



<http://social-epistemology.com>
ISSN: 2471-9560

Alternative Modernity and Its Discontents

Ljiljana Radenovic, University of Belgrade, lradenovic72@gmail.com

Radenovic, Ljiljana. 2023. "Alternative Modernity and Its Discontents." *Social Epistemology Review and Reply Collective* 12 (1): 32-38. <https://wp.me/p1Bfg0-7wd>.

The story of modernity, including its successes and failures, often revolves around several crucial points that arguably represent a break with the pre-modern past. Depending on our political, religious, social, and personal tastes, we celebrate it as a human success or condemn it as a further fall from grace. The story goes more or less (and with some variations) like this: The period between the 15th and 17th century was marked by geographical discoveries, technological advancements, and social changes in Western Europe, unparalleled with anything in the past. Europeans arriving in faraway lands learned there were far more plants and animals than Aristotle had ever envisioned. Gutenberg's printing machine made the dissemination of ideas cheap and quick. Galileo's telescope brought distant planets and stars closer to our eyes. Zacharias Janssen's proto microscope enlarged smaller things so we could see them better. William Harvey's experiments revealed the real function of the beating heart, and so on and so forth. Calls to study the book of nature directly rather than indirectly via canonical manuscripts such as Aristotle's became louder and more frequent.

The Disenchanted World

All these changes, as the story goes, made philosophers of the 17th century rethink the origins of our knowledge and opened the way for the mechanistic, reductive view of the world typical of our modern age. In turn, the speed of progress accelerated. But what is the crux of this modern view according to this story? Frances Bacon's *New Organon* is usually celebrated or condemned (again depending on our sensibilities) for clearly expressing its preconditions. The first and single most important move toward a 'disenchanted' universe in which everything can be measured and calculated (and sympathizers would add properly explained!) is Bacon's suggestion that all Aristotle's causes but one, i.e., efficient cause, should be discarded. This is a bit of simplification.

Bacon continued to use Aristotle's formal and material causes but it can be argued that these causes were substantially reformulated and made reducible to the efficient cause in his philosophy. In this way, the universe and all events in it can be explained as interacting moving bodies. An all-time favourite and overused example of such efficient causation is the way billiard balls move and collide. The second move, also found in *New Organon*, is Bacon's famous motto that knowledge is power. The motto is perhaps best illustrated in Bacon's utopia described in his unfinished novel *New Atlantis*. In Bacon's fictional country, people have been experimentally studying the laws of nature and have made such technological advances that their lives are incomparably easier than in any other nation in the world. So Bacon's dream was free scientific inquiry, controlled experiments, and ever-more sophisticated technology from medicine to agriculture.

Both insights persisted through the following centuries, and scientific and technological progress was explicitly or implicitly ascribed to them. The argument usually pushed is that thanks to this particular view of nature as something to be experimentally studied and used for our own purposes, we have had industrial revolutions, made scientific breakthroughs, and escaped the dark world of never-ending hunger and pestilence to enter the world of electricity, antibiotics, and the computer. This story implies that religion and, in fact, all of humanities, at best, stand outside the progress and, at worst, prevent it.

Enchanted Transcendence

In a fascinating, in-depth, historical essay John Milbank (2022) challenges this official narrative. He argues that the reductive ‘Baconian’ metaphysics described above was not the only one to motivate and endorse empirical science. Contrary to popular belief, a more ‘enchanted’ metaphysics also encouraged the study of nature’s open book. Had this alternative metaphysics won, we would have been living in an alternative modernity. More specifically, alongside the ‘disenchanted’ mechanistic worldview (within which God, if there is one, could only be the primary efficient cause or prime mover), other worldviews that Milbank calls ‘enchanted immanence’ were proposed and flourished. Various pantheist views belong to this tradition. These views are Neostoic, Neoplatonist, or Aristotelian in their nature and can be found in various historical periods in the works of thinkers from Eriugena to Giordano Bruno and Spinoza.

Now, the reasons ‘disenchanted transcendence’ (mechanistic metaphysics of efficient causes) won out are more complex than the usual official rationale saying this metaphysics explained natural phenomena better than others could or did. Surprisingly, the Christian Church played an important role in this victory. For instance, Milbank cites the papal and episcopal condemnations of 1270-1277; their goal was to keep God and creation separate, but ‘enchanted immanence’ worldviews undermined this goal. In other words, it was not clear-cut efficiency or the successful explanation of mechanistic metaphysics that caused it to prevail but diverse contingent factors of other kinds. In their search for a way to exclude heretical pagan views of ‘animated matter,’ Church authorities ended up preferring the mechanistic philosophies of Galileo, Descartes, and Newton.

