

SCIENCE IN THE TIMES OF A NEW OBSCURANTISM

We are now observing an extreme crisis of confidence in science. Why are anti-scientific viewpoints so popular, and why have we ceased to trust academia?



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It has been several centuries since Francis Bacon sketched out a picture of a marvelous world that would be created through scientific inventions in his novel *New Atlantis*, and almost a century and half since the birth of scientism, an ideology whose patrons include Bacon. According to the tenets of scientism, science was expected to solve once and for all the troubles besetting humanity in the developmental and spiritual spheres.

The nineteenth-century belief in the redemptive power of science continued for many decades. Some especially hot-blooded proponents of scientism worried that science would end in the 1930s, as all the mysteries of nature would have been unraveled by then. Although that prediction did not come true, such optimism continued unabated for many more years, and the faith in the earthly power of science only became more profound. Sending man to the moon was a clear sign of the legitimacy of science. Indeed, there was nothing to suggest that the twenty-first century would witness the arrival of the era of a new obscurantism, epitomized by today's anti-vaccination movement. And so we may ask: What happened? We should seek to identify the causes of this situation in several areas.

Science

Starting from the late nineteenth century, the exact sciences, humanities, and social sciences became increasingly refined in their theoretical aspect, complicated, and distanced from what we call common sense. Understanding them required at least a university degree. Barriers came to be posed here by increasingly narrow specializations. At the same time, there was an increasingly acute lack of theoretical work that attested to the fundamental unity of science, to the internal connections between its disciplines, to the general sense of all scientific inquiry.

This role was once successfully played by philosophy. As various disciplines became increasingly specialized and theoretically refined, however, the integrative function of philosophy became increasingly difficult to fulfill. Moreover, the cultural and interdisciplinary position of philosophy diminished as the nineteenth-century expansion of new fields linked to the world of technology and engineering (technoscience) caused philosophical reflections to be seen as insignificant, as they were impossible to translate into technological inventions and technological progress.

Modern-era science quickly shifted from a disinterested search for truth as a result of the contemplation of the world (*theorein* in Greek) to a striving for technological utility, which sought ever greater control over nature and society.

As a result of those processes, science became increasingly effective in the technological sense, but also less and less aware of the true significance of new inventions for the future of humanity (moral reflections failed to stay apace of technological progress), and intellectually increasingly refined and insensitive to the human need for meaning.

That process was exacerbated by the disappearance of science popularization, which came to be deemed an activity that took up the valuable time of scholars and was not appreciated by the scientific community. The institutional environment of science, increasingly focused on efficiency understood as cost effectiveness, also started to devalue the popularization of knowledge as an activity that did not bring tangible scientific results, and therefore was (purportedly) worthless. On top of this all, science studies began to conclude – in a way that increasingly demythologized the nineteenth-century image – that science was a field of social practice that was not free from the influence of all sorts of political ideologies, the interplay of group interests, or pressure from those in power, that scientists were not free from such vices as vanity, jealousy, or a penchant to cut corners to gain applause, fame, and financial success.

In this way, scientific reflection on the nature of science itself (whether sociological, philosophical, or historical) certainly undermined its Enlightenment-era depictions as a semi-divine activity, thus bringing science back down to Earth. Scientific reflection confirmed the excellent capacity for self-reflection and self-criticism present in science, but it also to some extent eroded away at its cultural status. Much greater importance was attached to the processes linked to efforts to pinpoint the place of science in the new political and economic context. For a long time, science mainly sought to meet the external needs of modern nation-states. Before that, it had contributed to their creation. Modern scientific pursuits in such disciplines as history, linguistics, archeology, and ethnography offer visible proof of this fact. At some point, however, the role of the patrons of science was assumed mainly by private business organizations.

Links to the state

It is possible to identify significant weaknesses in the state's patronage of science, primarily related to its desire to consolidate its power over both its own citizens and its natural and political environment. That situation was linked to the development of many fields of science and the social practices they regulated. Such



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ACADEMIA PART III The Current Threats

advances helped modernize the functioning of countries, but also resulted in stronger control of citizens (as brilliantly described by the prominent French historian Michel Foucault); radically improved the situation of entire populations (examples include the Green Revolution in India), but also led to disastrous environmental consequences of the use of certain technologies based on the achievements of science (the famous case of DDT, an insecticide used on a large scale after World War II that proved to be extremely harmful to the environment).

