



Editorial

Sustainability and risk perception: multidisciplinary approaches

Leonardo Mercatanti^{1,*} and Gaetano Sabato^{2,*}

¹ Department of Culture and Societies, University of Palermo, Italy

² Department of Psychology, Educational Science and Human Movement, University of Palermo, Italy

* **Correspondence:** Email: leonardo.mercatanti@unipa.it, gaetano.sabato@unipa.it.

1. Sustainability and risk perception as a dialectic process

Sustainability and risk perception are issues that, in the past years, have not only kept their scientific interest but have often been associated to new research fields, thus fostering new debates and thinking points which have led to a variety of different analysis. Although these hot topics are often dealt as two separate fields of study in the subjects of Geography and Social Sciences, they are “two complementary issues of the same dynamic. One mutually implies the other in different and complex ways and yet they are often dealt as two separate matters. Approaching the latter together as part of the same dialectical process, however allows us to gain a better insight on their interaction”. This is why, the choice of a multidisciplinary approach is particularly useful in order to fully understand the scope of this relation and its importance in the scientific debate. An inclusive approach aimed at keeping both matters part of a wider scientific debate can, from the point of view of Geography and Social Studies, allow a better investigation on the way in which sustainability is perceived and studied, as well as recognizing the crucial importance of human behaviours in situations of risk. The promptness and variability of human reactions in fact, can have a direct impact on the capability of implementing a responsible and sustainable approach. This is even more obvious if we consider that the interactions occurring daily between humans and spatial surroundings is very complex and dependant on a variety of different elements which are difficult to frame. Furthermore the rapid changes (cultural, social, economic and environmental) taking place in today’s society add even more complexity to an already intricate scenario whose interrelations and relative adaptive behaviours are very hard to describe in an exhaustive way. Concerns about the future of the Earth have clearly increased due to global warming and all its environmental implications. Causes of

climate change are also to be found in a very inadequate ecological vision which has proven its limits so far in the management and safeguarding of our planet's natural resources. Just to list a few examples, the fires of the Amazon Forest, which have been mining the health of the Earth's biggest lung, in 2020 have exceeded by over 50% the 10-year average. Hurricanes that force a yearly revision of national rankings and classification of hurricane periods. The so-called "Atlantic hurricane season" since 2014, has started earlier than the official time-frame identified by the NOAA-National Oceanic and Atmospheric Administration. Other atmospheric phenomena of peculiar intensity also seem to involve regions which were previously untouched by these natural events. Mediterranean hurricanes for instance—caused by an over accumulation of thermic energy on the Mediterranean Sea [1]—are a brand new climate phenomena and have only recently been identified by scientific literature (*Medicanes*). Coastal erosion has also become a very serious issue especially in some territories like the east-coast of the UK (Yorkshire, Norfolk), the south-eastern coast of Australia (between Newcastle and Gold Coast) or in California (Pacific). Coastlines are complex geographical systems as they are subject to a variety of factors like sea currents, water temperatures, tide levels, sedimentary release, the impact of man-made structures like sea-ports and anthropization processes. Although many of these factors have always existed, their impact on the morphology of the coastline was visible only after very long periods of time. Things have evidently changed as nowadays we can assist to radical land modifications happening in such a short time-span to be documented live by specific graph applications or by Google Earth [2,3]. Climate change is a widespread problem and has direct consequences also in the tourism industry [4]. Some of these changes are so unforeseen that have forced institutions to set up of a new indicator—the Earth Overshoot Day (EOD)—the day of the year on which natural resource consumption for the year exceeds Earth's capacity to restore those resources that specific year. Lockdowns of 2020, besides their negative counter-effect from an economic point of view, have however contributed in reducing the quantity of toxic emissions especially in the most industrialized country [5,6], thus impacting environmentally this current global set-up.

Last but not least, after the outbreak of Covid-19 a new worldwide issue has paved its way and is likely to become an increasingly hot topic in scientific debates and academic publications. The pandemic seems to have brought us back to the early 20th century when the Spanish Flu caused the death of an incredible amount of people. When at the beginning of 2020 we launched the Call for Paper for this special issue, we would have never imagined having to face such a global emergency. In regards to the topics dealt in this Special Issue and due to the current circumstance we have decided that it would have been most beneficial collecting contributions which also referred to the impact caused by the pandemic on these important matters, whilst never losing sight of what was the original intention of this work. Object of this issue is to investigate the relation between Sustainability and Risk Perception from different disciplinary and epistemological approaches, underlining the mutual influences and juxtapositions in order to provide a wider understanding on the ways in which they interact. To put it using Morin's (2000) words, Geography is a "science of complexity" so, as geographers, we must answer the call for a disciplinary synthesis that aims at putting together complementary and diverse epistemologies whilst at the same time respecting their own distinct traits [7].

2. Contributions of this Special Issue

In clear reference to what has been stated so far, the intention of this issue is to encourage an open dialogue between fields of study that, for quite some time, have been dealing with issues concerning sustainability. Whilst doing so, we also want to keep a keen eye on processes still in progress linked to change/transformation and include the subject of risk perception in the debate. For this purpose, the nine authors here selected have all provided some analysis of the aforementioned topics which are original and complementary to this collective work. The case studies presented, albeit in a multilayered perspective, bring out “human-based answers” to local/global issues and a production of meaning implied in these actions.

