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AN INVASION OF TRICKSTERS. CRITICAL REMARKS ON BRUNO LATOUR'S SOCIAL THEORY AND ITS POLISH RECEPTION

The number of publications inspired by Bruno Latour's social thought has significantly grown in Poland over the last decade. Among them there are theoretical analyses, research programmes as well as projects of social engineering. This situation makes it urgent to examine the credibility of Latour's vision of science and society. The present article claims that the premises as well as arguments of the French thinker are not only fallacious but also dangerous. A number of absurdities following from the actor-network theory become evident in the works of the Polish followers of Latour. Thus the article focuses on selected examples of them. In the conclusion the author indicates certain advantages for Latour's readers and formulates several hypotheses about the possible reasons for Latour's growing popularity.

Key words: constructivism; Actor-Network Theory; Bruno Latour; sociology of science

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Inwazja tricksterów. Uwagi krytyczne o myśli społecznej Bruno Latoura i jej polskiej recepcji

Streszczenie

W ostatniej dekadzie rośnie w Polsce liczba publikacji inspirowanych myślą społeczną Brunona Latoura. Są to nie tylko analizy teoretyczne, ale również programy badawcze, a nawet projekty inżynierii społecznej. Stanowi to ważny powód, by zastanowić się nad zasadnością proponowanej przez Latoura wizji nauki i społeczeństwa. Jak dowodzi niniejszy artykuł, zarówno założenia, jak też argumentacje francuskiego myśliciela są błędne, a nawet niebezpieczne. Wiele absurdów, do jakich prowadzi teoria aktora-sieci, wychodzi na jaw w twórczości polskich zwolenników Latoura, toteż artykuł zawiera omówienie niektórych z nich. W podsumowaniu autor wskazuje na pewne korzyści z lektury prac francuskiego myśliciela oraz stawia kilka hipotez na temat przyczyn jego rosnącej popularności.

Słowa kluczowe: konstruktywizm; teoria aktora-sieci; Bruno Latour; socjologia nauki

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Introduction

Nowadays, the coexistence of many social theories and diagnoses invokes neither astonishment nor any stronger resistance, since such a situation fosters the analysis of reality from various perspectives, which sensitize the readers of sociological literature to diverse problems. Even if synthetic ambitions are still present, the theoretic plurality once promoted by Pitrim Alexandrovich Sorokin or Shmuel Eisenstadt fosters fruitful polemics and inspires new research methods (Levine 1995; Kaczmarczyk 2018a; Kaczmarczyk 2018b). However, the praise of diversity does not mean that we should regard every attempt to create a new social theory as successful and worthwhile¹. Moreover, some of these attempts appear to be detrimental and perilous, especially when they gain accolades too easily and guide the thinking of a great crowd of sociology's adepts. I consider the views of Bruno Latour as such a case. In recent years, Latour's views gained significant popularity, also in Poland. Even though his works are largely obscure, and his practical postulates cause concern, he does not cease to fascinate and inspire many originality-seeking theoreticians. Thus, I deem justified an attempt to wade through the thicket of Latour's thoughts and seek their bottom lines, arguments, and practical messages. Naturally, it is difficult to discuss the entire, rich output of Latour in a short article, so I decided to choose just one of his works as the subject of my criticism: his book *We Have Never Been Modern*. My choice is conditioned by the fact that Latour's book includes a brief synthesis of his social theory and diagnosis of modernity, while the publication itself stems from the period when his thought was already mature. As we will see, references to other works by Latour – especially from the early period – will be indispensable, but *We Have Never Been Modern* provides probably the most occasions to pinpoint a few more general problems that may come from the practice of social theory. In the first part, I will present the problems connected to Latour's notion of “hybrid” which Latour uses, but never provides its unambiguous definition. In the second part, I will discuss Latour's constructivism and indicate its numerous weaknesses while simultaneously defending some versions of

