

ENVIRONMENT, FOOD, CULTURE: COVID-19

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1. Environment and Covid-19

In contrast to the principle of “sustainable development”, the excessive exploitation of the land, deforestation, desertification, mineral extraction activities, the illegal spill of hazardous waste, air and water pollution, the massive use of antibiotics, and globalization, contribute to unfavorably modifying the environment, causing the loss of biodiversity and scarcity of drinking water, all of which result in the spread of serious unknown diseases. Thus, the increase in temperature, with the consequent thawing of polar glaciers and the permafrost, has released and will continue to release lethal viruses and bacteria that have survived for millions of years, and which, in the past, have been responsible for destructive epidemics [1-2].

The effects of interaction between the environment, raw food materials and health, as well as their influence on the lives of populations, have been studied and disseminated by the IPCC (Intergovernmental Panel on Climate Change), an international body which processes scientific, technical and socio-economic information. Based on this knowledge, the WHO announced that between 2030 and 2050 the climate crisis will cause 2 million premature deaths worldwide every year, prevalently (50%) in developing countries [3-4].

Unfortunately, the increase in risk confirms the philosophy of insecurity which considers tragic events as being the price to pay for the evolution of humanity. This is the new element in the global risk society, where it is accepted that final decisions give rise to global problems and dangers that contradict the promises of effective control (known as *organized irresponsibility*). The “philosophy of insecurity” adds that the system of collective security weakens individual defenses which, anaesthetized by the aggressive invasion of a globalized production system, becomes an increasingly more vulnerable victim in the event of an attack by resistant or unknown elements [5].

If we evaluate the devastating events of pandemics, earthquakes, floods and fires, it is plausible to assume that there is no such thing as “zero risk” in the world; likewise, the fact that total security, with regard to the growth and modernization of production, is an unknown factor, since it threatens freedom and the capacity for development and innovation and prevents humankind from overcoming its own limits and improving the conditions of the species. A concept that, with the no-limit approach to carrying out life and work activities to increase herd immunity, was expressed in the approach to the Covid-19 pandemic by England and Sweden, as well as by a number of movements

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within the Italian political opposition who objected to adopting measures to contain the contagion from Covid-19.

Official science does not offer any certainty on the interconnection between environmental changes and the spread of infectious diseases, since they are physico-biological phenomena that cannot be measured with great precision. However, experts and international institutions have found that the peaks in the most virulent epidemics, SARS (Avian Influenza) in 2003, H1N1 (Swine Flu) in 2009, MERS (Middle East Respiratory Syndrome transmitted in the bat-camel-human sequence) in 2012, and today COVID-19, occurred at temperatures of at least 0.6 or 0.7 degrees above the average [6]. Climate change and epidemics know no borders since "*Tout se tient*" (everything is connected); but can the virus, in a situation such as Schengen, stop at the border, given the difference in the number of infections in the different countries?

Having examined the trend of the epidemic in Northern Italy, the hypothesis arose – supported by the Italian Society of Environmental Medicine (SIMA) and shared by the University of Bologna and the University of Bari – that the deaths that occurred in the most productive areas of Lombardy and Veneto may be attributed to specific causes of environmental pollution as these are regions that have recorded the highest levels of PM10 pollutant particles in the air and are responsible for complications in the respiratory system attacked by Covid-19 [7].

This hypothesis is supported by the comparison between the PM10 data detected in the epicenter of the epidemic, namely Hubei in China, which had among the highest levels in the world and those of the Po Valley area where the levels of PM10 were the highest in Europe; in Lombardy a PM10 value of up to 53 $\mu\text{g} / \text{m}^3$ was also recorded (maximum annual average value 40 $\mu\text{g} / \text{m}^3$) [8-9].

Mathematics has also provided its contribution on the topic of how an epidemic can be "curbed". In this regard, the climatologist-physicist Antonello Pasini using the equation of disasters ($R = P \times V \times E$), considered risk (R), which also includes pandemics, in relation to danger (P), and to the vulnerability (V) of the territory and individual exposure (E), depending on age, health, chronic diseases and climate change.

