

ne of the first crime, Creation! Such Deism is evident in the US Founding Fathers, who held that no human governor should be more powerful than the deity in whom the governed believe. This was their civil libertarian response to Hobbes' challenge that God should simply be replaced by a secular state holding the monopoly of force in society. On their view, even if God is gone from the scene, humans – no matter how powerful – are always in less than absolute control over their own fate. It is easy to see how this plays into the emergence of probabilistic reasoning and statistical population thinking in the Enlightenment, and more specifically how it provides the incentive to take risks – what I have called the ‘proactionary’ attitude.<sup>12</sup> That’s Pippi’s gold chest, which is now courtesy of the welfare state. It affords her the recklessness and generosity that are the hallmarks of the ‘natural born liberals’ that the welfare system was designed to breed.<sup>13</sup>

So, what does this mean with regard to the current pandemic?

At the most basic and seemingly trivial level, it means that the state can rely on having sufficiently ‘raised’ its population to trust the state whenever it needs to issue any further instructions concerning their behaviour. As the agricultural metaphor of ‘raising’ crops and livestock suggests, what states provide is an expansive potential for response, somewhat along the lines perhaps of creative “patchwork satisficing”. This incurs the risk of failure, and there will be failures. The elderly and those with ‘underlying’ health conditions are more likely than others to die from COVID-19. To be sure, statistical population thinking implies – as Keynes famously reminded us – we are all dead in the long run. Does this amount to a cavalier attitude towards those who might soon die anyhow, with or without COVID-19? The political science of civil libertarianism doesn’t allow that much wriggle room for a precautionary view of saving supposedly sacred lives. There will be blood whoever is in charge.

*Christopher Coenen*

## Breaking the Spell of TINA – An Integrative Notion of Socio-Technical Progress

This short text is so complex and full of ideas that trying to answer all the relevant points would require the writing of several essays. I will therefore only address three questions here, all of which relate to the role of philosophy of technology, or the wi-

12 Steve Fuller and V. Lipinska: *The Proactionary Imperative*, London: Palgrave Macmillan 2014.

13 Ibid., p. 76.

der area of multidisciplinary science and technology studies (STS). With regard to these three questions, I was in particular inspired by the following remarks of the authors:

*“grand-scheme optimizing takes us back to administrative practices of the state, to thermodynamics, gas laws, statistical population science (Bevölkerungswissenschaft) especially of the 19th century and thus also to a particular regime of knowledge/power which elevates scientists like Christian Drosten, Anthony Fauci, and ZHONG Nanshan to the rank of national celebrities and authorities. From the point of view of Science and Technology Studies (STS), constructive technology assessment, co-design, open science and open innovation, it was astounding to see how swiftly in a moment of crisis our modern knowledge-societies reverted to a supposedly outdated model. Though the contribution of citizens and ›citizen science‹ came back in with patchwork satisficing and real-time responsiveness, this did not owe to discussions about the best ways of mobilizing widely distributed competence in 21st century societies.”*

In a sense, I am moving from the particular to the general and from internal to external aspects: from the more practical question of how these disciplines and fields could best contribute to the “mobilisation of widely distributed competence”, via a question concerning our self-reflection – whether some of their own models, which have been cultivated for several decades, do not themselves appear outdated – to the question of a possible new role for these fields of research in a rapidly changing world, in which it may be precisely our key task to make technical action as political action even more visible and understandable and to contribute to breaking the spell of the pseudo-Sachzwang and of TINA (“There is no alternative”; “Das ist alternativlos”) in politics and culture, especially through critiques of technoscience.

### *Citizen STS*

It is true that the pandemic feels rather like a test, as the authors write, and one could indeed say that societies, social groups and individuals “expose their problems and characters more than usual”, including the “ways of inhabiting a socio-technical world”.

One salient feature of the pandemic is that it has seen a trend intensified that became significant with the rise of social media: namely that many people are more and more openly seeking refuge from the challenges of reality in conspiracy ideologies. This refuge, however, is no longer a quiet closet, but rather a digital counter-public made up of countless quiet closets that is spiraling out of control and increasingly manifesting itself also on the streets (often in symbolic places), as it already has done in parliaments and governments. Despite these manifestations ‘in real life’, however, this trend essentially consists of a myriad of technical (information and communication) actions, which are on the rise because people are spending more

time at home, have less work, and in many cases feel a desperate urge to create meaning. Under the pressure caused by the interruption of routines that hitherto made it easy for them to live politically conformist and consumerist lives, citizens everywhere cannot help but think about scientific, technological and medical questions, as well as about a wide variety of science- and medicine-related governance issues.

