

## Editorial

# The role of science in the Age of Denial and in times of pandemic: sustainability at the heart of the debate

Marcel Bursztyn, Gabriela Litre, Melissa Curi e Carlos Hiroo Saito

doi:10.18472/SustDeb.v11n3.2020.35623

The *annus horribilis* of 2020, whose analysis was the subject of SeD's Editorial in April<sup>1</sup>, was marked, in all of its respects, by the spectrum of the Covid-19 Pandemic.

The events that occurred in the year allowed us to reflect on where our societies lie in the 21st century. The example is a parable which represents the dark and obscure side of our failures and misdirections, but also signals a radiant facet of humanity, which is our incredible ability to overcome adversities and rise from the ashes, through ingenuity and art.

The year 2020 has already begun with the shocking news that a Chinese city –Wuhan– had been plagued by a dangerous disease, which led authorities to take the drastic measure of quarantining its entire population, something that was never seen or imagined before. Regardless of the discussion around the geographical and temporal origin of the pandemic, that “*Chinese virus*”, as some Western leaders called it, including the then U.S. President Donald Trump and Brazilian President Jair Bolsonaro, soon spread all across the world, and took by surprise even the rich countries of the northern hemisphere.

Health systems did not know how to react and, infrastructure could not accommodate so many sick people. Many died because of the lack of artificial ventilation equipment in hospitals, something that does not require much technology, but production was concentrated in factories also from China unable to meet so many urgent requests. The dismantling of the Social Welfare State, with worsened social inequalities even with the 2030 Agenda, revealed the vulnerability of populations, especially the poorest. The privatization of health services has also intensified this context.

Many rulers were sceptical of admitting the seriousness of the problem. Even with the alluvial of daily death figures, and the exponential growth of those infected by the disease, they preferred the convenience of denial or, at the very least, wavered in acting quickly and responsibly. In the rush of denialism, they challenged scientists and common sense itself. The United Kingdom prime minister, Boris Johnson, only ceased to be a denialist of the pandemic when he was affected by the disease and felt its gravity in his skin. In the United States, Trump never accepted the facts. He preferred to maintain his usual posture of denying the warnings of science and adopted an arrogant, distorted and lying narrative of reality. He struggled with reality; fought with science and prescribed chloroquine as the cure. He was disavowed by the facts and defeated at the polls, a result also denied.

Lukashenko, the Belarusian folkloric tyrant, suggested to his fellow citizens to drink vodka against the pandemic. He gained worldwide visibility as a clown, aside from his dictator image. In Brazil, the official stance of the federal government was not much different: scientific denialism and dissemination of fake news, such as the adoption of scientifically refuted drugs as treatment.

1 | <https://periodicos.unb.br/index.php/sust/article/view/30982>

More than half of the ministerial office had already got contaminated, and the government discourse remained faithful to denial, including the famous claim that the virus would be a “*gripezinha*”, a small flue, pronounced by Bolsonaro on at least two occasions (and denied by the author in November 2020, when Brazil recorded 168,662 deaths and 6,017,605 positive tests to Covid-19, thus generating a curious “denial of denial”)<sup>2</sup>. Two health ministers, both doctors and politically identified with the government, resigned. In the war against the facts, a military General took over the portfolio and does nothing but diversionist manoeuvres, as in a battle strategy.

But as the world of politics plunged into the rush of fighting with the inescapable reality of mass death, the world of science, silent and having to face crystallized threats of cutouts to the funds dedicated to research<sup>3</sup>, was taking up the challenge. Around the world, a multitude of research centres, universities and laboratories assumed the responsibility of producing anti-Covid-19 vaccines in record time. According to the WHO, there are now over 165 vaccines in development. The effort also mobilized scientists and researchers from other fields of knowledge, who studied the pandemic as a typical interdisciplinary case. They had the flexibility and discernment to change their objects of study, to contribute to the general effort to understand and face the problem.

In Brazil, the Butantã Institute of the State of São Paulo is coordinating the trial of a vaccine (Coronovac, from the Chinese company Sinovac) that, to date, has presented itself as one of the safest in the world<sup>4</sup>. But it is not the only one. In less than ten months, since the beginning of the research work, several vaccines prepared by different laboratories were ready to be applied on a large scale in December 2020. Never in the history of public health has the cycle between identifying the disease and discovering its prevention been so short! From prevention to combat, and the production of vaccines, science must maintain its coherence with its safety protocols. That is, science must be more scientific than ever.

