

TWO OPPOSED ATTITUDES TOWARDS SCIENCE IN TIME OF PANDEMIC

Abstract

The contemporary cultural context is strongly influenced by the mathematical-empirical sciences. This important role has resulted in two opposed attitudes towards science. On the one hand, science is viewed as a promise of salvation because of its wide technological impact. This optimistic attitude is exemplified by the so-called transhumanist movement. On the other hand, there is distrust of science for a series of reasons, reaching from anthropological and ethical considerations to conspiracy theories. While both attitudes have already been present in philosophical reflection and popular accounts in the media (related to topics like nuclear energy, ecology or genetic engineering), they attract a renewed attention in the current situation of the coronavirus pandemic. This paper argues that both attitudes are based on a misconception of science. Instead, the consideration of the personalistic (i.e. epistemological, ethical-anthropological and aesthetical-existential) dimensions of scientific activity opens a fruitful way to inspire the creativity of the human person, especially in time of crisis.

Keywords: personalistic dimensions, scientific activity, transhumanism, distrust of science, pandemic

INTRODUCTION

The contemporary cultural context is strongly characterised by the mathematical-empirical sciences. The progress of science and technology is helping to improve the conditions of human existence, especially regarding health care, infrastructure and communications. This astonishing and rapid progress has resulted in an attitude which attributes to science a quasi-soteriological meaning. Actually, science raises expectations in the possibility of an overall improvement of the human condition.

Such an attitude towards science is particularly present in the so-called transhumanist movement which holds that *homo sapiens* is only a transitory phenomenon in the course of evolution.

However, the scientific and technological progress shows to be ambiguous. Dehumanising effects of technology and ethical dilemmas together with political and economic exploitation of scientific results create distrust of science, which sometimes even turns into science denial.

The opposition between these two attitudes towards science becomes particularly evident in the current situation of the coronavirus pandemic. On the one hand, vaccination is presented as the ultimate and indispensable way to defeat SARS-Cov2; on the other hand, distrust of science grows and conspiracy theories flourish. Sadly, all this leads to growing animosity and divisions among people.

In this article, we take a general philosophical look on these two attitudes, without entering into the current controversies about COVID-19 and vaccination. Our aim is to recall the personalistic dimensions of scientific activity which help to avoid extreme positions and to contextualise scientific knowledge in a broader vision of reality.

1. Science as a promise of salvation

In our time, science possesses “[an] undeniable aura [...] as the only uncriticizable narrative form in our culture”¹. This normative strength of scientific knowledge seems to derive from several basic points. First of all, scientists study nature achieving theoretical and practical knowledge which makes technological developments possible. Secondly, the scientific method unites reproducible experimental and observational procedures with rigorous and comprehensible mathematical and conceptual operations, guaranteeing that scientific research remains universal, unbiased and independent of private views. Thirdly, science is not static and self-referential, i.e. scientific hypotheses and theories are always subject to further examination according to the scientific method.²

This strong position of science in society brings along strong expectations. Science seems to be a privileged way to overcome ideological divisions between people of different cultures and to improve conditions for human life by technological and medical progress. Even more, it seems that science is the only one capable of giving a reliable ‘promise of salvation’. The fulfilment of this salvation is not restricted to the improvement of the actual human condition but opens new perspectives which

¹ Brendan Purcell, Reflections on Evolution in the Light of a Philosophical Biology, James McEvoy – Michael Dunne (eds.), *Thomas Aquinas: Approaches to Truth. The Aquinas Lectures at Maynooth. 1996-2001*, Four Courts Press, Dublin, 2002, p. 78.

² Cf. Peter Achinstein, Scientific Knowledge, Sven Becker – Duncan Pritchard (eds.), *The Routledge Companion to Epistemology*, Routledge, New York – London, 2014, p. 346.

could transcend human nature—an idea proposed by the so-called transhumanists. Transhumanism, a contemporary philosophical and cultural movement, suggests that biological evolution can be accelerated and redirected by means of advanced technology in order to enhance human beings. The immediate result would be a transhuman being (a more potent kind of *homo sapiens*), while further development would generate a new species—the posthuman being.³ Philosopher Nick Bostrom, one of the most prominent and influential representatives of transhumanism, puts the basic idea in this way: “Current humanity need not be the endpoint of evolution. Transhumanists hope that by responsible use of science, technology, and other rational means we shall eventually manage to become posthuman, beings with vastly greater capacities than present human beings have.”⁴ In other words, science can ‘redeem’ man from himself and lead him into a splendid future, where the present difficulties will be overcome.