¹ Unfortunately, there lingers a view of theoretical pluralism, which makes many treat all theories that appear in handbooks as equally true and convincing. Krzysztof Pietrowicz shares such an understanding of pluralism: “If research programs of Pierre Bourdieu, Manuel Castells, Anthony Giddens, C. Wright Mills, Niklas Luhmann, David Willer, Jeffrey Alexander, Michael Burawoy, Guillermina Jasso, or Bruno Latour are equally legitimate – and I assume that it is so, since all of them appear next to each other in anthologies and sociology handbooks – it means that almost everything is permitted in sociological theory and in sociology” (Pietrowicz 2016: 71). As a result, the same author does not want to accept the fact that “in sociology, people that create scientific controversies are specifically rewarded” (2016: 71) – as if such controversies were undesirable. As I will prove below, this aversion to plurality and innovation can be explained by the character of Latour's doctrine.

social constructivism. The third part will consider the potential harm which, as I believe, may come from the realization and popularization of Latour's ideas, particularly in the area of environment protection. In the fourth part, I will present selected Polish continuations of Latour's thought, characterized by a greater order than the master's work, which allows us to more clearly notice the threats of Latourism. Finally, in a brief summary, I will mention Latour's merits for social thought and present two hypotheses to explain his increasing popularity in Poland.

The Island of Doctor Moreau

Only thanks to the knowledge of earlier works of Latour can we tell what exactly is the sociological or philosophical problem that comprises the subject of deliberations or the starting point of *We Have Never Been Modern*. The first chapter is entitled "Crisis" and is written in an almost apocalyptic tone as a reaction to morning press reports. Latour refers to the multiplication of "hybrids" like a Martians' attack, but he never explains what in these hybrids is harmful or problematic. Latour does not clearly define what he means by these hybrids or how do they differ from other objects. Later, we learn that they are "mixtures" of nature and culture, but it is not very spectacular because, according to Latour's other statement, culture is a hybrid in itself, and everything we discover in nature are our own artifacts; thus, there is no pure nature. Therefore, hybrids are not only chemistry, refrigerators, aerosols, noble gases, vacuum pumps, or deodorants but also, as we find out in the third chapter, actions like the restoration of bear population in the Pyrenees, kolkhozes, the Green Revolution, Star Wars, partridge hunting, or even Khomeini's revolution.

Thus, we are justified in suspecting that everything is a hybrid. If so, then the only problem posed by the hybrid is a fact that something may *not* be the hybrid, particularly nature and culture as such. Indeed, further chapters of *We Have Never Been Modern* confirm that Latour is concerned mainly with displaying the fictionality of the notions of nature and culture. Moreover, he sketches a broad history of their supposed overuse. Besides, the view that the opposition nature vs. culture plays a vital role in modern Western thought – not only for Jean Jacques Rousseau or the structuralists – is not undisputed. One way or another, we would suspect that such a theme should be disputed within the history of ideas or the history of discourse as understood by Michel Foucault. However, Latour strives to create an impression that his entire analysis pertains to physical objects, connected by "collectives" and "networks," which are "real, like nature" (Latour 1993: 6) but they also contain various practices. Latour describes these objects as inexplicable within scientific theories and irreducible to notions but

fully understood as elements of “a network.” But if everything is a hybrid, then it is difficult to understand why the unmasking of nature’s and culture’s fictionality leads Latour to postulate to “reorient and regulate the proliferation of monsters by representing their existence officially” (Latour 1993: 12). To refer to Latour’s returning example, does this mean that ozone layer depletion should be not only physically reduced but also constantly described as a mixture of two fictions: nature and culture? What aim has the characterization of every object as a mixture of two different nonexistent things which, moreover, are to be harmful constructs? Is Latour not capable of “returning to the cave?”