On the frontline of the battle, health professionals have given body and soul to save lives and, in many cases, to test the vaccines created by science. The sacrifice was not solely personal or professional: many paid with their lives. According to the Pan American Health Organization (PAHO), the Region of the Americas had the largest number of infected health professionals in the world, with nearly 570,000 health professionals who became ill and over 2,500 who succumbed to the virus.

Brazil is the third country with most deaths of health professionals due to COVID-19, after the EE.UU and Mexico. Since the beginning of the pandemic, 226 health professionals died, and 257,000 have got infected by the new coronavirus, affirms the Ministry of Health. Among the deaths, the most touched categories were nursing technicians and auxiliaries (38.5%), physicians (21.7%) and nurses (15.9%). However, even the magnitude of this heroic commitment seems to have been denied by the authorities: an Amnesty International survey reported that at least 634 health workers died in Brazil after contracting Covid-19. The number is 50% higher than that reported by the Brazilian government<sup>5</sup>.

The finding remains: the dichotomy between the times of politics (usually the short term, duration of a mandate, further shortened by election campaigns) and the time of science (usually the long term, research time and experimentation cycles), proved, in this case, to be a false dilemma. Science was much more agile than politics. While many politicians acted like an ostrich, hiding its head in a hole and having no vision beyond sectoral and even personal interests, scientists acted responsibly. It is a lesson of moral strength, but it is also the signal that we humans are resilient.

This experience brings us hard lessons in the interdisciplinary field: science, scientific culture and transparency of information go hand in hand with democracy. Fighting for our resilience nowadays also involves rebuilding democracy and renegotiating rights.

2 | <https://istoe.com.br/bolsonaro-mente-em-live-e-diz-que-nunca-chamou-covid-19-de-gripezinha/>

3 | <https://voca.abril.com.br/carreira/cortes-bolsas-pesquisa-ciencia/>

4 | <https://www.dw.com/es/brasil-coronovac-la-vacuna-m%C3%A1s-segura-hasta-ahora/a-55364182>

5 | <https://www.metropoles.com/brasil/brasil-e-o-3o-pais-com-mais-mortes-de-profissionais-da-saude-por-covid-19>

The **sustainability** of our future, capable of preventing and facing this and new pandemics, depends on avoiding the spread of the virus of authoritarianism and the apology to intolerance, violence and naturalization of social inequality. It also passes, in all nations, through the conscious engagement of everyone regarding their sociopolitical, solidarity and environmental responsibility.

Each nation must contribute because the pandemic has harshly revealed how interconnected we are. It is just another facet of our interdependence, already treated by ocean pollution, the movement of goods, climate change. More than ever, our Sustainability is in Debate.

In this issue, *SeD* presents the Dossier “Impact, Vulnerability and Adaptation to Climate Change in Brazil: an Integrated Approach”, composed of twelve articles. The research comprises the Impacts, Vulnerability and Adaptation (IVA) studies, developed within the framework of the project that subsidized the preparation of the Fourth National Communication of Brazil (4NC) to the United Nations Framework Convention on Climate Change (UNFCCC).

Also composing this edition, we have the *Varia* section, with three articles. The first one, written by Luciane Cleonice Durante et al., with the title *Environmental impacts and infrastructure in Agrarian Reform settlements in Minas Gerais, Brazil*, aims to analyze the potential environmental effects arising from infrastructure conditions in land reform settlements in the state of Minas Gerais.

In the article *Methodological proposal to analyze land-use changes: the case of Santa Catarina state between 2000 and 2010*, the authors Juliana Mio de Souza and Eduarda Marques da Costa check on the dynamics of land use and land cover, relating them to potential driving forces.

Finally, the authors Paula Egyto Tavares and Dalva Maria da Mota, in the article *Good for whom? Dendeiculture reactions by contract in Amazon paraense*, analyze the act of acceptance and resistance to dendeiculture by contract in Irituia. The research included reviewing documents and secondary data, and interviewing family farmers producing oil, trade unionists and representatives of municipal agencies.

We wish everyone a happy new year, with more health and science!

## The Editors