2. The distrust of science

A natural counter reaction to a radically optimistic view on science consists in a strongly sceptical attitude. Actually, historian of science Andrew Jewett claims in his recent book on the challenges to scientific authority in North America that “today, science is under fire as never before in the United States. [...] Across the political spectrum, in fact, citizens tend to pick and choose among scientific theories and applications based in pre-existing commitments”⁵. Even without an extensive analysis, we can safely say that Jewett’s main observations hold in our European context, too. While left-oriented groups suspect that science is based on an unreflected social construction, conservatives fear that a hidden political agenda comes under the guise of scientific results.⁶ The latter are cautious about the anthropological and ethical implications of interpreting the human being in exclusively scientific terms, while the former blame science of ideologically support of the establishment.⁷ What both groups have in common can be formulated in the following way: “To fully explain today’s distrust of science, we must account for the long-standing fear that it authorizes fake and damaging understandings of

³ Cf. Nick Bostrom, In Defense of Posthuman Dignity, Gregory R. Hansell – William Grassie (eds.), *Humanity Plus or Minus. Transhumanism and Its Critics*, Metanexus, Philadelphia, 2011, p. 55-56; Janina Loh, *Trans- und Posthumanismus zur Einführung*, Junius, Hamburg, 2018, p. 29-31.

⁴ Nick Bostrom, Transhumanist Values, Frederick Adams (ed.), *Ethical Issues for the 21st Century*, Philosophical Documentation Center Press, 2003, p. 4.

⁵ Andrew Jewett, *Science under Fire. Challenges to Scientific Authority in Modern America*, Harvard University Press, Cambridge (Massachusetts), 2020, p. 1.

⁶ Cf. *idem*, p. 1-3.

⁷ Cf. *idem*, p. 15.

who we are and how we behave.”⁸ In some sense, science is perceived as an anthropological threat because it reduces existence to mathematical-technical aspects suppressing vitality and creativity.⁹ It seems as if the human being is losing his autonomy becoming more and more dependent on what impersonal mechanisms render as necessary. The result is “the dehumanization brought about by the sway of number and quantity”¹⁰, an “amoral worldview”¹¹. Some scholars even recognise a causal relation between a technocratic mentality and the rise of political ideologies, as already Oswald Spengler anticipated when highlighting the “hidden demonic power”¹² of the machine.¹³

The distrust of science reaches its most extreme form in science denial. Typical science denial arguments can be categorised as follows:¹⁴

- *Impossible expectations of what science can deliver*: Deniers ignore that scientific theories and models are subject to revision and re-examination according to the methodology of mathematical-empirical sciences.
- *Biased presentation ('cherry-picking')*: Deniers highlight single papers in favour of their own opinion, while remaining silent about a majority of opposite views.
- *Misrepresentation*: Deniers present contrary positions in a simplified or erroneous way in order to reject them more easily.
- *Fake experts*: Some eloquent people highly exaggerate their competency in a given field, but due to rhetoric abilities present themselves as experts.
- *Conspiracy theories*: Deniers question the intellectual honesty of scientists blaming them of a hidden political agenda.

3. The personalistic dimensions of scientific activity

At the first glance, the scientific activity is primarily characterised by its logical-methodological aspect. In this sense, doing science signifies to collect, analyse and systemise empirical data in a given field of nature within a certain scientific community according to a well-defined methodological scheme. However, as already John Paul II pointed out, “if science is understood essentially as “a technical fact”, then it can be conceived

⁸ *Idem*, p. 3.

⁹ Cf. *idem*, p. 3-5.

¹⁰ *Idem*, p. 5.

¹¹ *Idem*, p. 9.

¹² Cf. Oswald Spengler, *Der Untergang des Abendlandes. Umriss einer Morphologie der Weltgeschichte*, DTV, Munich, 1962/2003, p. 1190.

¹³ Cf. Andrew Jewett, *Science under Fire*, cit., p. 10.