But as Milbank points out, in the 17th century, a third group of thinkers with views he calls ‘enchanted transcendence’ appeared. These were the Cambridge Platonists. On the one hand, they were aware that the universe of efficient causes sooner or later leads to a godless universe, because once this view is embraced, the need to posit God as the ultimate efficient cause slowly vanishes. According to Cambridge Platonists, such as Ralph Cudworth, the dead universe we end up living in is devoid of goodness and beauty, along with everything meaningful in human relations. On the other hand, Cambridge Platonists were wary of Spinoza’s kind of universe in which everything is alive. In such a universe, the vital distinction between God, humans, and matter disappears, and the result is the same as in a dead universe of efficient causes: determinism and mechanism.

The only viable option is ‘enchanted transcendence’. ‘Enchanted transcendence,’ Milbank says, ‘embraces a vision which is analogical, participatory and hierarchical. It does not debase the high to the low, like a purely mechanical philosophy, but neither does it elevate the low to the high like pure vitalism, thereby risking the obliteration of qualitative difference’ (Milbank, 2022, p. 86). In the universe of ‘enchanted transcendence,’ efficient mechanical causation is at play at the lower levels, but top-down causation that goes from complex wholes to their constituents (from a living cell to its particular molecules, for instance) is also at play.

Now, to return to the main point, Milbank argues that any of the competing worldviews could have won. All of them would have supported the study of nature and technological advancement, and, as a result, we would have lived in one of the competing modernities.

But had the modernity of ‘enchanted transcendence’ prevailed, we would have had a different and probably less damaging approach to nature and a different place for God in our lives.

Still, our official story, the story of progress and modernity we started with, forces us to be sceptical of Milbank’s alternatives. After all, isn’t it the case that the concept of efficient causation yielded a clearer understanding of manipulability in controlled experiments which, in turn, speeded up technological advancements? To put it differently, isn’t it just easier to explain the victory of the mechanistic ‘disenchanted’ universe by simply getting rid of less efficient alternatives?

Knowing and Making

Michael Hanby (2022) takes a different approach and defends the official story of scientific and technological progress and the ‘disenchanted transcendence’ from which such progress stems, even though he does not feel comfortable with it or with the world of modernity. Hanby offers a short, to-the-point summary of Milbank’s position. Milbank’s view is deeply Christian, Hanby argues, and, as such, cannot make a categorical distinction between knowing and making: ‘Milbank proposes to elevate “makeability” to the status of a transcendental’ (Hanby 2022, 166). After all, God created the world *ex nihilo*. Humans, as God’s creations and similar to God, also engage in knowing and creating. In other words, it is in our human nature to know, build, and make.

The history of science, technology, and magic makes sense within the more general framework of human beings as creators. According to Milbank, a world in which various forms of vitalism and a metaphysics arguing for top-down causation, along with its specific technology, was possible. Moreover, if there is enough pressure and need coming from within various sciences, it still is. If this happens, Hanby anticipates the following:

Christianity can then reconcile itself to the modern discovery of evolution and to the inevitability of scientific advance, and it can redeem them simultaneously, by contextualising them within an ontology of creation in tempore and a richer religious and liturgical culture and by redirecting human poesis toward the better end implicit in its beginning (Hanby 2022, 167).

However, Hanby worries there is a reason why this alternative modernity of which Milbank dreams never materialized. He argues that knowing and making simply cannot be identified without losing the need for speculative knowledge and with it losing the higher levels of reality. In other words, we naturally arrive at a reductive, mechanistic, dead world devoid of God when we focus on how things work and how to make them work most efficiently. This does not mean such a mechanistic worldview is true, but as Hanby notes, it does not need to be true as long as it works, i.e., as long as it produces the desired result: an increase in our ability to manipulate various phenomena and produce more advanced technology. For Hanby, there is no way around this. Modern science and modern technology are driven by a reductive approach to nature that automatically excludes contemplation of higher truths. In

that way, Christianity and science, as we have practiced both in the last several hundred years, cannot be reconciled in a more subtle, unifying metaphysics.

Metaphysics and Technology

In debates like this, it is important to pause and ask further questions before we pick a side. To what extent, we may ask, is our metaphysics the driving force behind our technology or our sciences? Although some historians (see, e.g., Wilson, 2000) have a tendency to associate periods of technological stagnation or deterioration with the rise of religious forces, such as the rise of Christianity in late Antiquity, a closer look at this period dispels the myth. As Luke Lavan (2008) argues, general concepts such as stagnation and decline do not capture technological advances in late Antiquity. We need a fine-grained magnifying glass to identify innovations in, and disappearances of, particular techniques to understand the period.

