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Multidimensional Risks in the XXI Century

Egea

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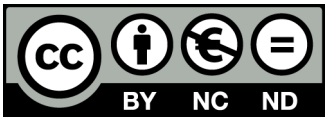

Contents

Part IV
Experiencing Risk and Uncertainty

Introduction. Experiencing Risk in Uncertain Times

by *Fabio D'Andrea* and *Maria Grazia Galantino**

This book issues from the proceedings of a conference organised by the ISA/ESA network on Sociology of Risk and Uncertainty, with the partnership of the Italian Sociological Association (AIS), in 2021 on the theme of «Multidimensional Risks in the XXI Century». When we chose to devote the joint midterm conference to this subject, we had in mind to investigate this awkward, uncharted field with a special focus on the megacities, which were the typical environment of those who felt displaced and lost and seemed to be becoming a new kind of global actor in the foggy scenarios of the new era. Things, however, have a way of happening that rarely matches our plans: the conference was supposed to be held in 2020, but the first call had to be postponed and then cancelled as the COVID-19 pandemic raged throughout the world, making even less sense than whatever had happened before, which was however far from negligible. We succeeded in holding the conference online a year later, but the impact of the recent, tragic events showed in the number of contributions that dealt in different ways with their dynamics and consequences. It also urged young researchers to test their skills against the unknown and set in motion many middle- and long-term projects. The articles presented here are a selection of the papers discussed on that occasion and give an adequate feel of the shift in interest caused by the pandemic. They also show how – more often than not – things seem to unintentionally fit together in a wider, unexpected plan, allowing us to catch a glimpse of what Kauffman, citing Nagel, calls a «purposeless teleology» (2016, 197), according to which organization at times springs from apparent disorder.

In a way, we showed some sign of clairvoyance, the catalyst of it all, when we decided to address the multidimensionality of risk as it seemed to unfold since the beginning of the new century, even though we were far from imagining its sheer scale. No one – or very few, as it turned out – could have foreseen the COVID-19 pandemic, just as no one was able to predict the oncoming war in Ukraine or the vertiginous speed of climatic change. Now, this is exactly the issue we had in mind when we first thought of the conference title: the fact that a system which prides

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itself on its data-computing power, presented as a sure way to know things in advance, fails to do so on an awkwardly regular basis. Not only think-tanks, departments and institutions do not see what is coming, but they are almost never up to it, even if by all means they could and should have. It is hard to ponder these circumstances and not to be reminded of Beck's work, which sadly culminated in an unfinished book, *The Metamorphosis of the World* (2016); a book, however, whose insights are helpful to try and better understand the apparent paradox we just mentioned. Ever since *Risikogesellschaft* (1986), Beck felt that the modern world was at an end and had to find (more or less) acceptable ways to raise the awareness of this unheard-of fact among those who were – and are – still convinced of the inevitability and eternity of Modernity and of its successes. Successes, by the way, that Beck never denied; he rather pointed to them as the reason why the hallowed modern order was crumbling. Too great a power to wield can cause unforeseeable and unforeseen consequences, especially if it is wielded with blissful nonchalance and arrogance.

The first essay we present has to do with the scope of human power over the world. Emanuela Ferreri deals with *Sociology and Anthropocene. Uncertainty, Risk and Contingency in the Global Scenario*, coming to grips with the new era that the unimaginable and still not understood potency of techno-science seems to have disclosed. Beck saw clearly that the end of Modernity was due to the change in scale of its capacity for the manipulation of reality, which rendered obsolete the three pillars it rested on: accountability, compensation and precaution, all parts of what he called the «risk contract» and all by now inapplicable. «The category of *risk society* […] thematizes the process of problematizing the assumption that it is possible to control and compensate for industrially generated insecurities and dangers» (Beck 2009, 7), thus forcing onto unaware modern people things they used to think of as defused, left behind. One of the most significant among them is surely the idea of *uncertainty*, which could be read as a side-effect of the growing complexity of teleological chains and fully blamed on human error or – and this is Beck's perspective, as well as Morin's, for instance – as a consequence of the partiality of knowledge, of the fact that there is a part of reality we know nothing about: «Ironically, our continually perfected scientific-technological society has granted us the fatal insight that we do not know what we do not know» (Beck 2009, 47). This is why Ferreri gives herself the uneasy task to work towards a socio-cultural redefinition of the concepts of *uncertainty*, *risk* and *contingency*, as a new form of knowledge is sorely needed to deal with the global challenges of the XXI century.

As we have seen, this kind of thinking goes against the grain of apparently unshakeable convictions. Western culture has been spinning the tale of certainty and control for centuries and has built a whole system – with its privileges, imbalances and inertias – on its basis, so that it is now hard to back off from those positions and very few would want to. As Beck put it, however, «the metamorphosis of the world is something that happens» (2016, 18) and mocks procedures and protocols and all those who are convinced that they are tools apt to tame its unruliness. At the start of

2020, the idea of global risk turned from paper and ink into something real and catastrophic, even though hard to detect and understand, especially for laymen. Its form itself defied classic understandability: a virus is a chimera, it exists somewhere between life and death as we think we know them and shares the same blurred status of subatomic particles; it is invisible, ubiquitous and menacing, so much so that Isabella Corvino thought of the figure of the «uncertainty virus» even before the pandemic, when she proposed her reflections about *Uncertainty Virus and Social Metamorphosis* for the original conference. Something about synchronicity might come to mind. Corvino meant to investigate the connection between the social construction of risk and danger and the governability perspective, trying to show how security and safety are closely linked to an idea of safe space and a whole range of relational issues which are usually neglected by high and low policies and supposedly neutral scientific perspectives. Moreover, this has much to do with what Beck called «the *staging of the reality* of global risk» (2009, 10), the fact that risk too partakes of a form of unreality, as it has to do with «the controversial reality of the possible, which must be demarcated from merely speculative possibility, on the one hand, and from the actual occurrence of the catastrophe, on the other» (2009, 9).

Thus, risk and its particular configuration as a virus open up to an intermediate realm that partly escapes the control of techno-scientific instruments, as Antonio Camorrino highlights in his contribution, *The COVID-19 Pandemic Catastrophe. An Analysis of some Cultural Transformations Starting from the Social Theory of Risk*. Here the imaginal power of representation that is implicit in the «staging of reality» comes to the fore, in the hypothesis that the specific features of the COVID-19 pandemic have strengthened an atmosphere of «nocturnal re-enchantment of the world» – a definition that balances Durand's and Maffesoli's visions and gets back to another seminal insight of Beck's, the «emancipatory catastrophism» (2016, 115-125). As metamorphosis happens, one can either mourn what is no more or make the most of what is coming, however foggy and indistinct. The aftermath of a catastrophe can offer a chance to change old habits and break now meaningless chains, a chance more easily exploited within the already mentioned new framework of understanding of the world. Even though "back to normal" seems to be the driving motto of the post-pandemic, what happened in the past two years can scarcely be thought to leave no trace on consciences and visions of the world as it is and as it should be. Already new ways of interpreting the work-life balance are making themselves apparent in market and supply-chain dynamics, while the old slogans lost a good deal of their guiding power. It is a hard-to-read set of circumstances; while the possibility of an emancipation towards a more sustainable and shared future is at least thinkable, old habits die hard and the metamorphosis has no in-built positive outcome: it is a wider, unpredictable field of opportunity. Warped by conflicting forces, in Camorrino's view it might inaugurate a cyclical temporal conception that prevents us from imagining a post-pandemic era, leaving us stuck in the here and now.

One of the oldest ways to cope with the unexpected is the ritualization of everyday life, again something that has to do with the imaginal sphere rather than

with factual rationality. Elena Savona, in *Risk and Pandemic: COVID-19 and the Social Risk Perception of a «Cultural Trauma». A Brief Sociological Analysis*, deals with the consequences of the pandemic trauma and the rituals it called into being. She keeps a sharp eye on the changes in experiencing urban, public spaces and the new relational obstacles the pandemic forced upon us: sacrifices and limitations in order to maintain a reassuring "social distance" and to strive for «pure», safe environments. Again, the connection between imagined and real space is highlighted, the fact that to inhabit a place is more than to merely occupy it: there is a constant shaping going on, a symbolic reorganization of meaning that might be a key factor in a renewed perception of our way of being part of the world, beyond Cartesian mechanism and determinism. A fresh perspective on social practices, beliefs and cultural representations is needed to go beyond the «epidemic architecture» which could turn into a maze leading us nowhere, replicating and reinforcing on a subliminal level the fears that we pretend to have mastered and left behind. All in all, a desirable outcome of the current crisis might be a renewed awareness of the complexity of the «becoming of the biosphere [which] is more mysterious than we have thought» (Kauffman 2016, XV), a becoming in which there is more to take into account than we thought until now. As Savona aptly shows, the all-encompassing *Wechselwirkung* (Simmel) that forms this complexity is not limited to distant heights of abstraction, but it surfaces in filigree in everyday activities and practices, in rituals as well as in technologies.

The complex and multifaceted interactions at play in the social construction of risk are at the core of all other contributions in this collection. Today's public controversies over risk engage experts, politicians, business and non-governmental organizations, and their loads of ideologies, strategies and vested interests. Often, though, they fail to count in peoples' perceptions and practices. The decoupling of expert knowledge and laypeople perceptions on contentious issues is well illustrated in Dario Pizzul's contribution on *Privacy Violation Risk in COVID-19 Digital Contact Tracing: Italian App Users' Perception versus App Designers' Conceptualization*. The discussion over contact tracing tools and their implementation – at a later stage, also over vaccination campaigns – involved scholars and commentators of different disciplines and ideological orientations, focusing particularly on risks posed to privacy and democracy. Many have rightly warned that techno-solutions implemented for pandemic purposes might come to be seen as "normal" or "necessary" in the long term, infringing data protection rights and challenging democratic life (Agamben 2021; Lyon 2021). Nevertheless, research shows that the public seemed to be less concerned than experts about risks associated with tracking and surveillance measures during the pandemic. Neither low awareness of privacy disclosure risks, nor people's fear of other risks, such as nuclear energy (Sjoberg, 1999) or biotechnology (Savadori et al. 2004), can be simply explained on the basis of misinformation or ignorance and dismissed as over-simplistic, non-scientific, and ultimately non-sense. Rather, how today's subjects make sense of, and respond to possible violations of their right to privacy and data protection confirms the persistency of a gap between experts and laypeople which is

not simply rooted in a different quality of knowledge about risks, but in a different value attributed to objects at risk. If «risk refers to uncertainty about and severity of the events and consequences (or outcomes) of an activity with respect to something that humans value» (Aven, Renn 2009, 6), both uncertainty and what is at stake (something that human value) are a matter of evaluation as they need to be assessed by somebody. The Covid crisis is a perfect case where trade-offs between different risks (health vs. privacy, health vs. economy, etc.) have been differently judged according to the different actors who assessed them. Once again, we are reminded that in a world of manufactured uncertainty, «it is not a matter of choosing between safe and risky alternatives, but of choosing between different risky alternatives, often also between different alternatives whose risks concern qualitatively different dimensions and are therefore hardly commensurable» (Beck 2009a, 297-298).

In the contentious process of establishing a legitimate definition of risk and devising measures to manage it, the Covid-19 crisis is only but one example. As argued by Bianca Rumore in *Robot Density and Techno-inequality: The Perception of Risk for Italian Contemporary Workers in the Digital Society,* a mismatch of perceptions and evaluations emerges also about robotics and digital technologies in the workplace. Not surprisingly, in this context epistemic inequality rules and those with lower levels of high-tech skills and expertise are the most concerned about the developments of robotics, which they see as a risk for their professional and biographical continuity. A risk which on the contrary appears downsized or considered "acceptable" by those experts who foresee a future of liberation from human labour. Who decides what is (acceptable) risk and what is not (acceptable), and for whom, remain thus crucial questions, which cannot be answered once and for all, out of the specific situations, social structures, and cultural contexts where risk occurs. Studies using a phenomenological approach have highlighted how the meaning of risk objects, their perceived relevance and harmfulness are constructed through social interaction and personal experiences and can vary according to social circumstances and to the role of those who make claims about risk, promoting specific interpretations of the issues at stake. As it happens in other domains analysed in this collection, the social staging of risks in the workplace establishes *relations of definition* that are also *relations of domination* which revolve around issues of power, interests, gains and losses (Beck 2009).

Urban security is a further field of policy where relations of domination are particularly manifest. The "safe city" is one of the most common refrains of the neoliberal frame that informs today's urban planning. The proliferation of individual and collective behaviours which are considered as risks for safe cities reveals a model of public policy based on punitive control and reduction of social protection, leading to discriminatory policies and to the segregation of the most disadvantaged. Neoliberal policies of social services and crime control are rooted in a cultural terrain where neoconservative visions, characterized by a strong moral connotation, yearning for a society more centered on traditional values, more orderly, more disciplined and controlled (Garland 2001), are becoming increasingly popular among the elites and the

public. These visions inform the field of urban policies and contribute to define which risks are incumbent and which deserve to be urgently addressed. Given the variety of actors and agencies which concur in managing risks in the cities, alternative visions can also emerge and compete for dominance in the public debate. The good news is that, as Beck contends, the heightened consciousness of risk may open up to alternative reasoning and new critical ways to address problems (Beck 2016). However, the vision that eventually comes to dominate the debate and manage to legitimize its solutions will very much depend on power, strategies and interests of all actors involved. The case studies on the cities of Milan and Budapest presented by Tatiana Lysova and Laura Schmidt in *The Construction of Urban (In)Security: The Policies and NGOs' Discourses in Budapest and Milan,* add more insights in this direction. They unveil different interpretations of what security is and what risks are considered the most relevant and urgent. Beside contextual and historical differences between the two cities, they also show that the role and the position of the actors in the process of constructing risk and security remain crucial. Just as crucial remains the instrumental use of risk and security by political leaders and institutions in satisfying secondary functions (or dysfunctions), such as creating social alarm, protest and resentment that can be directed at specific social subjects (Luhmann 1993).

The relevance of public institutions in understanding and constructing risk objects (or not) is also taken up by Raul Singh in *Substances as Risk: A Comparative Study of Strontium-90 and SARS-CoV-2 Virus*, an essay proposing quite a daring comparison between the Chernobyl disaster and Covid-19. The author moves from the analytical distinction between technological and biological hazards, or danger and risk (Luhmann 1993; Battistelli and Galantino 2009), maintaining that we need to look beyond such scientific categorizations, in order to understand the unequal distribution of vulnerabilities and to disentangle the interplay of politics, media, science and economy. Notwithstanding their dissimilarities, in fact, both catastrophes are indicative of how political and public institutions construct the cultural meaning of potential sources of harm (substances) as risks, in the attempt to deflect criticism and produce an understanding of the situation which suits available solutions. The process leads to a widening cleavage between those who create risks (their materiality and/or their cultural meaning) and those who are affected by them and bear their consequences. Ultimately, it (re)produces vulnerabilities through stigmatization and marginalization of those who already suffer of structural and cultural disadvantages. The emphasis on the cultural context in which risks impact returns also in the contribution *Risks and Threats of Recent Years in Cultural Experience of Ukrainians* by Natalia Kostenko and Liudmyla Skokova. Their empirical analysis looks at the relation between reactions to Covid-19 measures and individual values associated not only to safety, trust or freedom but also to deep-rooted attitudes and emotions regarding the future and its opportunities.

The way in which the pandemic altered our being in the word and our seeing the world needs new lenses able to focus on emergent new beginnings (Beck, 2016). As Morin (1976) maintained, a crisis is something of an effector: «Because of its

uncertainties and randomness, because of the mobility of the forces and forms within it, because of the multiplication of the alternatives, [a crisis] creates favourable situations for the development of audacious and innovative strategies». In the same line Arundhati Roy (2020) wrote early in the Covid crisis: «And in the midst of this terrible despair, [the pandemic] offers us a chance to rethink the doomsday machine we have built for ourselves. Nothing could be worse than a return to normality. Historically, pandemics have forced humans to break with the past and imagine their world anew. This one is no different. It is a portal, a gateway between one world and the next».

Today, the direction of change is ambivalent and fluctuating between progression and regression. As after any disaster, emancipatory instances move in parallel with processes of restoration and reorganization of economic and power structures (Klein 2007). The disappointing outcomes of climate change summits and, much more tragically, the return of the war in Europe, are but two striking examples. On the opposite side, the anthropological shock caused by Covid-19 pushes forward new ways of looking at ourselves and the world, different imaginaries of the present and the future, capable of opening up to new solutions and different forms of social interaction. Once again we can refer to Beck's «emancipatory catastrophism»: the awareness of living in a world at risk makes possible to glimpse glimmers of hope and, eventually, it may become a call to action.

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Part I
Global Perspectives

Sociology and Anthropocene. Uncertainty, Risk and Contingency in the Global Scenario

by *Emanuela Ferreri*[*]

The main objective of the essay is to exhibit a sociological reflection on the anthropocene. A socio-cultural redefinition of the concepts of uncertainty, risk and contingency is made explicit in relation to the critical reflection on society that is characteristic of the anthropocene era. Starting from the 2020 Human Development Report case, the paper provides an in-depth analysis that offers a critical comment about two contemporary issues: the relationships between the new global process of knowledge and the scientific knowledge of globalization; and a new definition in social and cultural terms, of the real needs of current knowledge for sustainability across the world. Ultimately, the essay will try to qualify two aspects of contemporaneity: the conception of the anthropocene as a syndrome of humanity; and an emerging need in contemporary society, that is, a renewed need to know starting from the recognition and observation of de facto social and cultural relations.
Keywords: sociology of risk; anthropology of damage; sociological dimensions of time and space; globalization studies; cultural paradoxes.

Premise

The general objective of this work is to understand the *anthropocene* both as a global social fact and as a globalized cultural fact[1]. All this can be defined through the paradoxes that sociological research is able to grasp by treating the problems of contemporary society. The problems of an era of perennial environmental, economic and political crisis, as well as of perennial crisis in the production, distribution and

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[1] In this paper, the term *anthropocene* is written in italics and with a lowercase initial. Some general arguments, oriented however to different critical and theoretical insights, are present in the 2020 essay, dedicated to a socio-anthropological definition of the Anthropocene (Ferreri 2020).

communication of politically important knowledge; knowledge, whether proven or not, innovative or not, which attempts to rise to the level of global issue and the cultural sensitivities of contemporary society (Ferreri 2013). We are talking about knowledge that becomes public culture available to anyone and that becomes culture that contextualizes itself, becomes local and impersonates itself in social actors through the most varied languages and everyday behaviors (Friedman 2008; Appadurai 2014; Ingold 2017).

From a sociological point of view, the *anthropocene* could be nothing more than the definition of an enormous dimension of time and space that implies socio-political characteristics and cultural qualities of an era or a long period of history, but not entirely specifiable in the world and in society.

The primary and official definition of *anthropocene*, namely the fact of finding ourselves in the years of the largest and most irreversible human impact on the planet, has spread and has become commonplace. More or less, almost everyone knows what it is and many certainly confuse the concept with accelerating climate change. Undoubtedly, the term of geological derivation can express the awareness of an indelible mark of humanity on the planet and of an unstoppable material damage. The same term *imprint*, however, is used both to describe the irreversible anthropization of planet Earth and to measure the impact of chemical emissions polluting the environment in which we live.

Now, however, we ask ourselves what happened to the vision, the definition of the world and the history of humanity that we have talked about so far, in the aftermath of the last pandemic. The COVID-19 pandemic is an anthropological universal damage, since it is damage that has been perpetrated to the heart of our material and intellectual ability to live in the world as human beings, to exist expressing the capacity of discernment and action, creating and renewing strategies for the survival, consistency and replication of ourselves as biological and cultural entities.

Allow me to relate a personal experience and begin the formulation of this excursus right from this point. I was not able to study the text of the *Human Development Report* of 2020[2] in the same way that I managed to do for every other volume of the genre. I realized that I first read the *Report* as if it were a precious *ex voto*[3], formulated by commendable experts for the COVID-19 society. A very detailed representation of the world that escaped the calamity, repented of its own recklessness, aware of its mistakes and hopeful for the future. At the same time, the *Report* is a cold and stereotyped picture, embarrassing in its positive assertiveness. We can consider it a sort

[2] UNDP, United Nation Development Program, (2020), *The Next Frontier Human Development and the Anthropocene*, (http://hdr.undp.org/en/2020-report/download).

[3] For a theory of religious practice and ritual objects cited in the text: «the ex-votos show the strategies that men and women have adopted to survive, persist and replicate themselves, as biological and cultural entities». The reference is: Grimaldi 2020.

of very rich *pledge* returned to scientific intelligence and political will[4], to the globalized society that intervened in the pandemic because its very existence was threatened by it. It is a recognizable and payable ransom with the knowledge we have available and with what we can create as we always have done, to still be a global society, still pleading humanity for humanity that lives in the grip of famine, disease and wars. There is no transition *from animals to gods* maturing in the 21st century to give us a *story of the future* (Harary 2015). Indeed, there is nothing else to do but stay where and as we have always been, in the world where we ask and study which of our prayers were answered and what others were not. Society is in the midst of the current of the only possible intermediation of cultural forces and material entities, there is nothing to do but exist socially with sensory bodies and thoughts present and elevated from the present, as thoughts are imageable, reconfigurable and communicable in the dimension of time that flows from past to future. After reading the text a second time, my predisposition to study an international research program and policy formulation of intervention has returned to support the first personal consideration, as will be seen in the following paragraph[5].

In the space of two seasons, a new universal damage has developed before our eyes. Not yet another devastating war on this planet which is always too full of armed conflicts – the only difference being having such conflict also in the middle of the European territory – but the sociological damage of wanting to make war the only instrument for resolving disputes, making it the hegemonic political and legitimate use of total violence. Personally, I despair of being able to see an international *votive table* that is able to repair this global damage through the elaboration of new life strategies equal to the extent of the damage perpetrated.

The Anthropocene: Global Condition and Research Program

The *anthropocene* is the most serious social, cultural and political problem ever. It consists in the alteration of the relations between humanity and other living forms and the definitive transformation of all the implications deriving from the relations of living beings with every typology of non-living matter. All this focuses on the exhaustion of awareness and the pollution of the knowledge we have at our disposal. The *anthropocene* therefore expresses a serious upheaval and misunderstanding of the state of the world and of humanity as a whole. Let us, however, enter into the merits of the image that

[4]We refer to the notion of development in force in the field of international cooperation that studies and defines it as a planned social change that is managed politically, induced by shared knowledge and socially participated (Tommasoli 2013; 2017).

[5] The purpose is to suggest that the combination of the two communicative levels (the moral contents and the assertiveness of the means-ends reasoning) can today inform a double cultural potential (the pragmatic and agentive indication) or can meet and transmit aspirations that nourish inclusive collective life (Appadurai 2014) even in the broader public-political confrontation.

offers us the most common definition: the vision of a planet that has been impoverished and abused for too long; of the environment in which we live increasingly globalized, damaged and vulnerable. Something can be remedied, some processes could decelerate and others even stop, but what is certain is that we cannot fail to admit the extent of the damage, ignore the consequences, distract ourselves from the risks to which we feel exposed. We cannot forget the ever deeper and wider *imprint* on the face of the Earth, the trace of the history of humanity. However, we should admit that it is that part of the history of humanity that we have so far accepted to know, or really want to know (Branca 2020) more or less consciously.

As a late modern cultural construct, the *anthropocene* is characterized by the conception of the sinking and shortening of the temporal dimension that we usually call *history*; for the enlargement and shrinkage of the space that we call the livable *environment* around us. We have the impression and the awareness that the natural world is upset and raped in the same way that society appears to be upset and raped. The *imprint* of humanity is characterized by the unprecedented capacity for abuse and violence on the body of nature, the body of human beings and on that of society.

The hypothesis underlying this work lies in the fact that the *anthropocene* is nothing but the ecological version of the political, social and cultural violence of our time (Ferreri 2020a). The logic, the praxis, the narrative of global violence could even persuade us that the relationship between the world and our society has reached the terminal stage. Why? What can we do to recover cultural and political energy to give contemporary society a different expectation? Why is humanity humanity's victim of choice?

Never before, we felt we have to redeem billions of human beings and entire geographical continents from the yoke of a distorted and destructive *logic* that we can no longer justify or that we no longer know how to justify. The word *logic* is not casual here; in contemporary sensitivity, the affirmed desire and therefore the ideal value, that it is not a matter of culture but of an effect of domination over society by certain historical forces. It may not be the case but certainly, the general and theorized conviction may be sufficient to try to redeem the power relations engulfing the global problem. It is also certain, however, that this is not enough to face other solutions with respect to what we are facing (Boltansky, Chiapello 2014; Collier 2018). If we define *anthropocene* as simply the current state of anthropization of the planet, then it is nothing more but the face of humanity as we see it today. This human face has a lot to do with the scientific knowledge and political awareness of our time, and our time alone.

Let us go back now to the primary support of our work, the *Human Development Report* 2020: «We are entering a new geologic age: Anthropocene. The age of humans. For the first time in our history, the most serious and immediate risks are human-made and unfold at planetary scales, from climate change to the COVID-19 pandemic to rising inequalities». Everywhere in the world we need reliable knowledge available to everyone, in order to «navigate the complexities of the Anthropocene», and «to support transformational changes» (UNDP 2020). In these words lie exactly the two sociological problems that matter to us: first, the

relationship among the global process of social change and cultural transformations and the knowledge of globalization we share; secondly, a new definition of the real needs of knowledge for sustainability and democratic citizenship as it is today, after the pandemic. We have already defined the pledge to be paid for humanity who escaped the last pandemic, which is clearly outlined in the *Report* describing multiple areas of research and intervention. We refer below to the *Second Part* of the *Report* (pp. 128-159), dedicated to the strategies to be implemented and to innovative actions to be taken to trigger social change and cultural transformation, along three lines that in terms of sociological research appear very clear to us.

The first concerns: «social norms, which frame socially permissible – or forbidden – behaviors. Sometimes understood as informal institutions, they have been less explored as a mechanism for change than formal institutions based on authority (exercised as government regulations, for instance) or price (providing consumption and production on incentives)». How the social norms that govern habitual behavior change is a matter of sociological investigation par excellence, and the *Report* contributes to attesting that «social norms are powerful determinants of people's choices and can change faster than commonly assumed». The warning is to do research exactly where changes occur, with the people who make them and keeping attention on the quality of socially perceived time. The second guideline concerns the incentives for change and in the first place the complex interaction between the different economic and regulatory typologies that we have at our disposal. The affirmation that interests us, however, is the following: «Even if people do not change their minds, they may still respond to incentives based on what they can afford and where they see opportunities to meet their aspirations». Here, the question lies in identifying the crucial economic relationship between the environment and the society of the *anthropocene*, and if we can collectively read it as the relationship between non-renewable resources and generations of people exhausted by having seen every possibility instituted to ease the severity of social inequalities deteriorate. The third line concerns a new typology of so-called nature-based solutions: «they embrace equity, innovation and stewardship of nature […] And they rely on the participation and initiative of indigenous people and local communities. […] Even though they are bottom-up and context-specific, they can contribute to transformational scale at higher levels». Ultimately, the inquiry question returns to seek the different culture for a different relationship with the whole world. Sociology once again embraces the twin discipline of anthropology[6].

[6] Our reference is *research with social participation* a tradition of intense studies in the field of ethnographic investigations for development cooperation (Tomassoli 2013). The social research that is aimed at the same time: at the acquisition of new cognitive elements, at the theoretical methodological advancement, to the dialogic restitution of experiences and their evaluation, and therefore not only to the academic use of the experiences themselves (Ingold 2015; 2017).

Whatever the capacity of judgment we can express about the international organizations for development cooperation, what is at stake here is dwelling on the basic questions that emerge for any reader, alongside those that immediately become the identified investigative task for social scientists. There is a strong generalized need for live, empirical research, for participatory observation if understood as a shared cognitive experience and that therefore is culturally communicative.

The need to know contemporary society locally and globally is outlined through the institutional and cultural realities. And the need to renew knowledge and practices that are able to activate a profound and wide cultural transformation anywhere in the world as soon as possible, and not only to activate the planned change on territorial and systemic targets that we have already been trying to achieve since the end of the II World War[7]. The linkage to the whole sphere of the social and human sciences for a renewed capacity for confrontation with all the natural sciences, for co-producing cultural transformations and for orienting political management at the height of cognitive responsibility, is therefore clear. Society offers the keystone in all of this: society that is experience and cohesion, institution and culture, motivation and purpose. Searching for a specific type of scientific, informative and political product, interacting with the intelligences applied to the research of human development, each page of the *Report* can be linked to our excursus as it is linked to different social phenomena and different levels of investigation. It is linked to the identification of the anthropological condition of sociological knowledge; to the universal phenomena we call the ontological insecurity of the human race; recursive crisis of society, incessant social change and cultural transformation. All this flows for scholars in the bumpy course of the transformation of knowledge about society and the transformation of knowledge that belongs to society and lives with society, since the latter and only the latter is culture, both for the social sciences and for humanities. The current need is to know how to start afresh from society, from the encounter in the field, from the subjects involved in the investigation, from the cultural situation and from the effective and localized social relationship (Ingold, 2015). Therefore, we affirm that one of the emerging needs in contemporary society and that is chosen in the *anthropocene*, consists in the energetic need to know again, to create knowledge starting from the recognition and observation of actual social relations and to start anew from the cultural formulation with which current problems are perceived and exposed. In our field of work, then, the continuous concern and insistent conviction that: «In twentieth - century the epistemological revolutions have pointed out both the base-statements of language

[7] The importance of the *Report* is exhausted in describing its program in detail and in the institutional intention of making the results of countless surveys available. Summarizing the guiding principles upstream and therefore the data and downstream modeling, i.e. important and cumbersome generalizations that do not ought not be underestimated, being in any case reachable and activated from within countless social institutions and different localizations of public knowledge and cultural sensitivity.

and the practices of common sense and ever the axioms of science are only locally valid but they are *groundless* from a logical point of view. Still they have a grounding role. They are really the only *certain* anchorage and certain because *shared*, at the basis of the historical and fragile scaffolding where culture, science and life itself stand» (Musso 2009, 101).

Uncertainty, Risk and Contingency in the Global Scenario

In the global scenario that for us defines the contemporary era, the *anthropocene* is an integral part of the mediascapes and ideoscapes of globalization. The generalized and closely related panoramas of things, information and ideas that provide users-viewers from all over the world with vast and complicated repertoires of images and narratives, in which the world of goods, news and politics are deeply blended together. The *anthropocene* and human development exist in the international ideoscape which consists of: «a series of ideas, terms and images including *freedom, well-being, rights, sovereignty, representation*, and the term prince, *democracy*» (Appadurai 2001, 55-56). All this, however, is characterized by a negative contingency, and is organized through the logic of the hyperbolic discount[8] and counterfactual intervention. Furthermore, and through all the cultural dimensions of globalization[9], the pandemic has led processes and phenomena that the social and human sciences have been studying with increasing clarity and intensity at least since the late 1970s not to their extreme consequences but capturing the attention of the wider public.