¹⁴ Cf. Haydn Washington – John Cook, *Climate Change Denial. Heads in the Sand*, Earthscan, London – Washington, 2011, p. 12-13.

as the pursuit of those processes that lead to technical success. What leads to success, therefore, is considered “knowledge”. [...] The concept of truth, therefore, becomes superfluous, and sometimes, in fact, it is explicitly renounced. Reason itself seems, when all is said and done, a mere function or an instrument of a being who finds the meaning of his existence outside knowledge and science, if possible in mere life.”¹⁵ Hence, the procedural characteristic of scientific activity represents only partially what science is. Actually, science has its origin in the human person; scientific activity is the activity of a person, i.e. the scientist. A careful analysis shows that there are three personalistic dimensions of scientific activity: the epistemological dimension, the ethical-anthropological one and the aesthetical-existential one. In a somewhat sketchy form, we can attach to each of these dimensions the Greek terms *logos*, *ethos* and *pathos*, respectively.¹⁶

3.1. The epistemological dimension of scientific activity

Biographies of outstanding scientists reveal that their achievements are not due to a blind execution of procedural steps. Moreover, their entire personality is involved in their research shaping their way of reasoning and inspiring new ideas or unconventional approaches. The way to new scientific insights cannot be described exclusively by experimental procedures because research also relies on non-formal knowledge of the subject doing science, i.e. his intuition, creativity and talent which obviously regard the scientist as a person rather than a holder of a certain academic degree. Furthermore, philosophical or religious views as well as art can strongly influence the way a scientist deals with problems. Though professional formation in a certain ‘sector’ of knowledge is crucial in the scientist’s research, his activity takes place against the background of his personal knowledge which is more comprehensive and integral. Moreover, the scientist’s activity takes place in a specific hermeneutic context which consists of the totality of accepted concepts and procedures in the current historical period. Keeping this in mind, it becomes obvious that scientific activity is not simply about combining sensory data in a smart way; it is a genuine intellectual elaboration.¹⁷

¹⁵ John Paul II, *Address to Scientists and Students*, Cologne Cathedral, November 15, 1980, n. 3; <https://inters.org/John-Paul-II-Cologne-Cathedral-1980> (18. 06. 2021).

¹⁶ Cf. Giuseppe Tanzella-Nitti, Le dimensioni umanistiche dell’attività scientifica, Alberto Strumia – Giuseppe Tanzella-Nitti (eds.), *Scienze, filosofia e teologia. Avvio al lavoro interdisciplinare*, EDUSC, Rome, 2014, p. 45-48; 52; Stefan Bauberger, *Wissenschaftstheorie. Eine Einführung*, Kohlhammer, Stuttgart, 2016, p. 28-30; 57-58.

¹⁷ Cf. Evandro Agazzi, *Scientific Objectivity and Its Contexts*, Springer, Cham – Heidelberg – New York, 2014, p. 98-103; 334-338.

3.2. The ethical-anthropological dimension of scientific activity

The most obvious (and certainly most discussed) personalistic dimension of scientific activity regards ethical and anthropological issues. Both, the exaggerated belief in scientific and technical progress and the distrust of science, refer to this dimension. An unbiased analysis of scientific and technological achievements in the last 200 years reveals the ambiguity of science. There is a rising need for an ethical reflection on the goals scientists strive for and the methods they use. Further ethical questions regard the influence of political and economic interests on scientists as well as the technological application of new scientific insights.¹⁸

In order to discuss ethical issues in a fruitful way, it is necessary to clarify the anthropological foundations. Since scientific insights themselves raise anthropological questions, this task becomes very complex. On the one hand, science reinforces age-old philosophical topics as the relation between spirit and matter or the mind-body problem. On the other hand, science adds new questions as the relation between man and machine, in particular between human intelligence and artificial intelligence.¹⁹

While some scientific-technical developments surely represent a threat to humanity (nuclear weapons, for instance), it is likewise undeniable that science and technology are contributing substantially to the improvement of the human condition. Therefore, the scientist as a person takes responsibility for the common good of the human society, i.e. the scientist's contribution consists in directing the advance of research to the good of the human person. As scientists advance in knowing the truth in their proper field of specialisation, they have also the opportunity to advance in good, i.e. in both intellectual and ethical virtues.²⁰ Hence, scientists as human persons are able to strive for good in a very specific way. In this sense, Pope Francis recently pointed out "how wonderful it would be if the growth of scientific and technological innovation could come with more equality and social inclusion. How wonderful would it be, even as we discover faraway planets, to rediscover the needs of the brothers and sisters who orbit around us"²¹.