The process of state-building was also linked to the development of the arms industry, which relied on the achievements of science – as we know, this sector was the source of most of the important technological inventions of the twentieth century. That said, state funding left a lot of room for basic research and the education of citizens in terms of the quality of their intellect and character. In this way, a certain balance was struck between the state's desire to use science to consolidate its power and the traditional recognition of scientific inquiry as an autotelic activity.

The situation began to change in the 1980s, which witnessed the onset of the hegemony of neoliberal ideology, marked on the one hand by the governments of Ronald Reagan in the United States and Margaret Thatcher in the United Kingdom, and on the other by the long-lasting dominance of neoliberal economic theories propounded by Friedrich August von Hayek and Milton Friedman (Nobel Prize winners in 1974 and 1976). Neoliberalism altered the state's policy towards science and its social environment.

Links to the economy

Utility – understood in the narrow (economic) sense – rose to the fore. From then on, science was above all expected to serve the purpose of consolidating the power of individual economies, with its advances being harnessed by the world of business. Various scientific disciplines thus became almost directly drawn into the gears of the capitalist machine of profit and exploitation.

The expansion of the neoliberal perception of effectiveness and success into the realm of academia manifested itself both in the gradual privatization of science and in the subordination of its findings to economic indicators. One of the offshoots of this process was the invasion of the evaluation of scientific activity by means of performance indicators, in the form of points scored for publications. The profitability of science was understood as the possibility of monetizing scientific findings. Research institutions, in particular universities, started to be treated increasingly like corporations. The notion of profit, which previously had no traction within the walls of academic institutions, became ubiquitous. For example, people

began to wonder if a given university or a particular faculty was “turning a profit” – something that had to seem absurd to those who (like the present author) grew up in the times when science was a relatively disinterested endeavor. The governing bodies of academic institutions started to talk about the necessity of “bringing more free-market mechanisms into the universities,” about encouraging competition understood in a way analogous to market competition, and about evaluating the heads of faculties and individual employees in terms of their ability to secure funding for their research (a condition that might be described as “grant fever”). Collegial bodies, such as university senates, started to focus on the topic of money at their meetings.

The concept of the university as a community of truth-seekers began to be supplanted by the understanding of higher education institutions as businesses. This was coupled with elements of what the prominent English political scientist Colin Crouch has called the “corruption of knowledge.” For example, individual academic disciplines – not only those closely linked to technology and engineering, such as robotics, chemistry, and pharmacy, but also economics, psychology, sociology, political science, computer science, and cognitive sciences – began to focus primarily on the market success of their output, completely forgetting about their traditional mission. Under these circumstances, those branches of science that could not be directly linked to the capitalist market started to be treated as needless (this held true, for example, for philosophy, the history of art, and musicology) or to be forced to justify their existence by coming up with “practical applications.” In turn, universities and other higher education institutions started to be perceived as a branch of the economy and became subject to market pressure. That led them to gradually renounce their traditional mission of the disinterested pursuit of truth, the education of critical, enlightened citizens, and the transmission of culture to new generations.

Those who wanted to remain true to the ethos of science and education – understood as the enhancement of the self-critique of Western culture, something that had always made it stand out in a positive way from the rest of the world – began to be perceived as defenders of an aristocratic vision of academia, as being out of touch with reality. Such a perception ignored the fact that what lay behind those seeking isolation from the pressure of current and everyday affairs was the potential to make the world a better place, through faithfulness to such ostensibly impractical virtues as critical objectivity and the ability to think of various alternatives, to reflect calmly on the past, and to think about the future without haste. Increasing contempt for the disinterested nature of scientific pursuits, understood as freedom from the pressure

to produce instant utility (stemming from the typical impatience of turbo-capitalism, which demands quick achievements), has resulted in a shift away from basic research both in the natural sciences and in the social sciences and humanities.