The processes of globalization have permanently changed and transformed the space-time dimensions of society, transforming cultural visions and social experiences. We list only the most relevant for our reflection: the idea and experience of the relationship between the West and the rest of the world; the idea and experience of what social actors are (individuals, groups, organizations and masses); the idea and experience of the relationship between power and authority (politics, economics, specialist and exclusive knowledge). Therefore, the social fact is also a result of globalization which today more than ever and through environmental, social and economic sustainability, summarizes the significant problems of the contemporary world in a single task. At the same time, the same problems are brought closer to our understanding by defining them as eminently cultural and scientific knowledge issues. In this way, it is always possible for politics, economics and mass communication to manipulate and exploit the actual cultural entity of the problems.

[8] The logic of the immediate advantage with respect to a future risk, even if the first is negligible and the second abnormal.

[9] Appadurai defines the other three dimensions: *ethnoscapes*, *technoscapes* and *financscapes* (2001).

It is not possible to retrace the amount of research, theory and sociological criticism that substantiates our reasoning, and having committed ourselves in the first place to redefining the concepts of uncertainty, risk and contingency in the *anthropocene era* it seems right to dwell on at least two problems that characterize contemporary sociological research and knowledge.

How to observe the space-time dimensions of society? We know that, what happens in economically and politically affluent metropolitan areas does not apply to all other areas of varied socio-economic and political intensity but ends up influencing them, dominating them and what is worse, inducing them into grueling competition (Sassen 2001). The city, the current metropolitan life, summarizes and exalts all the issues mentioned without simplifying or healing any of them. We know that social time, that is the time of individuals and social institutions, is what action and its purposes lack on a daily basis; we also know that time pressing and accelerating is that of behavior induced by the logic of the hyperbolic discount, of the counter-factuality of the forecasts, of contracts without integrity of subjects and without morals. We know that there is a historical time that even simulates the return to the past through the cultural re-proposition and social restructuring of ideological dichotomies such as: tradition/modernity, locality/globality, or with the most overwhelming and overbearing dichotomy that we know and experience in terms cultural and political: the one between Western / non-Western.

How to observe the social subject? The drive towards the evanescence of the subject, of the individual, of the social actor and of the organization of civil society too (Touraine 1997), is strongly reflected in the pervasive experience of the fragmentation of action, control and responsibility of the individual. We can speak of a negative and predatory[10] dividualization induced by the excessive bureaucratization and technologicalization of everyday life. Specifically, we refer to the technicalization of knowledge and the technological control of everyday life, phenomena that fragment the individual and his/her overall life management capacity (Appadurai, Neta 2020). And we refer to those excesses of bureaucracy and militarization of collective life that go so far as to ensure that any security system, from computer devices for electronic mail to the surveillance of national borders, is also experienced as something else, producing fear, structural oppression and a material expression of each type of conflict (Graeber 2013; Wieviorka 2020).

In this scenario, the concept of 'uncertainty' can inappropriately reverberate that of humanity's ontological insecurity*;* it does not easily ally itself to the primary anthropological function of culture, on the contrary, it puts it in crisis. In the unavoidable human condition of uncertainty, orienting thought, pre-figuring and ensuring social action where possible becomes a cultural stress equal to the physical stress of walking in the balance, in bad weather, without adequate footwear and with an exaggerated psychological concentration on the inconsistency between map and territory. With all this the uncertainty takes on an unprecedented density, and by

[10] Appadurai 2016, pp. 117-142.

strongly intertwining the idea and the social experience of the crisis, the very meaning of the term is led to the point of inflating the areas of decision-making and ethical responsibility, in the sense that the price of choice and responsible decision becomes ever higher.

The risk takes on an unprecedented intensity. The shift in meaning not only slips from the broader scope of every possible evaluation of the action and outcome to the more limited one posed by the calculation and representation of probabilities; but is globally identified with 'the risk society'. With the era that produces damage at a faster rate than that with which the knowledge and practices to remedy and intervene are produced. It is from here that the cultural sense of the irreversibility of both ecological and social damage flares up (Beck 1992; Giddens 2015). The contingency takes on an ever-greater pervasiveness in society and becomes a real state of coercion of time, space and cultural arbitrariness, or oppression of the subject in the present. In fact: «Contingency is a situation in which single individuals or groups can find themselves when accidental, occasional or conjunctural phenomena enable them to cope with the unpredictable» (Mongardini 2009, 7).

Returning even closer to the etymology of the term itself, 'contingency' is the real dimension of time and space in which uncertainty moves to find and rediscover cultural meaning and social possibility. That is, contingency is a universal anthropological condition. Contingency is the common situation in which the particular social experience and the cultural elaboration of the local level are postponed and are closely linked with the elaboration-experience of the global level which is uniquely cultural. The pressures of contemporaneity, the tensions of the cultural reflexivity of our age, cause the contingency to be shattered and invalidated and with it the social fabric, subject and identity.

A negative emphasis on contingency is too often produced in mass communication, and the same unfortunately applies to the generic recourse to sociological and anthropological theories, which are exposed and disclosed in an inadequate or irrelevant way with respect to the considerations that are linked to them[11].

Uncertainty, risk and contingency lead to significant consequences, and the crucial issues that call sociological investigation and cultural criticism can be briefly listed. Negative contingency situations have become the dominant and determining element in daily life. They are continuous, never resolved or institutionally mediated, as if the pressure of everyday reality and the imaginary at large of the knowable and the possible (if everything is possible, it means that nothing is entirely predictable

[11]For example, G. Bateson's legacy, *Steps to an Ecology of Mind* and *Mind and Nature. A Necessary Unity* (1972; 1979) and its double-bind theory of schizophrenia. An inadequate use of the precious theoretical corpus, relating to specific fields of investigation and very complex interdisciplinary perspectives, can provoke a series of exaggeratedly pathological diagnoses of the modern social environment, an effect that does not help the observation and understanding of current reality. Even the Baumanian perspective on the *liquid society* often undergoes a counterproductive disclosure twist in terms of sociological knowledge (2002).

and controllable) were so stressful as to make us feel inadequate. Violence has become a constant threat, directed against the survival, consistency, replication of our material and cultural existence. *The figure of contemporary disorder* (Balandier 1988) has been transformed into micro and macro-structural violence, which acts in the vacuum of society and culture, in the extreme vulnerability of collectivity and individuality. Current events strongly lead us to the reasoning of the hyperbolic discount: of the immediate advantage over future risk, even when it comes to an inevitable massacre.

As we have already said, the present is the era of widespread awareness of the ontological insecurity of human life. But ultimately, the processes leading to social change and cultural transformation of contemporary society, are heavily polluted by the multiple forms of contemporary violence. In particular, the quintessence of violence locally insists: the action that breaks and annihilates the culture that socially nourishes every relationship, the culture that lives and perpetuates itself in every social action (Ferreri 2020a). Culture in the era of globalization is no longer local (particular) nor universal but sterile universalism and selfish localism. At its root, the problem produces caustics and hateful polarizations opposing global and local elite social representations (Holmes 2000).

Violence pits us against each other by taking away society and culture, emptying institutions and thoughts, creating individual and collective gaps to lose. There is no violence that creates or establishes, or contains and repairs what can be saved; there is no legitimate violence, since violence is not social and it is not cultural, but it is an abuse of society and culture, therefore it cannot be defined as natural for our species. Violence is the suspension of every process of making oneself human, it is the coarctation of human ontogenesis, it is the rupture of every process of civilization.

Faced with shifts in meaning and violent coercion, the society that we have also defined as the keystone for the search for sustainability, appears to us as a huge asset on sale.

Concluding Remarks

On the syndrome of humanity. Within the notion of *anthropocene* a fundamental anthropological hypothesis remains ill-concealed: that of an imperfect and deficient humanity, capable of creating and spreading the socialized disorder between living, non-living and presumably metaphysical forms. The same syndrome of humanity can be read in the infinite cultural elaboration of the theme of the ambivalent belonging of humans to what justifies them in principle, enables them for collective life and keeps them materially alive. From prehistoric times to the present day, the *habitus* of the human species is grasped and represented in having to learn to live at one's own expense, belonging to matter and belonging to what surpasses it (Ferreri 2020; Lévi-Strauss 2015; Ingold 2000). In addition to deficiency and ambivalence,

the third symptom of this anthropological syndrome concerns the cultural expression of the relationship between sub-system and macro-system, between the part and the whole, between the inside and the outside of the environment that we are and that welcomes us. The dualism between individualized and internal aspects and generalized and external aspects can be considered culturally always present and socially characterizing the human system-environment relationship (Luhmann 1989; 1996). Human beings and society become an environment for each other. All this is part of the cultural and social legibility of a system-world scheme for which current events demand and deserve a new global interpretation. We continue with this to face the cultural paradox of how the environment of the human world is thinkable by observing it from the inside and outwards, in the perspective of continuous change, of unstoppable adaptation, since the endogen is the environment of the exogen and vice versa.

On sociological research. We have attempted to describe where a sociology of the *anthropocene* as a social, cultural and political problem starts from and where it can get, the ecological problem that shows us the modern and never modern face of the human world. From all the different arguments articulated in this excursus, we try to summarize at least five sociological recommendations for research in *anthropocene society*. I. We pay attention to the weakening of social bonds at all levels; let us apply ourselves to know more and more and better the nuclear mechanisms of collective life, but let us also allow ourselves to contribute to a wider and better public knowledge. Let us cultivate in all possible ways a critical view of risks, especially those that the devaluation and misrecognition of many expressions and institutions of ideological-cultural creativity (religious, political or otherwise cultural) can produce. II. We are careful to nourish the growing doubt about the freedom and happiness of human beings with a cultural sense, in order to stop the evidence of increasingly compromised existential conditions. Something can be stopped and changed in the global process by which, in contemporary society the human being is reduced to an isolated, self-referential monad, and collective life is reduced to individualizations that are too limited and therefore forced into exclusive belonging and localized cultural apperception. III. We pay attention to the unsurpassable condition of humanity's ontological insecurity, since it becomes risk, damage and global desperation only if people perceive themselves doubly alienated: from the social and from the natural. IV. We are careful not to resign ourselves to social fragmentation of all types and levels, since all demographic, political-economic and socio-cultural types not only overlap and hide from each other, but transform the social fabric that research must instead be able to rediscover and listen to it again in all its complex depth and communicative clamor. V. Let us be careful not to confuse violence with what violence is not and cannot become, in order to never justify or legitimize it.

In conclusion, we try to make the *anthropocene* the sign of an era of awareness and integrated knowledge of the world and society, to stop the expansive and violent process that puts the vast majority of the population at a distance forced by the living

resources of knowledge and of civil and political participation. Today, the need and dignity of scientific research in any field and academic tradition is based on these great questions. So that the work of those who study and research remains up to date with the contemporary world, in addition to continue being present and useful within shared paths of cognitive acquisition, starting from any culturally available form and expression of knowledge *with* humanity, *for* humanity and not just about humanity.

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Uncertainty Virus and Social Metamorphosis

by *Isabella Corvino* [*]

The social construction of the idea of danger and risk has excited a great interest, gathering social, symbolic and cultural aspects emerging as crucial parts of the Modern way of thinking. This paper aims at investigating the concept of risk and its nexus with the governability perspective. The continuous search for a safe place where to live: the city for the Modern age and maybe the web nowadays are "places" to be better investigated. The removal of the animal/natural side of human life and environment has been persecuted for a very long time. It is possible that the pandemic could recall humans back to their complexity and give impulse to a metamorphosis that could reshape human relations with others/otherness and environment.
Keywords: risk, relations, social metamorphosis.

Introduction

The assessment of citizens' perception and understanding of risk is necessary to structure society, to govern and manage security. In order to live a Modern, dynamic, mercurial life, our reality (made of globalization, market economy, production etc.) needs a stable, predictable, riskless environment. The question is not that easy to be addressed as to make the global world run as it usually is, people have to elaborate some procedure, or protocol or just habits to act without thinking on what they are doing, and why. At the same time, individual actions should be meaningful and should bring the sense necessary to bond us in small or large communities. As humans adapt their natural to a social behaviour, they operate an elaboration of the concept of risk. Many risks have a real possibility to do harm in the moment an individual face them, some others can have an impact on the community or have an indirect effect on all the community members even if they do not affect the totality of its participants. The naturality of the risk can change depending on time, place or culture; so, where does the concept of risk lies? One of the aims of Modern societies has been to eliminate risk from our lives, but this would involves cutting off

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complexity and meaning: «The category of risk opens up a world within and beyond the clear distinction between knowledge and non-knowing» (Beck 2007, 5). The nexus between risk and complexity stated by Beck opens up to a mistakenly ignored question which was apparently solved during the illuminism: people able to think and act rationally could face and solve every risk by the use of the almighty knowledge (assessed as something circumscribed and immutable). The absolute trust and faith in knowledge were a real turning point for the massive investment on culture and the repudiation of traditional/theocratic values but was the knowledge really put in a wider frame or was is another filter thought which look at reality?

> In conditions of modernity, trust exists in the context of (a) the general awareness that human activity – including within this phrase the impact of technology upon the material world – is socially created, rather than given in the nature of things or by divine influence; (b) the vastly increased transformative scope of human action, brought about by the dynamic character of modern social institutions. The concept of risk replaces that of fortuna, but this is not because agents in pre-modern times could no2ewt distinguish between risk and danger. Rather it represents an alteration in the perception of determination and contingency, such that human moral imperatives, natural causes, and chance reign in place of religious cosmologies. The idea of chance, in its modern senses, emerges at the same time as that of risk (Giddens 1998, 34).

Fortuna, risk, knowledge and chance start widening a correct approach to risk; moreover, following Lupton (1999a; 1999b) risk can have three major theoretical perspectives in sociology: the cultural, the symbolic and the governability perspective. As the minimization or better, the prevention of risks has become a central problem, individuals and political institutions are concerned on these goals. In the modern world, and even more in the city as on the web, what I will call «the places of Modernity», everything has to be predictable, the risk is somewhere outside and alien. The risk is always perceived as something threatening our lives from the outside: migrants, commercial barriers, climate change. One of the main questions is again what is normal and what is pathological (Canguilhem 1991); the conceptualization of normality is usually too reductive, for the risk of pathology is unbearable. Nowadays risk is related to the proximity of the "other", the sick, so that the only way to protect oneself is isolation: can society survive to distance even in the internet age? The virus (Serres 2010) as a divisive criterion forces to reaffirm limits and borders, to choose who deserves to be saved and part of the new group and who is to be left behind, but is risk really outside? Urbanization seems like an irreversible trend (Mathieu 1988), human life has changed, people are free from risk and uncertainty, the city will be kingdom: «Beck and Giddens argue that while all societies in human history have been challenged by threats and dangers, these have

largely been the outcome of the natural world, such as infectious diseases, famine and natural disasters» (Mythen, Walklate 2006, 12). We could say that humanity was part of nature and not something detached from it, not only a cultural entity; with the Enlightenment started a new storytelling: humans were living in a natural environment but were something superior to it. Right now, liquid fear (Bauman 2008) is drowning our lives, but the expectation of a catastrophe staged as a turning point between the old and the new world might herald the advent of a social metamorphosis (Beck 2017). After the pandemic, several scenarios might be considered, even one in which, after the virtual spell we have lived under until now, it is quite possible that new forms of grassroots relationality may emerge.

Risk and Plans for the Future

> Anyone who takes a "calculated risk" is aware of the threat or threats which a specific course of action brings into play. But it is certainly possible to undertake actions or to be subject to situations which are inherently risky without the individuals involved being aware how risky they are. In other words, they are unaware of the dangers they run (Giddens 1996, 35).

Modernity flourished under the sign of the "calculated risk"; this was the *passepartout* allowing everybody to experience even the most foolish things on earth (extreme sports, travels in dangerous situations, or simply overcoming the idea of risk taking a flight in severe atmospheric conditions). All these actions were faced as normalized by the calculated risk by the referent of each circumstance. Taking for granted every experience on one hand cancelled the idea of adventure, nature and reality in some sense; on the other hand, it allowed a great part of the population to experience the low risk of these activities supporting a more and more hazardous way of life. When nature, environment and adventure were translated to data to calculate a risk assessment, they were objectivized and cleared of the laws of chaos, chance or the unexpected. Lupton (Mythen, Walklate 2006, 14) warns that «it is important to bear in mind that risk concepts are fluid and dynamic over time and space. It therefore remains vital for researchers to carry out empirical studies that are able to map the complexities, contradictions and changes in risk understandings, on the part of both lay publics and experts». Unfortunately, to achieve advances and plan the future, every risk assessment tends to be stable and when a risk appears, society is shocked as an unsuspected reality shows its nature. If in the past, planning the future could be a storytelling of bravery and fortune, today we plan the future assisted by a false omniscience sense and a pretended rationality cutting short emotions, instincts and human/animal characteristics. To feel at risk is a shame, as if people were admitting not to be able to manage things; and to ask for help is a plain admission of inadequacy (Sennett 2012) as if simply by having all the

instruments and a solid education everybody could and must be independent. Of course, these independent subjects are living in a contemporary world in which the division of labour and specialization act like a *passpartout* to let people living independently and even isolated. The perfect mix of well-thought institutions, division of labour, ability to interact within a city space or the web, as a space in which connections and collaborations are not built upon personal relations, allows people to think they are carrying all the work ahead alone, facing calculated risks. About trust in abstract systems, Giddens (1996, 83, 84) affirmed:

> Much more could be said on the subject of the interweaving of trust, tact, and power in encounters with non intimates, but at this point I want to concentrate upon trustworthiness, particularly in relation to symbolic tokens and expert systems. Trustworthiness is of two sorts.
>
> There is that established between individuals who are well known to one another and who, on the basis of long term acquaintance, have substantiated the credentials which render each reliable in the eyes of the other. Trustworthiness in respect of the disembedding mechanisms is different, although reliability is still central and credentials are certainly involved. In some circumstances, trust in abstract systems does not presuppose any encounters at all with the individuals or groups who are in some way "responsible" for them. But in the large majority of instances such individuals or groups are involved, and I shall refer to encounters with them on the part of lay actors as the access points of abstract systems. The access points of abstract systems are the meeting ground of facework and faceless commitments. […] This counterfactual, future-oriented character of modernity is largely structured by trust vested in abstract systems which by its very nature is filtered by the trustworthiness of established expertise. It is extremely important to be clear about what this involves. The reliance placed by lay actors upon expert systems is not just a matter – as was normally the case in the pre-modern world – of generating a sense of security about an independently given universe of events. It is a matter of the calculation of benefit and risk in circumstances where expert knowledge does not just provide that calculus but actually creates (or reproduces) the universe of events, as a result of the continual reflexive implementation of that very knowledge.

Step by step humans substituted the faceless Gods with the faceless experts creating or reproducing the universe. The sense of security just depends on knowledge and this creates a power field involving who knows and who places reliance in their hands. In this way the symbolic side of risk is under control and its prevention is entrusted to experts.

The best predictable spaces remain the city and the web: in these anthropized environments the governability level is at its highest level. At the same time, while

all sorts of potential dangers or hazards are being neutralized, the attention on risk prevention is raising as a little part of us could still conceive the chance as something that can really happened.

> Risk and the calculability of risk are modern "inventions" which have made it possible to replace ethical judgments with probabilistic calculations. The calculation of risk is what physics, engineering and social sciences have in common precisely because it can be applied to disparate phenomena: from smoking, to nuclear energy, to road accidents, to monetary investments. Beck (1992a) defines it as a kind of ethics without morality, a technological moralization. The invention of risk is what makes it possible to make calculable what cannot be calculated (Ewald 1986) as it is associated with monetary compensation. But the dimensions of risk in the mega-technological society, according to many authors, are such as to sweep away the assumptions on which the calculability of risk is based (Short, Clarke 1992). The globalization of risk, the limited ability to forecast, the disaggregation of spatial and temporal boundaries make the basis of the calculation of risk a further technocratic fiction (Gherardi, Nicolini, Odella 1997, 80).

This particular affirmation underlines how risk assessment and calculability are strictly linked to ethics: the calculation lies on an assumption interpreting what can be done as the right thing to be done, the ethics without morality. Technocracy acts as a system purifying equations from those variables bringing complexity to the discourse. The vagueness of this approach was already problematized by Beck in his *Conditio Humana* in which the author affirmed how global risks were different from the old ones as they were delocalized, incalculable, non-compensable. Causes and effects as not limited in a given space, could be unpredictable; the unknown and the regulatory dissent cannot allow a risk management action, finally, these risks are no more compensable with money as the scale of the impact is impossible to be prestated or measured: prevention would be the only mean, but as previously said it cannot be planned in reality.

Risk and Meaning

Risk is still perceived as something threatening our lives from outside the invisible borders of our reality, even though since Modernity the narrative of risk as a consequence of human actions that could be minimized by collective actions was developed and became a cornerstone of our vision of the world. Cities and the web are two hyperregulated spaces, where the conceptualization of normality is usually very reductive and the perceived sense of risk very low. It is fairly stunning if we assume the fact that those places have become the arena where macroprocesses and

micro-strategies collide and adapt to one another producing new risks. These locations are perceived more and more as social laboratories in which new forms of relationality may be experimented in a safe way. Risk seems to be related to the proximity of the "other": this has been made clear during the first period of the pandemic when the only way to protect oneself was physical isolation, so the web presented itself as a second chance to keep our lives moving forward. The virus is a common denominator of the cities and web risks. Even when the web was moving its first steps, the shadow of an invisible danger was perceived as a real threat. As it happened on the web, states and communities have reaffirmed limits and borders to cut out the risk and risky situations or groups causing the rise of social exclusion rate and a more general erosion of the fundamentals of communities leaving room for alarmism and repressive policies while exacerbating the sense of uncertainty. Risk, when conceived as calculable and manageable through knowledge, materializes in the field of the unknown, unfamiliarity and difference making it impossible to generate feelings of trust and positive relationships. This dynamics insists on the conceptualization of man as a pure cultural entity:

> The sinking of modern certainties reveals how much they have distorted the perspective from which a comparison should have been attempted, to the point of making it impossible due to the alleged disappearance of the other term: the idea that the Enlightenment would have chased away all obscurity, adopted as founding myth of an entire season of humanity, had such imaginal power to convince generation upon generation of its truth, to be posed as realized or inevitable. There is nothing left to clash with, nothing to understand except a more or less marked malfunction of reason: Evil – I would add risk –, in a certain sense, has become a problem of poor organization, at the same time that Eichmann proved the exact opposite (D'Andrea 2017, 11).

The aut/aut between knowledge and risk logically abolishes a term and makes it unthinkable. Something, however, remains to mark the gap: an apparently unmotivated affliction.

The split between reason-nature and environment-body has caused an almost total removal of some risks such as that of death, a scandalous and unacceptable event for modern societies. The atomization of society is partly a consequence of the overestimation of the capacities of men. A finiteness of the world has been voluntarily affirmed, its representation a perfect immobility and not a process; if the world were conceived as a process, the category of risk could never be eliminated.

> Risk is not, in other words, the catastrophe, but the anticipation of the catastrophe. It is not a personal anticipation, it's a social construction. Today, people are aware

> that risks are transnational and they are starting to believe in the possibility of an enormous catastrophe, like radical climate change or a terror attack. For this sole reason we find ourselves tied to others, beyond borders, religions, cultures. In one way or the other, risk produces a certain community of destination and, perhaps, even a worldwide public space (Beck 2009, 18).

As risk produces a certain community of destiny (Morin) it is quite natural to think that it could be perceived as a social glue, but as it frequently happens, rational thought fails. The staging of risk causes fear and division. Reality explodes into different dimensions according to the degree of proximity to risk, increasing social conflict. For example, during the first period of COVID-19 pandemic social distancing policies were meant to contain the virus limiting geographic mobility, revoking work visas for foreign workers. Social distancing without an appropriate financial and social support lead to raise the stress level to unprecedent standards. As Beck (2009) said, it is ontological security that has regressed, more than social security. State, economy and science have not been able to offer adequate answers, for this reason it will be necessary to find new answers to the risk society. since global risks require collective responses as an expression of mutual dependence. There will be a need for a change in the relational approach to manage uncertainty: trust among people is needed. Trust is exactly, in Simmel's words, an intermediate term between knowledge and ignorance, which is the same definition of risk. Knowledge reliability has been diminishing in recent years, everyone can see that experts and governments often fail to act in accordance to its suggestions or "laws".

Finally, Lupton and Tulloc (2002, 113) ironically stated that «Life would be pretty dull without risk». In the mind of the authors, «most writing in the social sciences on risk-taking tends to represent it as the product of ignorance or irrationality. The modern subject tends to be portrayed in this writing as risk-aversive and fearful of risk. […] While there has been an extensive literature on people's perceptions of risk, little empirical research has attempted to investigate the meanings given to voluntary risk-taking: […] (for) self-improvement, emotional engagement and control». Western societies' emphasis on the avoidance of risk would be associated with the ideal of the 'civilised' body, and an increasing desire to keep control by rationalising and regulating the self and the body. Unnecessary risks would show a deviant inclination, ignorance or inability to regulate the self (Lupton 1999a). Douglas (1992, 13) described humans as «hedonic calculators calmly seeking to pursue private interests. We are said to be risk-aversive, but, alas, so inefficient in handling information that we are unintentional risk-takers; basically we are fools». The idea that risk-taking may be intentional and even rational seems unacceptable. Studies of sportsmen, addicted to substances and criminals (Lyng 1990; Stranger 1999; Collison 1996; Canaan 1996) have shown that voluntary risk-taking is often pursued to face and overcome fear, seeking excitement, and to feed the self. In this part of literature, risk-taking is represented more positively, bringing

back to light the figure of the adventurer. The social construction of risk tends to push too hard on fear and community management. Rather than focusing on the distinction between 'rational' and 'irrational' risk assessments, it would be interesting to understand something more on the meanings that are attributed to risk and which relation exists between risk and social behavior. Lupton, Tulloc (2002) study has to be discussed for its insights on the nexus between risk and self-improvement, emotional engagement and control, going forward on linking these issues with the topic of trust. A wider framework has to be found to better understand what is more than rational and knowable.

Risk and Division?

As in a very old tale, the moment in which people were experimenting the most peaceful, rich and safe period of their history, liquid fear (Bauman 2008) started drowning their lives. The fear to lose it all, the stress on knowledge and risk prevention, always inadequate in an instable world seems unbearable. The expectation of catastrophes asks for a social metamorphosis (Beck 2017). The old approach is only able to identify accountability (or culpability) for a certain risk, to create an enemy; for this reason media often start using war talks in communicating about risks and dangers. The continuous tension in cutting off and purifying "reality" from viruses is a losing game. As nature, environment, humans will always have an unpredictable, animal, natural part, it will be no use to manage risks assessing the given data. To work on the governability perspective, it is necessary to take into account the complexity of events, we might otherwise come to perceive

> a life without risk as too tightly bounded and restricted, as not offering enough challenges. These discourses are also underpinned by contemporary ideas about the importance of identity and selfhood. The notion of risk-taking as contributing to self-development, self-actualisation, self-authenticity and self-control is part of a wider discourse that privileges the self as a continuing project that requires constant work and attention. Risk-taking, in this context, becomes a particular 'practice of the self' (Foucault, 1988), a means by which subjectivity is expressed and developed according to prevailing moral and ethical values. […] Mary Douglas' (1966) work on purity and danger highlights the integral role played by conceptual boundaries in constructing ideas of Self against those of the Other. She argues that it is particularly at the margins of the body and society that concerns and anxieties about purity and danger are directed. Because margins mark and straddle boundaries, they are liminal and therefore dangerous, requiring high levels of policing and control. This is why we tend to think of risk-taking as involving the transgression of boundaries; and why there

> may be an additional sense of self-improvement when policed boundaries are crossed (Lupton, Tulloc 2002, 123).

To study risk it is not possible to analyse the mere phenomenon without focusing on the nexus existing with relations. Evidence from Lupton, Tulloc studies underlined that the staged risk can be nullified if the relation among people involved is based on trust: in other words, people know the cost of experience can vary a lot depending on the context. In the mind of the author, dialogue and trust in relations could be the real shelter against risk; knowledge can lead to manage situation we are aware about and we want to overcome, living in communion with others can trace a path through the unknown. It is important to go back to Eliasian studies on civilization to better understand the ideal of the 'civilised' body/self and open up our researches to emotions including sense of meaning, pleasure and displeasure, desires and imaginal capabilities. The re-evaluation of the body can suggest the renaissance of the Maffesolinean ethic of aesthetic, the value of proximity and the undisputable vale of in person collaboration to imagine or create a future. In order to face global risks, it would be necessary to create a new relational awareness up capable of restoring a sense of co-responsibility towards the issues examined, of bringing subjects back from the delusional world of total control and domination where most of them seem to live – or would like to, like Cipher in *Matrix*. There is no economic growth that could compensate for the environmental and social risks to which first the Western community, then the whole world have been exposed for centuries; the whole spinning of this tale went awry in the last decades and the global society seems to be moving – whether we like it or not – towards an unforeseeable metamorphosis (Beck 2017). To try and make the best of it, we should find new frameworks of thought and action focused on what was left out of the old toolbox, new strategies that can give rise, through the enhancement of relationships, to an integral process of enhancement of each individual component, both on the subjective and the collective level, where metropoles are bound to play a crucial role.

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Part II
Risk and the Pandemic

The COVID-19 Pandemic Catastrophe. An Analysis of Some Cultural Transformations Starting from the Social Theory of Risk

by *Antonio Camorrino*[*]

The COVID-19 pandemic that has affected all of humanity has definitively reinforced the era of the «second modernity» (Beck, 1986). In the first paragraph, the main social transformations that occurred in the transition from modernity to the «second modernity» with reference to the pandemic event will be highlighted. The pandemic catastrophe confirmed the predictive effectiveness of many of the scenarios described by Ulrich Beck and Anthony Giddens. It has also activated «blaming» processes such as those analyzed by Mary Douglas (1992). In the second section, the pandemic will be discussed from these different «risk» perspectives.The virus has introduced an invisible threat to the world. A threat that partly escapes the control of technical-scientific instruments. This aspect is also considered typical of the «risk society» (Beck 1986). However, it is plausible that the specific features of the COVID-19 pandemic have strengthened an atmosphere of «nocturnal re-enchantment of the world» (Camorrino 2021a), to put together the well-known formulations of Michel Maffesoli (2018) and Gilbert Durand (1960). The third and last paragraph is dedicated to this aspect.In the conclusions I wrap up the reasoning, highlighting how the pandemic threat inaugurates a cyclical temporal conception that prevents us from imagining a post-pandemic era.
Keywords: pandemic, risk, «re-enchantment», «second modernity», «blaming».