The equation is a product whereby, if a factor = zero, any risk (R) is annulled, but in the case of Covid-19 it is intractable because it is more dangerous than other known influenza viruses, so vulnerability (V) is high, also due to the fact there is no antidote. All we can do is to act on exposure (E), which is implemented by avoiding contact with carriers of the virus [10]. This is the meaning of lockdown and closing public spaces and businesses (bars, restaurants, hotels, places of worship and study) where contact is easier, with all the consequent negative economic repercussions, as well as the obligation to wear a face mask and personal protective systems for categories at risk.

There are several theories regarding the high rate of mortality in the red zone of northern Italy. One is the reality of a particularly vulnerable elderly Italian population; others are rather fanciful, such as the conspiracy of the American athletes participating in the 7th Military World Games in Wuhan, accused of spreading the virus, to which the US counterattacked with the hypothesis that the Covid-19 virus had leaked from specialized Chinese laboratories.

Another element to consider is that Covid-19 generates greater fear than environmental pollution because, whereas the former spreads rapidly among the inhabitants in urban centers its transmission intensity becoming more and more rampant, the latter seems remote, and thus alarmism is attributed to political clashes or fantasies. As a result, the environment continues to change unfavorably, its alterations damaging not only the soil and our heritage, but also raw food materials in particular, with extremely negative economic consequences globally, such as an exponential increase in poverty

levels and deaths. This situation in turn leads to exacerbating situations of widespread fear, collective panic and uncertainty about the future [11-12].

But there is also the challenge regarding who is going to determine the best approximation date on which the epidemic curve finally reaches zero transmission and simultaneously, the production curve starts its upward trend of recovery, achievable if the state and a more collaborative Europe guarantee a consistent flow of liquidity to support income and consumption through (necessarily public) investments. The urgent short-term economic recovery, characterized by new technological and digital competitiveness, is essential to contain the further impoverishment of weak populations, whose survival, in the tragic scenario of absolute poverty, is seriously at risk.

And so, the fast and efficient lifestyle of developed societies has become the main enemy [13].

SARS caused an estimated 40 billion dollars' worth of damage, but Covid-19 could generate costs of trillions of dollars depending on the duration of the pandemic.

The measures already implemented to prevent adverse effects on human health and to reduce food safety risks, not only in critical areas of the world such as Africa and South Asia, but also in the Mediterranean area, have not guaranteed appreciable results, so much so that vast crops are often attacked by pathogens capable of destroying them: in Italy typical plantations such as olive trees, tomatoes and vines have suffered extensive damage [14].

Therefore, since the food market, which follows guidelines on health protection and life expectancy, constantly requires new safety measures, it should be considered from a broader perspective rather than from the simple prerequisite common to all food products. Hence, investments are needed in order to address additional issues, such as the absence (non-presence) of known pathogenic organisms, knowledge of the origins of the food and its production processes (traceability or product tracking), exclusion of the use of substances considered "suspicious" even if not yet scientifically declared "dangerous" as a preventive measure, as well as providing correct information on the contents and nutritional risks of the product.

But it is also true that among the psychological factors that have negatively influenced the perception of risk in the public's opinion on nutrition, is the message that foods are not potentially contagious vehicles. The information is true and should have tranquilized the population, instead of causing the disorderly onslaught of food markets due to the panic-buying of food and a surge in infections, with the curious hoarding of both natural and chemical yeasts.

Ultimately in the relationship between environment, nutrition and health, food quality, quantity and availability are to be considered fundamental, a system that bases the philosophy of safety on trust in production and distribution. Therefore, an existential trust which, translated into institutions set up for this purpose (the safety apparatus), today has new connotations and does not immediately refer to the generic "suitability for consumption" of the product, but invades the sphere of the more strictly "qualitative" characteristics, including hygiene and health, that are essential to improve the consumer-producer relationship damaged by successive economic and food crises.

2. Culture and Covid-19

Despite everything, the environment along with the climate, continue to adversely affect artistic and natural heritage by damaging elements that are exposed to harmful agents. The supply chain of companies dedicated to cultural heritage preservation and

protection is being dramatically impacted by the crisis resulting from the spread of the infection and are risking bankruptcy. The whole sector is concerned about the sudden decrease in tourist presences and admissions to protected territorial areas of archaeological and naturalistic interest, parks, museums and places of culture, as well as the cancellation of educational trips, to which is added the malaise in the related sectors of catering, tourist-accommodation facilities and spas.