There were a number of inventions in architecture (the use of vaulted sculptures, the use of concrete instead of ashlar, mass production of facings), in the military field (innovation in fortification exemplified in Theodosian walls, arrow-shooting ballista, simpler styles of helmets cheaper to produce), and in agriculture (vertical coulter, screw press). At the same time, some techniques were lost (e.g., with the mass-production of fineware). But the crucial factors were not so much Neoplatonism or Christian disputes over the Holy Trinity but multiple social and economic factors, as well as the centralized role of the State and Church and the demands of the market.

Finally, even though Christianity, as the religion of *other* world so to speak, asked its believers to look at the eternal not the temporary life, the Church made a considerable effort to alleviate the suffering of the faithful here and now, for example, by feeding the poor and healing the sick. Many hospitals were founded in this period (Miller, 1997). Furthermore, a favourable view of medicine is evident among Christian thinkers from Origen on (see Radenovic 2022). Augustine offers the following explicit thought about not only medicine but technology in general:

Among other arts, some are concerned with the manufacture of a product which is the result of the labour of the artificer, like a house, a bench, a dish, or something of that kind. Others exhibit a kind of assistance to the works of God, like medicine, agriculture, and navigation. [...] A knowledge of these arts is to be acquired casually and superficially in the ordinary course of life unless a particular office demands a more particular knowledge (St. Augustine, *De Doctrina Christiana*, in PL 40, book 1, chapter 30).

In *De Civitate Dei*, he explicitly praises technological advancement:

Who can adequately describe, or even imagine, the work of the Almighty? And besides this [the virtues given to mankind] there are all the important arts discovered and developed by human genius, some for necessary uses, others simply for pleasure. [...] Think of man's progress in agriculture and navigation; of the variety, in conception and accomplishment, man has shown in pottery, in sculpture, in painting [...] all his ingenious devices for the capturing, killing, or taming of wild animals [...] the weapons against his

fellow man [...] all the medical resources for preserving health (St. Augustine, *De Civitate Dei* book 22, chapter 24, translated by David Knowles, 1072).¹

We might well ask how much technical knowledge was accumulated by trial-and-error, whether it was motivated or explained by the current theory of how things work, and to what extent it was inspired by the dominant metaphysics of the time. Finally, we could ask if the metaphysics of the time contributed substantially to the development of the general way natural phenomena were tackled, played with, and explored. None of the answers to these questions is ever clear-cut or straightforward.

It is safe to assume, as Lavan correctly points out, that artisans were always curious about why they were able to make things the way they did and what kinds of powers operated within the materials they worked in. In the 2nd century, the architect Vitruvius explained the art of making buildings via four elements, in other words, via physics and metaphysics. Similarly, many centuries later, Galileo used Aristotle's physics to explain why the water in a suction pipe climbs vertically: the water goes into the pump to fill the vacuum because nature abhors a vacuum. But when attempts to bring water to a level higher than 33 feet failed, Galileo added that nature's abhorrence seemed to be limited: it ceased at 33 feet (Kitsikopoulos, 2013). Still, to what extent knowledge of the way natural phenomena function influences the way artisans do their craft and vice versa is never linear, and to understand it, we need to study individual cases.

The need for careful case-by-case study is also clear when it comes to the influence of the current metaphysics, not just physics, on the method and goals of the direct, empirical study of nature. One of the best places to search for such cases is the history of alchemy (see, e.g., Viano, 2018). For instance, Olympiodorus who worked and wrote in 6th century Alexandria insisted alchemy was both philosophy and *technē*. Of course, he got his metaphysics and physics from Aristotle. But he developed the 'chemical analysis' of bodies that Aristotle only sketched. His writings count as the first chemical treatises.

Like other alchemists, Olympiodorus was interested in the study of matter, its characteristics and how to transform it. Now, what is interesting and unites all Byzantine alchemists is the idea that transmutation of elements is possible because the underlying substance of all metals is one and the same element. To get to it, we have to deprive a particular metal of all its specific qualities. Once we succeed, we are in a position to add to this now completely neutral element the desired qualities—of gold, for instance. In a nutshell, the metaphysical theory, a theory of *prima materia*, stands behind the alchemist's dream to make gold from other less valuable metals.

Finally, a unique mix of theory, a particular methodology for studying nature, a unique social situation, and the like usually give birth to the breakthroughs in the way we understand and do things. For instance, Thomas Sydenham, known as the 'English Hippocrates', is famous for his invaluable insight into the nature of fevers: he argued fevers are not the disease itself

¹ As quoted in Ovitt 1986.

but the process of cure. His general theory of human physiology was the theory of humours. His approach followed that of the Empiriks: a medical school insisting doctors write careful histories of diseases and their remedies and collect these throughout long clinical practice. His methodology came from Bacon and Boyle; he believed in many trials and the systematization of findings. Finally, his unfortunate life circumstances—he had to treat patients of all kinds, not just the rich clients, and he experienced epidemics of plague and smallpox—opened the door to his revolutionizing insight.²

Reconceiving the Birth of Modernity

What are we to conclude from the request for more subtlety in our understanding of the birth of modernity, its metaphysics, and its advancements? The ‘devil is in the details’ is the mantra of those who look to undermine some overarching claim. So instead of ending with a general warning that the historical forces that brought us here (whether we like them or not) are more complicated than often portrayed and might have brought us to a similar but somewhat different place (alternative modernity), I prefer to tease out an important lesson that usually goes unnoticed.