Modernity and «Second Modernity»: the Social Impact of the Pandemic

Modernity has radically changed how human beings perceive dangers, whether they come from nature or the action of other human beings. The instrument of the risk, that is the scientific calculation that an event can happen and with what probability, has stripped the events of meanings that could refer to some transcendent grounds (Luhmann 1991). Indeed, it has allowed the «colonization of the future» in a previously unknown way (Giddens 1991). Risk is one of the principal means by

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which the world is «disenchanted» if we want to apply the famous formulation of Max Weber (1919) to this reflection. The progressive rationalization of ever more consistent portions of human experience is the result of a process of «mathematization of the world» (Husserl 1936). For a few centuries the idea prevailed that this process could be linear, progressive (Koselleck, Meier 1991), and ultimately – step by step – it emancipate humanity from any threat: any danger it was thought could be averted by exclusively scientific research of the underlying causes of a given phenomenon (Douglas 1970). Modernity is founded on the ideology of progress, that is on the belief that the future will undoubtedly be better than the present and, even more, the past (Pecchinenda 2009). More generally, science has provided a new horizon of meaning to modernity, spreading the belief that humanity had come into possession of extraordinarily effective tools for solving problems and difficulties that had always made daily life very challenging: in this sense, science contributes, in modernity, to nurture a certain climate of trust in human skills and in their possibilities of transforming the world for the better (Parini 2006).

The greatest danger to which the human being is constantly exposed is that of death. In modernity, even from this point of view, a profound cultural transformation takes place. Death is no longer seen as the effect of divine punishment but as the outcome of a cause that can be sought and averted through the continuous and constant progress of scientific research (Bauman 1992). Even the State, from this point of view, with its discipline in favor of public hygiene was seen in modernity as the agent capable, ultimately, of eradicating diseases from the social body (Foucault 1963).

The COVID-19 pandemic forces us, despite ourselves, once again to revise this optimistic vision. Already the twentieth century has dramatically awakened us from the progressive illusions of modernity. World Wars I and II were unprecedented carnage. Moreover, in both conflicts, the achievements of science and technology have played a decisive role in exponentially increasing the tragic accounting of death (Bauman 1989). The Shoah, then, was a real «cultural trauma», an event that profoundly shaped the identity and collective memory of contemporary society (Alexander 2016). In other words, modernity has shown a «dark side», an unexpected face capable of activating deep emotional and moral reactions (Alexander 2013). The dropping of the atomic bomb on Hiroshima and Nagasaki then represented a wound still not healed, a material and symbolic event capable of shaping the imagery of the decades following the explosion (Caramiello 1987). Climate Change then fueled an apocalyptic atmosphere especially if we consider this phenomenon, logically, as the fallout of the successes of modern logic and not as the expression of its failures (Beck 2010a). The COVID-19 pandemic, with its fierce and sudden manifestation, reinforced this tragic sentiment, raising some issues typical of the «risk society» (Beck 1986). Indeed, even the virus, due to the way it spread so quickly and ubiquitously, was perceived as a perverse effect of globalization (Lupton 2021).

That doesn't mean that science and technology have not produced great achievements. They did it and it is good that there is no misunderstanding about this. Modernity is right to celebrate the gigantic triumphs of science. And, even if we just want to focus on today, we think about the decisive importance of vaccines in countering

the serious effects of the pandemic and the disease it spreads. Having said this, however, it should be pointed out that the particular relationship between «expert systems», science, and society in late modernity has led to a significant erosion of scientific authority (Giddens 1999). From this point of view, if we return to the example of vaccines, we think of the significant phenomenon that summarizes this state of suspicion towards science and its acquisitions: the vaccine was expected by many as the definitive solution against the pandemic. At same time it was for other individuals a source of profound skepticism, to the point that some have shown resistance to inoculation: this remarkable phenomenon has been defined as «vaccine hesitancy» (Bloomfield et al. 2021). But, from a broader perspective, the profound transformation between science and society must be considered. The sphere of action of «technoscience» has progressively expanded, so that increasingly pressing requests and doubts emerge around very different issues, from cosmetic surgery to the very delicate questions of the beginning and end of life: this articulated scenario complicates – even in the daily life – the relationship between science and society (Bucchi 2010).

The Pandemic Catastrophe from the Perspective of Risk Theory

From the perspective of the sociology of risk, the global nature of the pandemic must first be highlighted. No country in the world has been impervious to the spread of the virus. The entire world population in the presence of the virus has turned out to be a unique and planetary «'community of fate'» (Beck 2007). So much so that the attempts to counter the repeated advance of the various and feral pandemic waves seem to require «cosmopolitan» strategies, especially when one thinks of the creation and worldwide distribution of the vaccine (Lupton 2021). Several times, it has been repeated, the pandemic will end (at least its critical phase) only when a very large part of the world population will be vaccinated. From this point of view, Ulrich Beck in a pioneering way strongly suggested how much only a «cosmopolitan turn» would make it possible to adequately address the complex problems raised by the social life of the «second modernity» (Beck, Magatti, Martinelli 2005).

It is true – but this aspect has also been theorized by the sociology of risk – that different nations have taken different actions to contain the virus. This difference in health measures has probably fueled a strong «moral» climate, another characteristic of the «second modernity» (Beck 1993). In fact, it happened that social behaviors allowed on one side of the border were prohibited on the other. This has fueled tensions with respect to the alleged inequity of the restrictive measures adopted by each country.

The fact that the virus «violates the boundaries of the body», threatening the violated body with death, increases, even more, the emotive and moral reaction of the subjects towards the dangerous object and spreads magical responses or magical and rational responses together (Douglas 1970; Brown 2020). Such emotional and moral reactions are by no means to be understood – as Mary Douglas and Marcel

Calvez note – exclusively as the effect of a lack of communication between institutions and individuals. Nor are they to be understood solely as evidence of ignorance. Instead, they must be understood as a cultural response (in the sense that the «Cultural Theory» gives to this adjective) of subjects who, through their choices, strengthen their idea of the body, its boundaries, and the willingness or not to take risks: it is, finally, a very complex problem of identity construction of subjects within specific human groups (Douglas, Calvez 1990).

A fact of the utmost importance must be pointed out. In accordance with the theories of Mary Douglas we could say that the way that a community has of perceiving risk is always the reflection of a specific cultural construction: culture functions as a filter that causes subjects to attribute a specific meaning to the real or potential risk. Furthermore, this cultural perception of the risky goes hand in hand with moral attributions (Douglas 1985).

The anxiety triggered by the risk of contagion activates the «blaming» mechanism (Douglas 1992). There are, for example, those who saw the pandemic as a sort of revenge of the biosphere against the alleged excesses of modernization (Lupton, Willis 2021). Or those who found previous generations guilty, accusing them of being «Boomer removers» (Bronzini 2021). Or even those who have indicated in Asians the culprits of the spread of the virus giving rise to various episodes of discrimination (Yellow Horse 2021). The examples, from this point of view, could multiply. This is not surprising since the emergence of danger always goes hand in hand with a moral judgment: in the face of threats of social disintegration (such as those perpetrated by the virus), the social ties are strengthened thanks to processes of moralization of the danger (Douglas 1992). In other words: the material and symbolic «contamination» caused by the pandemic catastrophe pushes the human group to create social solidarity and to identify a common and shared system of attribution of responsibilities and the same target on which to place the «blame» (Douglas 1970). This state of affairs is even more significant if we consider, more generally, the growing difficulty, in the face of the exponential expansion of the technical-scientific system and its articulated relations with society, to objectively identify the division of responsibilities (Camorrino 2019; Jonas 1984). Above all, when the discernment of responsibilities becomes more and more complex in the face of new categories of risks that appear as the result of «manufactured uncertainties» (Beck 2009). In this sense – following the theses of François Ewald – we can think of the current introduction of the «precautionary principle», a formulation that indicates a weakening of the instrument of risk as a means of forecasting and the emergence of a climate of growing uncertainty. The late modern era is, from this point of view, the era of catastrophes (such as, despite us, the pandemic), and of the «irreversible» consequences of these catastrophes. In other words, the cause of these catastrophes – Ewald continues – is increasingly attributed to the power of human activity to irreversibly damage the equilibrium of the biosphere. Furthermore, in the presence of these real or potential catastrophes, the ability to predict the outcomes of a course of action or a choice to be made

becomes very limited, so that, when in doubt, the worst scenarios are always considered (Ewald 1996). The extent of the pandemic catastrophe is such as to undermine the «*imaginaire assurantiel*» typical of the modern state (Le Goff 1987, 98). On the other hand, Beck also points out how the impossibility of insuring the risks associated with typical late-modern catastrophes represents the indicator of entry into the «risk society» (Beck 1992).

In any case, in the face of the danger of contagion, the risk appears in all its moral connotations, since it is used, through the «stigmatization» of an «other» human group, as a means to strengthen collective solidarity (Lupton 1993). Moreover – according to Douglas and Wildavsky – what becomes the object of «blaming» as well as the perception of what is considered risky, is by no means the result of a «neutral» process. Instead, it is always the result of a cultural selection in which the moral judgment of what is considered acceptable or worthy of value represents a collective strategy of attribution of «blame» and, therefore, of reinforcement of the moral community (Douglas, Wildavsky 1983). The virus – I apply Douglas' reflections here – puts the «purity» of the social body at risk materially and symbolically. The degree of disorder that follows is resolved through the symbolic identification of a transgressor (or a group of transgressors) who channels the community's «blame» upon himself by exorcising the dissolutive power deriving from the «profanation» of the social order (Lupton 1999).

The «Nocturnal Re-Enchantment of the World»: the Invisible as a Threat

It is no coincidence that the pandemic catastrophe represented the ideal atmosphere for the spread and success of conspiracy theories. The virus, as a typical late modern threat, presents itself in an invisible form and escapes total control (Beck 1986). Although thanks to technoscientific tools such as tracking, swabs, and constant data collection, many advances have been made in making the «invisible» «visible». For these reasons, that is, due to the threat of a virus whose course cannot be precisely predicted based on mathematical calculations (just we think of the nightmare of variants), alternative narratives are spreading that instead justify and «explain» every single aspect of the pandemic: conspiracy theories counter the «eschatological anxiety» (Kermode 1967) caused by the sudden irruption of evil into the world. On the other hand, the unpredictability of the effects of current disasters as well as the impossibility of compensation for the damage they produce is typical features of the «risk society» and a globalized world (Beck 2008).

Illness, death, restrictions, and other material damage caused by COVID-19 are thus integrated into a broader vision of the world capable – in a distorted, transfigured, and simplifying way – of giving meaning to an otherwise psychologically unbearable event. In the face of the threat of the «end of the world», perhaps even a merely symbolic threat, all the parts that make up the scenario of this world can assume – in the eyes of the conspiracy theorists – an «allusive» life: the

parts that make up the world begin thus indicating that there is a truer reality, the unveiling of which would confirm the possibility of the apocalypse (De Martino 2002). From this point of view, it is perhaps legitimate to define conspiracy theories as a sort of «postmodern theodicies» (Camorrino 2021). In the conspirative imagery, that is, the belief in knowledge – applying here theories by Douglas and Calvez – produced and transmitted by «enclaves» antagonistic to official medical knowledge prevails. The authority of official science, by these minorities, is increasingly questioned: in the transmission of knowledge considered valid, the «charismatic role» of the leaders of these «enclaves» instead becomes key (Douglas, Calvez 1990). It may seem paradoxical but this shadow of deep suspicion on the knowledge and activity of official science – which often leads to «paranoid» or conspirative conduct – does not represent the outcome of an anti-modern force but, rather, the radicalization of the practice of suspicion inaugurated by modernity (Aupers 2012). In this sense, Ulrich Beck underlined how the impetuous advance of science has produced the regime of «inability-to-know» (Beck 2007). This formulation was anticipated by Max Weber in his well-known example of the «tram paradox»: the advancement of the rationalization process does not generate a world that is easier to understand for the subjects who live it. Indeed, the complex articulation of the highly rationalized world hinders a profound understanding of «how things work»: from this point of view, rationalization does not lead to a clarification of the existing but to its greater obscurity. However, at an ideal level, thanks to science and rationalization, *it would be* possible for everyone (the conditional is a must) to rationally know the structures that underlie the social and natural world (Weber 1919). This atmosphere of «darkness», together with the return of the invisible in the form of the virus and a preeminence of emotionality and moralizing tensions that run through society, suggests the possibility that a process of «nocturnal re-enchantment of the world» is underway (Camorrino 2021), paraphrasing the formulations of Michel Maffesoli (2018) and Gilbert Durand (1960).

This peculiar form of «re-enchantment» must also be understood as a reaction to the ever-increasing difficulties of giving meaning to death and the dead in contemporary society: it is hardly surprising, in this sense, that the film and TV imagery is a surge of undead, dead precisely with which late modernity was unable to deal (Cavicchia Scalamonti 2022). It is not excluded – wanting to apply the thesis of Antonio Cavicchia Scalamonti to the pandemic catastrophe – that the myriads of deaths caused by the pandemic (especially those that in the initial phase even prevented the celebration of funerary rites) will return symbolically in the coming decades under imaginal forms of the film industry – or through other artistic forms – which would reflect the sense of guilt not resolved by collective memory.

The significant reappearance of death at the center of the social scenario (due to the pandemic), seems to have again blurred the boundaries between life and the (threat of) death. This generates a «viscous» atmosphere, a «nocturnal» climate in which the most decisive of separations (Durand 1960) – that between life and death – is faded by the sinister action of the virus. This is a very important fact if we

consider the typically modern and late-modern process of removing death from the social limelight: it is for this reason that what remembers or alludes to death is today increasingly perceived with a feeling of shame and annoyance (Elias 1985). Death, no longer embedded in the moral horizon of tradition, «reflexively» erodes the meanings associated with it: the individual construction of the self detaches the life of the individual from the generational transmission of meanings, weakening the ultimate meaning of death (Giddens 1991). Furthermore, dangers perceived as almost completely removed from individual management – as for what concerns the pandemic catastrophe – increase the state of anxiety and reinforce «destined» impressions of one's course of life (Giddens 1990).

Even where systems of religious beliefs prevail, a weakening of belief in the afterlife is highlighted (Cipriani 2020, 194 and ff.; Garelli 2021): this state of affairs certainly contributes to a lesser decrease, even among believers, of the anguish caused by the threat of death caused by the virus. From this point of view, it should be noted that late modernity is by no means an era in which the space of religion in public life decreases (Casanova 1994). That is, the advancement of modernity has not emptied society of the support of the religious, as many of the theories of secularization preached (Berger 1999). Along with a more «traditional» way of understanding religion, other modalities have made room, such as that of the new forms of spirituality (Palmisano, Pannofino 2021) and those of the «God of one's own» (Beck 2010b). The unprecedented modality of social relationship with the sacred that Ulrich Beck discusses, it seems to be an eclectic mix between the belief in the traditional God and highly individualized declinations of the religious (Camorrino 2022). In any case, this persistence and renewed rebirth of the religious in contemporary society despite a very peculiar scenario, based on a marked «pluralism» (Berger 2014) is a further indicator of the process of «re-enchantment» underway today (Maffesoli 2013).

Conclusions: a New Time Perspective

The COVID-19 pandemic catastrophe has upset the ordinary course of social life. It can be understood – wanting to apply a concept by Berger and Luckmann (1991) here – as a «marginal situation on a planetary scale» (Camorrino 2021b).

The transformation may be so profound that it also affects the temporal conception that human subjects and groups could have from now on[1]. It is plausible

[1] The suspension of ordinary life also has other very important implications not only concerning the transformation of the temporal conception. Another related aspect of the utmost sociological importance is in fact the change of spatial perception during the pandemic and, above all, during the toughest months of the lockdown. A crucial role in building new forms of sociality during the lockdown was played by new communication technologies. For reasons of space, I cannot adequately discuss this very important question here. Both the transformation

that if that of the «second modernity» is a time based on the «anticipation of catastrophe» (Beck 2007), a post-pandemic society will not be technically possible: time may become irremediably circular. From this point of view, we are beyond the «eternal present» of postmodernity (Maffesoli 1979). The time frame will be marked by the outbreak of one pandemic to another, or from one variant to another. It will perhaps be possible to announce the end of the COVID-19 pandemic one day, but will it be technically possible to announce the end of the era of pandemics *tout court*? In any case, even if we want to be tenaciously optimistic, it is sufficient that the threat of another pandemic – even if only a potential one – persists for a circular perception of time to prevail. And it is precisely this atmosphere of «anticipation of the catastrophe» that crystallizes the circularity of the late modern time horizon. A circularity that is ontologically different from that experienced by subjects in traditional society (Eliade 1949), due to the absence of stable anchors of meaning and the widespread feeling that today, the threat of the end, always has to do with «manufactured risk[s]» (Giddens 1999).

It is therefore possible that this circularity of the time horizon has very concrete repercussions. For example, by institutionalizing, even in non-emergency times, rules and practices that stem from the pandemic state. The fact is that, if it is true that we have entered a circular time, the state of the threat becomes persistent, that is, it does not disappear with the concrete termination of the state of emergency. Indeed, it can never be said that we definitively went out from the state of emergency because a new pandemic is always possible. From this point of view, think about the anti-terrorism safety rules to be respected every time you take a plane. The pandemic catastrophe strengthened the temporal circularity of the «second modernity».

All this, unless the arrival of new variants or new pandemics is definitively averted through new technical and scientific developments. The «risk society», however, with its «reflexive» nature makes this scenario very unlikely (Beck, Giddens, Lash 1994). In this sense – we could say «metaphysically», applying here a reasoning by Gunther Anders on the «Atomic Age» – we have entered a «final time» since it is not imaginable at the moment a time that is radically emancipated from the pandemic threat (Anders 1962). In this sense, the «second modernity» will now have to deal with another dimension of permanent risk, if we can say so. The persistent threat of a pandemic catastrophe is now associated with Climate Change, terrorist attacks and economic crises (Beck 2003). From this point of view, the pandemic indicates not so much a profound social transformation as a real «metamorphosis of the world» (Beck 2016). The sociology of risk had indeed analyzed and discussed the great global health problems as one of the dimensions of the risk of the «second modernity» (Beck 2013), but the COVID-19 pandemic with

of spatial perception and the role of new communication technologies during the lockdown related to the suspension of ordinary life have been analyzed in Affuso, Parini, Santambrogio (2020). A synthetic reconstruction of this very useful research on the Italian case was carried out by Licursi (2022).

its speed of transmission and its immediate global impact on all spheres of social life, it probably represents a turning point.

That said, we don't need to be flattered by millennial sirens. The fact that perhaps we have entered a circular time – if the thesis presented here is correct – does not mean affirming anything apocalyptic. Just as we live peacefully and without particular restrictions with the anti-terrorism security rules (for example), so we will be able to live in an equally peaceful way with the security rules related to the containment measures of a sanitary nature. This is plausibly the price to pay for living in a global, free and interconnected society like ours. It remains understood that the wish is to leave behind us once and for all at least the COVID-19 pandemic, although, as I write these pages, unfortunately we cannot yet say so. The hope is to have learned new precautions to be applied globally after this real catastrophe in order to reduce the chances of a new unfortunate event of this kind. What is certain is that sociological risk theory offers a conceptual toolbox of the utmost importance for analyzing the transformations and implications of the pandemic catastrophe. This short essay is also intended to be a small contribution in this sense.

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Risk and Pandemic: COVID-19 and the Social Risk Perception of a «Cultural Trauma». A Brief Sociological Analysis

by *Elena Savona* *

COVID-19 is without a doubt a «cultural trauma», whose «moral force» feeds beliefs and behavior in the pandemic society. The crisis caused by the outbreak of the COVID-19 in our society has forced contemporary human societies – albeit in different ways – to deal with the threat – produced by an invisible enemy – to the integrity of the boundaries which are not only physical but also social, institutional, symbolic and cultural. The pandemic troubles the individual and social system and it turns into a threat for the preservation of its identity. The outbreaks of the disease caused an upheaval in the framework of the ordinary experience producing chaos and the lack of distinction: all over the world anguish and uncertainty have «polluted» the imaginary of the everyday life. New rituals – that in part still persist in the social practices – were therefore set up in the daily existence. Moreover, pandemic has unsettled the way people experienced the urban spaces. More specifically, urban spaces have suffered a process of readjustment in order to maintain order and «purity»: an «epidemic architecture» seems today to penetrate the ordinary project requirements of the experts. The social expressions of the phenomenon of COVID-19 (and of the disorder that it produced) would be, for the reasons explained above, a «return of the nocturnal». Therefore, the aim of this paper is to analyze – through a socio-anthropological perspective – the ambivalence of the coronavirus phenomenon that has emerged from social practices, behaviors, beliefs and cultural representations, which are all related to this contemporary «cultural trauma».
Keywords: risk; pandemic; contagion; «cultural trauma»; metropolis.

Introduction

The health risks linked to the outbreak of epidemics studded the human history since immemorial times. People always had to struggle for existence (Lupton 1999). COVID-19 outbreaks caused an upheaval in the framework of the ordinary

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experience: all over the world anguish and uncertainty have «polluted» – applying here a concept developed by Mary Douglas (1970) which will be deepen further – the imaginary of the everyday life. New rituals – that in part still persist in the social practices – were therefore set up in the daily existence. Moreover, pandemic has unsettled the way people experienced the urban spaces which has shown – according to Gilbert Durand (1963) – their «nocturnal» face. Part of this reflection will be thus given to the analysis of the imaginal echoes strictly connected to the risk of contagion on behaviour and social practices. COVID-19 is without a doubt a «cultural trauma» (Alexander 2012) whose «moral force» feeds beliefs and behaviour in the pandemic society. Pandemic – in the words of Carrera (2021) – breaks into the urban context whose «material structures» appears different because of the interceding of a kind of «epidemic architecture». This «moral force» is at the basis of the interrelated processes of «representation» and «imagination» (as Durkheim means the latter according to Alexander) that participate in the «construction of the trauma» experienced by a social group. In this sense, the representations resulting from this complex «process of symbolic production» would guarantee the attribution of meaning to the experience of the tragic event, reconstituting causal relationships between the events, actions, perceptions that were initially difficult to identify (Alexander 2012). The «universe of all-encompassing meanings» (Berger, Luckmann 2020) before the «original event» undergoes – according to Alexander again – an unexpected and irreversible redefinition. The «ritualization» of some gestures and procedures can be considered an indicator of the broader process – albeit still in its germinal stages – of the «re-memorialization» of the biography of a community, as well as the «redefinition» of its identity (Alexander 2012). For that purpose, the theoretical tools of the sociology of the imaginary[1], together with those of the sociology of risk and the neo durkheimian studies, will allow me to have a look at the «profound structure of meaning» which underlies the visible and material dimension of the society (Secondulfo 2019).

[1] It's necessary to point out that the use of the term «imaginary» – and the application of the tools of the sociology of imaginary to the pandemic as well – in anyway has the aim to devalue the seriousness and tragedy of the consequences of the COVID-19 emergency. It's likewise important to give the reader a short but helpful definition of the «imaginary». The imaginary is not something fantastic or non-existent, but it's rather the «symbolic representation of reality» – as Gilbert Durand (1963) explains – which consists in the whole cultural products that, together with the emotional dimension, shape the everyday life of individuals and social groups: myths, symbols, representations, worldviews, values and beliefs culturally determined. Imaginary is for these reasons the substratum (invisible dimension) of reality (visible one) from which the meanings to be attribute to the social experience are drown. This tools, which will be mostly deepen in the last two sections of this article, allows the analysis of a complex phenomenon, as the COVID-19 pandemic is, in which individuals and social groups are «emotionally involved» (Elias 1956).

Health Risk Perception: Anguish and Uncertainty

The COVID-19 health emergency takes place in the list of «new risks» that punctuate the scene of the «world risk society». These risks are characterized – according to Ulrich Beck – not only by the «unpredictability» of the extent of any tragic consequences, but also by the extreme difficulty in locating the source of the threat, and therefore, in recognizing who is responsible for it (Beck, 2007). A clear example, in this case, is the problematic nature of the identification of patient zero in our globalized society. This state of affairs, produces the worsening of the feeling of uncertainty and anguish especially where the opinions and the advices of experts, belonging to the same scientific community, seem in stark contrast (Giddens 1990). Moreover, the scientific institution has suffered a strong social pressure linked to the difficulties of quickly giving certainties to people about the new virus. Thus contributes to the process of the «social construction» (Berger, Luckmann 1979) of the perception of risk which the new media and social networks partecipated in. These last became responsible of the over-abundant transmission – even in this case characterized by a «viral» origin – of an heterogeneous universe of information[2] (Gruzd et al. 2021; Bloomfield et al. 2021). Although, the techno-scientific imaginary that seems to have emerged with a greater strength from the current health crisis, shows that it is widely ambivalent. In fact, if on the one hand this imaginary is littered with narratives according to which science is suffering the reshaping of its legitimacy and authority (Lyotard 1979); on the other hand, there are also different narratives which are characterized by having a deep trust in science. These narratives, for this reason, recognize to science its «emancipatory power» (Le Breton 2012). The constitutive ambivalence that is renowed to the techno-scientific imaginary, also characterized each social object. Therefore, to analyze the coronavirus phenomenon seems to be inevitable to reflect on both its visible and invisible dimensions which returns – as Maffesoli (2013) insists – «reenchanted» as well as «sticky», «polluting», «undifferentiated» (Grassi 2020) and for that reason «threatening». It means that, in order to a better understanding of phenomenon and the development of social action plans in relation to a threat or to the outbreak of a danger, the statistical-scientific and technical risk analysis must be supplemented by the exploration of the social «emotional response» (Lupton 1999). In other words, it is a question of analyzing and considering the state of mind and beliefs of individuals and social groups as regard the risk covered by the analysis. For these reasons, the research of the risk perception is suitable for grasp the causal relationship which brings together the social and emotional directions to action with the acceptability of this risk (Cerase 2017). Indeed, this would be to investigate how the risk of contagion was perceived and its acceptability in a particular social context. For this purpose,

[2] The information «exuberance» has been defined by scientific literature with the term «infodemic». This theme – that does not find room to be debated with the right rigour – has been deepen in a forthcoming paper (Camorrino, Savona 2022).

decisions and communicative strategies have a prominent role to play. So, if, according to Cerase, Douglas has been thinking about the communicative dimension as a source for a «symbolic exchange», the way in which the risk should be communicated by institutions will take into account the universe of values and the normative dimension which pertain to that social and cultural context. In other words, this would be to reflect on the moral implications that this «message transmission» will have, in the last analysis, on the social structure (Cerase 2017). According to the socio-cultural perspective on risk adopted by Douglas (1992), tolerate and conceiving the risk, and therefore the subsequent direction to action, do not only depend upon complex processes which pertain to the psychological sphere of individuals and to what other members of the collectivity they belong decided to do about it. But also, this process of decision making is the result of the institutional risk communication and, above all, the expression of the stage of «moral concern» transmitted by the institutions themselves. In this sense, the analysis on risk perception and uncertainty strictly linked to the possibility that a danger became real and to the individual and collective strategies of risk management, cannot be reduced – as Douglas (1992) clearly explain – as a mere interpretative and techno-cognitive effort. But rather, the risk perception merge together with the cultural representations of organizations and institutions of a peculiar social group. What has been said, appears relevant for the analysis of the decision-making and accountabilities processes.

Contagion, «Impurity» and «Abjection». A Socio-Anthropological Analysis of a Contemporary «Cultural Trauma»

From the early stages of pandemic, the scientific production on the coronavirus disease has been intense. Sociologists attempted to inquire reality which was marked by the sudden disruption of the social order. This paper as well has the aim to analyze coronavirus phenomenon and its effects on the social experience, trough particular and interesting neo durkheimian perspectives. Some theoretical tools from Mary Douglas, Julia Kristeva and Jeffrey C. Alexander's works will be applied to the pandemic emergency in this section.