What follows is a brief presentation of each contribution.

Piero Farabollini, Francesca Romana Lugerì and Emy Fuffa (Environmental knowledge, risk prevention, renaissance suggestions in the time of COVID-19) bring the attention on how the various environmental factors play an important role in the spreading of the virus. Human movements, food habits—including the quality of agricultural produce—and the environmental impact of factories all have effects on the level of social exposure to the disease. A cultural shift is necessary to manage risk perception more effectively. Approaching sustainability also in reference to matters concerning the valorization of the territory and economic activities linked to tourism is therefore very important. Jennifer Holland and her work “Risk perceptions of health and safety in cruising”, further investigates the topic of tourism and traces the effects of the Covid-19 pandemic on cruising and especially on the damage caused by the cancellations made by millions of tourists. Particular attention is given to how risk is perceived by potential British tourists. Cruise holidays are in fact, in normal circumstances, considered as one of the safest travelling option and its risk perception is extremely low since it generally only counts accidents connected to fate or chance which can also happen in ordinary daily situations. For this reason, this article provides interesting thinking points for comparative studies of the period pre and post pandemic.

Stefania Palmentieri and her article “Sustainable tourism: a valid remedy against climate change impact in every context. The Svalbard and Kiribati archipelagos” also focuses on tourism and investigates two very distant lands, located at very different latitudes and longitudes, which due to climate change risk to completely disappear. The population of the Kiribati island in the Pacific Ocean relies on limited resources and technological means. The people’s risk perception is so high that they have been planning the possibility of a mass exodus in order to survive. The inhabitants of the Svalbard isles although supported by international aid programs, still live in constant threat of natural hazards caused by climate change which have already had a severe impact on local economy, thus determining a new balance of power. The melting of former ice-lands is opening new possible maritime routes and the creation of new logistic hubs for southern marketplaces, thus causing a shift in past geopolitical scenarios. Giuseppe Terranova in his article “Geopolitics of Covid-19: global challenge at national borders” describes how the spread of Covid-19 has led many countries to pursue a policy of isolationism, choosing autonomously the closing of borders. Although some solidarity actions have been registered, the isolation trend has predominated over a more rational and support-based attitude. The pandemic has contributed in magnifying the delicate equilibrium between global rules and the principle of sovereignty of each country, thus creating further

international tension. We are assisting to the beginning of a new *glocal era* based on the correlation between local and global dynamics. The analysis of past risk management approaches in remote areas is also matter of interest for our research. In Sicily, the isle of Stromboli represents a relevant case-study for the investigation of the peculiar relation between its population and a surrounding naturally exposed to hazards. Flavia Schiavo (Existential risks of an excluded community: *Le mani sulle città* by Franco Rosi) bases her analysis on the film “Hands over the city” directed by Francesco Rosi in 1963. Her research is about one of the most devastating examples of post WWII urban transformation which took place in Naples as a consequence of mindless urban planning and careless top-down decisions taken by local authorities. The latter took past actions with the deliberate intent of keeping citizens misinformed and unaware on matters concerning safety and risk evaluation. Giovanni Messina (*Islands of Fire. Stromboli* in the documentary by Vittorio De Seta) offers an interesting interpretation from a geographic point of view of a popular documentary of 1954 directed by Vittorio De Seta. The work-pace of local farmers and fishermen shows a deep interrelation with the natural surrounding and is marked by a sense of ancestral trust and respect towards the Stromboli Volcano.

Elisabetta Genovese e Thomas Thaler (The benefits of flood mitigation strategies: risk perception and effectiveness of property-level protection measures) discuss, also in terms of cost-benefit analysis, which tools governments can and should use to reduce climate change. Their work investigates the different methodologies applied in order to evaluate the effectiveness of government measures in the attempt of cutting down environmental damage. In this respect, the particular use of integrated approaches has given proof to be one of the best ways of limiting risk connected to natural disasters.

As previously stated, and in line with the objectives of this Special Issue, the occurrence of a global pandemic has set the premises for long term and more critical debates centred on sustainability, social justice and the role of media.

Risk perception concerns populations which often take sustainable actions with the intent of reducing risk. These social dynamics may vary from region to region and are influenced by cultural background and policies implemented by local governance. In this regard, globalization can hold some useful tools for dealing with these contemporary matters for example by sharing good practises and by having a wider and more precise amount of information compared to the past. This topic is the core of Giulia de Spuches, Francesca Sabatini, Gabriella Palermo and Emanuela Caravello’s work: “Risk narrations and perceptions in the COVID-19 time. A discourse analysis through the Italian press”. The authors focus on how some Italian media perceived and chose to provide information on the Covid-19 pandemic especially during the first months following the break-out. The analysis focuses on two main national newspapers and further investigates risk perception in relation to members of the population which have been identified as the most vulnerable (for financial or health reasons).

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helped in providing a more multidisciplinary and complementary approach to such a contemporary subject of study. Special thanks also to our Chief Editors and each member of the Editorial Staff of AIMS Geosciences and the trust they put on us. Their constant and careful support has been a valuable and much needed aid, especially in such difficult and complicated times as the ones we have been forced to face in the past months due to the pandemic crisis. Such precious cooperation not only made this collective work possible has further shown how a cross-cultural approach is more effective in finding solutions to contemporary issues.

Conflict of interest

The authors declare that there is no conflict of interest in this paper.

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