There is a significant dissonance between Latour’s declared goal – the enriching of sociology with a description of a new kind of objects and their influence on the society – and the actual content of *We Have Never Been Modern*, which comprises a Foucault-like discourse analysis. It is even more disappointing considering that some readers could expect a lot from Latour’s metaphors like “proliferation of monsters,” “passing God through a vacuum pump,” “socialization of nonhumans,” “inert bodies ... capable of ... scribbling on laboratory instruments”, “the Ogre ... reduced to the size of a mouse,” or finally the “mobilization of things.”

Sociology knows examples of original studies about the influence of physical objects on humans, culture, and even the fate of civilization. For instance, Georg Simmel scrutinized the division of culture into subjective and objective – apparent in the dominance of industrial production of everyday use objects – that changed human approach toward world and humans themselves. On the other hand, Roland Barthes noticed the phenomenon of treating objects as multilayered symbols and the saturation of human environment with signs unconnected to objects’ functions. Even so, it is difficult to say what novelty does Latour convey about the relationship of humans and objects. His fixation on the physical and the physical “tinkering in [a] lab” does not allow us to formulate any original observations about the iconosphere, unknown functions, or influences of objects that surround us. However, Latour’s thought means a depreciation of notions and mental models, serving to explain events and classify things. Thus, Latour is without a doubt striving for something different than the creation of a new sociology of everyday life.

Latour’s direct object of attention is the way in which modern people *comprehend* the surrounding world. They supposedly perceive it through categories of unchanging laws of nature and their own free will, whereas it is supposed to consist of hybrids which are “mixtures of nature and culture.” The very notion seems to be a metaphor similar to “monsters” and “tricksters,” since neither nature nor culture are objects, which makes it difficult to mix them like eggs on a frying pan. If we treat seriously Latour’s insistent search for nature and culture in all things, then we should consider the notion of the hybrid as

an example of Whitehead's misplaced concreteness, a faulty concretization of abstract notions. We may correctly claim that larch is a tree and belongs to the natural ecosystem, or that it bears numerous cultural meanings, but we cannot claim that it consists of nature and culture as a body consists of amino acids. This reflection suggests that the hybrid only refers to interpretation and description of things².

However, we discover in an earlier text by Latour and Callon (1992) that there hides a serious ontological claim under this notion, since both nature and culture are supposed to be creations of the more fundamental reality, to which we cannot apply concepts like "subject" or "thing." Thus, Latour speaks of an "actant" and not an "actor," a "network of actors" instead of "social relations," or "inscriptions" instead of "data" (Callon, Latour, 1992: 347). Thus, hybrids "are neither objective nor social, nor are they effects of discourse, even though they are real, and collective, and discursive" (Latour, 1993: 6). Ontological interpretation of Latour's notions confirms our initial assumption that everything is a hybrid, but it also raises new doubts. The discussed interpretation may be in itself interpreted in two ways. On the one hand, it verges on being a completely trivial thesis that there exists one reality governed by the same laws. Hardly any serious scholar would undermine such a thesis, while the fact that various sciences utilize different notions and methods stems from the rules of cognitive economics and the limits of our knowledge of complex reality. In the humanities, discarding specific notions is difficult, as it would result in the possible rejection of accounting for a subjective point of view.

On the other hand, we may interpret Latour's position as non-trivial and claiming that this "hybrid" reality from which nature and culture arise is unobtainable to us – or difficult to obtain – which means that we cannot reach it without philosophical deliberations; similar to the "thing-in-itself." After all, we read that hybrids are "invisible, unthinkable, unrepresentable" (Latour, 1993: 34). Moreover, their existence is concealed. As Latour writes, the responsibility "lies on certain conception of science that suppresses the ins and outs of Nature's objects and presents their sudden emergence as if it were miraculous." (Latour, 1993: 70). Describing every object as a mixture of nature and culture

² Such an interpretation is suggested by the notion of "network" presented by Latour in *Reassembling the Social* (2005), in which he writes: "network is an expression to check how much energy, movement, and specificity our own reports are able to capture. Network is a concept, not a thing out there. It is a tool to help describe something, not what is being described" (Latour 2005: 131). If someone thought that the section entitled "Defining at last what a network is" will offer a sound definition of a network and not merely a few enigmatic labels what comprises a good actor-network theory, they would be deeply disappointed. Such person would only learn that a network is nothing more than an indicator of how well the scientific text is written (Latour 2005: 131).

would serve to achieve a more adequate, non-falsified description of reality and would spare scholars from entanglement in complex descriptions that refer to fictions like nature and culture. This interpretation engenders three difficulties.