The crisis caused by the outbreak of the COVID-19 in our society has forced contemporary human societies – albeit in different ways – to deal with their own limits and boundaries which are not only physical but also social, institutional, symbolic and cultural (Pfaller 2020). Individuals and social groups all over the world have had to deal – in an unprecedented way – with the threat produced by an invisible enemy. The purity of the individual and social body and the purity of the boundaries in charge of maintaining its integrity have therefore been the subject of the attention placed at the foundation of rational risk management strategies. Think only, as an example, to the different medical devices as instruments for sanitization, or consider the use of protective face masks and to the management and the readapting of spaces through

measures of interpersonal distance, which still today – albeit to a weaker measure and in a new phase of coexistence with the risk of contagion – it leads the social action in the experience of everyday life. These strategies for managing the body as «symbol of the social structure» – as Lupton explained – they draw their meanings from a typically late-modern imaginary of the body based on the principle of «self-regulation» and control of the boundaries that separate it from the Other and, therefore, from the danger of profaning those boundaries. The virus, in this sense, as a sneaky and contaminant object it brings with it the anxiety and disgust produced by the loss of control of what has escaped from one body and threatens to penetrate into another, thus becoming overwhelmingly visible (Lupton, 1999). However, the closure of the individual and social body and the closure to its borders to the outside was joined by a strong sense of community which has emerged during the first lockdown: togetherness helped people to deal with something that was still unknown. Individuals faced with a new form of collective suffering: «In many places, a sense of crisis, with a trauma potential, began immediately» (Demertzis, Eyerman 2020, 432). COVID-19 pandemic, as a «traumatic» event, it would appear having enhanced the rise of the need for re-composition and redefinition of the boundaries in which order and security would be guaranteed. The «moral certainties» – as Jeffrey Alexander (2012) said – seem to be challenged by the «social pain» and the «symbolic and emotional force» that the pandemic carries with it. These last, indeed, would weigh on the preservation of the «collective identity» integrity. More precisely, the processing of the social experience of a «cultural trauma» occurs – according to Alexander (2012) – thanks to the intercession of the «symbolic representation» which has emerged by a «process of signification», that is to say, a kind of process of common understanding of the «collective suffering». This last flows into rituals and daily gestures, but also in the scientific and artistic production generally designed and in the institutional decisions and mechanisms for the preservation and defense of the «collective identity». In fact, faced with the threat to the integrity of the collective identity, the social group (or a human society, thinking on full-scale) is convoked to reorganize itself and to rethink boundaries (Alexander 2012; Douglas 1970; Kristeva, Lechte 1982). This culturally determined process takes into account people «emotional response»: risk perceptions and social reactions to the uncertainty produced when a catastrophic phenomenon occurs (Lupton, 1999). The traumatic process, by which the «collective memory» is continuously redefined and reshaped, lays the foundations for the establishment of a «shelter of meaning» (Camorrino 2018). This last is able to get meaningful the experience that individuals and social groups have of an extraordinary event, or – in the words of Berger and Luckmann (1966) – this kind of repair allows to give meaning to a «marginal situation». In fact, the troubles to a specific «symbolic universe», and therefore to collective identity, are the fundamental precondition for the representation of a devastating, tragic and catastrophic event as traumatic (whether it really happened or it is just «imagined», perceived and therefore experienced as a potential threat), as traumatic (Alexander 2012). The «collective memory» is the result of – according to Maurice Halbwachs – the sharing of the experience, imageries, memories, symbols

and emotions that inhabit in those people who have lived this experience and recognize them. In this sense, the «collective memory» – according to Halbwachs (1968) – it feeds on «individual's memories» – that even if these came from a personal experience – these are made by a complex of emotions, reflections and visions that are determined by the social, cultural, spatial and temporal context. In other words, as it is clearly synthesized and explained by Gianfranco Pecchinenda (2008): individuals and social groups-built narratives and use them to safeguard their identity. For this purpose, COVID-19 as a contemporary «cultural trauma» shows itself highly ambivalent: if in one way – in the terms used by Alexander (2012) – it is a source of ideals chimeras, in the other it results extremely credible to fall down in fatal and wasteful scenarios. All these scenarios, narratives, visions, cultural representations and imaginaries, make up different «discourses on risk», that is to say its «strategies of normalization» (Beck 1992 cit. in Lupton 1999) which are built on the problematic relationship with the Other. Despite to the threat to the integrity of the individual and collective identity's boundaries, fears and anxieties, connected to the source of the danger, produce mechanisms to define what Other means for all the members of a social group, and what is different from them, by channeling these feelings towards a «scapegoat» (Douglas 1970). This kind of process ingenerates the rejection and the expulsion of the latter, or, in simple terms, the removal of the «source of risk» which is above all a threat to the integrity of the body and its boundaries (Lupton 1999). In this sense, the vision of Michel Maffesoli (2009) – the «crisis» opens up to the emergence of an «energy», therefore of an emotional force – or to use a durkheimian concept, a form of collective «effervescence» – whose symbolic power is given by the «moral force» linked to the experience of a «cultural trauma» (Alexander 2012). This last reaches its climax in the setting up mechanisms of «blaming» (Douglas 1970) and processes for the «stigmatization» of otherness (Pfaller 2020). At this point of reflection, COVID-19 as unknown threat, is therefore the «abject[3]», the «impure», the potential heatsink of the solidarity and the social order, and at the same time the «revealer» – according to Maffesoli (2009) – of our human condition (Lupton 1999). The «abjection» – from the perspective of Kristeva – it is the danger produced by the unmanageable closeness of what is not «thought», «tolerate» and considered as something «possible» (Kristeva, Lecthe 1982), to what is instead – in the terms of Douglas (1970) – «familiar», classified within cultural interpretative categories shared by a community. Sometimes the otherness and the diversity get away from these classifications and take place on the edge of one or more categories. When the otherness deals with what is known and «familiar», and it makes it «polluted» (Douglas 1970), «hybrid», different from what it was before, and at the same time what is now polluted transform itself, by

[3] This concept was developed by Julia Kristeva and then applied – as an analytical category – to the coronavirus phenomenon by Larissa Pfaller (2020, 821). The aim of the last-mentioned was to analyze and grasp, whether and how, COVID-19 could play a role in the «exclusion and stigmatization» processes, meant as «forms of social abjection». For further readings on this topic, see Kristeva and Lechte (1982).

encouraging processes for identities redefinition (Lupton, 1999). This proximity of the «abject» – for these reasons – shakes the foundations of the «universe of meaning» (Berger, Luckmann 1966) and of the horizon of meaning from which people draw the meanings to give to the experience of the abject, that it means an «extraneous» that worries and «disgust», threatening to create chaos and disorder on the foundations of individual and collective identity. This reaction, which Kristeva defines «abjection» (Kristeva, Lechte 1982), is a peculiar strategy for the defense of the cultural identity and to menage the relationship with the «impurity», in order to avoid the risk of «pollution» (Douglas 1970). The abject and the abjection can be considered, putting together the perspectives adopted by Julia Kristeva and Mary Douglas, as cultural products and instruments by with menage chaos and indistinctness produced by a form of physical, symbolical and identity pollution. It's abject and impure, what appears «ambiguous», «nocturnal» – according to Gilbert Durand (1963) – and therefore, «sticky» and «obscure» (Grassi 2020): it troubles a system that has well-defined boundaries, turning into a threat for the preservation of the identity of this system (Kristeva, Lecthe 1982). The violent attack by the COVID-19 to our daily experience represents a «return of the nocturnal» (Maffesoli 2013), that is to say the coming back of the chaos and «compromise» (Durand 1963). This state of affair is more than ever visible in the different strategies of coexistence with the virus which the contemporary societies have progressively adopted. In fact, it is possible to consider the lockdown, the containment measures adopted from government and their recommendations to avoid and reduce the risk of contagion and, in the end, the normalization of this risk, as forms of a compromise with the abject and impure in the current pandemic society.

The «Nocturnal Face» of COVID-19: Experience Everyday Life in the Urban Space

The emotional response to the risk of contagion takes its form from the social practices and in the experience that individuals and social groups have of the pandemic phenomenon. The following consideration represents, in this sense, a sociological reflection attempt with regard to the next questions:

- What is the social risk perception in the pandemic society? Does the experience of the urban spaces play a relevant role in this sense?
- What role does the social experience of urban spaces play in the process of the construction of the collective memory? And what role does it play in the process of crystallization of the daily rituals connected to the COVID-19 phenomenon?

As stated above, human history told about epidemics with which different societies have to face with, and especially it told us about the different relationship that these

societies built up with disease and death. Uncertainty has always been, therefore, an unavoidable condition of the social experience. In the traditional society the death, above all, was made visible to the most and its experience was considered normal. On the streets of villages and cities, in fact, death invaded the squares: no territorial boundary, therefore, separated life from disease and death, but rather the passage of time (Lupton 1999). Once it gets dark, into the realm of darkness and «indistinctness», anguish and fears thickened. It is the reign of the «nocturnal» – according to Durand (1963) – that is to say, the reign of the «monster» and unknown, the wickedness and disorder produced by environmental risks or by any possible attack of malignant and «impure», so, «pollutans» forces, as it is explained by Douglas (1970). At this point, it is perhaps possible (tragically) to observe and identify some similarities with the current pandemic society in which, as I will try to explain, disease and death are no longer confined to the limits of the social imaginary (Camorrino 2017). During the COVID-19 health-care emergency public spaces have undergone numerous readjustments in the name of social distancing. Different health safety measures were adopted by governments all over the world in order to maintain purity and order: these last are two of the inspiring principles of the «diurnal» imaginary, that is, as theorized by Durand (1963), of the realm of «antithesis» a, «separation» and «distinction», was to contain the risk of «pollution» of the «pure» by the «impure» (Douglas 1970), as well as to reduce the degree of disorder and «indistinction» between the visible dimension and the invisible one (Durand 1963). In fact, the daily life experience had radically changed. In other words, in the first stage of the pandemic above all, the relationship that people have with the Other had changed. The urban context as well, it's been experienced in a different way, playing a role in the process of social construction of risk perception. The approach to architectural and urban design, in fact, seems to have undergone adaptions: only think about the people growing interest – noticed by the experts and insiders – in open spaces, especially with regard to homes (balconies and terraces, for example, become an unavoidable precondition at the time of the home purchase). The design, therefore, has been rethought with the aim of answer to that need. Also think about the numerous requirements for the realization and the enforcement of air exchange systems and installations of controlled mechanical air circulation systems. These needs have generated well-established practices and strategies for managing the risk of spreading viruses and pollutants, as well as – applying the socio-cultural perspective of Douglas (1970) to the danger and risk of «pollution» – «rituals of purification» (or «separation») in a late modern style. Further to what has been mentioned, lights and shadows, what is visible and what is not, were mixed together in the urban space as well as in the bodies. Just think about the urban lighting during the first lockdown: while the cities were empty and silent, an invisible threat invaded the streets – Carrera (2021) describes – only few dim lights were turned on. It could be – by applying here the sociological categories of the imaginary – a sort of a scary and threatening «return of the nocturnal» (Maffesoli 2013). These issues mark the collective experience of the trauma, crystallizing in the collective memory, which is

in this case a nation-state, whose territorial borders safety and the entirety of those identity and symbolic returned to be a fundamental property. The boundaries of the cities, as well as those of the body, represent – in the vision of Mary Douglas (1970) – the place of «dangers», «vulnerability» and «disorder» which came from what is different and «Other» (Lupton 1999). In other words, all these boundaries are threatened by everything contributes to the risk of violation. The social dynamics of in-group and out-group, center and periphery, the progressive marginalization of disease and death and the confinement and isolation in hospitals and cemeteries, generally located in the suburbs of cities and metropolises, direct product of the modernization process, they are the perfect example in this way. The COVID-19 pandemic, for these reasons, has made the relationship with otherness more problematic than it was before. Thus, it contributes to widen the gap of social inequalities, especially with respect to the access – already limited – to health services, threating the integrity of social solidarity (Pfaller 2020). In conclusion, it emerges from what has been said that the analysis of the «the surface of things» has been – as it is explained by Secondulfo (2019) – necessary to better understand the «deep structure» of the social reality.

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Part III
Risk and Technology

Privacy Violation Risk in COVID-19 Digital Contact Tracing: Italian App Users' Perception Versus App Designers' Conceptualization

by *Dario Pizzul*[*]

During the COVID-19 pandemic, digital contact tracing (DCT) has been a largely discussed topic mainly due to privacy and data protection implications. This contribution explores to what extent these issues have been pivotal in the development of DCT in Italy. Through 17 interviews with experts who designed and implemented the app, it emerges that privacy is indeed a core element in the design of DCT. These findings are compared to the perspective of the users, explored through the analysis of about 23.5 thousand app reviews. The reviews, scraped from the Google Play Store, are initially analyzed through basic automatic techniques. Then, manual thematic analysis is performed on reviews dealing with privacy. It emerges that users do not seem to care much about it. These findings are coherent with several theoretical contributions arguing that users do not always have a full understanding of the privacy implications of the technology in use.
Keywords: digital contact tracing, pandemic, privacy, data protection, Immuni.

Introduction

Since the early days of the COVID-19 pandemic and until vaccines' development, the attempts to contrast the spreading of the coronavirus have been mainly non-pharmaceutical interventions (NPIs), such as masks, physical distancing, and digital contact tracing (DCT). Among the many NPIs, DCT is one of the most discussed ones. DCT consists of a set of procedures and digital technologies developed to support the standard manual contact tracing approach which quickly became infeasible due to the enormous number of people affected by the pandemic (Ferretti et al. 2020). In its most widespread configuration, this solution relies on smartphone apps to track and notify contacts of positive people in a more efficient way. Scholars

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from several fields analyzed the benefits and the harms of such intervention, considering its technical, epidemiological, and ethical implications (Ferretti et al. 2020; Vaudenay 2020). Privacy is among the issues that received a large share of attention from social science scholars, as well as ethics ones (Morley et al. 2020; Sharon 2020). This issue was also of utmost importance for the several actors involved in the development of DCT, namely national public institutions, private companies, and groups of experts. Ultimately, the matter of privacy regarded also DCT users' perspectives and behaviors towards this kind of solution.

This work builds on and aims at contributing to the stream of literature on users' perception of privacy, which argues that they do not usually have full correct information on it and that a discrepancy from attitudes and behaviors may emerge (Acquisti et al. 2015). Furthermore, studies on the idea that privacy is not just an individual matter, but a group one – and perhaps even a public good – contribute to enriching the theoretical background of this contribution (Sætra 2020).

The main goal of the whole work is to explore how experts and users involved in DCT in Italy dealt with privacy related to this technology, moving from the idea that experts could present deeper concerns about privacy and pay more attention to it, compared to end-users. To explore this issue, which is part of a broader PhD project, 17 semi-structured interviews have been conducted with people who have been involved to different extents in DCT development and implementation.

To enrich the empirical materials, nine relevant official documents and statements have been analyzed. Furthermore, users' perspective on DCT is included through the analysis of app reviews. 23.278 reviews have been scraped from the Google Play Store, covering almost a year since the launch of the app in June 2020. Preliminary automatic analyses on the most relevant topic mentioned in the reviews have been performed. Subsequently, manual thematic analysis has been performed on a second database containing reviews just on «privacy», to understand the users' perception of this topic.

The interviews and the document analysis show that privacy concerns guided the selection process of the DCT app. Furthermore, privacy was among the most important issues for the actors involved in this process. Conversely, the analysis of reviews indicates that users do not discuss privacy that much.

In general, users seem to underestimate how certain DCT configurations could harm privacy, while experts have the time and competencies to make deeper considerations. This evidence appears coherent with the considered literature, emphasizing the role of experts when dealing with privacy, which appeared to be handled more like a collective matter than just an exclusively individual one in this situation.

DCT: a Promising Technology

Contact tracing is a quite standard procedure with infective diseases. It requires human operators to get in touch with positive patients and try to register their close encounters during previous days (World Health Organization 2020). Such a procedure is extremely difficult with a high and growing number of cases, and it also needs to cope with the fact that patients may not recall all their close encounters. Digital technologies could solve both these problems since smartphones could communicate one with the other through Bluetooth and record proximity and time of exposure (Ferretti et al. 2020).

Such technological solution seemed promising to many computer science experts in different EU countries that started developing different protocols for implementing DCT on mobile devices (Vaudenay 2020). Furthermore, many national governments around the world found in DCT a viable NPI that could help in the fight against the virus (O'Neil et al. 2020). The private sector joined the development of DCT as well, with the two tech corporations Apple and Google in the front, that developed a joint framework for better integrating DCT in their operating systems (Google 2020). DCT has been implemented throughout the weeks and months of 2020 in many countries at the worldwide level, but Europe was the most active context. In Europe, many debates and controversies happened in trying to find the most proper configuration of this new digital system (Vaudenay 2020). Among the several discussed topics, a quite hot one clearly emerges: data protection and privacy (Sharon 2020; Vaudenay 2020).

Privacy and Data-Protection of DCT: Pivotal Issues for – almost – Everybody

Privacy and data protection can be considered the main concerns of the many different actors involved in the development of DCT technologies in Europe. The experts that worked on the protocols for implementing tracing functionalities on mobile devices mainly focused on minimizing privacy and security risks (Inria, Fraunhofer 2020; Troncoso et al. 2020). Many feared that DCT technologies with no specific limitations and task-oriented features could harm people (Troncoso et al. 2020), for instance becoming surveillance tools in the hands of governments.

National public institutions largely prioritized these two elements as well. For instance, in Italy, the Government created ad-hoc experts' groups to evaluate data protection features and privacy implications of the intervention (Ministro per l'innovazione 2020a).

The two main private companies involved in the issue, namely Apple and Google, declared how «privacy, transparency, and consent are of utmost importance» when dealing with these kinds of technologies (Google 2020).

What about the users of the apps? A quite significant number of academic contributions explored how users relate to this technology, mainly through

quantitative studies (Zetterholm et al. 2021). With respect to privacy and data protection concerns, it has been shown how they could negatively impact people's intention to use tracing technologies during COVID-19 (Altmann et al. 2020; Zetterholm et al. 2021). From a large-scale qualitative project it emerged that, when using the CTAs, users perceive a sort of tradeoff between their privacy and the greater good of an additional weapon against the virus (Lucivero et al. 2021). Conversely, a choice-experiment showed how data protection concerns were not as impactful on the decision to use the app as shown by other studies (Horvath et al. 2022). Contributions relying on digital methods and focusing on the analysis of users' reviews of CTAs showed how privacy and data protection were among the most discussed topic (Elkhodr et al. 2021).

Privacy in the Social Science Literature

People and Their Privacy in the Digital Domain

Academic literature largely reflected on the issue of privacy related to the users of technologies. When dealing with digital technologies, it emerges that great uncertainty surrounds users with respect to the use of their personal information online (Acquisti et al. 2015). Not being fully aware of how personal data is managed in the digital domain contributes in decreasing users' concerns about possible data mismanagements and it also influences each one's privacy preferences (Acquisti et al. 2015; Furini et al. 2020). Many studies have shown how, yet without identifying a shared explanation, such uncertainty reflects also in users' attitudes and behaviors toward privacy, which seem to contradict one with the other (Barth, de Jong 2017). Through the expression «privacy paradox», some scholars argued how «on the one hand, users express concerns about the handling of their personal data and report a desire to protect their data, whereas at the same time, they […] rarely make an effort to protect their data actively» (Gerber et al. 2018, p. 227). Other studies, still recognizing this discrepancy, refuse to consider it a paradox, suggesting how attitudes toward privacy are usually broader considerations by users, while behaviors are more context-specific decisions (Kokolakis 2017; Solove 2020). In general, privacy regulation is a complex topic, which relies on another key debate: whether privacy should be considered as an individual or collective matter.

Privacy: an Individual or Collective Matter?

Traditionally, privacy has been considered as an individual matter, probably building on the liberal tradition of individualism that predicates ownership of both material and immaterial properties, such as personal information (Helm, Seubert 2020; Huey 2012). This individualistic conceptualization of privacy also influenced its protection mechanisms in the online word. Each person has the right to choose either to accept

or not privacy terms and conditions to opt-in online services, which often translates in being overwhelmed by long privacy notices and feeling obliged to accept them in order to participate in the online world (Fairfield et al. 2015).

In contrast to this perspective, some contributions suggested how reflections on privacy should start focusing also on contextual elements around the individual and extend its boundaries toward groups of people, considering privacy as a collective matter (Coll 2012). A collective view on privacy was already present decades ago (Regan 2002), but it grew most recently in the fields of law (Fairfield et al. 2015; Sætra 2020), philosophy (Floridi 2017; Taylor et al. 2017), and many more. With respect to social sciences, a less individually centered perspective on privacy emerged as strictly connected to the networked self that develops through new relationships happening online. A relational understanding of autonomy also involves a redefinition of privacy which is not exclusively based on the idea of individual protection of personal information (Helm, Seubert 2020; Huey 2012).

The Research Design

The main goal of the contribution is to further explore the pivotal topic of data protection and privacy with respect to DCT solutions in Europe.

A case study on the Italian app Immuni could help to reach this aim. Italy is a relevant case to study because it has been one of the EU countries most forcefully hit by the pandemic in the early months of 2020 (Our World in Data 2022). Furthermore, it is one of the first countries to develop a contact tracing app following the main tracing protocol (the Apple and Google's one) that was later implemented by most other EU countries (European Commission 2022).

To explore the matter of interest, two main perspectives are analyzed: the perspective of experts and professionals involved in the development process of DCT in Italy, and the perspective of the users of the technology.

The research question for this work is therefore the following: how did experts and users, involved in digital contact tracing in Italy, deal with privacy related to this technology?

Based on the suggestions that come from the analyzed theoretical contributions, and despite some of the findings of the previously considered literature on DCT, a general hypothesis that guided the work is that experts pay more attention to privacy and present deeper concerns about it compared to end-users of DCT.

The perspective of experts involved in DCT in Italy has been mainly explored through 17 semi-structured interviews. As pictured in Table 1, four interviews were realized with members of the Government's taskforce in charge of evaluating the different DCT solutions: two members from the technical group number 6, and two members from the privacy group number 8. Additional three interviews have been realized with experts who participated in the development of the tracing protocols

cross-nationally. The interviewees under the category «App» are actors who contributed to the development of tracing solutions in Italy. The perspective of two computer science scholars, who did not participate in the development of the app but analyzed its technical features, has been included to broaden the technical understanding of the issue. Furthermore, four local health-care authorities' members, from two different regions, were interviewed to explore how the app was used in their daily tracking activities. Finally, a short interview was realized with a professional from the European Commission who was involved in the process of setting guidelines for DCT at the continental level.

The interviewing process run from January 2021 to July 2021. The recruiting of these interviewees largely happened via e-mail; most of the addresses of these relevant actors were available online, while others have been obtained by interpersonal contacts. Almost all the interviews have been realized through video or phone calls, an inevitable choice due to the still largely widespread coronavirus. Just the interview with N_3 was face-to-face since it was realized during a visit to the healthcare authority's office. Questions were always sent in advance due to the complexity of the topic.

Task Force		**Protocol experts**	**Developers teams**	**Computer Science experts**	**Local Healthcare Authorities**	**EU**
Technical Group (6)	Privacy Group (8)					
Int. A	Int. C	Int. E	Int. G	Int. L	Int. $N_1 + N_2$ Int. N_3	Int. P
Int. B	Int. D	Int. F	Int. H	Int. M	Int. O	
			Int. I			

Table 1 - Interviewees divided by category

To expand the empirical elements on institutional actors' and private firms' perspectives on privacy, nine relevant official documents and statements have been analyzed, as reported in Table 2. These documents offer additional insights on the matter of interest, as well as fully new perspectives that was not possible to gather through interviews, such as the one from Apple and Google.

Apple and Google	Joint statement – April 10, 2020
	Joint statement – May 20, 2020
Institutions	Ministry of Innovation hearing – April 30, 2020
	Ministry of Innovation hearing – June 3, 2020
	Ministerial Order for task force establishment
	Commissioner Order for Immuni implementation
	Task force's technical group report
	Task force's privacy group report
Privacy Authority	Immuni's implementation authorization

Table 2 - Relevant documents for the analysis

The users' perspective is explored through a less conventional, but largely effective research strategy. Previous contributions showed how users' reviews posted online are valuable sources of information since opinions are expressed through them (Cheng, Jin 2019). 23278 reviews have been downloaded from the Google Play Store through a custom-made scraping script[1], covering almost one year period, from the app launch in June 2020 to the first days of July 2021. A Python script has been coded to clean the large dataset and perform preliminary analyses on the most relevant topic mentioned in the reviews. The N-gram technique, a basic Natural Language Processing technique (Zečević et al. 2021), was applied to obtain the most recurring groups of three words (i.e.: trigrams). Through this procedure, the general topics of the large dataset of reviews were grasped. Subsequently, a second database of 1102 reviews has been created from the original one, including just the reviews containing the word «privacy». On this second database, following well-established procedures in the digital methods literature (Caliandro, Gandini 2019), inductive manual thematic analysis has been performed.

Some limitations should be acknowledged with respect to the methodology of this contribution. First of all, it was not possible to gather first-hand material from two key players, such as Apple and Google. Apple never answered to the emails, while Google Italy provided no further information than the official statements. Then, with respect to users' reviews an issue of representativity should be stressed. The analysis focuses just on the reviews from the Google Play Store, since the designed scraping tool could not get reviews from the Apple Store. Furthermore, the users that post reviews are just a part of the greater group of users of the app. Therefore, the findings from these materials cannot be generalized, also because they focus just on a specific country context, but this is a well-known element when doing case studies (Yin 2018).

[1] Most of the code was scripted following the Google play scraper available here https://www.npmjs.com/package/google-play-scraper, last accessed August 2021.

Results

The Experts' View on DCT privacy

The actors involved in the task force of the Government for evaluating the different DCT solutions explained through interviews what also clearly emerged from their official reports (Ministro per l'innovazione 2020a, 2020b): privacy and data protection were pivotal in evaluating different approaches to the tracing technology. *Interviewee C* explained that the main issue that group 8 covered was the data management process of different tracing solutions: how much they focused on privacy, and whether they followed the national and supra-national legislation on the topic.

The debate on privacy, of course, also characterized the activities of the group of experts working on the technical protocols for DCT outside the single national contexts. As already mentioned, privacy was one of the key elements of all the different solutions (Inria, Fraunhofer 2020; Troncoso et al. 2020). *Interviewee E* clearly explains how data management and privacy set strong value boundaries in designing the technology.

> [We] agreed that in the spectrum between more data and less privacy, and between fewer data and more privacy, we should have pushed things as hard as possible towards minimizing data and maximizing privacy, because basically the benefits [of DCT] were uncertain, but the privacy damage, had we made that step, was certain.[…]Our position was that we needed to develop a protocol that could minimize by design, by default, the data gathering.
>
> Interviewee E

Interviewee G, who was part of the development group of Immuni, confirms that «the discussion on which kind of technology to employ was […] a discussion around the issue of privacy».

Similarly, analyzing how DCT developed in Italy, one of the two computer scientists that were interviewed recognizes a pivotal role to this matter.

> At the end of the day, I think that the choice between the different solutions and protocols came down to a choice guided by the fear of data manipulation, privacy, and the shadow of monitoring, or more precisely, surveillance.
>
> Interviewee L

One of the members of the local healthcare authorities confirms the centrality of privacy, suggesting also that it largely limited the potential use of data in the fight against the pandemic, as also discussed in academic contributions (Sharon 2020).

> Unfortunately, Immuni played no role. Because of its features it could not share any data. Being compliance with users' privacy granted that no information could be gathered. Therefore, since we could not have information from Immuni, it was not useful for us.
>
> Interviewee N4

The Users' View on DCT privacy

Findings from the General Database

The extraction of most recurrent trigrams from the large dataset of all the reviews does not reveal any insights on the matter of interest. The top20 trigrams do not contain the world privacy, or any other concept that refers to the issue of data protection. As Table 3 shows the top20 trigrams may be grouped in five categories, covering more technical related issues, positive or negative evaluations of the app, and issues with positive encounters, but with no relation at all with privacy and data protection.

Category	Trigram
Technical issues	google, play, service consumare, troppo, batteria *(use, too much, battery)* dire, notifica, esposizione *(say, exposure, notification)* notifica, esposizione, attivare *(exposure, notification, active)* abilitare, notifica, esposizione *(enable, exposure, notification)* attivare, notifica, esposizione *(activate, exposure, notifiction)*
Useful	potere, essere, utile *(can, be, useful)* app, ben, fare *(app, well, done)* fare, molto, bene *(app, very, well)* app, molto, utile *(app, very, useful)*
Useless	non, servire, nullo *(useless)* non, servire, niente *(useless)* a, cosa, servire *(what, is, for)*
Positive contacts	essere, stato, contattare *(being, contact)* contattare, persona, positivo *(contact, person, positive)* stato, contattare, positivo *(be, positive, contact)* persona, risultare, positivo *(person, tested, positive)*
Other	dovere, essere, obbligatorio *(must, be, mandatory)* cosa, dovere, fare *(what, need, do)* non, capire, funzionare *(not, understand, work)*

Table 3 - Top20 recurring trigrams grouped in categories

Conversely, when considering the single most recurring words, as Table 4 in the appendix shows, the word privacy appears.

Findings from the Privacy Specific Database

When considering reviews that deal with privacy, as Figure 1 pictures, it emerges that the ratings associated to the reviews are largely positive, with most of the users giving 5 stars votes to their comment covering privacy.

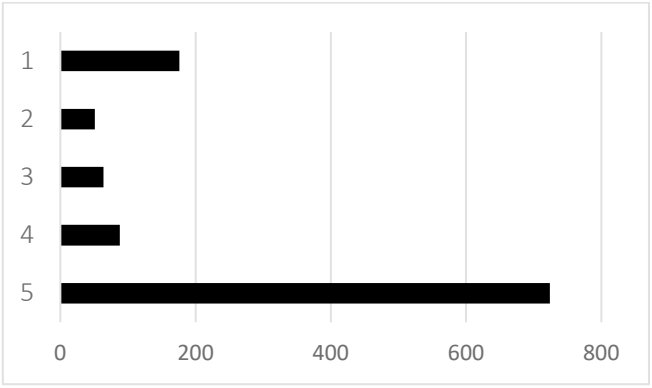

Figure 1 - Number of reviews on privacy by each rating

Through the manual thematic analysis, it emerges that users do not seem to value privacy that much, or, at least, to value more the benefits that could come from less limited tracing solutions in the fight to the virus. Some consider Immuni to be too much focused on data protection: during an emergency, like the COVID-19 pandemic, other priorities should prevail.

> I don't understand why the Italian Public Institutions, which should protect my health and safety, cannot follow my movements because of privacy, and they cannot alert me of possible and unknown contagion.
>
> Published on 17/07/2020, 127 likes

> I agree with those who say that, in this case, the public good should prevail over our privacy and the authorities should impose (as for the lockdowns) data registration.
>
> Published on 13/06/2020, 52 likes

Furthermore, other users reflect on the issue of privacy pointing out how, in a highly digitized world, many other online activities are more dangerous for data protection than DCT through the Immuni app.

> I don't really care about my privacy or my position… I really don't care, when I have my phone on they already know where I'm at, and if I am at the groceries they know if I bought beer or Coke at the Eurospin or the Conad [ed. two supermarket brands in Italy], so privacy what…
>
> Published on 16/06/2020, 11 likes

> I want to remind you that internet browsers have much more personal information about us compared to what this app could gather.
>
> Published on 03/06/2020, 1054 likes

Finally, even though reduced in numbers, some users expressed negative opinions on the data protection and privacy features of the app.

> Once the download of the app was over, I found the Bluetooth of my device to be turned on… goodbye privacy, what you can hear around is true. I deleted it, to protect people from the virus we need something else, swaps and tests… the app is just to control us.
>
> 21/06/2020, 34 likes

> Very bad, privacy is not respected since all your movements are tracked and the shops you enter, I tried to disenable the «location» function and it suddenly appears a message from the Immuni app saying that you are disenabling the app, but wasn't Immuni just based on Bluetooth?
>
> 2/12/2020, 2 likes

Discussion

It quite clearly emerges how privacy and data protection were key concerns for experts involved at different extents in the development of DCT solutions. Conversely, for users, these issues were not among the most discussed topics. When considering just the reviews dealing with privacy, it seems that users underestimate how certain DCT configurations could harm privacy. Several comments expressed how data protection should not limit the perceived potential of digital technologies in managing the pandemic. On the other hand, experts, not being fully sure of the

benefits that could derive from these technologies, suggested and pushed toward more privacy-preserving solutions.

In general, some users show awareness toward the value of personal data, stressing how it is handled by some private companies to extract large economic value. Still, this awareness contributes to discount even further the value of personal data with respect to DCT, having a cynical stance towards privacy (Hoffmann et al. 2016).

