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Title

Contributing to Disaster Management as an Individual Member of a Collectivity: Resilient Ethics and Ethics of Resilience

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Abstract

Resilient ethics and ethics of resilience are introduced as aspects relevant for disaster management. In this view, this short communication highlights both the aspects of ethics and resilience, and the human cognitive biases that lead to unexpected behaviors in a context such as that of the current Covid-19 pandemic. The role of educative information is discussed, and the need to consider resilient ethics and ethics of resilience in disaster management is emphasized.

Keywords

Covid-19; Disaster management; Ethics of resilience; Moral values; Resilient ethics

How should I behave in the face of a disaster? In the present context of the Covid-19 pandemic, this is a question for an individual, which has its roots in own moral standards but whose response can have consequences at a collective, community level, even a worldwide level. Whatever the specific context in which such a question is raised, the response is inseparable from some sort of risk assessment, as emphasized in [1]: what will be the consequences for all concerned? (utilitarian ethics); what are the benefits for me, if I agree to follow the set of rules promulgated by the authorities, and inevitably limiting my freedom of acting? (social contract ethics); is my action a kind action, a generous action, a tolerant action, an honest action? (virtue ethics); is my action in accord with human nature? Is my action preserving human goods and values? (nature law ethics); is my action respectful of persons and their rights? What are my duties? (deontological ethics); how rooted in care my action is? Does my action attend to the needs of those it is my power to help? (care ethics).

As the Covid-19 coronavirus propagates at flight speed from the 8.494-km^2 city of Wuhan to the four corners of the world, resilience is the focal issue: resilience of the institutions, resilience of the emergency supply chain (medical equipment, drugs, foods), resilience of the industrial system, resilience of the economic system, resilience of the work activities (health care working, critical services working, teleworking), resilience of the education system, in the end resilience of people and their ethics. The topic of ethics for disasters was addressed in [2], but the Covid-19 disease is the starting point for a new debate on resilient ethics and ethics of resilience. This is fundamental for taking resilient-ethical decisions at all levels of resilience in disaster situations. It would need to be a form of ethics which combines all the ethics mentioned in the previous paragraph, with focus on the specific challenges faced during a disaster that has the potential to hit massively a large portion of the population.

Let us focus on people and machines to illustrate concretely how the principles of resilient ethics and ethics of resilience can apply. In the digitalized, robotized world of today, technologies of robotics, digitalization, artificial intelligence and machine learning should contribute to building autonomous machines that adjust by themselves their routine functioning to emergency actions for resilience; therefore, their “ethics” module cannot be rigid, with fixed rules set at the factory, to allow for such adjustment capabilities. For example, future medical assistive robots should be equipped with resilient “ethics” modules that can adapt their behaviors to the degree of severity of patients’ illness that they care of; such robots should be given true authority and autonomy to have a certain room of maneuver to make them able to choose appropriate actions in the specific setting [3]. There is a real need for that, given the many robotics systems that have been deployed (at hospitals, hotels, etc.) since the beginning of the Covid-19 pandemic. The robotics community should work collectively and collaboratively with medical and crisis experts, to develop robots for assistance in the operations during a crisis, with resilient ethics.

As for people, resilient ethics and ethics of resilience should be promoted through information, communication, education and training, with emphasis on the necessity to adapt moral values in emergency situation. For the time being, because we are in the heart of the Covid-19 pandemic, communication and information are among the immediate means of resilience. Information is provided by classic media (television, radio, newspaper) and social networks from official and non-official sources. Non-official sources are, alas, sometimes untrustworthy and exploit people's lack of trust in institutions: Gonçalves-Sá (2020) points out the huge quantity of online information on the new coronavirus, including misinformation. The result is that people are not properly educated on the matter, and thus not very knowledgeable, and therefore also not very aware and mindful, despite being likely over-informed [4].

To build resilient ethics, moral persuasive information must, consequently, take human cognitive biases into account, including the optimistic bias [5] for which people tend to believe to be less at risk to health problems than their peers, which is what is observed to be happening in many cases with the Covid-19 disease [6]. In a general way, people tend to underestimate the probability to be exposed to negative events: it is the superwoman/superman attitude of "it won't happen to me" [7], which can be explained by, besides the optimistic bias, the illusion of having control on things, which people tend to believe that they have on most tangible hazards [8]. In short, it may be that some people feel that they will avoid the Covid-19 disease and, therefore, they feel free to ignore protective measures, including confinement. Information should, thus, be focused on – and be repeated over and over – the fact that none can escape infection by the new coronavirus and that the physical reaction to the disease is conditioned by a number of factors, mostly unknown, and differs from individual to individual. It is not just an age issue: Guan et al. (2020) report that the median age of 1099 patients in mainland China through 29 January was 47 years [9] (but this may be an old age from the viewpoint of young people!). And, anyway, it is not just an individual matter, but a collective one in view of the potential for contagion spreading. Besides the optimistic bias, there is the pessimistic bias, especially the pessimistic fatalism [10], which makes people believe that it is the end of the world that they need to prepare for, with proper stocks of life necessities, as it has been seen in various cases, including the case of the current pandemic.

For the effects of biases to be successfully mitigated during disasters, information must be authoritative and educative to effectively contribute its part to resilient ethics and ethics of resilience. Responsibility for own behavior, altruism, solidarity, care of the other, care of the environment, sense of sacrifice, and so on are values that should be taught as moral lessons. Unfortunately, such lessons are regarded old-fashioned in some countries. Nevertheless, they can be rejuvenated and updated in the current context of the pandemic, to make it an "opportunity of change". Moral and social values can be taught through new social media that are at the moment a particular big hit and are showing a

lot of creativity. Lessons can take many forms such as short comic strips, short films, daily saying, etc. Even using sci-fi has been showed to be effective to teach ethics [11].

Resilience is preparedness, physical and mental: we should be prepared to behave accordingly to what is ethically expected in disaster situations. Resilient ethics must be the human and social basis for deployment of the four stages of the integrated approach of risk and resilience management needed to deal with disasters: prevention/mitigation comprising all activities for reducing the probability of disaster occurrence; protection/preparation related to all safety measures and activities that are designed and planned to enter in action when the disaster occurs, in order to reduce its impact and minimize losses; response as obtained by the activities of emergency and crisis management implemented during the aftermath of the accident to control its impact, prevent additional damage and loss; finally, recovery for restoring back to a normal or improved situation after the disaster [12]. These four steps are to be mindfully implemented on a strong ethics of resilience by the individual and throughout, with resilient ethics, as a member of the collectivity, for collectivity to be resilient: more fundamental research is needed to achieve this.

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