In fact, the companies involved in the restoration and conservation of cultural heritage, archaeological parks, churches and the recovery of local built heritage, though being tangible and intangible demo-ethno-anthropological assets, have suspended on-site work to comply with the regulations on containing the Covid 19 pandemic. This has evidently not only blocked the activity of archaeologists, architects, restorers, technicians and related services, including associations, cultural institutions, volunteers, but also that of artists, musicians, actors ... and primarily the indispensable interventions needed for the conservation and protection of listed assets.

If the situation continues, the degradation of the many monuments, museums, art galleries, churches, theaters, auditoriums, archives, libraries and cinemas scattered around the territory will continue, with intuitively unfavorable consequences for their safeguard and enjoyment. Nevertheless, though the pandemic has immobilized people, museums and cultural heritage have found a new purpose and relationship with the public through digital technology and it has become an essential tool with which culture can be observed and shared. It offers the public the opportunity of virtually visiting much-loved places, galleries, museum spaces, libraries, archives, conservatories, archaeological parks and keeps the importance of the link between the cultural world and its community alive.

Naturally, the tourism sector, closely linked to that of cultural heritage, is also suffering. In particular, all activities involved in hotels and other accommodation facilities, food and beverage service outlets, travel agencies and tour operators, are at a standstill and the forecast for the future is not encouraging.

The penalized categories have consequently asked the government to compensate them for the damage to the entire sector, which exceeds 16 billion euros, hoping that a National Fund for Culture will be instituted. It is expected to be an investment fund guaranteed by the state, with swift procedures and structured so as not to increase public debt. It should serve to protect cultural heritage and those who work in the field of production and cultural offer, so that what is at present a utopia – that one can make a living from culture and live well on it – can become a reality.

The fund would be open to contributions from all those who wish to support the sector during the current emergency and liquidity crisis, due to the closure of museums, cinemas, theatres and bookstores.

As already mentioned, the repercussions of the crisis from Covid-19 on the composite and variegated world of cultural enterprise, which employs hundreds of thousands of people, are dramatic and could ultimately prove fatal. From now on the difficult financial conditions of cultural enterprises will have to be dealt with efficiently to ensure their survival and enable them to return to producing culture, thus contributing to social cohesion and economic wealth.

Once the epidemic is over, partnerships and cooperation between businesses, artistic associations and the third sector (NGOs, non-profit organizations, etc.) will be important. They will have to team up to relaunch new ways of creating and disseminating culture, so as to show the world that Italy, as the nation with the most UNESCO sites, has the ability to react positively.

In Italy at the end of 2019 the budget forecast for revenue and expenditure issued by the various Ministries for the three years 2020-2022, yet again excluded provisions for structural interventions in the cultural sphere.

The Italian Ministry for Cultural Heritage, Activities and Tourism (MiBACT) delegated to deal with all matters pertaining to tourism, ordinary and extraordinary conservation, and maintenance of the cultural heritage, as well as its recovery, also in the international field of illegally exported assets, has allocated most of its funding to the “*Missione: Tutela e valorizzazione dei beni e delle attività culturali e paesaggistiche*”. For 2020, allocated funds are 2640.5 million euros for artefacts of high cultural, scientific, artistic and historical significance, from the budget the Fund for the protection of cultural heritage will receive 139.2 million euros, while that for the implementation of the strategic plan “*Grandi progetti beni culturali*” is 112.7 million euros. Two acts on legislative delegation are foreseen, one for the amendment of the Code for Cultural and Landscape Heritage and the other for entertainment. In addition, a fund for the *Carta Giovani Nazionale* (CGN) has been set up by Italy’s Presidential Board for 2020-2021-2022 aimed at the 18-35 age group, which guarantees a number of discounts and benefits for museums, cinema, theatre, sports events, cultural events, concerts and sports activities. Additionally, there are 400 million euros each year from 2025-2034 in investment funds for municipalities to enhance local heritage and to make provisions for the “*Mappa del Recupero*” for those artefacts in need of protection, focusing on disadvantaged areas and small enterprises. And lastly, a fund for small museums and art galleries aimed at reducing social marginalization and improving urban décor.