Both the experts and a good portion of the users agree on the fact that Immuni was wrongly criticized for its data pervasiveness. Some of the interviewees complained that the media contributed to wrongly frame a technological solution that indeed was strongly based on data protection. Similarly, users expressed approvals with respect to the level of privacy protection that they perceived the app could assure.

As some contributions suggest (Acquisti et al. 2015; Hatamian et al. 2019), users do not have complete information to fully evaluate privacy implications. In the analyzed case as well, users expressed strong opinions in favor of a more intrusive solution, arguably due to the highly uncertain context of the COVID-19 pandemic. Conversely, experts largely focused on minimizing the privacy violation risks, deeply considering data implications of this new technology.

Also due to the institutional nature of the project, many dimensions of DCT that involved privacy have been defined by experts and not left open to individual decisions. This approach to a complex privacy issue seems a way of handling it as a collective matter, and not as an exclusively individual one, as contributions from many disciplines suggested (Coll 2012; Helm, Seubert 2020; Taylor et al. 2017). The burden of the choice is held by experts that have the competencies and time to discuss all the nuances of a specific technology's implication on data protection. With respect to DCT, privacy and data protection did not seem as exclusively individual issues anymore (Fairfield et al. 2015).

Conclusion

To try to slow down the spreading of the coronavirus, during the early months of 2020 many NPIs were implemented while waiting for vaccine development. DCT was among one of these interventions. Italy was one of the first countries to introduce a CTA, after many articulated debates both at the national and the continental level, especially on privacy and data protection. These two issues have been explored by contributions analyzing the users' views on tracing apps, reaching divergent findings.

This contribution aimed at exploring how both users of Immuni and the experts who worked on its design, analysis, and use dealt with the issues of the privacy and data protection.

The literature on users not having a full understanding of privacy implications of the technology in use, which sometimes brings them to underestimate risks involved in several practices, worked as theoretical background (Hatamian et al. 2019). Furthermore, the work relied on theoretical contributions that argue how an individualistic approach toward privacy and data protection should be left behind in favor of a more collective and group one (Taylor et al. 2017).

The findings from the analysis of documents, semi-structured interviews, and users' reviews confirm that users seem to care less about privacy and data protection if compared with the experts who participated in the development of the technology. Such great attention towards protecting users' personal information when designing a new technology seems to be an approach towards privacy that leaves behind an exclusively individualistic perspective on it, which predicates that any privacy choice is up to the user. Such attention toward the evaluation of the nuances of data protection seems to embrace a group approach to privacy, considering it as a sort of collective good. This approach could be a valuable one also for future technologies, to finally put aside the idea that the privacy of the users is a matter of notice and individual consent, and to start protecting data by design.

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Appendix

Table 4 - Most recurring single words

Top40 single words
app
funzionare (work)
non (not)
essere (to be)
fare (to do)
dovere (to shall)
inutile (useless)
potere (can)
positive (positive)
molto (very)
notifica (notification)
utile (useful)
avere (to have)
servire (to serve)
scaricare (to download)
solo (just)
installare (to install)
attivo (active)
bluetooth
ottimo (excellent)
mai (never)
persona (person)
dire (to say)
batteria (battery)
sapere (to know)
immune (immune)
problema (problem)
bene (good)
andare (to go)
quando (when)

privacy
contattare (to contact)
cosa (what)
nullo (nothing)
gps
segnalare (to signal)
nessun (none)
stato (state)
capire (to understand)
altro (other)

Robot Density and Techno-Inequality: the Perception of Risk for Italian Contemporary Workers in the Digital Society

by *Bianca Rumore*[*]

Robots and digitalization scare the world of workers. According to the third Censis-Eudaimon report on corporate welfare (2020), 7 million Italians believe they are losing their jobs due to innovation, from robots to AI. This research analyses how the techno-enthusiasm of companies is opposed to workers' worries, resulting in techno-inequality and polarization of the labour market, more visible in the post-Covid era. The current perception of the risk of losing one's job and the uncertainty about one's future are based on different factors: robot density, innovation acceleration, robot prices, quality of robots and investments in various types of robots. In the end, the paper shows that the ancient and profound fear of the rebel robot is still alive, revealing the role played by the robot-related social imaginary in the current perception of risk of Italian workers.
Key words: Human-robot interaction; innovation; future of labour; technological unemployment; techno-inequality

Introduction

The density of robotics and the growth of technology are scaring the world of workers. According to the third Censis-Eudaimon (Fondazione Censis 2020) report on corporate welfare, 7 million Italians believe they are losing their jobs due to innovation, from robots to artificial intelligence. Until now, Industry 4.0 and flexibility, in Italy, have indeed represented the dark side of technology applied to the work (Domini et al. 2021; Dottori 2021; Paba et al. 2021). For companies, innovation refers to profit and time to market because it makes companies grow, modernizes them, makes them traceable to the millimetre and has a positive effect on GDP (gross domestic product). On the worker side it means anxiety, control, fear

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of being replaced by a machine (Riva 2019). The paper aims to analyse disparate factors and epistemological issues constructing Italians' perception of the risk of losing one's job because of automation.

Firstly, the research considers the opposite perspectives of companies and workers towards technological development and digitalization, exploring the so-called "techno-inequality" and the polarization of Italian labour market. The smart working and the socio-economic reconstruction after COVID bring with them more and more fear of unemployment, especially in Italy. In march 2021 the results of the fourth Censis-Eudaimon report explain the dichotomy between HR, companies and workers (Fondazione Censis 2021). On one side, HR are requiring flexibility, digital tools, and skills, on the other side 6 Italian workers out of 10 show resistance to smart working and digitalization, against a smaller percentual which prefers a hybrid solution or a tailored smart working.

Then, the work takes into consideration current factors and reasons which fuel the uncertainty about one's future. Relying on International Federation of Robotics' results, the paper compares Italian most recent data with European and Asian ones about growth of robot density, innovation acceleration, robot prices, quality of robots and investments in various types of robots, above all in this post-pandemic phase (Campa 2019; IFR Press Room 2021a).

Therefore, the paper traces the dystopic robotic-related imaginary shaped over the centuries, from ancient history to XXI century, by passing through Frankenstein's monster and science fiction. The same word «robot» – from the Czech «robota» – means more or less forced labour. The concept of «technological unemployment» emerges in the works of David Ricardo (1821) and Karl Marx (1867) and in the economic literature of the nineteenth century. In this sense, the ancient and profound fear of the rebel robot and its public imaginary could help to explain the recent Italian workers' perspectives towards robot density and innovation acceleration.

In conclusion, the reconstruction of Italian workers' perception of risk related to technologies allows us to understand today's impact of robots and digitalization on employment, considering also the social role of the robotic-related imaginary in the present relationship between human and android.

Companies Vs Workers: Techno-Inequality and Polarization

In 2020, the third Censis-Eudaimon Report on corporate welfare revealed that 7 million Italians felt the fear of losing their jobs because of new technologies and digitalization (Fondazione Censis 2020). From the report three major themes have been emerged:

- Techno-polarization and inequality of workers' incomes due to innovation and level of knowledge of certain productive sector;
- Fear of robotics growth;
- Future role of corporate welfare in order to solve the techno-inequality.

The enthusiasm of companies in front of robotics density and digital innovation clashed with Italian employees' risk perception. The attitude toward technological growth, indeed, showed divergent thinking, emotions and sentiments among workers, companies and management staff. The Censis data underlined the different perspectives of workers, managers and companies related to technological growth, and named them under the label of «techno-inequality». It has resulted as clear how the technological inequality is much more visible among workers of high-intensity technological sectors and is distinguished according to the kinds of employees. According to Censis Report (2020), meanwhile employees, especially workers with executive tasks, are scared of robots and digital technologies, 97% of company management saw only the bright side of innovation; for top managers, the robotics shift could, in fact, improve the amount of productivity, the level of efficiency, the workplace and workers life (Fondazione Censis 2020). From the data and opinions of a representative cluster of employees and business managers emerged that workers' techno-phobia can be considered next to the risk associated to number of working hours, quality of the life in the company, lower pay checks and less protections. In 2020, Italians employees perceived the future of work as hard and difficult given the advances in robotics, artificial intelligent and digital field. 52,5% of Italians, mostly executive task workers, believed will be more and more complex finding targets in common between managers' side and other workers' side. Concerning techno-inequality, Stefano Scarpetta of OECD talked about the polarization between the majority of the population and small groups of highly-skilled workers, who could apply to hi-tech job opportunities with high remuneration (2017). Instead, most of the people will do simpler works. Larry Summers, in this respect, considered that, in the Digital Era, the nexus between capital accumulation and inequality consists in the devastating consequences of robots and AI, rather than in the accumulated fortunes (2014).

After COVID-19 pandemic, Edelman Trust Barometer (2022) reported a different kind of workers' fear, related to smart working and digital skills, in the Italy of post-pandemic transition. After two years, it is certainly possible to consider how pandemics augmented the uncertainty about the future and affected the working sphere. The fifth Censis-Eudaimon Report on corporate welfare (2022) portrayed the new uncertainties and fears of Italians. In 2022, 73,8% of employees are afraid of other radical emergencies, not only health crisis, capable of breaking daily routines. The risk related to digital shift is more and more evident. The 51,3% of workers declared how much their job suffered the sudden digital acceleration during pandemics, because of various problematics and troubles (55,3% with video-calls on Skype, Teams etc.; 45,4% with emails; 28% with wi-fi connections, 32,9% with working space arrangement in their

houses). In addition, smart working's questions revealed a more heterogenous picture, with a lot of individual differences. 25,1% of workers want to stop smart-working, the 32,9% of them likes it and would keep it, instead the 42,1% of Italians would like to find hybrid and personalized solutions. Fiorella Passoni, Managing Director of Edelman Italy, stated: «The fear of job loss is a fear that has changed over the years, and while in pre-pandemic times it was linked to the relocation of factories and automation, today it is the fear of not being adequately trained that takes the lion's share of the blame.[…]With a much longer life and work expectancy, today it is necessary to consider constant training and re-skilling as commodities on which leaders will necessarily have to rely» (Edelman 2022).

Density of Robotics and Dynamics of Employment

The perception of the risk of losing one's job and the uncertainty about one's future are based on different factors. First of all, the growth of *robot density* and the *innovation acceleration*. The International Federation of Robotics (IFR) defines «robotic density as the number of multipurpose robots in industrial companies in operation for 10,000 people employed» (IFR 2018a). Giorgio Metta, scientific director of Italian Institute of Technology (IIT), narrates that in the late Sixties Nobert Wiener, the father of cybernetics, was invited to Italy and this event can be considered the symbolic start of history of robotics in the country (Capone 2021). In 1989, *CNR Robotics Finalized Project* represented one of the most fundamental phases of Italian cybernetics, involving each year more than 600 researcher who studied and created prototypes in order to improve robots' structure and their control, thanks also to sensors (Capone 2021). In 2005 the birth of Italian Institute of Technology marked the acceleration of robotics in Italy. Beside IIT in Genoa, Sant'Anna School of Advanced Studies of Pisa and Polytechnics of Turin and Milan feed research and development of robots. In January 2021, the average robot density in the manufacturing industry corresponded to 113 units per 10,000 employees; by regions, Western Europe (225 units), especially Germany, and the Nordic European countries (204 units) have the most automated production, followed by North America (153 units) and South East Asia (119 units) (IFR 2021c). The annual installations of industrial robots more than tripled within ten years. These units are increasing in 2022. In February 2022, IFR counted about 3 million units of industrial robots. The number of industrial robots increased 13% on average each year, from 2015 to 2020. In Italy, in 2020 there were 78,200 units of industrial robots, 5% more than 2019. More precisely, Italy is the second country in Europe and the sixtieth in the world regarding robot density, as shown by World Robotic Report (IFR 2021a). In 2021, 2,220 machines are produced, 1,005 of them for the export. The production increased in comparison with 2020 and diminished compared to 2013. The export is decreasing as opposed to 2019.

These results of IFR are only reconstructing the economic impact of *industrial robots*, not establishing any relationship between this latter and workers' fears. The first-generation industrial robots appeared in the Fifties, becoming gradually numerous and significant in Italy in the Seventies. They were gigantic and rigid steel machine with a rudimentary electronic brain, faculties of perception, servomechanisms and hydraulic engines; they were slow and able to do only limited tasks, requiring no high precision, like paint spraying and car body welding. Precision work was still done by humans. Since Eighties industrial robots have been started to be more complex and anthropomorphic, having more precision, velocity and load capacity of assembling complex electronic circuits. In the car and heavy industry, they have increasingly taken over other tasks that require precision such as piercing and stockpiling. Nowadays they have laser devices and visual systems, allowing them to operate with millimetric precision. The above robotic density and the stock of robots in absolute terms would be much higher if we included *service robots*, divided into *professional and personal* ones, such as companion robots, social robots, medical robots, military robots and space robots. *Professional service robots* are used in a variety of sectors: logistics and distribution, security, monitoring and maintenance, surgery and medical rehabilitation, and agriculture (Magnani 2020; Grimaldi 2022). In the logistics field, the spread of robots is related to the growing e-commerce. The McKinsey Global Institute (2018) predicts the change in delivery methods: 78% of items things sold on the Internet could be delivered by autonomous vehicles and drones in the future, reducing traditional deliveries to 20% and bicycle couriers at 2%. Among *personal service robots* we can find the category of companion robots, like Chatbot with legs for simple conversations with elders, assistive robots taking care of sick people or sex robots, home-cleaning and gardening robots; in the scientific research, robots start likewise to be used as knowledge tools (Datteri, 2022). Last but not least, there are also *Humanoid Robots*, like Cub, R1, HyQReal, Centauro (Capone 2021). Moreover, service robots, mostly, are *Intelligent robots or robots with AI.* The growth of service robots with AI could move the centre of automation from industries to society, improving the human-machine interface and their autonomy (Nicosia 2010, 14). In Italy, Metta, Scientific Director of IIT, explained that the Institute is developing four macro-areas: wearable robotics for medical rehabilitation (e.g., prothesis), surgical robots, robots for precision agriculture, capable of helping humans in case of disasters or accidents, soft robots for environment or space exploration (Capone 2021). Today variety and increasing application of robots in more and more different areas affect contemporary workers' anxiety and fear of robot job replacement. The «high frequency of disruptive innovations» is, in fact, impacting on labour market; despite the fact that innovation has always characterized human history, current levels of innovation are faster and characterized by much higher pervasiveness than previous industrial revolutions, thanks also to globalization (Magnani 2020, 135). Indeed, important innovations appear rapidly in Digital Era and today workers live in the highest innovation system of all time. This impressive growth can be explained by another factor: the continued *decline in robot prices*. As shown by a McKinsey study (2013), the fastest supercomputer in 1975 cost $ 5 million while today a smartphone with similar

computing power is about $ 400. During a campaign against the increase of the minimum wage to 15 dollars an hour, Ed. Rensi, former CEO of Mc Donald's for the United States, pointed out that « It is cheaper to buy a robotic arm than to hire an employee who packs french fries for $ 15 dollars an hour» (Machkovech 2016). Although, the other factor to take into consideration is the *quality of the robots* which has undergone continuous improvements.

In this regard, the American economist Nouriel Roubini (2014) believes that current technologies are highly capital-intensive, fostering investors instead of offering job opportunities to people; these technologies are also skill-intensive and labour-saving innovations, favouring workers with strong technical skills and tending to reduce the number of low-skilled workers. On one hand, as a result, a variety of professional positions could disappear and, on the other hand, new kinds of work could emerge (Edelman Trust Barometer 2022). The innovation process would seem to attack all the level of employment. In fact, the introduction of the cognitive automation means that AI could complete some intellectual tasks. Machines have already taken human tasks, replacing dangerous and heavy works in industrial accidents, nuclear power plants, natural disasters, terrorist attacks, or and space missions. For instance, Japan needs automation in order to cover the decrease of manufacturing workers due to the ageing of the population. Moreover, according to *World Economic Forum* (WEF) (2022), after pandemics, business leaders focus more and more on priorities as big data, cloud computing and e-commerce. These will embody recent upgrades of artificial intelligence, cryptography and robotics. Thus, industrial jobs, with repetitive tasks, traditional roles in services, but also more complex and intellectual professions, with high skills and a medium-high level of education, are at risk (Magnani 2020). The *Future of Jobs Report* (World Economic Forum 2020) revealed that companies are requiring further and further requalification and digital transformation. WEF (2022) declares digital skills as central in all the sectors, from agribusiness, finance, manufacturing industries, media; digital skills do not consist in the soft ones, like communication or emotional intelligence but hard digital skill: workers have to be able to use AI, robotics, and the Internet of Things (IoT). The companies' requirements are widening the gap between those who have high-tech skills and those who do not, resulting in income polarization in the labour market. In this sense, new technologies, instead of removing jobs, could make workers' first skills old and force to the requalification of employees. Additionally, WEF (2022) underlines how the rise of platform companies has transformed the dynamics of employment. The platforms, like Uber, are creating work without providing any employment contract. Consequently, the prediction is the following: more work, less employees. The difference with the Nineties is visible also by the following data: in 1990, the three automobile industry giants, General Motors, Ford and Chrysler, capitalized around $ 36 billion and employed 1.2 million people; today, Apple, Google and Microsoft have a capitalization of around one trillion and employs only approximately 360,000 people (Magnani 2020, 132). Therefore, it is not easy to estimate the coming net balance on

employment. The fast innovation process has been affected workers' fears and risks and has been caused stress, especially where market is rigid and professional education is insufficient. Workers find difficult to imagine jobs of future. They find frustrating the current professional transitions, acquiring more and more competencies and learning new technological innovations, without enough years between one and the other, like in past industrial and agricultural sectors (Magnani 2020). Last but not least, the recent *investments in robotics in this post-pandemic phase* have to be taken into consideration. As economies are reopening after the pandemic, in fact Asia, Europe and America are expanding their robotics research funding programs (R&D). Just think about *The new European Program "Horizon" Europe* and how it focuses on research and innovation over the period of 2021 to 2027. «The robotics-related work program 2021-2022 in Cluster 4 will provide total funding of 240 million USD (198.7 million EUR)» (IFR 2021c). In addition, China with the strategic plan called *Made in China 2025* would like to upgrade the manufacturing capabilities of its industries and to promote the development of intelligent robots; meanwhile Japan with the *New Robot Strategy* wants to become the most important robot innovation hub in the world (IFR 2021c).

The Ancient Fear

Contemporary Italian workers' perception of risk, fostered by the above factors (like the growth of robot density and technological innovation in general), can be read with the glasses of the socio-technical imaginary, built around the dichotomy "human/machine". The latter still seems very powerful and undeniable, implying the ancient fear of rebel machines and workers' anxiety of being replaced by technological innovations. From ancient history to XIX century the term «automaton», from the Greek *autómatos* «that moves by itself», prevailed, prefiguring the literary *topos* of Inhumans which in some way gain a degree of human autonomy (Carluccio, Denicolai 2022, 100). Different kind of automata appeared in ancient Greek philosophy, literature and mythology. While analysing the concept of slavery, Aristotle stated that «if automata were sophisticated enough to replace humans in every activity, slavery and work would be unnecessary» (350 B.C.E.). Also in other mythological plots, such as in the Jewish one with the Golem, the topic of mechanization emerged. During the years of Illuminism, machines became more and more common. In 1800, the automaton became an archetype for all the future science-fiction, starting from Mary Shelley's *Frankenstein* (1818; 1831) and E.T.A Hoffman's *The sandman* (1815). As Riccardo Campa pointed out: «The idea that machinery can replace workers and cause permanent unemployment is as old as the industrial revolution» (2019, 130). This idea can be found in the works of David Ricardo (1821) and Karl Marx (1867) and the economic literature of the nineteenth century. Both the Luddites and Marx have considered that machines did not help humans, causing instead unemployment and exploitation of people still

employed. «Luddites saw the solution in the destruction of the machines, while Marx and the socialists preached that the proletarians would benefit more from a revolution aimed at taking full possession of the machines (the means of production)» (Campa 2014, 87). Only in the first half of the twentieth century, economists called this concept as "technological unemployment". For some economists the concept is a phenomenon itself, for others is only a portion of the more general "structural unemployment" of post-industrial society. In 1920, the word "robot"– from the Czech "robota" which means more or less forced labour – was introduced for the first time in theatre play *R.U.R.* (Rossum's Universal Robots), written by Karel Čapek. In Čapek's perspective, the robots represented the symbol of heavy-work, capable of doing the most fatiguing jobs. While the development of electrically powered machines was underway, Čapek inaugurated the theme of the rebellion of androids, problematizing the ethical and social aspect of technological growth. For this reason, from 1920 the word robot had an incredible success, implying from the very beginning the ambiguous power of the machine universe which could escape human control with deleterious consequences. Since the Twenties, technological innovation has affected and changed with more and more constancy society, work and everyday life. The cinema has begun, likewise, to show these changes. For instance, Maria, the robot in *Metropolis* (1927), was the artificial which replaced and deceived humans, creating an ambivalent sentiment of trust and fear (Carluccio, Denicolai 2022). Since 1947, Norbert Wiener has christened a new science with the name "Cybernetics", which combined communication theory, control theory and statistical mechanics. Later, in the Fifties, Isaac Asimov introduced the concept of "Robotics" in his science-fiction cycle (i.e., *I, Robot* (1950), *The Second Book of Robots* (1964), *The Bicentennial Man and Other Stories* (1976). His three laws of robotics and the positronic brain will remain at the basis of the science-fiction narrative system, such as in the *Star Trek* and *Star Wars* saga (Carluccio, Denicolai 2022). According to some historical reconstruction, robotics began in XVII and XIX centuries with the ludic automata and tele-manipulators. In the Seventies, with the construction of the robots for manufacture industries, the robotics became a legitim discipline (Borgna 2022). Today robotics is an interdisciplinary science, involving mechanics, biology, computer science, linguistics and psychology. «Will robots inherit the earth?» (Minsky 1994, 99). In the digital society, with the introduction of robot with AI, the question formulated by Marvin Minsky, the theorical father of AI, is increasingly common. Until now, it has been debated if technological growth frees humans from work, or otherwise produces human exploitation and unemployment. And the debate is still in progress, mainly controversial and often focused on the dichotomy «technology is bad» (Luddites, technophobes) *versus* «technology is good» (Campa 2014, 87). In the recent comedy *On Our Watch* (2021), in an Italian city of a not-so-distant future, Arturo is a successful manager who invents an algorithm for his company. Unfortunately, the algorithm will be capable of replacing his job. In this way, Arturo will lose his work and his entire life, turning into a rider for a high-tech company, controlling work time by smart watches and free-time by

holograms. This recent movie portrays very well current Italian workers' fears (Paragraph 1), showing how human-machine relationship seems to have remained unchanged, from its origins until today.

Conclusions

In conclusion, it is difficult to predict what the development of robotics will be in the coming years, considering the increase in the number of industrial robots and the spread of service robots. Will current technological innovations generate an increase in the economy and employment? The answers are not predictable and obvious. In all the predictions of the socio-economic literature (Moretti 2013; Autor 2014; Katz 2014; Summers 2014; Campa 2014; 2019; Magnani 2020), the transition is inevitable and affects the perception of risk of contemporary workers. Despite of the innovation enthusiasm, for Operto and Veruggio (2022) robotics is in its prehistoric phase. Industrial robots are still alive and they keep playing an important role in the optimization process of industrial production. Instead, intelligent machines and robot with AI are still imperfect, fallible, uncapable of overcoming AI classic problems. Notwithstanding this, robots with AI are fuelling a double face imaginary, reconfirming human ambivalent sentiments of fascination and fear (Lughi 2021):

1) robots as a rebel and solid machine
2) robot as an incorporeal, disembodied dimension of software, and its relationship between physical and digital.

Meanwhile, a trend shows its relevance, the increasing «self-optimization» (King, Gerisch, Rosa 2019) of workers. Requiring more and more digital competencies and abilities to use various software and to monitor robots, companies and business managers collect continuously digital measurement of workers' activities. Working time can be documented via time recording software and workers' tasks can be checked and often under-reported, causing social pressure and psychological consequences. In this sense, the risk is that companies can reduce workers' performances to poor numbers and generate a matrix of permanent comparison, competition and self-optimisation's processes when the acts of self-tracking create performative and entrepreneurial actors (Elias, Gill 2018).

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Substances as Risk: A Comparative Study of Strontium-90, and SARS-CoV-2 Virus

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In the following paper, I compare Chernobyl Nuclear Disaster of 1986 and the Corona Virus Disease of 2019 by analysing the substances causing it, through a socio-anthropological approach. The essay looks at the social vulnerabilities arising out of the substances, and the role of State and other public institutions to argue how these substances exist as risks that are uncertain, and objectively unknowable. I begin by comparing Strontium-90, and SARS-CoV-2 virus as substances that generate social meanings and thereby act as risks in society. Referring to personal accounts through interviews (from present-day informants in West Bengal, India), and secondary data (from interviews of Ukrainian and Belarusian informants directly affected by the Chernobyl Disaster), I argue that the substances' embodiment and its scientifically ambiguous nature infiltrates social identity, generates a range of subjective meanings and therefore, doubly marginalises those already considered as minority in the respective space and time. To map the production and management of these substances as risks, I take Beck's risk-theory approach to the State and society. I analyse the USSR's role in the disaster, its response mechanism and the radioactive substance's uncertain nature as risk. The unfolding story of India outlines the State's use of media, knowledge and discriminatory policies to deal with the global risk. I conclude by foregrounding the types of connections that are thus established making a comparative study of these objectively different substances possible as risks in a global society.
Keywords: disasters, risk, substance, state-society, social vulnerabilities.

In April 1986, when a reactor exploded in a small town of Ukraine, nobody knew what it would entail in the years to come for the its residents, and the broader structure of the State and society at that time. It was only a moment of explosion and then there was quietness as though nothing had happened (Alexievich 1997). Thirty-three years later, in 2019, in a busy city of China cluster of cases of pneumonia were

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traced. The world was unaware what the 'cluster' meant at that time (Na Zhu et al. 2020). Like the explosion at Chernobyl, for a year, the State chose not to disclose the disaster that would uproot lives, cause displacement, affect human body and the space that they inhabit, drastically.

For a sociologist, the two incidents invoke some pertinent areas of inquiry beyond what becomes of the social. Thomas Drabek (2017) has pointed out a host of areas sociologists have looked at when studying disaster in the 20th century; preparedness, response, recovery, mitigation. With further research, Drabek (2017, 139-147) noted the emergence of newer directions that sociologists could look into while studying disaster; social vulnerability, forms of resilience, improving warning systems and emergency management applications. To comparatively analyse the two incidents, a look into the cause, perhaps a socio-political explanation is necessary. Not only does this explanation wrest the cause from its apparent biological underpinnings but also aids in unpacking the kinds of vulnerabilities that is experienced and varies with respect to individual's social positions and the role of the State in dealing with the emergency.

Ulrich Beck (1986) discussed the concept of risk society within the rising anxiety of environmental hazards[1], nuclear war and climate change. According to Beck, the reflexive modernisation of an industrial society makes way for a «risk-distributing society» (1986: 20). Risk, in Beck's definition, is «a systematic way of dealing with hazards and insecurities induced and introduced by modernisation itself» (1986, 21). However, risks can also acquire a character of being uncertain when science fails to produce reliable knowledge on risks; it become ambiguous, and objectively unknowable (Park, Shapira 2017).

Risk society is one wherein unanticipated consequences come to occupy dominant role in history and society. Late modernity was the period in which Beck locates the risk society. Before Chernobyl happened, Beck had already outlined the magnitude of an environmental disaster that would affect the world at large cutting across 'borders of nations', institutions of health, property, profit and legitimation (1986, 224). However, Beck also notes the political potential of risk society. The unintended consequences or disasters in a risk society is averted and managed continuously by 'reorganisation of power and authority' (Beck 1986, 24). In a risk society, every downfall, environmental or otherwise, its origin, and its consequences becomes a matter of politics. Knowledge acquires a greater political significance in a late modern or risk society. But what exactly does being in a risk society mean for the individual? For Giddens (1990), this 'risk culture' that one is embedded in becomes a concern of an individual and society's ontological security. Giddens argues that being a participant of late modernity with a heightened risk factors mars individual's ability to trust, making the person continuously anxious as the structural

[1] Environmental hazards are those arising through «degradation of natural systems and ecosystem services on which humanity depends». Degradation of air, water, land and biodiversity is gradual that are accelerated by human activity UNDRR (2020, 28-26).

forces of risk society dismantle one's security framework. It produces a state of ontological insecurity leaving an individual anxious, disturbed and distant from self and others in the society.

As per UNDRR-ISC (2021), nuclear radiation and virus contagion fall under technological and biological hazards respectively with the former being completely man-made and latter, in the case of SARS-CoV-2 virus, said to have «evolved naturally» (Navarro 2020). To establish a ground for comparison would then require looking beyond the categorisation given by scientific theory that has dominated paradigms of thought on hazards and disasters universally (Scandlyn et al. 2013, 38-40). They (*ivi*, 46) argue that dominant scientific paradigms of categorising disasters allow governments and other hegemonic organisations to 'deflect criticism' and consider disasters as simply natural with no anthropic involvement. A social vulnerability perspective opens door to studying hazards beyond the scientific paradigm that overlooks anthropic susceptibility (to disasters and its responses), levels of social interaction determined by social inequalities and questions of social justice to communities doubly vulnerable[2] (Scandlyn et al. 2013, 42). The perspective calls for viewing the two events as either man-made, or a socio-natural hazard[3]. While the Chernobyl Disaster and SARS-CoV-2 virus-outbreak may have occurred in different space and time, what puts them under the common radar is the role of the substances at the root of the two hazards and its consequences on the wider socio-political reality in the global society. It is in the light of above perspective and specificity of Strontium-90, and SARS-CoV-2 virus to be embodied, I compare how the two substances representing these hazards have generated social vulnerabilities through an interplay of politics, media, science and economy.

In the context of socio-anthropological interest in substance as carriers of social meanings, the paper begins at interrogating hazardous substances as symbols of culture and as risks that are uncertain. I compare Strontium-90, and SARS-CoV-2 virus as substances and analyse the cultural ways in which it manifests itself as risks. Here, I refer to personal accounts through interviews (from present-day informants in West Bengal, India), and secondary data (from interviews of Ukrainian and Belarusian informants directly affected by the Chernobyl Disaster) to locate the ways in which social vulnerabilities are experienced by those affected by the substances. I argue that substances reproduce as risks in three ways- as that which

[2] Fischhoff, Slovic et al. (2000, 121-136) have applied a similar approach to understanding risk perception, hazard comparison by taking into account political realities, cost-benefit analysis, alongside people's preferences toward safety, hazard and risks. They conclude by arguing for a «combined approach» where an inter-disciplinary perspective can help arrive at answers on how hazards should be weighed or compared against one another.