First, it must prove superior over how scholars explained the world before. It is even more important, since Latour defines the function of scientific theory in opposition to its traditional understanding. We usually expect theory to make the world predictable by revealing the laws governing phenomena. In turn, Latour claims that actor-network theory becomes better the more it can prove that certain subjects (actants) make other objects “do unexpected things” (Latour 2005: 129).

Second, according to Latour himself, hybrids are usually our creations, whose appears required the distinction between nature and culture; in this sense, they are secondary in relation to this division. In order to prove that “hybrid” reality is ontologically primary, Latour would need not only to create a few captivating metaphors but also prove the existence of objects that are neither mixtures of nature and culture nor can be reduced to nature or culture and explained through them.

This challenge directs our attention toward the third essential difficulty. As we know, Latour’s strategy of creating notions seeks seemingly non-reductionist explications of the creation of things. Ironically, the inability to complete this function apparently reveals the absurdity of Latour’s ontological claim. Let us refer to his favorite example: “Can anyone imagine a study that would treat the ozone hole as simultaneously naturalized, sociologized and deconstructed?” (Latour 1993: 6). Common sense dictates that the very “hole” without a doubt can be treated as a natural phenomenon and, thus, we may explain the physical mechanisms of its emergence. Second, the knowledge of such mechanism allows us to indicate the technological reasons for the rise of freons like deodorant production and, next, the social causes for these technologies’ expansion, like the rise of consumption or hygiene standards. Such causal chains can obviously be long and complex, but they are understandable and not at all reductionist. Latour provides no reasons for not accepting them. Despite this, he proposes his own strategy. Latour claims, that the ozone hole in a way contains in itself what we would call its causes: as an object, it is simultaneously natural and cultural; real, collective, and discursive.

We can notice here two logical fallacies at once. In the name of his doubtful ontological claim, Latour connects the notions of nature and culture into a single cluster “nature-culture,” even though he admits that those notions are mutually exclusive, and he reifies this cluster in the form of physical objects. Such objects are supposed to be interconnected in “networks,” though he does not mean causal connections but “translations” or “imbroglios.” In the third chapter of *We Have Never Been Modern*, we learn the consequence of such an operation:

“The point of separation – and conjunction – becomes the point of departure. The explanations no longer proceed from pure forms toward phenomena, but from the centre toward the extremes” (Latour, 1993: 78). Thus, deodorant production does not explain the ozone hole, but it is the ozone hole that explains deodorant production! No wonder that, professing such a peculiar methodological doctrine, Latour can write that networks are “odd beings” with “the capacity to produce both time and space” (Latour, 1993: 77), just as he proclaims a “whirlpool in the temporal flow” (Latour, 1993: 74). We could understand this, if only Latour convincingly explained how “networks” can substitute causal connections in explaining phenomena. All we know is that networks are some heterogeneous relations between objects secondary to them. We may only “follow” these relations (“bonds”), but we cannot comprehend them through any scheme, theory, or rule. In principle, we know nothing about them, because our knowledge means assumptions rationalized in one way or another; thus, schemes, theories, and rules.