While in this context the contributions of ‘citizen science’ to dealing with current challenges in the pandemic crisis certainly deserve attention, other technical actions, namely the battles raging online and ‘in real life’ about how to interpret and explain the extraordinary events, appear to be the real key contributions ‘from below’ to re-defining a socio-technical world in a state of emergency and to addressing the role of science and technology in it.

Furthermore, as we know from many public engagements with technoscience activities organized by (largely) academic practitioners of STS, the main problems in the communication on such topics are in many cases not questions concerning scientific facts or technological options, but fundamental misunderstandings of what science is about, that is: of both scientific thinking and the political economy of science and technology. In a world in which we have QAnon on the one hand, and old-fashioned and often out-moded respect for science (that is likewise misunderstood for the most part) on the other, citizens who are experts in the methods of STS and knowledgeable about the science, innovation and health systems, and about how science works, are even needed more than citizen researchers involved in natural science and technology development. Philosophers of technology could play a key role in educating the public with a view to enabling as many people as possible to practice ‘citizen STS’ and thereby to make societies better able to resist the lure of conspiracy ideologies. This may then amount to a true mobilization of ‘widely distributed competence in 21st century societies’.

### *Science and Post-Truth in the Pandemic*

However, are philosophers of technology and other academic STS experts really in a position to take on the role of helping to enlighten the public on these issues? The field of STS has to a large extent formed with a main aim of combating what the authors call a “technocratic mindset that appears divorced from and opposed to the sphere of politics and the discussion of public values” – and at its core philosophy of technology is influenced strongly by an anti-technocratic and anti-scientistic impetus. Franz Seifert recently wrote<sup>14</sup> that in STS the dismantling of the authority of science traditionally goes hand in hand with the democratization of science and thus

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14 Franz Seifert: „Die Grenzen akademischen Zweifels,“ *science@ORF.at*, 14.10.2020, <https://science.orf.at/stories/3201963/> (checked 18.12.2020).

with a further “democratization of democracy”, and asked to what extent the field can continue with these paradigms of the past decades. According to Seifert’s analysis, the actor constellation in ‘truth wars’ has changed, and we may in this context remember older arguments made by Steve Fuller. In the point of view of Seifert, skepticism about science (as least as a system), which was previously welcomed as an opportunity to democratize democracy, now appears to pose a threat to a democracy that is being attacked by Covid and climate change deniers and even more hopeless and aggressive deniers of reality. Now it is they, argues Seifert, who are taking advantage of the – never conclusive – doubtfulness of scientific theories and facts to cast doubt on evolutionary theory, industrially induced climate change, the usefulness of vaccinations or the dangerousness of the coronavirus – and it is they who are the most vocal and visible anti-system groups in many societies, currently rivalled only by anti-racism activists. Seifert believes that the pandemic, and indeed the hopelessly polarized political landscape in the USA – which exists, one might add, in other countries as well – demonstrate that the disintegration of a basic consensus on truth can become a problem of order for a democracy. This does not mean, nor does he believe, that the critical analysis of societal aspects of science and the latter’s intertwinement with power are irrelevant or even dangerous per se; however, Seifert emphasizes that, if the desired democratization of science exclusively means dismantling and relativizing scientific authority, this ultimately equates scientific expertise (including that of the social sciences) with everyday thinking, hands over any decision-making process, no matter how ‘technical’ it may be, to political interests alone, and stifles any fact-based argumentation in public debates. In his point of view, it is here that the limits of an engaged, constructivist critique of scientific truth become clear.

I agree with Seifert to some extent, especially concerning his characterization of the current enemies of science who are, in fact, often fascist enemies of reason and humanity. What these people attack, however, is not the technocratic mindset. Most of them, for example, enjoy seeing their sadistic drives satisfied by the brutal acting out of the technocratic mindset at the borders of the European Union.