[3] UNISDR (2009) states that socio-natural hazard is the likelihood of natural hazards to occur more frequently because of increasing human activity. In the context of the two events, the outbreak of SARS-CoV-2 virus has to be read as socio-natural hazard rather than only as natural (I explain why later in the essay).

infiltrates identify; that which is objectively unknowable; and that which marginalises those already marginalised. Next, I take Beck's risk-theory approach to analyse the State-sponsored production and management of Strontium-90, and SARS-CoV-2 virus as risks. Personal accounts and newspaper reports provide a closer look at the policies of the USSR and the Indian State in production and management of the particular substances as risks. Finally, I conclude the comparison by arguing for the relevance of the connections between public institutions in understanding these substance-causing hazards as risks that are uncertain and that the dominant scientific paradigm of disasters would not reveal in the context of the global inequality.

Substance as Risk

A substance's nature to attain cultural meaning has been a part of kinship studies and questions of relatedness. Schneider (1968), Strathern (1988), Carsten (2004) have made significant contributions in analysing kinship bonds established through substances like blood, semen and other kinds of bodily fluids. Alongside making kinship bonds, these substances also determine the practices of taboos, stigmatisation, forms of exclusion and the larger role of role of state, and science in assisting reproduction of such naturalised kin relations (Carsten 2004, 109-134). These substances are embodied.

Similarly, the radioactive substances and the virus only become symbolic when it is connected to the human body either through direct embodiment or association. It is in its embodying quality that these substances have become determinants of particular social realties.

Beck's analysis of «dangerous, hostile substances» that lay concealed and invisible to human eyes offers an interesting entry point to analyse Strontium-90, and SARS-CoV-2 virus as risks (Tooze 2020). He argues that every substance must be looked with a double gaze and be understood through this doubling to measure its potential as risk. There is a need to 'investigate' the scientific nature of a substance as handed down by State and science, and to view them as risks that affect culturally (Beck 1986, 72-73). In this 'speculative age' of radioactive substances and viruses, the double gaze debunks knowledge concocted from those in power and allows individuals to understand its cultural manifestation in the lives of those affected by it.

I take this perspective on risk-inducing substances like the Strontium-90, and SARS-CoV-2 virus to map its cultural implications on body, and sociality of those affected. Firstly, I argue that the hostile substances, when they enter the human body, they isolate it from the existing social fabric. It inserts homologous bodies into a community that can be discriminated, and thereby, can be called by names. The substances thus infiltrate identity.

Secondly, I argue that the objectively unknowable nature of these substances, because of its ambiguity produces varied subjectivities and meanings at a cultural level.

Lastly, I argue that these substances doubly marginalises those who are marginalised by the pre-existing social structures.

Strontium-90 and Its Social Vulnerabilities

When the reactor exploded on a Friday night, residents of Pripyat went out into their balcony and one woman (N.P. Vygovskaya) described the fire that arose as «bright, raspberry red glow" (Alexievich 1997, 194). It was the tickle in the throat and the water in the eyes that made them realise that this was not beauty. By the next day, people were packed into buses and sent away from their homes to never return. The words 'contamination', 'radiation', were alien to the residents. What earlier stood as parts of their everyday lives, were suddenly, translated into biological waste.

M.F. Khokhanov, a former chief engineer was testing milk and other substances in the affected areas of radiation. He chanced upon a woman who was breastfeeding. When he tested her, they found that the woman's breast produced «radioactive milk» and she was called *The Madonna of Chernobyl*. When Khokhanov reported this to the State authorities and pleaded for immediate evacuation he was told, «carry on testing and watch the television» where Gorbachev was reassuring people: «Emergency measures were taken» (Alexievich 1997, 202). Khokhanov admits his disbelief at being a scientist and a participant with the State in watching the disaster unfold. The State's lack of implementing «the contingency plan» in case of an accident began to show in the sociality that was produced as the substance began infiltrating the identity of the citizens.

When children from Chernobyl affected areas moved to other places, they were called *Chernobyl Glow-worm, Chernobyl Hedgehog, Chernobyl children*. Zhukova (2020) conducted in-depth interviews of Belarusian adults who had moved to Italy in foster care families for recuperation when they were children. The concept «Chernobyl child» was coined to deal with the bureaucratic procedure of rehabilitating them. The following quote highlights the medical vulnerabilities that had begun to show as social exclusion

> My Italians are very much afraid of our country because of the radiation. I remember I brought them candy, they were afraid to eat it…! Even now, she [host mother] has been saying that she would have come to visit me [in Belarus], but she's way too afraid… (Raisa, female, born 1984).

Zhukova also notes that children's gender, age, appearance and family situation became key determinants for Italian parents to invite Belarusian kids. The more the child resembled the 'Chernobyl child' the lesser was the preference. The intersection

of medical vulnerabilities with social vulnerabilities was reproduced by the humanitarian organisations that were involved in facilitating the children's recuperation (Zhukova 2020).

The social translation of Strontium-90 into identifying marker was used to alienate the evacuees settled in other parts of Ukraine and Europe, even from their own families (Alexievich 1997). A woman (N.A. Burakova) reports that her sister wouldn't allow her entry into her house in Minsk when she needed shelter. To each other, the people of Chernobyl were not afraid or impolite because they shared a memory, a similar fate (ibid). A new form of relatedness began emerging among those who carried the radioactive substance and those who did not. Blood, that earlier determined kinship ties, took a backseat as radioactive substances and the memories of stigmatisation became determining factors in uniting individuals affected by it. Alexievich (1997) takes notes of such an emergent form of kinship ties in a village of people from different descent groups but who consider themselves tied because of their body carrying the radioactive substances,

> It may be poisoned with radiation, but this is my home (Monologue of a village on how they call the souls from heaven to weep and eat with them: Alexievich 1997, 49).

Burakova grieves pleading with Alexievich to not diagnose them with *radio-phobia* that has separated them from everyone. The segregation she endured made her feel like a lump of metal of whom everyone was afraid to touch, or talk (*ivi*, 231-233).

The biological value of the radioactive substance was interlaced with the social. Petryna (2003) argued that a biological citizenship was created to identify and segregate those with radiation medically and politically. These 'citizens' were not just people with a differentiated body but also a sociality that was defined by lack of primary care and support, stigmatisation in public institutions, poverty, and failing medical aid (*ivi*, 115-143). Thus, the substance here, had infiltrated identity, produced a range of subjectivities due to the mounting failure of State and science to provide an objective knowledge about the substance and doubly marginalised women, children and other minority groups, through its nature as risk in society.

SARS-Cov-2 Virus and Its Social Vulnerabilities

The SARS-CoV-2 virus was named the *Chinese virus* and was deliberately used by the erstwhile President of USA, Donald Trump, to cast the virus as foreign (Ketchell 2020). The repercussion of coining the virus as 'Chinese' (because of its first tracked location geographically) became a ground for racist attacks against Chinese, or Asian migrants in USA and other countries. In India, the racist slur *chinky* used for Northeast Indians was now replaced by *Coronavirus* because of their mongoloid physical features akin to the Chinese community (Haokip 2020). A Manipuri girl

was spat on the face and told '*corona is here'* on the streets. Many northeast Indian students and migrants were asked to vacate residences in Delhi during the early months of pandemic (Mani 2020). One of my informants (Gloria, 22, student) from Kalimpong (a town in West Bengal) reported

> When I was walking down (a street in Kolkata) these men on bike passed by me shouting coronavirus, coronavirus!

What would have started as physical distancing, a distancing of bodies; was given the name by the State as social distancing, that eventually made way to socially alienate through false news, inefficient handling, lack of medical facilities and welfare schemes to deal with emergency in India.

Domestic helps in India found their bodies to be highly stigmatised because of the medical discourse popular among the middle classes. Female domestic workers who go to homes and offer services were being labeled as «Covid Super Spreaders» (Batra et al. 2021). Many female domestic workers lost their jobs, or were being pressurised by their employers to get tested and get the vaccine without providing any economic means to do the same as they are unable to register themselves online or afford the cost of tests or vaccines. Ms. Sinha (45y/o), domestic help in the urban Howrah neighbourhood (of West Bengal) says that she held on to some of her work during the lockdown but there were many families that barred her from entering despite her constant reassurances that she took precautions, wore mask, never took public transportation. Mrs. Maajhi (48 y/o), a domestic help in the same neighbourhood found it difficult to keep her job throughout the lockdowns as her employers feared her as a carrier of the virus.

Essential/front-line workers in India, who already belong from lower castes were provided inadequate protective equipments, hospital beds and reliable source of income by the State (Srivastav et al. 2020). The Muslim community in India endured further stigmatisation after the congregation of Tablighi Jamaat in Delhi Nizamuddin Markaz from March 12- 22, 2020. The Indian government and media used the opportunity to make it a communal battle that resulted in the beating up of a Muslim youth in Bhopal, separation of hospital wards for Hindus and Muslims in Gujarat (Sarif 2020). In the urban Howrah neighbourhood, where one side is dominated by the Muslim population, such stigmatisation prevailed among the Hindu informants as they reported that 'most of them were maskless', 'we avoided going there', 'it didn't seem like the virus was even there'. However, a Hindu resident of the same neighbourhood, Mr. Jaiswal (63 y/o), says,

> I saw many people wearing mask and taking it seriously. In fact, this was more so in Pilkhana (the Muslim neighbourhood). Hindus, over here, think the

> Muslims did not care. However, I have seen people in Pilkhana take it more seriously than ones here.

Patients who recovered from the virus continued to be stigmatised. In my year-long ethnographic work on the urban neighbourhoods of Howrah and Kolkata (twin-cities of West Bengal), the cultural tilt to the virus was noted in the way it affected the social fabric of the neighbourhoods. Informants report how there was more avoidance among inhabitants as the fear of the virus began entering their neighbourhood. Families that were found to have been diagnosed with the virus were avoided even after they had tested negative. Many report that they did not visit their neighbour's home on the death of a member (even though the person was said to not have died of the virus) because they couldn't trust anyone as people were hiding if their family got the virus.

Like, the victims of Chernobyl, Asian migrants in the West, Northeast Indians in India, female domestic workers, essential/front-line workers, Muslims and on many occasions patients who have recovered from the virus bear the social vulnerabilities induced by the virus. In 2021, the second wave of the outbreak saw close to 2.4 crores infections in India only (1.8 lakhs death) (Bhatnagar 2022). There was also partial medical recovery from SARS-CoV-2 virus which did not happen in the case of the victims of radiation as they carried the substance throughout their lives (Zanni et al. 2022). The ambiguity of the virus remains as mutations continue to take place (Bollinger et al. 2022). The SARS-CoV-2 virus as a hostile substance has produced identities that have emerged out of its embodiment; marginalised communities that were already facing marginalisation; and since its knowledge continues to remain uncertain, it exists as risk in society.

State and the Risk Society

Radioactive substances like Strontium-90, Iodine I-131, and the virus SARS-CoV-2 would not have reproduced as risks in society without the involvement of State. To understand this, it is necessary to look into Beck's analysis of the production of risks. As we shall see, these risks are not produced naturally. Rather, there is a complex play of the sphere of political, non-politics and sub-politics under the looming ethos of neoliberal, capitalist enterprise of the State.

Until 19th and early 20th century, it was taken for granted that setting up of nuclear reactors, scientific achievements and discovering ways to make life progressive technologically are salient to a developed society and thus, excluded from the political pervasions (Beck 1986, 184). The sphere of *techno-economic* interests was considered *non-politics*. In fact, these processes were not subject to critique because of the power with which it was enforced. Progress became a 'consent in advance for goals and consequences that go unnamed and unknown'

(1986, 184). Hence, it was removed from public inspection and landed directly in the hands of business enterprises and freedom of research of science. When a scientific discovery was made, it was pushed in the market under the ideal of techno-economic progress and that concomitantly brought about changes in all the structures of society (Beck 1986).

Later, the welfare state made an intervention and brought the techno-economic realm under the political rubric by government monitoring agencies (Beck 1986). However, the techno-economic realm was successful is cloaking itself under the grab of care and concern for nature and society and that which can be achieved by lesser political intervention of the state. «Freedom of science» and «scientific progress» became the maxims which made state intervention lesser and, the state began migrating from concerns of welfare, and governmentality and moved into the *grey area of corporatism* (*ivi*, 188). Beck alludes to Marx's understanding that state thus gets reduced to «ideal total capitalist» under the function of the «management committee of the ruling class» (*ibidem*). He argues that in a risk society, instruments of politics, its concepts and foundations are becoming unclear, open and in a need of a historically new determination. Furthermore, in the *sub-politics* of medicine, there is no parliament, no executive where the consequences of the decisions should be investigated in advance (*ivi*, 188-235). It doesn't have a social locus of decision making either.

According to the medical ethos, the public sphere and politics are equally "uninformed" with no idea of development and riddled by moral consequences which are outside the purview of medicine (*ivi*, 204-212). Medicine's withdrawal to an amoral understanding of the human body has been conceived centuries back in the writings of Descartes and the Cartesian dualism that related body to the domain of science (Scheper-Hughes, Lock 1987). Medicalisation reduces the body to a biological material (*ibidem*). It creates a misidentification between the individual and the social bodies through its biomedical reductionism. They argue that the body in risk society is under more thorough surveillance by the state through *bio-power* (Foucault, 1980). Not individuals but the state controls, regulates, administers population through the mechanism of *biopolitics* as understood by Foucault (1980, 139). Bio-power is a way in which biopolitics is put into practise. It did not replace repressive and deductive functions of power but worked together with technologies of power in producing *docile bodies* for capitalism to work successfully (*ibidem*). Hence, in relation to State, the capitalist techno-economic industry reaps a dual advantage- autonomy of investment decisions and the monopoly on the application of technology (Beck 1986). When these techno-economic models acquire the political legitimation of the state, it rids them of taking responsibility of the consequences that are not investigated by the state and remain hidden, as knowledge is controlled by the scientific sub-politics. All the side effects, henceforth, of the developmental projects fall in the hands of the state. The sub-politics gains a life of its own and begins determining the laws of the state. The state becomes an agent to science and capitalist enterprises under the idea of progress and development. It

participates in production of the scientific culture to be relevant despite changing its forms (*ibidem*).

USSR and Its Policies During the Chernobyl Disaster

Chernobyl was one of main the reasons where, because of a substance exploding from reactor in a small town of Ukraine, the state machinery of the USSR collapsed (Veen 2012). How did Chernobyl insinuate this collapse? What is the role of the substance, State and science?

The sarcophagus of the reactor was constructed hastily to put up a design that would make engineers from St. Petersburg feel victorious. The structure was built with a remote assembly design through robots that had gaps which exceeded 200 square meters in total and aerosol activity was continuously taking place, and was intended to last for thirty years (Alexievich 1997).

The crisis was kept away from international media for a long time with a blame-game going on within the administration (*ibidem*). When the time came for media coverage, it was held in the deserted city where the disaster took place. There were journalists appointed by the State. None of the engineers from Moscow who had constructed the plant were present. Within minutes verdict was delivered sentencing the chief engineer, shift chief and other technicians including the director for ten years; wherein most died while serving the sentence because of the radiation.

V.A. Borisevich, a physicist who alarmed people about the explosion, admitted that for a long-time films in the USSR were made to showcase the glorious life of a scientist, it was the «golden age of physics» that motivated physicist like him to pursue science under USSR (ibid). However, with Chernobyl, the glory of physics ended because, he admits, «we haven't understood Chernobyl» (*ivi*, 217-22). The science fiction envisioned by the state during Stalin's time began crumbling under the disaster they were witnessing in their lives.

V.M. Ivanov, a Communist Party first secretary, was ordered to remain silent to avoid panic among people because neither the scientists nor the Central Committee at Moscow could believe that such an incident could happen anywhere in the world (*ivi*, 243-248).

A «defender of the Soviet power» expressed his hatred for the democracy that was replaced after the fall of the USSR following Chernobyl (*ivi*, 248-250). He states that a loaf of bread is much more expensive than it was under the Soviet state. He argues that democracy brought with itself a ban on censorship, the idea of free speech but what would its use be if he has no money to fend for himself. He said that Chernobyl was the mistake of Communists and they will learn from it. Democracy is not his choice, democrats are outsiders from the USA who have entered to steal their wealth and means of livelihood.

These narratives put together by Alexievich express the role State, science, media and economy had to play in the disaster. The delusions of science, the model of economic development as proposed by the USSR by glorifying science and calling for more

citizens to build the science utopia displays the complex network in which risks such as the radioactive substances were produced. As Beck (1987) has argued, the environmental deterioration created by the functioning of state, science, media and economy is what was witnessed in Chernobyl and continues to be as the site is still forbidden access. It is also important to note that the disaster had a larger global impact as well in terms of Ukraine and Belarus's international politics (Zhukova 2017). The Chernobyl disaster did not halt the nuclear program strategy of the USSR either. The Soviet Premier drew a plan for nuclear generated electricity from 11 to 30% which would, according to the Premier, work as reliable source of energy in the future (Marples 1988). The Gorbachev period following Chernobyl boasted of being frank and open on the mistakes of the past, the stagnation of the Brezhnev period that led to inefficiency and complacency within the nuclear power plant. As the narratives express, science and nuclear revolution had failed for the people. It caused ontological insecurity with production of risks and the agent for this destruction has been the complex interplay of State with other public institutions. It failed to produce a certainty about the radioactive substance that could aid them in dealing with its consequences. Rather, its nature as risk that is uncertain, ambiguous led to the systemic questioning of the state-science authority in the USSR (Beck 1986; Zinn 2008).

SARS-CoV-2 Virus: a Global Risk

The risk factors with strengthening global capitalism[4] has not decreased but only extended with time as we witnessed the spread of SARS-CoV-2 virus. Rapid movement of people, and the intimate connection between politics and economy at a transnational level between States constitute the global connections observed presently[5] (Hannerz 1996). It is in context of such connections SARS-CoV-2 virus established itself as a global risk, a pandemic and the glaring inequalities in its management and experience in the Global South and the Global North.

Beck stated that by 1980s, there was some awareness of both climate change and emerging diseases paradigm globally. With rapid carbon emissions across the globe from industries, especially in the Global North, the climate crisis has become an immediate threat (Pardikar 2020). The intrusion of humans into forest ecosystems and the massive animals incubators of the agro-industrial complex were some of the significant anthropic reasons behind the discovery of viruses such as HIV, SARS-

[4] Hutton and Giddens argue that the changing social relations following the late 1960s has resulted in an «increasingly globalised» society with financial market making up «its leading edge». They further argue that with increasing global capitalism risks have multiplied and with that likelihood of socio-natural hazards (2000, 1-52).

[5] According to Giddens (1990, 64), «globalization can […] be defined as the intensification of world-wide social relations which link distant localities in such a way that local happenings are shaped by events occurring many miles away and vice versa».

CoV-2[6] (Tooze 2020). Deforestation projects, industrial emissions, scientific experiments on animals in laboratory in Global South originate from a growing demand of agricultural products, infrastructural needs from the Global North and organisations like IMF (Stiglitz 2002; Taylor 2021).

When the virus began spreading in Wuhan, the State chose silence over spreading awareness. By March, 2020, when lockdowns were announced all over the world, the virus had already spread in cities, and neighbourhoods. With no preparation or alarm, lockdown was imposed on people and the decrees issued by State, science and media became sacrosanct. Individual belief in science grew stronger. There is an unquestioning attitude toward science in this moment of risk and uncertainty. Beck evokes the concept of *risk positions*; one where there are a series of questions but to which the victims have no answer (Beck 1986, 53-54). It makes one dependent on external knowledge. This is one of the most harmful characteristics of a risk society, knowledge is no more from what individual themselves think and come to acquire (*ibidem*). On the contrary, knowledge comes straight out of the scientific realm, on whom unquestioned faith is bestowed in risk society; and, here, mostly from the Global North[7].

SARS-CoV-2 Virus in India

In India, an exodus began right at the beginning of lockdown with migrant labourers losing jobs in the city and rushing homeward on foot with no means of transportation. BBC India reported the journey Goutam Lal Meena (a mason) took in the middle of summer from Gujarat to Rajasthan;

> I walked through the day and I walked through the night. What option did I have? I had little money and almost no food (Meena, BBC Report)8.

Ms. Sinha and Ms. Modi, two domestic helps working in the urban Howrah neighbourhood, who come from rural areas of Howrah by train everyday were left with two choices either to stay in one of the houses 'where I work' or return home. Ms. Modi returned to her village but was left with no source of income to run her family. She added that the State offered no help despite promises being made on

[6] This makes the outbreak of SARS-CoV-2 virus not simply a natural but a socio-natural hazard (Tooze 2020).

[7] In Ukraine too, knowledge, ideas of nuclear preparedness came from the government in Russia and was forced upon nations like Ukraine. Thus, in many ways Ukraine acquires the status of a colonised state with weak economy and a zone vulnerable to foreign infiltration (Alexievich 1997; Ivakhiv 2020).

[8] Biswas (2020).

television of providing money and rations. Ms. Sinha stayed and continued to work but she said;

> I was not allowed to return to the village to see my family. I'd sneak in at night. My son had come from Jaipur after being unable to keep his job. He was harassed by the panchayat (village council). They would not allow him and then they locked him in a room where he had to pee, shit, eat in the same place, in summer.

The Prime Minister of India issued a policy of Atmanirbhar Bharat (self-reliant India) which meant for people to fend for themselves (Ramchandran 2021). More and more companies began laying off employees because they could not pay them. With education moved online, those without access to electronic gadgets, laptops and internet could not access education. In Delhi, 20 students dropped out of school because they did not have means to access online education (Mishra 2020). In the early months of the lockdown, states in India were criticised for lack of medical infrastructure to adequately deal with a pandemic of this rate. Medical professionals walked out of their hospitals as a protest against the state for not paying them their salaries (Sabarwal 2020).

The Prime Minister announced a PM CARES Fund which collected Rs. 10,990 crore from March 2020 to March 2021. When a case was filed against the accountability of the funds, the Centre clarified that PM CARES Fund is not a 'public authority' and does not come under the Consolidated Fund of India[9]. Reportedly, when the State was dealing with a failing economy, labour crises, unemployment, lack of medical infrastructures, issue of vaccine availability, it only spent one-third (Rs. 3976 crore) of the PM CARES fund (Jebarai 2022). Around April 9, 2021, the second wave of the SARS-CoV-2 outbreak began in India with 144829 cases. It resulted in 40% higher death than the first wave (Nandan Jha 2021).

The Government used media during the two waves of the outbreak where death of celebrities like Sushant Singh Rajput, scapegoating Tablighi Jamaat, India-China Standoff, Aryan Khan drug case were sensationalised to deter State's failure in handling the rise of cases and death rates from becoming public knowledge[10]. Patients dying of SARS-CoV-2 virus were reported, in India, to have died of other co-morbidities, to curb the count of virus-related and show a 77% of National Recovery Rate (Chatterjee 2020). The knowledge passed on from State and science through its machineries (News channels, IT cells of political parties, Whatsapp Forwards) reverberated in the gradual undoing of the ontological security that

[9] 'PM CARES is not a 'public authority 'under the RTI Act, Centre tells Delhi High Court' *Scroll*, September 23, 2021.

[10] 'India Recap 2021: From Vaccine Century to General Rawat's death - What all made headlines' *India TV News*, December 31, 2021

prevailed before, especially for those who were socially more vulnerable to the virus, as discussed above (Yadav 2020). However, the lockdown, and restrictions imposed by State was meted with anger as is evident from all the informants of my study. For the small business owners, it was a matter of tremendous loss. Mr. Jaiswal says,

> I have just been home with shutdown of everything. It has become difficult to manage household expenses if lockdown continues or is imposed again.

Mrs. Gupta, 39-year-old woman, who was about to get back to work after thirteen years expresses frustration at the State for its abrupt decisions. The State may have done its best to escape scrutiny and criticism but the ontological insecurity unleashed because of the risk (SARS-CoV-2 virus) remained undeterred against the range of socio-political vulnerabilities that emerged in the society.

The news of Pfizer and AstraZeneca working successfully against the virus came as a relief to people (Al-Hanawi et al. 2021). The anger against the State that informants had at the start of the lockdown began dwindling. However, the distribution of vaccines, its availability continues to remain a question as «poor planning, piecemeal procuring and unregulated pricing – by Mr Modi's government has turned India's vaccine drive into a deeply unfair competition, public health experts told the BBC» (Inamdar, Alluri 2021).

It is important to consider the nature of substance as risk again to understand the unfolding story of Indian state as it deals with the virus. It has failed to deal with the virus objectively, or produce a concrete knowledge about the virus. Rather, it has taken hasty steps that has led to the production of an understanding of the virus through a subjective lens having socio-political and economic resonances for its population. The experiences of those affected by the virus give an accurate picture of the State's policies toward the substance, and the ambiguity around it. Thus, the substance's nature as risk continues to dominate the reality of the social in India.

Conclusion

A risk-theory approach to the two incidents has given a sense of the range of social vulnerabilities that emerged out of the substance, the forms of resilience (or its lack) individuals have shown in dealing with the disaster and the socially emergent forms of stigma, public institutions' failure in providing lack of effective warning systems and inefficient emergency management protocols. Moving away from the dominant scientific paradigm has shed light on nature of hazards as socio-natural and not a simple categorisation as man-made or natural (Scandlyn et al. 2013). Not only has the comparative approach aided in studying hazards socio-anthropologically but it has also resulted in considering the ways in which public institutions intersect with each other to produce the uncertainty attributed to risks in different space and time

(Beck 1986; Slovic 2000; O'Malley 2008; Ivakhiv 2020). Collective susceptibility of humans to the radiation and virus with inadequate public mechanisms to respond to it have showcased the socio-natural character of disasters (especially in terms of SARS-CoV-2 virus as it has been argued to have «evolved naturally» (Navarro 2020)). Besides, the vulnerabilities arising across varying social strata questioned the objectivity of the two events and raised concerns of social justice to those whose experiences of the hazards coalesce with their pre-existing social positions. The two events have shown the role played by the anthropocene in both its cause and response through public institutions as had been argued by Beck in his theory on the risk society running on the wheels of global capitalism (Beck 2000). It is in the context of global that Chernobyl became a disaster where not one but several states got involved and changed the face of global international relations of Ukraine and understanding of nuclear energy[11] (Zhukova 2017). Similarly, the SARS-CoV-2 virus-outbreak got the status of a global pandemic because of the context of increasing globalisation in which it has spread, affected societies and their relations to each other (Bickley et al. 2021; Shrestha et al. 2020). The stories of Ukraine and India parallels also because of their statuses as post-colonial, economically less powerful societies finding themselves continuously lumbered by the global powers (Ivakhiv 2020; Shrestha et al. 2020). Risk and globalisation influence one another as risks get distributed in a 'boomerang effect'[12] due to globalisation (Beck 1986, 36-37). Substances embodying the two events showcase the nature of risks and the uncertainty in which it distributes not simply at a local but on a global scale where connections of politics, science, economy and media become necessary to locate risks.

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[11] Carlson (2022).

[12] The boomerang effect of risks entails that those countries or groups that produce risks also get affected by it in the global context of interconnections (Beck 1986).

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Part IV
Experiencing Risk and Uncertainty

The Construction of Urban (In)Security: The Policies and NGOs' Discourses in Budapest and Milan

by *Tatiana Lysova* and *Laura Schmidt**

This paper examines the urban (in)security discourses generated by legislation and non-governmental organisations (NGOs) in different European contexts: Budapest and Milan. The research has two main aims. Firstly, it seeks to highlight the differences and similarities in the discourses between the studied contexts. Secondly, as the previous research shows, legislation and NGOs generate diverse discourses on various social issues; therefore, it is essential to investigate whether there is such a difference in the discourse on urban (in)security. The findings demonstrate that while there is a general coherency in the construction of urban security, there are critical distinctions in the discourses on urban insecurity between and within the contexts. The differences between the contexts might be attributed to the specificities of neoliberalisation and the current socio-political situation in each city. The differences within the contexts might be ascribed to the nature of the involvement of NGOs in tackling urban insecurity.
Keywords: urban insecurity, crime prevention, urban policy, NGO, neoliberalism.

Introduction

Although the problem of urban insecurity is not new, it persists in European cities. As confirmed by numerous studies, city authorities undertake many efforts to tackle it, which result in increasing securitisation of cities and reducing crime rates. Simultaneously, the research shows that subjective insecurity and fear of crime remain stable or even increase in cities (Valera and Guàrdia 2014). Partially, this paradoxical situation is explained by an ever-expanding concept of urban insecurity and various global and local factors impacting the perception of insecurity in cities.

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Given this paradox, urban insecurity might be treated as a social construct that tends to reproduce despite the changes in the objective reality (Valera and Guàrdia 2014). The discourses generated by various actors involved in tackling urban insecurity contribute to forming this construct (Crawford 2009). The previous research indicates that NGOs and legislation could generate opposing discourses on social problems (Colombo 2018; Gőbl, Szalai 2015). However, there is a lack of research on whether and how legal and NGOs' discourses on the problem of urban insecurity differ.

Therefore, this paper's primary goal is to investigate how policies and the representatives of NGOs dealing with the problem of urban insecurity construct urban (in)security in their discourses in two European cities. The study aims to compare the phenomenon by analysing variations and commonalities between the two cities and, additionally, within them by researching legal and civil organisations' discourses.

This research is implemented in two cities: Budapest and Milan. They represent European post-Soviet and Southern cities, respectively, two understudied contexts in the existing scholarship on urban security (Baptista 2013). The cities were selected based on the maximum variation approach (Flyvbjerg 2006) as they differ in their socio-economic and political situation; however, the problem of urban insecurity is acute in both of them (Stefanizzi, Verdolini 2018).

The paper is structured in the following way. The first section examines how neoliberalism affects the ways of tackling urban insecurity and discourses on it. Then it discusses the peculiarities of neoliberalism in each city, contextualising the research. The research methodology is presented in the next section. The presentation of the main findings in Budapest opens a discussion on the study's empirical results, followed by an account of the findings in Milan. The paper concludes with deliberations on the main findings, focusing on the main similarities and differences between and within the studied contexts.

Neoliberalism and Urban Insecurity

In the 1980-1990s, European countries shifted from a previously dominant welfare state to a neoliberal regime. However, due to cultural, political, economic, and social variations between countries and within them, neoliberalisation has not been a straightforward and uniform process (Ong 2006). Therefore, it is important to discuss the impact of neoliberalism on urban insecurity discourse in general and in each studied context.