¹⁸ Cf. Jan Cornelius Schmidt, *Das Andere der Natur. Neue Wege zur Naturphilosophie*, S. Hirzel, Stuttgart, 2015, p. 275-278; 301-304.

¹⁹ Cf. Giuseppe Tanzella-Nitti, I fondamenti filosofici dell'attività scientifica, Alberto Strumia – Giuseppe Tanzella-Nitti (eds.), *Scienze, filosofia e teologia*, cit., p. 39-43.

²⁰ Cf. Giuseppe Tanzella-Nitti, *Le dimensioni umanistiche dell'attività scientifica*, cit., p. 54-57.

²¹ Pope Francis, Encyclical *Fratelli tutti*, October 3, 2020, n. 31.

3.3. The aesthetical-existential dimension of scientific activity

The existential involvement of the scientist through his activity manifests itself not only by its reference to truth and good, but also by its aesthetical dimension; the scientist as a human person perceives the beauty of the universe. While everyone can experience visually the beauty of a landscape, the scientist disposes of methods to look ‘deeper’ into nature by grasping its laws and in this way he discovers the elegance and harmony of the order of the universe.²² The scientist becomes aware of the correspondence between human rationality and the intelligibility of the universe. This insight evokes amazement and reverence. Even scientists with naturalistic philosophical views are capable to take satisfaction from their activity by admiring the order of nature.²³ In this way, the aesthetical dimension disproves an exclusively instrumental approach to science and opens to scientists the possibility to experience the Absolute. Science shows to be a human value worth of dedicating one’s life to it.²⁴

CONCLUSION

The rediscovery of the epistemological, ethical-anthropological and aesthetical-existential dimensions of scientific activity allows us to arrive at an equilibrated account of science. In time of crisis, when people are bothered to lose their freedom to impersonal mechanisms—independently of the justification of this fear—it is important to become aware again of the full resources of the human person. Creative scientific work in the past emerged whenever the scientist was existentially involved, characterised by intellectual virtues and aware of his ethical responsibility. The personalistic approach to science—instead of the instrumental one—is capable of inspiring creativity. Authentic personal creativity is possible only when the metaphysical structure of reality is respected, i.e. in the search for truth and in the striving for good, which together result in the perception of beauty. This task relates the scientist to other scientists and the scientific community to the broader society. Science alone—as an abstract construction—cannot ‘redeem’ mankind, but science understood as a multidisciplinary human, i.e. personal, activity, together with other fields of knowledge, can offer a peculiar contribution in promoting the common good.

²² Cf. Jan Cornelius Schmidt, *Das Andere der Natur*, cit., p. 245-251.

²³ Cf. Gerhard Schurz, *Evolution in Natur und Kultur. Eine Einführung in die verallgemeinerte Evolutionstheorie*, Spektrum Akademischer Verlag, Heidelberg, 2011, p. 106.

²⁴ Cf. Giuseppe Tanzella-Nitti, *Le dimensioni umanistiche dell’attività scientifica*, cit., p. 57-58.

DVA SUPROTSTAVLJENA STAVA PREMA ZNANOSTI U VRIJEME PANDEMIJE

Sažetak

Suvremeno se kulturno surjeđe nalazi pod snažnim utjecajem matematičko-empirijskih znanosti. Njihova je važna uloga dovela do dva suprotstavljena stava o znanosti. S jedne strane, znanost se promatra kao spasenjsko obećanje zbog njezinoga širokog tehnološkog učinka. Primjer takvoga optimističkog stava jest takozvani transhumanistički pokret. S druge strane, postoji nepovjerenje u znanost zbog niza razloga koji sežu od antropoloških i etičkih promišljanja do teorija zavjere. Oba su stava doduše već prisutna u filozofijskoj refleksiji i u popularnim prikazima u medijima (u svezi tema kao što su nuklearna energija, ekologija ili genetsko inženjerstvo), ali privukla su novu pozornost u trenutačnim okolnostima pandemije koronavirusa. Ovaj članak obrazlaže kako se oba stava temelje na neispravnom shvaćanju znanosti. Promišljanje personalističkih (tj. epistemoloških, etičko-antropoloških i estetsko-egzistencijalnih) dimenzija znanstvenoga djelovanja pak nudi plodonosan put kako bi se pobudila kreativnost ljudske osobe, osobito u vremenu krize.

Ključne riječi: personalističke dimenzije, znanstveno djelovanje, transhumanizam, nepovjerenje u znanost, pandemija