As the official story has it, modernity was born with the Baconian reduction of Aristotle’s causes to the efficient cause and Bacon’s famous claim that knowledge is power. Together, these two factors encouraged the experimental study of nature and led to our scientific and technological progress. But there is a reckless conflation in the story: a conflation of the methods we use to probe nature and reductive mechanistic metaphysics, or, in other words, between Bacon’s appeal for careful and systematic observation of natural phenomena via controlled experimentation and Baconian view of proper explanation of natural phenomena via efficient causation. These can but do not have to go together.

As we have seen, other kinds of metaphysics may be favourable to experimentation and may provide motivations for invention. There is no reason to think a systematic trial-and-error methodology of the Baconian kind would have not occurred within some alternative, non-reductive metaphysics of ‘enchanted immanence’ or ‘enchanted transcendence’ (as Milbank calls them). Parsing nature for our own purposes is nothing new and was not born in the 17th century either. Given the various factors that play a role, we can easily imagine alternative technological paths to the 21st century; i.e., we can imagine an alternative modernity.

Finally, there is no reason to think our request that all explanations be reductive will not be eventually replaced by a request for more complex ones. Those who study physics, biology, or ecology already know that radical reduction to basic elements and efficient causes is a philosophical chimera (Oyama 2000; Thompson 2010). When we take a closer look at the history and current state of our sciences and technology, it appears the Baconian method, a method that played a substantial role in both, would have been fine within a non-Baconian metaphysics. Baconian metaphysics seems to have emptied our souls and left our world barren and godless while not being the key factor in our progress, as often advertised. Maybe it’s time to realize our progress to steam engines, antibiotics, and computers was never really confined to this impoverished worldview, even though it became the spirit of our times.

² For more on Thomas Sydenham’s research and life see the very informative paper “Thomas Sydenham: epidemics, experiment and the ‘Good Old Cause’” by Andrew Cunningham 1989.

References

- Cunningham, Andrew. 1989. "Thomas Sydenham: Epidemics, Experiment and the 'Good Old Cause'." In *The Medical Revolution of the Seventeenth Century* edited Roger French and Andrew Wear, 164-191. Cambridge University Press.
- Hanby, Michael 2022. "Questioning the Science and Religion Question." In *After Science and Religion: Fresh Perspectives from Philosophy and Theology* edited by Peter Harrison and John Milbank, 155-70. Cambridge University Press.
- Kitsikopoulos, Harry. 2013. "From Hero to Newcomen: The Critical Scientific and Technological Developments that Led to the Invention of the Steam Engine." *Proceedings of the American Philosophical Society* 157 (3): 304-344.
- Lavan, Luke A. 2008. "Explaining Technological Change: Innovation, Stagnation, Recession and Replacement." In *Technology in Transition A.D. 300-650 (Late Antique Archaeology 4)* edited by Luke Lavan, Enrico Zanini, and Alexander Sarantis, xv-xl. Leiden: Brill.
- Milbank, John. 2022. "Religion, Science and Magic." In *After Science and Religion: Fresh Perspectives from Philosophy and Theology* edited by Peter Harrison and John Milbank, 75-144. Cambridge University Press.
- Miller, Timothy S. 1997. *The Birth of the Hospital in the Byzantine Empire*. Johns Hopkins University Press.
- Ovitt, George, Jr. 1986. "The Cultural Context of Western Technology: Early Christian Attitudes Toward Manual Labor." *Technology and Culture* 27 (3): 477-500.
- Oyama, Susan. 2000. *The Ontogeny of Information: Developmental Systems and Evolution*. Duke University Press.
- Radenović, Ljiljana. 2022. "Misunderstanding the Human and the Divine." *Social Epistemology Review and Reply Collective* 11 (7): 9-14.
- Thompson, Evan, 2010. *Mind in Life: Biology, Phenomenology, and the Sciences of Mind*. Harvard University Press.
- Viano, Cristina. 2018. "Byzantine Alchemy, or the Era of Systematization." In *Oxford Handbook of Science and Medicine in the Classical World* edited by John Scarborough and Paul Keyser, 943-964. Oxford University Press.
- Wilson, Andrew I. 2000. "Drainage and Sanitation." In *Ancient Water Technology (Technology and Change in History 2)* edited by Örjan Wikander, 151-179. Leiden: Brill.