Neoliberal "Preventive Turn" and Urban Insecurity

Neoliberalism brought about a "preventive turn" (Garland 2001): a state should primarily aim at crime prevention, not crime repression, as it had been done under

"penal welfarism." The preventive turn suggests that insecurity and crime should be tackled in two ways: social and situational. Social crime prevention seeks to improve the socio-economic conditions of a potential criminal and victim, while the situational approach focuses on reducing the possibility of crime through direct manipulations in the physical space (Garland, 1996). Nowadays, in most Western countries, a mixed approach to crime prevention dominates (Crawford 2009).

Additionally, more recently, participatory security and community involvement got into the spotlight as a crime prevention mode. Partially, the neoliberal logic of cutting state expenses might contribute to the responsibilisation of local actors in urban security and crime prevention (Crawford 2009). However, it should be pointed out that community involvement is not a new phenomenon in the literature on the topic, as, for example, the role of spontaneous surveillance is well-described (Jacobs 1961).

Along with the development of neoliberalism, such uncertainties as increasing migration flows, reduction of social protection programs, increasing labour precarity, and others entered into the public discourse on urban insecurity (Stefanizzi, Verdolini 2018). This widened discourse is also reflected in and generated by urban (in)security policies (Herbert, Brown 2006).

Budapest: a Post-Soviet City and Neoliberalism

In the 1980-1990s, Hungary transitioned from the Soviet regime to an open market, and it was the period of the introduction of neoliberal policies in the country. The neoliberalisation process has undergone some transformations with two main stages:

1. The 1990s - the beginning of the 2000s: «embedded neoliberalism». Its main feature is balancing social welfare protections and market liberalisation; however, such regimes are often unstable due to implementing two divergent political approaches (Bohle, Greskovits 2012). By 2010, the Hungarian government partially failed in this balancing when the centre-right political forces came to power (Stubbs, Lendvai-Bainton 2019).
2. 2010 - onwards: «authoritarian populism» (Rogers 2020) or «national-neoliberalism» (Ban et al. 2021). The former framework points out the efforts of the ruling Prime Minister and party to consolidate their power in the country, while the latter highlights a balance between neoliberal economic policies and policies prioritising national interests as defined by the political elite.

These specificities of Hungarian neoliberalisation and the coming to power of the populist forces have several implications for investigating the discourse on urban insecurity. Thus, according to Taşan-Kok (2004), the urban security policy discourse of Budapest tends to ignore local context, needs, and conditions as policies are drawn on "best practice" examples rather than being developed organically in or adapted to the city. Another reason for ignoring the current situation in the city is the dominance

of centre-right powers in Hungary that shift the focus in their discourses from the current issues to achieving the restoration of the "glorious past" of one of the capitals of the Austro-Hungarian Empire (Akçali, Korkut 2015).

Along with it, irregular immigrants have appeared in the security discourse in Hungary, especially since the immigration crisis of 2015 (Gőbl, Szalai 2015). In particular, the official discourse has been trying to establish a direct association between immigrants and social threats and dangers (increased crime rates, negative labour market consequences, etc.). However, even before 2015, there had been exclusionary discourse towards some ethnicities, primarily the Roma people, who have been consistently discriminated against in employment, housing, and other policies, despite being officially "colour-blind" (Keresztély et al. 2017).

The empirical studies focusing on local inhabitants show that the discourse on urban insecurity in Budapest revolves around crime and the visible presence of "others" in a broad sense. "Others" comprise all people who demonstrate deviancy in a neighbourhood: homeless, drug addicts, immigrants, and ethnic minorities (Barabás et al. 2018; Stefanizzi, Verdolini 2018).

Milan: a South European City and Neoliberalism

The literature suggests that a starting point for Italian neoliberalisation is the 1980-1990s, when the party system existing from the end of the Second World War (the First Republic) ended due to an extensive political investigation of corruption (Koff, Koff 2000). The literature characterises Italian neoliberalisation as selective, marked by the beginning and adaptation of institutional changes at the margins of and their gradual extension to the whole society (Ferragina, Arrigoni 2021). Therefore, it might strongly affect more vulnerable and marginalised social groups as institutional changes impact them in the first place.

The adaptation of neoliberalism has impacted the discourse on urban insecurity in Italy, too. If, before the 1990s, the official insecurity discourse had been built around the war against organised crime, in the 1990s, it shifted and expanded to broader public insecurity, street crime, and urban decay (Ricotta 2016). As a result, urban security legal discourse has expanded to traffic, migration, environment, and other urban policy issues.

Populism also influenced the new rhetoric on urban insecurity in the country by connecting "others" (migrants and various marginalised groups) with "dangers" (e.g., street crime) in their urban insecurity discourse (Bonfigli 2014). The situation became especially acute in 2008 with increased migration flows to Italy, which led to the introduction of several repressive measures (Hepworth 2012). One of them is the Security Package of 2008 which gave mayors the power to issue contingent and urgent by-laws for urban security reasons.

The research analysing the by-laws issued in Milan shows that there is a political division in constructing urban insecurity in the city (Verga 2016). While a right-wing mayor directly associated urban insecurity with street prostitution,

alcohol consumption, concentrated migrants' presence, and other issues (Verga 2016), left-wing mayors of Milan promote an integrating approach toward "others" (Bonfigli 2014).

Besides the political discourse, the media and NGOs have played an important role in forming the discourse on urban insecurity in Milan. While the media follows the populist discourse of constructing urban insecurity (Dal Lago, Palidda 2010), Catholic-oriented charities and volunteer organisations emphasise the importance of social acceptance and integration of vulnerable and marginal groups (Muehlebach 2013).

The empirical studies focusing on the Milanese population show that the discourse on urban insecurity includes crime (especially burglaries, robberies, and anti-social behaviour) and the presence in an area of inhabitation of "others" (Stefanizzi, Verdolini 2018).

Methodology

This research aims to answer the following question: how is the problem of urban insecurity constructed in the relevant legislation and by the NGOs directly involved in dealing with the issue in Budapest and Milan? Therefore, the empirical research consisted of the desk-based research of the legislation and semi-structured interviews with NGO representatives.

A complete list of laws, legal decrees, acts, regulations, programs, provisions, and ordinances dealing with urban (in)security in power by December 31, 2019, has been compiled to perform the document analysis. In total, 37 documents at the state, regional[1], and city (Milan and Budapest) levels were included in the study.

To study the construction of urban insecurity in the immediate context of its production, semi-structured interviews with non-governmental and voluntary organisations representatives were conducted. Following the literature on the involvement of the civil sector in dealing with urban insecurity (Grabosky 1992; Wo et al. 2016), NGOs include both voluntary and non-governmental organisations in this research. However, the current study accounts that voluntary organisations usually refer to the local level, while NGOs commonly refer to the international one.

The selection of NGOs was based on the classification of their involvement in tackling urban insecurity suggested in the literature (Grabosky 1992):

- open government policy dimension (legislation formulation, participatory planning, etc.);
- volunteer activities:

[1] In Italy only, for Lombardy region.

- neighbourhood watch: self-organisations of residents to be alert for and report suspicious activities in the neighbourhood;
- citizen patrols: patrolling public spaces with some minor crime control functions;
- mediation: the resolution of minor interpersonal conflicts in the neighbourhood;
- victim assistance: psychological and legal advice and other help to crime victims.

Additionally, to account for the local contexts, the NGOs were selected based on the problems identified in the legislation analysis. In total, eight semi-structured interviews were conducted (four in each city). The average interview length of an interview is one hour. In Budapest, the fieldwork was in spring 2020, and in Milan – in autumn 2020.

During the interviews, the following topics were discussed:

- the current security situation (as perceived by an interviewee) in the city and a specific neighbourhood (if an organisation operates in one neighbourhood);
- the main changes in the field of urban security during the last five-ten years;
- the perceived effectiveness of the current policies and interventions aimed at tackling urban insecurity;
- policies and actions they consider to be the most effective for tackling urban insecurity.

The collected legal and interview data were subjected to coding in NVivo 12 software and then to critical content analysis, focusing on the relationships between the codes (Bowen 2009).

Budapest: Discourses On Urban (In)Security

Legislation: Urban Security as a Strategic Goal

The analysis of legal definitions is useful for understanding the normative framework around urban security (Selmini 2005). The Hungarian law does not provide any unified definition of urban (in)security but discusses it in various documents. For example, Act CLXXXIX on Local Government, 2011, Section 13(17) states that the local government's task is to contribute to the public safety and security of the citizens living in the area and to public order maintenance in the municipality. The analysis of the Act indicates the adaptation of neoliberal logic in tackling urban insecurity. Thus, the majority of the suggested measures are preventive, and there is

the responsibilisation of local governments. However, it is worth mentioning that, in 2012, a new Fundamental Law of Hungary was enacted by the conservative government, diminishing local authorities' powers (Hoffman 2019).

The legislation analysis shows that state-level documents usually construct urban security through goal-setting. For example, the National Crime Prevention Strategy (2013-2023)[2] prioritises urban security, constructing it through achieving public order, security and safety of public places and citizens, and citizens' improved feeling of security in public places. The same construction of urban security can also be found in Act XXXIV on the Police (1994), Section 14.

As to urban insecurity, crime and delinquency, especially juvenile, are associated with it in the Strategy's discourse. The Strategy also mentions the presence of migrants among the factors aggravating the perception of insecurity. Such an approach can also be met in Act LXXX on Asylum (2007). In 2015, irregular migration was introduced as an urgent matter for the first time when adjustments were made to the Act, introducing the term crisis caused by mass immigration (chapter IX/A, Article 80/A).

At the level of Budapest, urban (in)security also appears mainly in some strategic documents. For example, the Budapest 2030 Long-Term Urban Development Concept (No. 767/2013 IV.24) discusses urban security as an integral part of the «optimisation of human services», constructing the phenomenon through public safety and the feeling of security of the local inhabitants, pointing out that the level of the feeling of security and trust in the police remain low in Budapest. Another document is the Thematic Development Programs of Budapest (2015), which connects urban insecurity with crime, drug selling, lack of trust in others and state institutes, intolerance, low living standards, social inequalities, and housing issues. The problems mentioned in the documents seem to be context specific, as the transition to an open market affected Hungarian society by aggravating anomie resulting in a low level of social trust (Barabás et al. 2018). Additionally, Tosics (2006) demonstrates that housing issues have induced social and spatial segregation and inequalities in Budapest since the Soviet times.

Summing up, the Hungarian and Budapest legislation discusses urban security usually in some strategic documents, that is, it should be achieved in the future. Through these goals, it is possible to reconstruct the discourse on urban insecurity in the city, which constructs the problem mainly through criminal activity and various social issues.

NGOs: Living "In Peace and Safety" in Budapest

The representatives of the grass-roots organisations coincided in their general estimation of Budapest as a secure city. According to them, it is possible due to declining crime statistics, a lack of organised crime, and visible signs of

[2] Adopted by the National Crime Prevention Council, Government Resolution No.1744/2013.

securitisation in the city. Additionally, the interviewees noted the increased presence of formal control realised by the police and video surveillance on the streets.

Despite acknowledging the decline in street crime, the representatives of NGOs constructed urban insecurity through mugging, stealing, car theft, and drug dealing. Additionally, the interviewees noted crime displacement from physical to virtual space (illustrated by the grandchilding[3]) as criminals explore new opportunities for crime committing. The representatives of NGOs also mentioned such visible signs of social and physical urban degradation as neglected urban areas, homelessness, and public drug consumption in their discourse on urban insecurity. According to Interviewee 3BV, the last issue has been an acute problem for the last several years due to the growing popularity and availability of synthetic drugs.

From the analysis of the interview data, it appears that Budapest can be divided into two parts in terms of urban security. The Buda side (located west of the Danube River) has a secure reputation, which is mainly due to the low crime and incivility rate. The Pest side (east of the Danube River) has several places with a robust reputation of being insecure. For instance, Interviewee 2BV mentioned that District VIII still has an insecure reputation which tends to reproduce, despite many improvements and interventions introduced by the municipality. On the other hand, Interviewee 1BV mentioned Hős utca as one of the most problematic streets of the city, where the municipality fails to solve problems. The street is constructed as insecure due to a lack of maintenance, extreme physical degradation, creating "inhuman conditions" there, and the high concentration of marginalised groups and ethnic minorities (Roma people).

This spatial division between secure and insecure parts reinforces the spatial and social segregation of Budapest existing since the Soviet time (Tosics 2006). As the interview analysis shows, wealthier people prefer to inhabit the Buda side of the city, which is more homogeneous in terms of population. A less affluent population usually settles on the Pest side.

Summing up, the representatives of NGOs' discourse on urban insecurity is complex: it is constructed through such issues as criminal activity and its changing and adaptive nature, visible signs of social and physical degradation on the city streets, lack of proper maintenance of the city streets, and others. At the same time, the interviewees also connected various city-specific issues (intolerance towards any deviance, social and spatial segregation, and others) with the problem of urban insecurity in their discourse.

[3] A phone-based cheating the elderly with the aim of money extortion: a criminal calls an older person saying that their child or grandchild (hence, the name) is in trouble (a car accident, injury, etc.) and they need money urgently. The criminal asks to send money to their bank account and then disappears.

Milan: Discourses On Urban (In)Security

Legislation: Urban Security as a Public Good

The analysis of the Italian legislation started with the legal definition of urban security. In the Decree *Public Safety and Urban Security: Definition and Areas of Application* (2008), urban security is defined as «a public good that should be protected through activities within the local communities aimed at defending the respect for the rules governing civil life for improvement of the living conditions in urban centres, civil coexistence, and social cohesion». The analysis of the text of the Decree indicates the neoliberal logic of urban security provision in Italy by redistributing security provision responsibility to the local level and prioritizing preventive measures.

Urban insecurity is constructed in the legal discourse mainly through ordinary (as opposed to organised) and predatory crime (for example, in the mentioned Decree of 2008 and Law 48/2017). However, some social issues also appear in the discourse on urban insecurity: social degradation, marginalisation, isolation, and others. In addition, incivilities (alcohol-induced violence, public or private assets damage) contribute to the legal urban insecurity discourse.

The analysis of other state-level documents indicates that immigration, especially the irregular one, is included in the legal discourse on urban insecurity in Italy as a factor aggravating it (Security Packages of 2008, 2010, 2017, and 2018). In 2010, the Security Integration Plan proposed an integrational and inclusive approach toward immigrants. Still, the Plan stated that the concentrated presence of foreigners might bring about insecurity to the local Italian population and the foreigners themselves.

At the level of the Lombardy region, the legislation provides for research on the territory to understand factors contributing to urban insecurity (Agreement for the Promotion of Integrated Security 2019). Additionally, various criminal phenomena appear in the legal discourse on urban insecurity at the regional level (for instance, in Lombardy Regional Law 6/2015).

The Milanese legislation constructs urban insecurity primarily through social issues and its subjective dimension. The local discourse on urban insecurity includes crime, urban decay, degradation, social marginalisation, lack of social solidarity, and vulnerability of some social groups (women, children, and youth) (for instance, Memoranda for Understanding Project *'Neighbourhood Control'* 2018).

As discussed earlier, politicians' left/right affiliation significantly shapes their policy discourse on urban insecurity. The current mayor of Milan, B. Sala (since 2016), is a centre-left politician who rarely addresses the topic of urban (in)security in mayoral provisions. The analysis of his ordinances on urban security shows that they are mainly issued in cases of special events (significant sports events, music concerts, etc.), the conduct of which requires increasing security measures.

To sum up, Italian legislation constructs urban insecurity as a complex phenomenon. On the one hand, the discourse on urban insecurity revolves around unorganised crime, incivilities, and urban physical degradation. On the other hand, the legal discourse on urban insecurity is based on and contributes to the stigmatisation of some social groups by drawing a connection between them and insecurity in Milan. Local legislation pays more attention to the social side of urban insecurity than the national one, which might be due to the political orientation of the current mayor of Milan.

NGOs: Displacement of Urban Insecurity to the Periphery of Milan

The representatives of NGOs characterised Milan as a secure city. Mainly, the interviewees attributed it to the visible presence of formal control (police forces) and neighbourhood watch in the streets and declining crime rates. Additionally, the NGO workers' discourse on urban security in Milan encompasses the vivacity of life in the city, highlighting the role of social, cultural, and educational activities in creating informal control and security in Milan.

Despite mentioning declining crime rates, the representatives of NGOs' discourse on urban insecurity revolved around violence, robberies, abusive occupation, and scams. In their opinion, these issues are inevitable in any large city. Incivilities (aggression, alcohol-induced misbehaviour, and baby-gangs[4]) also appeared in the discourse on urban insecurity in Milan.

The interviewee's discourse on crime was racialised to some extent as the representatives of the grass-root organisations drew a connection between crime and immigrants. Thus, Interviewees 2MV and 4MV suggested that immigrants might be more crime-prone due to experiencing economic hardship more frequently. Simultaneously, Interviewee 1MV pointed out that immigrants might have an even greater feeling of insecurity due to their stigmatisation and, as a result, attitude in society, including in institutional settings.

Visible signs of urban decay and degradation also contribute to the construction of urban insecurity in Milan. The interview analysis shows that this issue is especially acute in the city's periphery, constructed as an area of concentrated urban insecurity. Interviewee 4MV supposed that such a situation is due to «a will of the Municipality of Milan» to displace visible problems from the city centre to the periphery to make the centre more attractive. Additionally, the NGOs' representatives suggested that there is insufficient visible control in the periphery, which instils the perception of insecurity and feeling of abandonment.

As a result of this social and spatial stigmatisation, there is a tendency toward social and spatial segregation in Milan. Thus, the more affluent population tends to inhabit central neighbourhoods of the city, while less wealthy people live on the

[4] An organised group of adolescents who usually commit petty crime or incivilities.

city's periphery. If various social groups coexist in one neighbourhood, physical signs of segregation (gated communities, CCTVs, etc.) usually appear there.

Lastly, the interviewees mentioned a lack of social cohesion as a factor contributing to urban insecurity. According to them, it happens due to possible difficulties with social integration and disaggregation of traditional social ties in large cities. Interviewee 3MV called it an «urban desert», which leads to indifference and a lack of help to others.

To summarise, it is evident that the NGOs' representatives accounted for the complex nature of urban insecurity, highlighting various city-specific problems. Although they constructed the phenomenon through crime and physical urban degradation, their discourse paid much attention to the social roots of urban insecurity.

Discussion and Conclusions

The article set out to understand similarities and differences in urban (in)security discourses generated by legislation and NGOs in two various contexts in Europe – Budapest and Milan. The study results indicate that the construction of urban security coincides in all the discourses and both contexts. More specifically, while legislation constructs urban security through public safety, public order, etc., the representatives of grass-root organisations build their discourse on urban security around declining crime rates, visible signs of securitisation and control, and safe public spaces. Therefore, there is coherency between the legal and NGOs' discourses in Budapest and Milan, highlighting the crucial role of public order and safety in creating urban security.

However, there are some principal differences in the discourses on urban insecurity within and between the two cities. These differences are firmly grounded in each city's context. Thus, although the legislation of both countries constructs urban insecurity through crime, incivilities, social and physical degradation, and exclusion of immigrants, the document analysis reveals some specificities in each context.

For instance, the Hungarian and Budapest policies mainly (with just a few exceptions) discuss urban security in strategic documents, shifting the focus from the current problems in the city to the goals the policies aim to achieve. It might be attributed to the specificities of neoliberalism development and the country's current political situation discussed in the literature (Akçali, Korkut 2015; Taşan-Kok 2004). Still, it should be mentioned that some documents highlight contextual problems resulting from the consequences of the transition period: lack of social trust and social and spatial segregation.

In contrast, the Italian and Milanese legislation connects urban insecurity with a variety of problems, highlighting the local nature of the phenomenon and paying much attention to the social side of urban insecurity at the local level. Additionally, the paper confirms the findings of Verga (2016) that there is a political division around the problem of urban insecurity in Milan: the centre-left government rarely

addresses urban insecurity directly. Therefore, the policies mainly aim to tackle various social issues, which might lead to increased security as a by-product.

Unlike the legal discourse, that of the grass-root organisations in both cities often discussed local problems that have both situational and social roots and emerge at a neighbourhood level. We attribute this difference to the involvement of NGOs in tackling urban insecurity in the immediate environment of its production. Additionally, the grass-root organisations participating in the research frequently deal with various social issues, which explains their attention to this side of urban insecurity. Therefore, this study suggests that NGOs and legislation can generate contrasting discourses on urban insecurity.

Still, the current study finds some principal differences between the cities in the NGOs' discourses. Although all the interviewees mentioned similar problems in their construction of urban insecurity (for example, a lack of formal and informal control, stigmatisation of some places and social groups, etc.), there are some variations which can be ascribed to the current economic, political, and social situation in each city.

For instance, while, in Budapest, there is a long history behind the stigmatisation of the Roma people, which also leads to the stigmatisation of places of their concentrated presence, in Milan, the stigmatisation mainly concerns immigrants, which is due to the exclusionary political and media discourses induced by increased immigration flows. Spatial stigmatisation has also various roots and is tackled differently in the cities: the Municipality of Budapest tries to alleviate it by making interventions in the problematic districts (although with some failures), while the local authorities of Milan reinforce it by displacing problems from the city centre to the periphery. Additionally, the research shows a difference in the explanations for the lack of trust in others and institutions. Thus, while in Budapest, it might be attributed to the societal consequences of the transition period, in Milan, it is mainly due to the conditions of urban life eroding traditional social ties.

Further research might be undertaken to investigate how these discourses impact, on the one hand, the implementation and further development or reformulation of policies and, on the other hand, actions undertaken by the NGOs. Such research would facilitate understanding how discourses influence practices in tackling urban insecurity.

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Risks and Threats of Recent Years in Cultural Experience of Ukrainians

by *Natalia Kostenko* and *Liudmyla Skokova*[*]

The article looks at types of reaction and adaptation among Ukrainians due to the change of cultural and informational order in the context of COVID-19 pandemic caused by increased systemic turbulence in society against the background of forced isolation of national territories, offensive biopolitics, and achievements of the Internet and cybersystems. Empirically generated cultural segments differ in their readiness to comply with or ignore the necessary protective measures falling back on the values of safety, trust or freedom and investing various affective manifestations into the social environment – from fear, anxiety and irritation to hopes for the comeback of erstwhile order, empathy and interest in new opportunities. The cultural consequences of the pandemic in the form of mastering life practices when faced with biological threat remain rather significant in the new conditions after Russia's full-scale invasion in Ukraine when the agenda of risks in the military context has become much more dramatic and disastrous.
Keywords: risk society, emergency state, biorisks, cultural and informational order of the pandemic, risks in military context.

Thematization and the Language of Risks

Until very recently when the world including Ukraine had been in the active phase of coronavirus pandemic it was possible to accept the formula of risks according to «second reflexive modernity» by Ulrich Beck who aptly introduced the idea of «risk society» in sociological research. The formula is based on the assumption that modern risks «are often invisible, classless (egalitarian) and global» (Rasborg 2018, 159). Beck's thesis is currently being criticized for underestimating the varying degrees of social vulnerability to global risks (Curran 2016). However, it remains one of the possible ways to classify risks during COVID-19 pandemic regardless of the originality of interpretation. However, after full-scale invasion in Ukraine on 24

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February 2022, the key risks have become, at the very least, clearly "visible" and evident for Ukrainians. Besides, the very term of "risk" turned out to be too "soft" against the background of real threats and violence, requiring much more dramatic vocabulary for perception and evaluation by people directly involved in the situation. Still, when speaking about risk society in reflexive modernity, Beck definitely differentiates the terminology suitable for anticipating and describing dangers and in various ways inducing individuals and communities to act and power structures to legitimize these actions.

> Risk does not mean catastrophe. Risk means the anticipation of catastrophe. Risks are about staging the future in the present, whereas the future of future catastrophes is in principle unknown. Without techniques of visualization, without symbolic forms, without mass media, without art, risks are nothing at all. The sociological point is: If destruction and disaster are anticipated this might produce a compulsion to act. The social construction of a 'real' anticipation of future catastrophes in the present (like climate change, or financial crisis) can become a political force, which transforms the world (for the better or the worse) (Beck 2016, 264).

When thematizing risks, Ulrich Beck repeatedly brought up their classification by historical periods. We could say that in its semantic history the concept of "risk" moved from the delivery of fate through being determined by searched-for reasons and calculated losses and gains to the indeterminate nature of consequences, i.e., «from fated, to determinate, to indeterminate» (Lash 2018, 118). However, in the still-not-abandoned situation of global virus pandemic with accompanying economic and political resonance as well as full-scale Russian invasion Ukrainians as never before definitely discover and experience all three destabilizing meanings of "risk" which overlap and interfere, producing doubt in the explanatory strength of classical and neoclassical epistemes, deficit of convincing knowledge. Naturally, this is coupled with unrelenting anxiety and existential fear – but not among everyone, at least not among those who, using the same meanings of "risk", distinguishes in them ambivalent stimuli and inspiring insights signifying if not "anticipated utility", then unexpected opportunity, physical and mental adventure (Le Breton 2018). This happens against the background of dysfunctional formal institutions responsible for risk control and minimization, which only grows due to the tension between normative horizons and institutional implementation of social reform as well as policy changes, as Beck emphasizes. On the contrary, anxiety becomes institutionalized in its effort to dispel uncertainty as can be clearly seen in environmental organizations and movements (Mythen 2018). Actually, in his book *The Metamorphosis of the World* Beck articulates the reformative potential of social

transformations in a cosmopolitized world, a mobilizing component of global risks (Beck 2016a; Mythen 2020).

In this article we will concentrate on the perception of risks in the Ukrainian society during COVID pandemic, which individuals, communities and organizations did not have the chance to deeply comprehend due to new unseen trials faced by people and the country, with different ontology and consequences.

Cultural Order Shift in the Space and Time of the Pandemic

Cultural Ontology of the Pandemic

The current virus pandemic noticeably changed the circumstances of life both globally and locally (IPSOS 2020; UNDP 2020; UNDP 2020a; World Economic Forum 2021). It questioned the trends of social development in economic and political fields and reformatted different institutional and everyday activity patterns, thereby inducing to test new models of interaction on different levels. The changes also impacted previously formed cultural and informational orders due to forced isolation of national territories, aggressive biopolitics, and achievements of Internet communications.

It would be relevant to clarify the peculiarities of pandemic ontology as an unstable cultural state of the society, namely its axiological dimension, the impacts of informational environment on susceptibility of media users as the media are the main source of routine knowledge about coronavirus infection threats and prevention measures. This will enable us to more precisely analyze research approaches to observation and means of empirical verification of shifts and deviations in cultural and informational orders.

Apart from the main direction and sociological language of risk analysis in «reflexive modernity» established by U. Beck, our methodological assumptions are grounded in the ideas of contemporary sociology about the social states of «emergencies» (Žižek 2010), grounds and practices of biopolitics (Foucault 2007, Agamben 2020), and socio-cultural vision of social reality. The shifts in cultural and everyday life provoked by the pandemic could be first perceived as situational inconveniences and affective experience left behind as soon as former algorithms of existence are restored. However, the sudden nature of circumstances, their unexpected long duration, structural and moral imperatives capture our living worlds, mental and practical reactions in an unnoticeable way, subordinating them to other requirements and forming the transformed norms and the new normality in modified space and time.

The temporal and spatial parameters of existence for individuals and communities turn out to be rather indefinite and volatile as territorial boundaries of safe and unsafe spaces move and overlap, with accessible zones of real movement

decreasing (Kostenko, Skokova, Naumova 2021). The areas of functioning for current actors and organizations are reformatted institutionally or spontaneously. They are included in different networks of pathogens, humans and animals able to carry them, non-human agents of laboratory and other types, medical institutions, political and business structures, etc. (Cañada 2019). The temporal limits of regular and media events duration are established with significant imprecision; present-day context is projected to an indefinite period, all the while strengthened by feelings of timelessness and delayed time period. Remote communication expands the area of free and safe spaces but hardly eliminates confusion unavoidably broadcast by available information.

The description of ontological characteristics of the pandemic adjoins the definitions of "emergency", the state Ukrainian society has been in during recent years due to systemic turbulence and military conflict in Donbas ongoing since 2014 (Skokova 2021). This state is conceptualized in contemporary sociology according to "extraordinarity" and "exceptionality", along with the ideas about envisaged impacts of various transformational processes. The reality of "emergency" simultaneously produces numerous topologies and temporalities, constituting affective environments of urgency and expectation of measured rhythms for common and private existence (Adey, Anderson, Graham 2915; Kostenko 2016). The biorisks emerging in the space and time of the pandemic add special vulnerability to the "emergency" state despite institutional and individual efforts to decrease their probability – they can hardly be prevented with guarantees, which produces unpredictability.

Staying in the time and space of the pandemic cannot but impact our identities, not to say that they are now subject to radical review or threatened by a change of destiny. However, sometimes they lose their confirmation due to the lack of former habitual activities. Those who mastered operations with their «digital identity» could have possibly achieved success in the innovational dramaturgy of managing impressions of themselves, convincing themselves and others of their legitimacy, and sociological understanding (Goffman 1956; Garfinkel 1991). In the limited home space and retarded time, the intention of personal identities to claim recognition is probably suppressed in the permanent circle of family members. However, digital identity is found in social networks according to the new logic of affective communications, digital economy of algorithms, practices of impact on users and their surroundings, thereby affirming something called «the new normality of claims for justice» (Chouliaraki 2021). This "new normality" presents both sufferings and creative solutions, further discrediting the "former normativity" of communities in the context of contemporary multimodal world. In our narrations about themselves, close and distant characters, in the stories we write jointly in the world distorted by the pandemic the narrative constitution, the succession of time and the alternation of places are violated (Ricoeur 1998; Fernández 2021). The ubiquitous media produce and offer such stories to us in excess by synthesizing different "digital identities" but in no way solving their deficit of authenticity.

Identity types practiced as adherence to cultural styles become all the more noticeable; in the most general sense, they are classified according to:

- management of meanings, their correlation with values and motivational algorithms of the latter;
- degree of awareness and open-mindedness to information, digital competence;
- ability to dispose of personal and group cultural resource and cultural practices.

However, the peculiarity of such cultural styles does not necessarily agree with those accepted in the communities, with modifications of "affected" social strata and persons not covered by legitimized associations with low-income age groups or displaced persons. For example, those who are not willing to get vaccinated against COVID-19 due to different reasons, ignoring reasonable demands (and the level of education is not a deciding factor here), get not only administrative bans on mobility but also stigmatizing claims in public space and everyday life.

Tension Between Value Priorities and Uncertainty About Informational Sources

The fluctuations of society's value mentality and value priorities as well as their inconsistence between different population categories become evident, especially against the background of achievements of «methodological nationalism» (Beck) and actualized practices of «etatization of the biological». According to Foucault, these are practices of regulating individuals and kins in the conditions of industrial modernity when the attempts of government to control the spread of the disease require comprehensive capture of human embodiment and existence, which risks transforming this existence into «naked life» (Agamben).