The challenge is in the field of reconstructing the cultural heritage in which the state, by implementing Art. 9 of the Constitution, should ensure that private individuals do not earn high profits from public assets but are open to patronage, i.e. those who donate and in return only ask for moral recognition (with this approach, France collects one billion euros a year). It is necessary to catch up with the great museums of the world in producing content by becoming a knowledge community and forming connections with schools, who should be the first recipients and interlocutors in any heritage policy.

Once the epidemic is over, joining together and cooperating with companies, artistic associations and the third sector will be important in relaunching new ways of creating and disseminating culture. This will show how Italy is able to respond positively, being, as mentioned earlier, the nation with the largest number of cultural heritage monuments and sites on UNESCO’s world heritage list.

Furthermore, since crises are times for newfound awareness and often determine a turning point which consequently leads to a change in the way we live, communicate and work, it will be necessary to finance innovative projects that experiment with new ways to produce and disseminate culture, as well as taking full advantage of EU funds allocated to the sector, but which are not always utilized.

3. Conclusion

The future has to be planned bearing in mind that humankind (the giant Goliath) can succumb to a viral particle that is smaller than 0.1 microns (the young David) and can threaten its survival. It is however evident that experiencing the shock caused by disasters, including that of Covid-19, can result in a major concern about the concrete possibility of recovery. This is also in relation to the crude live coverage of the aforemen-

tioned disasters by the media without the defenseless individual having any real possibility of changing their direction, thus compromising the principle of silent trust between producer, consumer, authorities and democracy.

The normality of existence is no longer normal and the pandemic “*will change if we change*”, but with the real risk that, in the meantime, the longer it lasts, the more it generates mental apathy and resignation, as bitterly highlighted in the title of Francisco Goya’s etching “*The sleep of reason produces monsters*”.

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Biographical notes

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Summary

Human activities and the exploitation of natural resources cause the loss of biodiversity and a scarcity of drinking water, as well as the spread of serious and unknown diseases. Therefore, the WHO has raised the alarm regarding the premature deaths in the world caused by environmental pollution. In Northern Italy, as in China, the high level of PM10 pollutants have contributed to the virulent spread of the Covid 19 epidemic. This is further support for the philosophy of insecurity that defends the fragility of “zero risk”. In addition to the many painful deaths, the current pandemic has also created a general and profound economic crisis, putting the survival of the weakest populations at risk. In Italy it has heavily affected both the production sector and that of cultural heritage, a key element in the country’s global image, as well as in the agri-food sector. The priority for intervention has now been transferred from the healthcare system to the sectors of economics and politics, which must adopt appropriate measures for a hopefully rapid recovery in production and, with that, a return to work, with income, health safety, and the safeguard of the environment and cultural heritage.

Riassunto

Le attività dell'uomo e lo sfruttamento delle risorse naturali provocano la perdita della biodiversità, causando scarsità d'acqua potabile e diffusione di malattie gravi e sconosciute. Perciò l'OMS ha lanciato l'allarme sulle morti premature nel mondo determinate da inquinamento ambientale. Nel Nord Italia, come in Cina, l'elevato livello di particelle inquinanti PM10 ha contribuito alla diffusione virulenta dell'epidemia Covid 19. È questo un ulteriore sostegno alla filosofia dell'insicurezza che difende la fragilità del “rischio zero”. L'attuale pandemia oltre ai tanti e dolorosi decessi ha creato anche una generale e profonda crisi economica mettendo a rischio la sopravvivenza delle popolazioni più deboli. In Italia ha agito pesantemente sia sul comparto della produzione, sia su quello dei beni culturali, elemento chiave dell'immagine del Paese nel mondo, nonché sul settore agroalimentare. Il prioritario intervento da parte della Sanità è ora trasferito all'economia e alla politica, cui compete l'adozione dei provvedimenti appropriati per una ripresa, possibilmente rapida, della produzione e, con essa, del lavoro, del reddito, della protezione della salute, dell'ambiente e del patrimonio culturale.