

European science in the de-globalizing world

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At the turn of the millennium, a remarkable change took place in the relationship between science and politics in Europe. In January 2000, the European Commission (EC) proposed to create a common European Research Area (ERA). The European heads of governments and states endorsed the concept in March the same year, and adopted a program, known as the Lisbon Strategy, to make the EU “the most competitive and dynamic knowledge-based economy in the world” by 2010. Science and innovation were the cornerstone of this objective. The Lisbon Strategy did not succeed though: it was evaluated as inadequate and failing in the midterm review, and again in 2010.

To explain its failure, the late Austro-American-Swiss scientist Gottfried Schatz commented that “Europe’s best scientists do not shape Europe’s research policies”, and that most European science programs “are being strangled by a Byzantine bureaucracy”. He also blamed the insistence on “networking” that compelled feigned coordination and cooperation of research projects, instead of supporting individual talents. And yet, inspired by the ERA, Europe’s scientists lobbied the EC for a new funding mechanism for basic research, which led to the creation of the European Research Council (ERC) in 2007. Here, scientists, rather than politicians or EU officials, identify new directions and innovative ideas in research. The ERC has been highly successful in its mission to support excellent research and has earned much respect from the scientific community.

After the failure of the Lisbon strategy, the EC devised a new one under the name Horizon 2020 with a more modest goal to achieve “smart, sustainable and inclusive growth”. The ancient European cathedrals, erected centuries ago, got modern counterparts: the Science and Technology Parks, often financed from the EU Structural Funds and the Cohesion Fund, originally intended to reduce economic disparities across the EU. But the shortcomings of the goal-oriented EU science and innovation policy soon became transparent in the post-communist countries where the research establishments lack human capital, experienced leaders and appropriate mechanisms to select excellence. The foul habits from the “scientifically managed societies”, in which the “planning of science” had implied perfunctory guesses, exaggerations or plain lies, continued to contaminate research in the communist posterity. The EU policy, with its pre-set objectives and priorities, its implicit assumptions that fundamental discoveries can be foreseen and the milestones planned, may provide a fertile soil for their persistence.

In July 2019 then, the EC announced to invest “in new solutions for societal challenges and drive innovation-led sustainable growth”. The next framework program, scheduled for 2021-2027, named Horizon Europe, will come with “an important novelty”: the European Innovation Council – “a one-stop-shop for innovation funding to turn science into new business and accelerate the scale-up of companies”. The EC report boasted that Horizon 2020 will generate new knowledge and technologies with a strong economic impact and that Horizon Europe will “boost the EU’s competitiveness, innovation capacities and scientific excellence”.

The two past decades of science policy in the EU may be epitomized by a musical expression: variations on a single theme. The theme reminds of the mantra of the defunct European communist regimes that “science and technology are primary productive forces”. All a sudden, it becomes clear that a new theme is overdue.

The cause of this sudden change came up as a “Butterfly effect” – a metaphor coined by meteorologist Edward Lorenz: the flapping of the wings of a butterfly may set off a tornado weeks later. In August 2018, a Swedish schoolgirl rose to global prominence and became the figurehead for global school strikes under the name Fridays for Future. Incidentally, on 21 February 2019, after Greta Thunberg had spoken at the plenary session of the European Economic and Social Committee (EESC) in Brussels, the then President of the EC, Jean-Claude Juncker, expressed his satisfaction “to see that young people are taking to the streets in Europe to create visibility for the issue of climate change.” He proclaimed that in the next financial period, 2021 to 2027, “a fourth of the budget goes towards climate change mitigation, and this is going to be a paradigm shift”. The leading politicians of the EC became aware of the gravity of environmental problems and began to ponder over more radical moves. Eventually the idea of a carbon-neutral economy with no net emission of CO₂ became their agenda.

The events proceeded at an accelerated pace in December 2019, when a new EC President and a new Council were appointed. The Council, now headed by Charles Michel, agreed to make the EU countries carbon neutral by 2050. The new President, Ursula von der Leyden, submitted to the European Parliament a growth strategy, named the European Green Deal, “to transform the EU into a fair and prosperous society, with a modern, resource-efficient and competitive economy where there are no net emissions of greenhouse gases in 2050 and where economic growth is decoupled from resource use”. As von der Leyden put it, it is “more than just a vision. It is a roadmap for action. [...] This is Europe’s ‘man on the moon’ moment.”

The EU intended to have the Green Deal enshrined as law by March 2020 to ensure that the transition to carbon neutrality is irreversible. The unexpected virus pandemic compels postponing the date and may obscure its urgency. Yet, I dare designate the memorable day of the Act as the ‘European Break’, in analogy with the ‘American Break’ on September 11, 2001, which has profoundly changed the USA. The reason is that the road to sustainability is likely to be different from the straightforward path sketched by the EC President and it vastly exceeds the task to stop climate change. The global ecosystem, dominated by Homo sapiens, is extremely stressed. Humanity finds itself in a critical stage of its evolution. It needs science, but with a different purpose and function than the one described in the Lisbon strategy and the subsequent Horizons.

European science has its roots in ancient Greece: to transit “from Mythos to Logos”; to understand the world, to relieve people of fear and contribute to their happiness. Science has always been part of culture along with art and both, in alliance with economy, have enabled the growth of civilization. Yet the growth in our time is so fast and the complexity thus generated so enormous that it exceeds human capacity to understand, to adapt and to manage. The dynamics of changes is such that as soon we find a solution to a problem, the problem has already changed and supplanted by new problems.

In her speech at the EESC, Greta Thunberg appealed to European politicians to pay attention to scientists: “Listen to them, because we are just repeating what they are saying and have been saying for decades.” When the news on the European Green Deal broke, many scientists met it with scepticism as to whether the goal is technically feasible. Yet, in my mind, the most important challenge for science should become the question whether we need economic growth at all, even in the “sustainable“ form outlined by the EC President. After all, it is obvious that the first condition for humanity to mitigate climate change is the radical reduction of material consumption. Will the plague of Covid-19 accelerate this awareness?

But it is not only the climate that is at stake. The present condition of human civilization, overloaded with goods, data, news and events, reminds us of the abnormal behaviour of rodents that ethologist John B. Calhoun observed in experiments with animals

living and reproducing within a limited space. Overcrowding entailed heavy burden on the brains with too many sensory inputs and brought about permanent stress and social collapse [1]. The present human condition, hyperconsumerism, hedonic treadmill, disintegration of spiritual foundations of society, post-truth machination, dying democracies and rise of populism and authoritarianism, hypercompetition and de-globalization – all that appear to be symptoms of incipient social pathology.

Science is not here to heal social ills. It can neither order nor norm. It does however, along with plain descriptions of facts provide conditional statements: “if A then B”. It should combine the natural and cultural sciences and shift priorities: Is market economy possible without growth? Can we minimize consumption and redistribute wealth worldwide? Would humanity substitute material values by symbolic ones once artificial intelligence opens the world of virtual reality for human self-fulfilment? May the popular attempts to “slow living” and “downshifting” become viable lifestyle? But science should also ask whether the present state of the human species is not an indication that it has reached an evolutionary dead end from which there is no way out [2].

In conditions of rapid changes and enormous complexity, science is not able to predict the feasibility of the European Green Deal. We must rely on the wisdom of sociologist Max Weber that “man would not have attained the possible unless time and again he had reached out for the impossible”.

REFERENCES

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