Social, political and theoretical debates about the values and ethics of interaction among individuals, society and state develop in a wide range of relevant concepts: from utilitarian approaches oriented at the social good in a critical situation to a Kantian view on respect for humans as individuals (Walby 2021). Neoliberal policy is believed to be not efficient enough to counter a wide-scale biological threat. However, the strengthening trend «to use an emergency as a normal paradigm for the government» in search for safety is also not deemed acceptable, with D. Agamben warning against the risk of authoritarianism (Agamben 2020). The manipulative intentions of behavioral science which believes that it is easy to push a human to comply with national priorities are just as unacceptable. Some "fair" models of getting out from the pandemic-provoked crisis are also offered, driven by social and democratic impulses in organization of social health care where «if somebody falls ill, we are all potentially ill»; therefore, illness-associated risks and

expenses are to be borne by all members of the society, with this metaphor extending to other social fields (Walby 2021, 24).

In practice, the dissent and tension among values of "freedom", "trust" and "safety" turned out to be especially vivid in the slogans of numerous protests against lockdowns inspired by social and economic motives but also with political and psychological justifications. The government is expected at the same time to protect from the disease risk, vested with responsibility for the citizens' health, but this demand is countered by avoidance of quarantine measures. Such mental ambivalence prevents the achievement of "collective agreement", society's consent to accept restrictions. In particular, this is reflected by court appeals to administrative and governmental measures to fight the epidemic, which is specific to Western democracies and has also been observed in Ukraine.

The manifestations of this value tension are also embodied in the imbalance and inversion of other durable value dichotomies like public vs. private when remote presence of an individual at collective events opens up home isolation, bringing it into public context, and on the contrary, a public event intervenes into a private space.

The current informational climate cannot but influence the correction of value and meaning preferences as well as of motivational algorithms of actions. Probably it is with the beginning of coronavirus pandemic that we felt «inside the media» (McLuhan1995) stronger than ever before because we obtained all the main information about it from the media and social networks, directly or as retold by people around us. In the field of traditional and novel media it is also problematic to agree the principles of freedom of speech with institutional control over media content and the spread of "infodemic". We could observe the saturation of public space with flows of false and ill-intended messages about the infection and mass vaccination – all that amidst skeptical attitude to state institutions and informational resources, low digital competence, and non-critical perception of messages received in different ways (Radu 2020; Kostenko, Skokova, Naumova 2021). At the same time, the indicators of undecided attitude to the sources of messages due to the lack of clarity and ambiguity of implications in the phenomenon of trust in media mark the opinions about the media more and more insistently; this is characteristic of the new "regimes of truth", cultural and informational orders of the pandemic.

Population Segmentation by Perception Types for Sociocultural and Ontological Changes

Types of Reactions to the Shift of Temporal and Spatial Coordinates of Everyday Life

Empirically confirmed evidence of variability of individuals' reactions to ontological changes caused by the COVID-19 pandemic is based on a set of

questions about their perception of everyday life. These empirical data were obtained from the sociological survey *Social Consequences of COVID-19 in Ukraine*. It was conducted as part of the research project of the Institute of Sociology of the National Academy of Sciences of Ukraine *Social Consequences of the COVID-19 Pandemic in the Context of Social Transformation in Ukraine: a Sociological Approach* with the grant support of the National Research Fund of Ukraine. The collection and processing of empirical data was carried out by the sociological firm "Human Research" from July 28 to August 7, 2021 by the method of face-to-face interviews using a structured questionnaire on a tablet with software for conducting sociological surveys. The general sample (2,000 respondents) represents the adult population of Ukraine (age 18 and over) – Table 1. The sample does not include territories that were not under the control of the authorities of Ukraine at the time of the survey – Autonomous Republic of Crimea, some districts of Donetsk and Luhansk regions. The statistical error with a probability of 0.95% does not exceed 2.2%. Survey results are the set of statistical data in SPSS format.

Age	18-25	9,4
	26-35	18,3
	36-45	19,2
	46-55	16,5
	56+	36,7
Gender	Man	45,4
	Woman	54,7
Type of settlement	City from 500 thousand and more	24,6
	A city from 50 to 500 thousand	34,6
	A town up to 50,000	8,2
	Village	32,6
Region (oblast)	Vinnycka	4,1
	Volynska	2,6
	Dnipropetrovska	8,4
	Donecka	4,9
	Zytomirska	3,2
	Zakarpatska	3,2
	Zaporizka	4,5
	Ivano-Frankivska	3,6
	Kyiv	7,7
	Kyivska	4,7
	Kirovogradska	2,5
	Luganska	1,8
	Lvivska	6,6
	Mykolajivska	2,9
	Odeska	6,2
	Poltavska	3,7
	Rivnenska	2,9

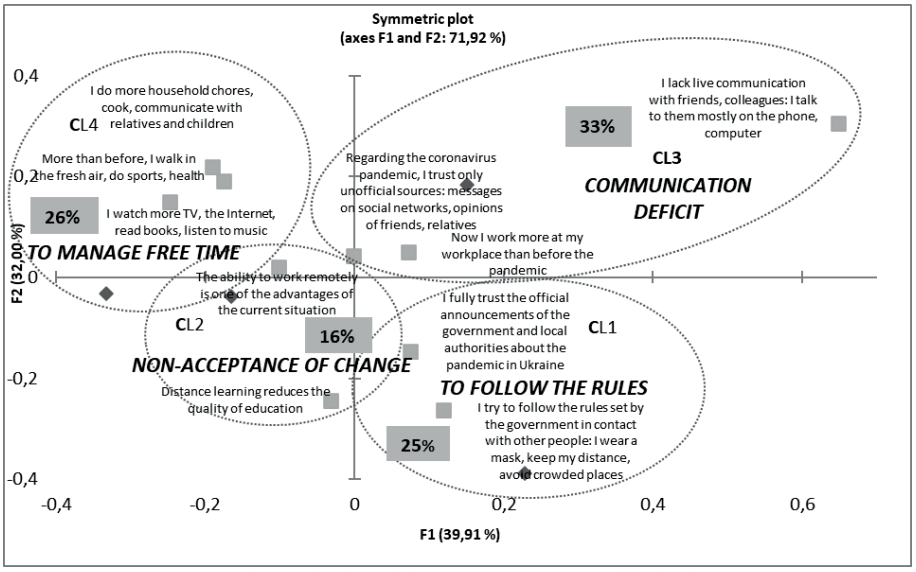
	Sumska	2,9
	Ternopilska	2,8
	Charkivska	7,2
	Chersonska	2,7
	Chmelnycka	3,3
	Cherkaska	3,2
	Chernivecka	2,3
	Chernigivska	2,7
Education	Higher Education	37,6
	Unfinished higher or secondary special education (technical school, college)	39,7
	Secondary education (grades 10-11)	19,2
	Primary / Incomplete secondary education (no more than 9 grades)	3,3
How has your financial situation changed during the coronavirus pandemic (since spring 2020)?	It became better	2,7
	Nothing changed	41,3
	It worsened for a while, but then returned to the previous level	16,6
	It got worse and still is	36,4
	Hard to tell	2,9

Table 1 - Characteristics of respondents to the survey "Social consequences of COVID-19 in Ukraine" (2021), n=2000, %

The main tasks, directions and structure of the research, as well as its results, are presented in a collective monograph (Stepanenko 2021). This book highlights: 1) socio-political consequences and challenges regarding the legitimacy of the social order under the conditions of the pandemic; 2) social and structural consequences; 3) socio-psychological manifestations and consequences of the pandemic; 4) sociocultural and communication aspects of the pandemic.

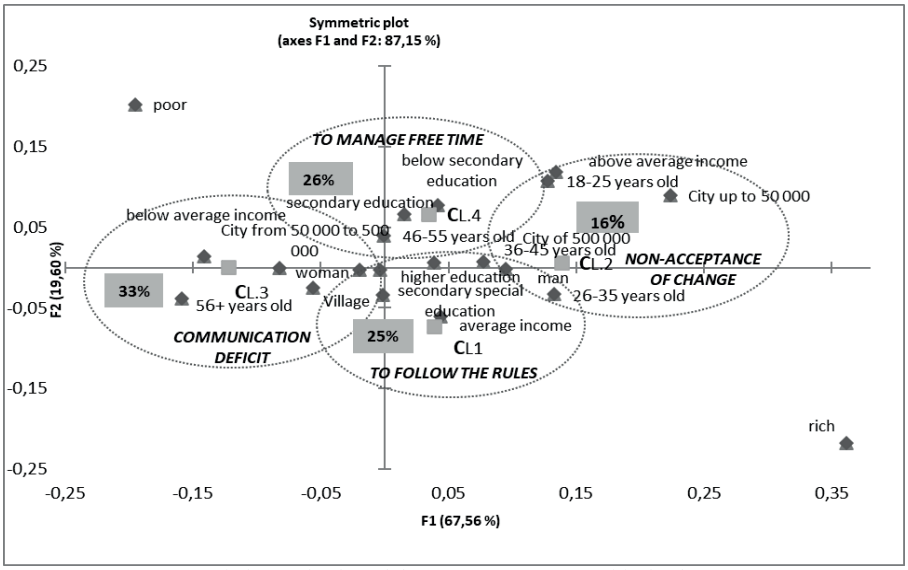
As a result of cluster analysis (K-means Cluster) of the set of questions about perception and evaluation in the space and time of everyday life (work, home, communication) four statistically significant clusters were empirically generated. These clusters are distinguished according to different types of response and adaptation to the current situation. Cluster segmentation based on correspondence analysis (Charts 1, 2, 3)[5].

[5] Fig. 1. Types of perception and evaluations of shifts in cultural, temporal and spatial orders in the context of the pandemic (K-means cluster analysis, correspondence analysis, N=2000, 2021). Fig. 2. Social map of perception types for ontological shifts in the context of the pandemic (K-means cluster analysis, correspondence analysis, N=2000, 2021). Fig.3 (1-4). Peculiarities of perception types for temporal and spatial shifts in the context of the pandemic (%, N=2000, 2021).



χ^2 = 1063.54 observed value, alpha = 0,050, χ^2 = 40,11 critical value, DF = 27

Fig. 1 - Types of perception and evaluations of shifts in cultural, temporal and spatial orders in the context of the pandemic (K-means cluster analysis, correspondence analysis, N=2000, 2021) By answers "*fully agree*" and "*mostly agree*"



χ^2 = 103.62i observed value, alpha = 0,050, χ^2 = 75.62 critical value, DF = 57

Fig. 2 - Social map of perception types for ontological shifts in the context of the pandemic (K-means cluster analysis, correspondence analysis, N=2000, 2021)

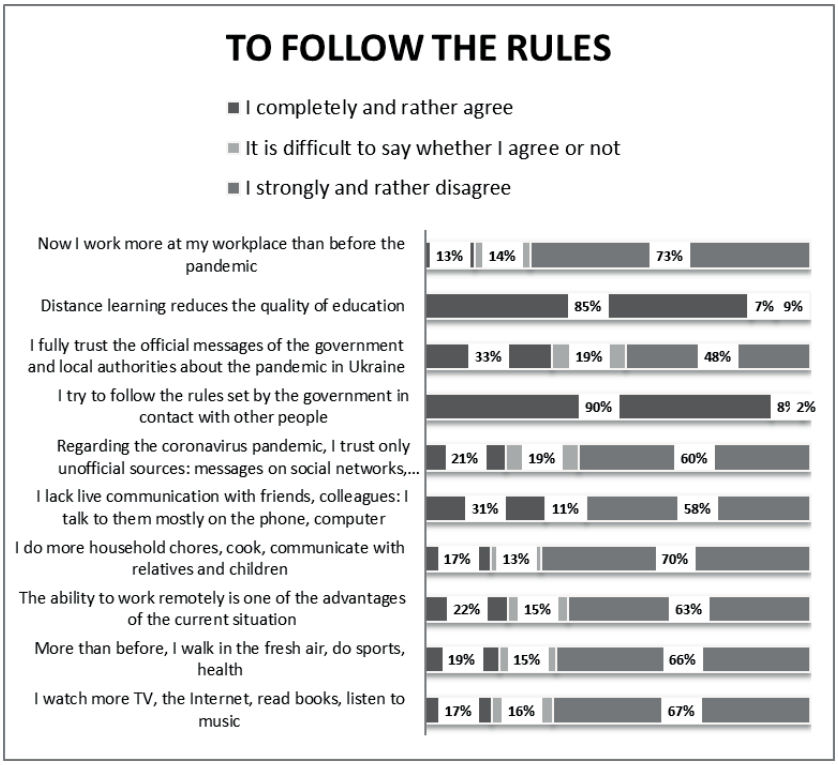
1. ***TO FOLLOW THE RULES*** segment (25%) preserves the structure of sample by age, education, and place of residence. The residents of Center and East of the country are seen there more often than the sample average; men joint it a bit more than the average, and those with average income join it much more than the average (51% vs. 45%). The only statement about cultural orders of the pandemic that the representatives of this cluster agree with the most is the need to «adhere to the rules» established by the government for the current period (90%), along with the opinion about decreasing education quality due to remote schooling, which is characteristic of all empirically generated segments (Fig. 3).

2. In ***NON-ACCEPTANCE OF CHANGES*** cluster (16%) there are a bit more of young people aged 18-35 (37% vs. 29% in sample average), fewer of those aged 56+ (25% vs. 33%), more men (55% vs. 47%) and financially well-to-do people (17% vs. 15%). As a rule, these are urban residents, including residents of big cities (29% vs. 26%), more seldom those who live in rural areas (25% vs. 32%) more of those in the East and the South, fewer of those in the West (17% vs. 25%). Here the shares of small business owners (10.2% vs. 8%), technical experts (13% vs. 10%) and qualified employees (26% vs. 21%) are higher than the sample average. In this segment, unlike the others, people visibly do not agree with the adherence to restrictions in the context of pandemic (84.7%) and do not trust information from official bodies (89.8%); they also do not feel or are unwilling to recognize discomfort caused by the lack of direct communication (82.4%) (Fig. 3).

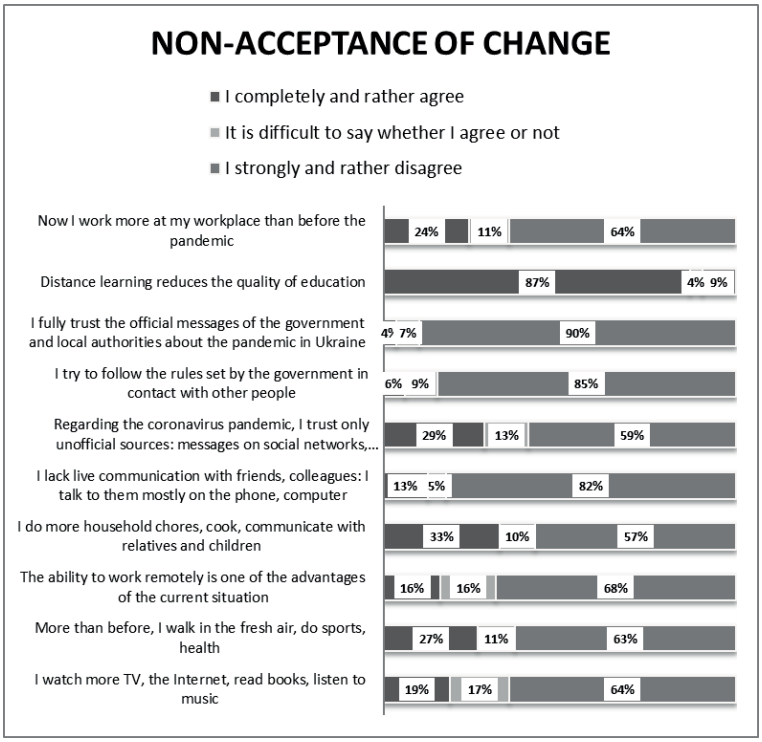
3. ***DEFICIT OF COMMUNICATION*** (33%) is the biggest segment amounting to a third of adult population; in it, there are more respondents aged 56+ (40.3% vs. 33.4%), women (58.6% vs. 53.4%), and residents of mid-sized cities (37.5% vs. 35.8%) compared to sample average; it is more pronounced in the West and less in the East of Ukraine. The segment has fewer young people aged 18-35 (24.5% vs. 29%). It more often includes respondents with lower-than-average income (33% vs. 27%) and “poor” individuals (9,7% vs. 7,6%) as well as retirees who don’t work (25% vs. 18%). Compared to other segments, here they feel a distinct lack of face-to-face interpersonal communication (95%) and are busy at work more than before (28.4%), while in other clusters this indicator is lower (13-24%). They would rather trust unofficial information obtained from friends and family in social networks (45.7% vs. 21-31% in other clusters) (Fig. 3).

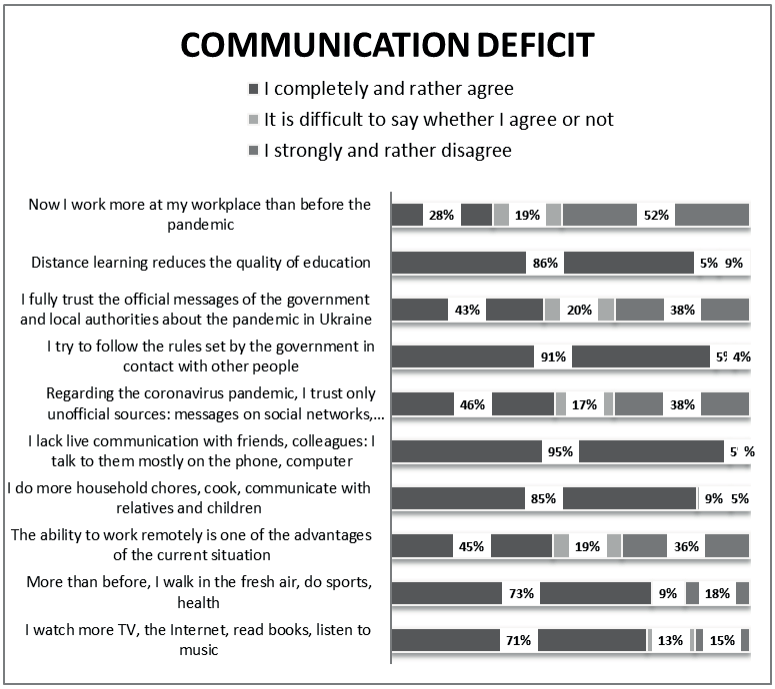
4. In the ***TO MANAGE FREE TIME*** segment (26%) the amount of mature people aged 36-55 is higher than the sample average (40.2% vs. 33.4%) but there are fewer elderly people aged 56+ (29.9% vs. 33.4%), with the sample’s gender structure replicated. Among cluster representatives, the values for secondary education (19.5% vs. 17.5%) and above-than-average income (17.9% vs. 14.6%) are a bit higher, with fewer people having lower-than-average income (24.5% vs.

27%) and more than average of housewives (9.9% vs. 7.9%), more residents of small towns with population under 50 thousand (8.5% vs. 6.8%), more people in the West and fewer in the East and South. The representatives of this type have possibly adapted to the pandemic and mobility restrictions better than others, thereby freeing up a share of time which used to be spent for commuting and presence at the workplace. They treat new time slots as free time for rest, family activities and self-development (69-82%), not feeling any deficit of face-to-face communication (Fig. 3).



In general, people are not prone to believing that in the context of the pandemic their way of life has radically changed since spring 2020. Almost a half of respondents believe that these changes are mostly "insignificant" (46%). However, the *non-acceptance of change* cluster, which contains more young people, men, urban residents and financially well-to-do respondents, is more confident in stating that their way of life "has not changed at all" (37.6% vs. 28.6% according to sample average). However, for a third of an older, women-dominated, less urbanized and less well-to-do *deficit of communication* group the changes in life seem "significant" (34.2% vs. 25.9%).


NON-ACCEPTANCE OF CHANGE
I completely and rather agree
It is difficult to say whether I agree or not
I strongly and rather disagree
Now I work more at my workplace than before the pandemic
24%
11%
64%
Distance learning reduces the quality of education
87%
4%
9%
I fully trust the official messages of the government and local authorities about the pandemic in Ukraine
7%
90%
I try to follow the rules set by the government in contact with other people
6%
9%
85%
Regarding the coronavirus pandemic, I trust only unofficial sources: messages on social networks,...
29%
13%
59%
I lack live communication with friends, colleagues: I talk to them mostly on the phone, computer
13%
5%
82%
I do more household chores, cook, communicate with relatives and children
33%
10%
57%
The ability to work remotely is one of the advantages of the current situation
16%
16%
68%
More than before, I walk in the fresh air, do sports, health
27%
11%
63%
I watch more TV, the Internet, read books, listen to music
19%
17%
64%


COMMUNICATION DEFICIT
I completely and rather agree
It is difficult to say whether I agree or not
I strongly and rather disagree
Now I work more at my workplace than before the pandemic
28%
19%
52%
Distance learning reduces the quality of education
86%
5%
9%
I fully trust the official messages of the government and local authorities about the pandemic in Ukraine
43%
20%
38%
I try to follow the rules set by the government in contact with other people
91%
4%
Regarding the coronavirus pandemic, I trust only unofficial sources: messages on social networks,...
46%
17%
38%
I lack live communication with friends, colleagues: I talk to them mostly on the phone, computer
95%
I do more household chores, cook, communicate with relatives and children
85%
9%
5%
The ability to work remotely is one of the advantages of the current situation
45%
19%
36%
More than before, I walk in the fresh air, do sports, health
73%
9%
18%
I watch more TV, the Internet, read books, listen to music
71%
13%
15%

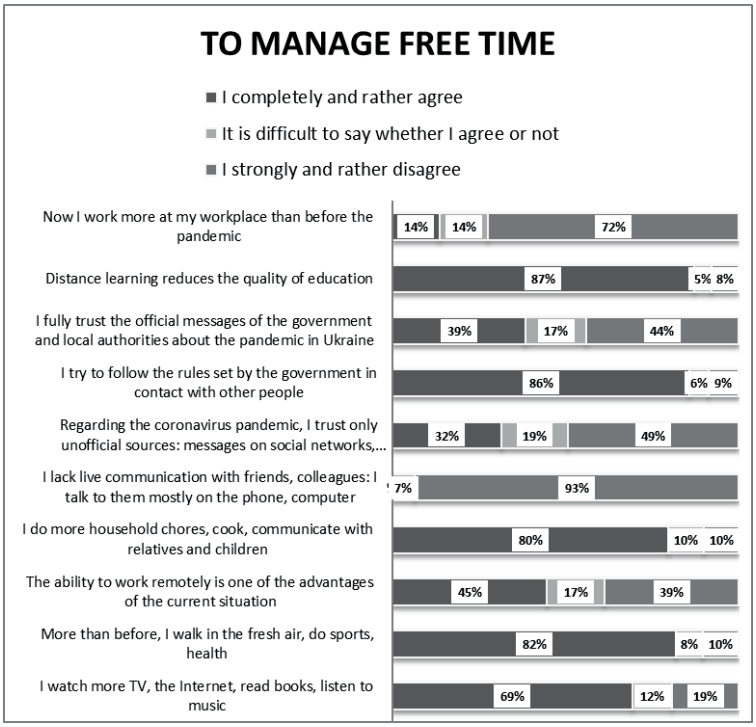


Fig. 3 (1-4) - Peculiarities of perception types for temporal and spatial shifts in the context of the pandemic (%, N=2000, 2021)

"To what extent do you agree or disagree with each of the following statements about the consequences of coronavirus pandemic? (provide an answer most suitable for each line)"

The documented segments are different in perceiving information and trusting social institutions and their surroundings. Due to the uncertainty of testimonies about COVID-19 disease and its consequences, a significant share of respondents is convinced that «coronavirus is an artificial crisis with someone's interests behind it» (43%), the pathogen is of "artificial origin with intentional spread (biological weapon)" (43%). These data vary from 56.1% and 55.7% respectively in *non-acceptance of changes* cluster; 44.2% and 41.5% in *to follow the rules* cluster; and up to 39% and 39.5% in *deficit of communication* cluster and 38.5% and 42% in *to manage free time* cluster.

The attitude to vaccination against coronavirus is also different. First of all, this is relevant for young and well-to-do men from *non-acceptance of changes* cluster where 69% respondents are not going to get vaccinated on principle, though for different reasons, while in other groups this statement was voiced by 36 to 40%. In this segment, there is high criticism of the authorities' action and low trust in social institutions: 39% insist on the government's inaction in the context of pandemic, while in other clusters not more than 21-25% claim that. 87% of this cluster totally or mostly do not trust the government (65-69% in other clusters); 73% do not trust the media (47-56% in other

clusters); and 51%, the Internet (34-44% in other clusters). Almost a half of them would not support a strict quarantine under any conditions (44.3% vs. 23% on average in the sample). Clearly, the reasons of such convictions are also grounded in political and economic contexts while an axiological summary is concentrated more on the value of *freedom.* In *to follow the rules* cluster such summary concerns the values of 'order' and 'safety'; in *deficit of communication* – the values of *human communication;* in *to manage free time* – the values of 'adaptation to the situation', 'comfort', 'self-development' and 'enjoyment'. However, quite often such value landmarks are prone to ambivalence.

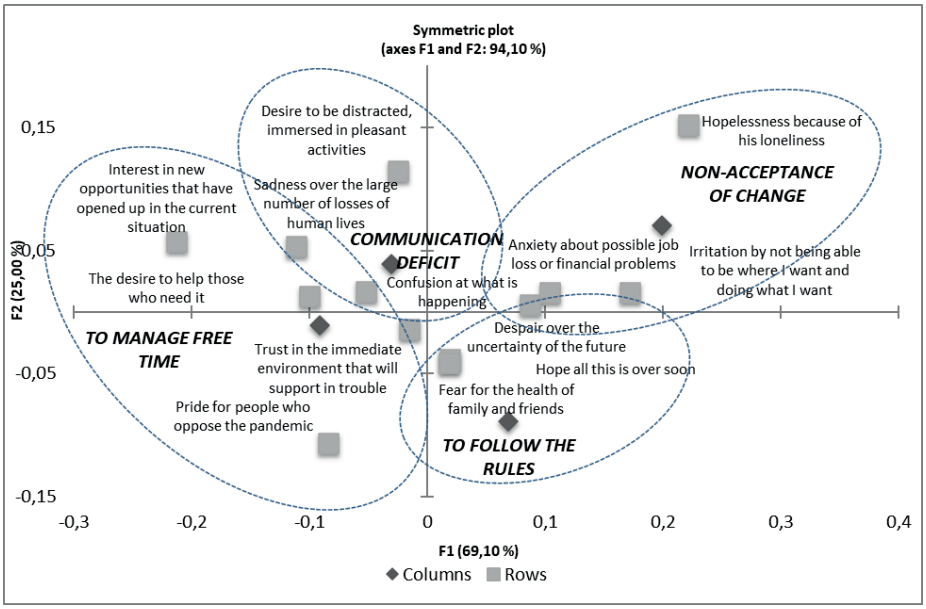


Fig. 4 - Connection of perception types for temporal and spatial shifts in the context of the pandemic with the society's affective environment (K-means cluster analysis, correspondence analysis, N=2000, 2021)
"How do you feel today about the coronavirus pandemic (check all that apply)"

Contributions of Different Population Segments to the Affective Environment of the Society

Representatives of empirically constructed types invest different emotional states into the society's affective environment according to their value and meaning vectors, social and demographic characteristics[6] (Fig. 4). Negative emotions are felt stronger

[6] Fig. 4. Connection of perception types for temporal and spatial shifts in the context of the pandemic with the society's affective environment (K-means cluster analysis, correspondence analysis, N=2000, 2021).

by representatives of *non-acceptance of changes* (hopelessness, anxiety, irritation) and *communication deficit* (confusion, sadness, a wish to get distracted from "silent" everyday life). *To follow the rules* is prone to fear for the safety of their family and loved ones, despair due to uncertainty of the future but still hopes that everything will end soon and the previous order will resume. *To manage free time* produces positive impulses more visibly than others (trust in the closest circles, willingness *to* help others, and interest in new opportunities). Each of these groups requires separate attention to overcoming deficits they feel from society, state, media and citizens and also to personal efforts they invest into functioning in a changing cultural ontology.

Conclusions

1. COVID-19 pandemic has noticeably changed the circumstances of life on global and local scale, shattered the confident trends of social and economic development, reformatted institutional and everyday patterns of activity under the influence of biological risks, encouraging to test new models of social interactions. Against the background of forced isolation of national territories, aggressive biopolitics and achievements of the Internet and cybersystems the changes affected previously formed cultural and informational orders and increased the emergency state, which simultaneously produces multiple topologies and temporalities, constituting affective environments of urgency and expectation of paced rhythms of social and private life. This state influenced cultural styles correlating with the peculiarities of human perception of current spatial and temporal modifications of existence, with the ambivalence of value mentality, which prevents the achievement of social agreement on accepting restrictions and mass vaccination, with skepticism and undecided attitude to informational sources in the conditions of low trust in most governmental and social institutions.

2. We have empirically generated four cultural styles as statistically significant types of reaction and adaptation to the situation with COVID-19 pandemic, differing from each other by the degree of readiness to comply with or ignore due protective measures. These styles are associated with the values of safety, trust or freedom as landmarks and also with investments of various affective manifestations into the social environment – from fear, anxiety and irritation to hope, empathy and interest in new opportunities. The domination of these or those styles is associated with social, demographic and settlement characteristics of communities as well as with their financial status. The conducted analysis confirms that cultural consequences of coronavirus pandemic require further observation to clarify peculiarities and trends of cultural evolutions which have already been marked out. Today these trends serve as stimuli or obstacles in the regulation of social states of turbulence and uncertainty caused by a biological threat and provide the foundation for projections for the future development of societies in such states.

3. Full-scale invasion of Russia in Ukraine on 24 February 2022 radically changed the agenda of risks, adding dramatic and catastrophic intentions thereto against the background of huge destructions and violence, transformation of citizenship status and geographic attribute into an existential experience of Ukrainians. It is possible that on the eve of peace event the resilience of unity tested by military context will face risks of doubts, dividing organic solidarity under the influence of differences due to varying gravity of suffered trials and activity in movement towards victory and forming a new typology of attitudes towards threats. In the future we will see how much practices of existence in the situation of biorisks, general switch to remote communication in a pandemic that has taught us to perceive the Internet as a very important infrastructure, and the acquired experience of survival and interactions of wartime will be adopted and efficient.

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