The pressure of profit-making

This atmosphere of pressure on academia, which was expected to yield to the demands of the capitalist market, also had its impact on the policies of the state, which increasingly saw science as a branch of the economy of the same sort as trade or industry. In addition, the neoliberal way of thinking about the world demanded the state's gradual withdrawal from the traditional functions of initiative and supervision. Under these circumstances, individual scholarly disciplines began to focus increasingly on the acquisition of funding from private sources. This held true in particular for the natural and other sciences mentioned earlier, whose findings could find market applications. Major corporations started to allocate huge resources to scientific research. In some disciplines, such as pharmacy and computer science, they have almost completely replaced state funding.

But farming science out to corporations and letting them reap the profits proved to have disastrous consequences for the moral aspects of scientific pursuits. That was because they were motivated only by a desire to generate profits, and paid no heed to the moral aspects of individual scientific achievements. Stripping science of morality, as a result of its subordination to the requirements of the capitalist market (further reinforced by the pursuit of fame and fortune on the part of individual researchers ready to offer their talents and skills to whoever paid more), led to what could be called science becoming corrupted by the world of business. This is especially evident in the aforementioned disciplines.

Big pharma, an industry known for its ruthlessness and self-interest, practically monopolized scientific research into new drugs, subordinating it to the imperative of profit generation. For example, pharmaceutical companies spent decades developing drugs that would generate the highest profits – not the ones that are needed most on health-based grounds. In turn, the IT sector proved to be extremely effective in attracting the most talented scientists, who were eager to contribute to the birth of what is called surveillance capitalism, just as banks successfully attracted the most talented students of mathematics and physics to help devise new financial instruments that ultimately proved to have disastrous consequences (the financial crisis in 2007–2008). If we add the bribing of individual researchers by large oil and mining corporations interested in climate denialism, we arrive at a gloomy picture of a deprived world of science in

which the profits of those who finance research are more important than any knowledge-related or moral considerations.

The pseudo-market of ideas

All this cast a shadow over the authority of science and did not remain without influence on the ongoing crisis of confidence in science. It has provided ammunition to people who, for various reasons, have always looked at science with suspicion. Before the era of the Internet, such individuals gained no recognition as the spread of ideas was limited by the technical nature of the media and by the culture of the reviewing process and selection, which separated at the very beginning what was sensible (rational) from what was unwise (irrational).

The age of the Internet has brought unlimited possibilities for promoting various ideas. Anyone can freely spread anti-scientific views, taking advantage of the aversion felt by some people to science as a system associated with the oppressive state (the freedomists), exaggerating the actual shortcomings of science, and feeding on (justifiably) deeper distrust in the world of big business, interested only in making profits and using science for its own purposes. When we add the withdrawal of the state from its role as the regulator in the aftermath of neoliberalism, we end up with a sad picture of the current state of affairs – a pseudo-market of ideas where scientific truth struggles against absurdities, research integrity clashes with intellectual deception, and the state just sits back and watches.

Combating the new obscurantism

In these circumstances, the only hope for rebuilding the cultural position of science lies in its capacity for reform and show that it nevertheless is indeed independent of the great forces and interests that have corrupted it. But this alone is not enough: science must show that it can be critical of these very forces. Importantly, scientists must also be able to popularize the achievements of science, to point out its numerous benefits, especially those in the spheres of morality and cognition (not utility!). The purpose is to constantly remind everyone that science is a priceless form of life where the freedom of inquiry goes hand in hand with the ability to think critically, and the value of an individual success is measured by its community impact. In this fight against the new obscurantism, however, we need the help of the state, which should return to the position of the main patron of science and also actively engage in the process of educating society to enhance its ability to distinguish between truth and falsehood, between scientific findings and absurd ideas. This is because it is naïve to expect that in the high competitive market of ideas, the truth will manage to defend itself all on its own. ■

Further reading:

Crouch C., *The Knowledge Corrupters: Hidden Consequences of the Financial Takeover of Public Life*, Polity Press, 2015.

Foucault M., *Discipline and Punish: The Birth of the Prison*. Trans. Alan Sheridan. Pantheon Books, 1997.