Between the hammer of anti-science conspiracy thinking and the anvil of science-based technocratic apparatuses that in recent years have increasingly come under the control of anti-democratic rightwing forces, those who the authors call “the ‘reasonable’ people, who exercise solidarity by acknowledging technical necessities”, may be crushed for failing to adopt an unequivocal and strong position towards science and the notion of truth. Lately, the Fridays for Future movement has reinvigorated a very old-fashioned belief in science – but it is very old-fashioned only from the perspective of a decades-old academic and social movement discourse that itself was based on an older philosophy of technology. In fact, the new, often transhumanist technofuturism that has played an important role for around two decades shares a si-

milar strong belief in science, coupled however with an equally old-fashioned belief in technological progress. Both of these, as well as other current intellectual and political movements that are not fascist, appear to be converging towards a consensus that combines 19<sup>th</sup>-century liberalism with notions of cultural progress (in terms of successful identity politics of hitherto marginalized and oppressed social groups) and more or less eco-technocratic solutions to dealing with the capitalist destructive domination of nature.

We can indeed “describe our technocratic” condition – not only during the current pandemic – “as one of being exiled at home and impatient of the present” and in which “the loss of a future and of the past amount to a loss of the political” and “all that is left of it is a kind of rearing up or rebelliousness against the rule of necessity”, or, we may add, polite silence.

The philosophy of the technology of the 20th century was to a large extent a reflection of or reflex to the social rise of technoscience, to its own crisis that followed from it, and to the homelessness of modern man that accompanied it – modern man who was all ‘in the world’, in the immanence, yet in exile as well on account of his entanglement with a past that imagined another world, or a ‘beyond’. Due to the current decline in public appreciation of scientific thinking and the rise of the enemies of reason, which – unlike in the interwar period – have had a striking impact on all societies in North America and Europe at least, and especially in the classical liberal democracies, science is losing its character as the guiding social institution. Citizen science and the proposed Citizen STS can be remedies to this to some extent; however, if no democratic anti-capitalist alternative to the current social order emerges, the philosophy of technology and STS in general will soon find themselves in the strange position of not being able to do anything reasonable or sensible other than helping to reinstate the authority of science. Having a questionable but non-fascist belief as one’s motivation for taking action on behalf of reasonable people is better than having no such motivation at all.

### *On Action*

As a conclusion, all I can provide here is a rough sketch of a possible new role for our fields in a rapidly changing world. At the end of the day(light) of liberal democracy, breaking the spell of the pseudo-Sachzwang and of TINA will boil down to the question of what alternatives to capitalism may exist. Besides bringing (other) citizens into our own field, not as objects of study or lay participants or alternative experts, but as comrades in creating such alternatives, a main aim for STS could be to forge a new alliance with idealistic natural scientists and engineers as well as with movements such as Fridays for Future. In order to play such a role, one of the most

distinguished tasks of the philosophy of technology must again be to develop an integrative notion of socio-technical progress in order to make our technosphere truly and sustainably habitable. When it comes to ethical reflection, it will be vital to bring ethical reflection to the achieved level of the productive forces and to avoid any arguments based on dubious assumptions of a ‘given’ scarcity of resources (such as those in the current discussions about ‘triage’ in which the use of this term echoes the economic war waged against the health systems in many countries).

In order to be able to really help “open the black box of *Sachzwang*”, STS need to re-invent their own field. If successful, such a re-invention may also give philosophy of technology a crucial role in regaining our “power to imagine another world for ourselves”.

*Langdon Winner*

## The Virus Is a Catalyst, Society Itself the Disease

As the Covid-19 pandemic runs its course, the quest to draw lessons from its rise, spread and eventual consequences will surely engage public health professionals, policy makers, social scientists, and philosophers for many years to come. One topic of fascination will be the variety of ways in which different nations and populations around the world have responded to the outbreak and the grim challenges it presents them. While it is premature to draw any firm conclusions, some preliminary comparisons may be helpful in our thinking going forward.

In important respects the virus, SARS-CoV-2, can be seen not only as the cause of the numerous physical maladies associated with Covid-19 infections, but also a pungent catalyst for the reactions and strategies of widely different societies. Among the obvious questions that arose at the outset were these. Who would take a leading role in defining key issues? What options would be imagined and tried? How soon? Thus, what methods for monitoring the spread of the virus would be instituted? What measures for preventing and treating infections should be organized and how broadly? How would the populace as a whole respond to initiatives proposed by scientists and political figures? In what ways might important institutions alter their basic form and methods of operation? From the standpoint of political philosophy, these issues suggest basic questions about the features of civic culture and how particular cultures might be compared.

Given the fact that by February 2020 most world societies were becoming aware of the possible onset of a coronavirus pandemic, it is possible to recognize and compare some basic patterns of response. Some nations were quick in understanding the