Any attempt of a sympathetic reading of Latour and understanding his thought is strongly hindered by the fact that he hardly defines the applied notions and constantly falls victim to contradictions, sometimes apparent and sometimes veiled by accumulated metaphors. For instance, he first writes about observation of a vacuum pump that “credible, trustworthy, well-to-do witnesses gathered at the scene of the action can attest to the existence of a fact” (Latour 1993: 18). However, he later concludes that “these mute entities [facts] are thus capable of speaking, writing, signifying within the artificial chamber of the laboratory or inside the even more rarefied chamber of the vacuum pump” and “little group of gentlemen ... testify to each other that they are not betraying but translating the silent behavior of objects” (Latour 1993: 29). Finally, we discover that “our vacuum pump traces the spring of air, but it also sketches in seventeenth-century society and likewise defines a new literary genre, that of the account of a laboratory experiment” (Latour, 1993: 89). Logical connections between these statements elude us but, as a sum, they are meant to convince us that the vacuum pump is at the same time an object, a social bond, and a discourse.

Even though *We Have Never Been Modern* abounds with vagueness and contradictions such as the one above, we cannot reject its visionary quality. As I mentioned, the main and maybe the only understandable cause for writing about “hybrids” is for Latour his notion of modern mentality, supposedly dominated by “the Great Divide:” thinking of the world in terms of pure nature or pure culture. On the one hand, we are supposed to have universal laws of nature and, on the other hand, free people organized in society. Latour presents a critical assessment of this dichotomy based on the antinomy of its poles; the laws of nature are not universal, since we supposedly create them as scholars, and society is not free, because it determines human action. Latour freely exchanges

the notions of subject and society with no attempt at a detailed analysis of the relationship between individual actors and the human collective. Meanwhile, this relationship was the main point of interest for classical sociology. We notice a few other traits of Latour's vision of modernity.

First, it is not a historical analysis, and the referred historical sources are very scarce, just like the selection of thinkers, who are supposed to represent the mentioned methods of thinking. We rather deal with a historiosophy suggested by Latour himself, which is closely connected to his conception of science.

Second, this historiosophy is very rigid, which is strengthened by its ideal type approach and the metaphor of the political constitution ("the modern Constitution") that Latour uses to describe the "division of power" between Nature and Culture. Reading Latour may cause quite a similar impression to the one created by reading Foucault: nobody is capable of opposing the dominant discourse, no one knows why it dominates, and what does it serve. As Latour puts it: "the cultural preoccupations of the humans ... occupy them fully and fall only by chance" (Latour 1993: 99). Moreover, the main categories of "the modern Constitution" are fictions that allow nothing indirect, as they become the more counterfactual, the more the "monsters" multiply. To Latour's self-assertion testifies the fact that he initially presents his readers with a false alternative: "Now we cannot have it both ways. Either the networks my colleagues in science studies and I have traced do not really exist, and the critics are quite right to marginalize them or segment them into three distinct sets: facts, power and discourse; or the networks are as we have described them.... Either we have to disappear, we bearers of bad news, or criticism itself has to face a crisis because of these networks it cannot swallow" (Latour 1993: 6). Latour excludes the possibility that the study of science could not begin with his work or not share his historiosophical vision. He masters the eristic method described long ago by Schopenhauer as a dilemma with consciously hyperbolized parts. Finally, Latour incrusts his entire argument with his favorite method of a stream of nonsensical words: "The tiny networks we have unfolded are torn apart like the Kurds by the Iranians, the Iraqis and the Turks; once night has fallen, they slip across borders to get married, and they dream of a common homeland that would be carved out of the three countries which have divided them up" (Latour 1993: 6–7).

Third, the "Constitution" sketched by Latour seems to be even more fictitious than the absolutisms that he condemns. After all, in contrast to his suggestions, it is difficult to find someone in the history of science and philosophy who would in fact represent the described mentality. Let us begin with the constantly mentioned Thomas Hobbes and Robert Boyle. Even if Latour accurately characterizes their views, he still artificially contrasts them and later connects into a single whole. Only such a synthesis is meant to correspond to "the modern Constitution." For instance, we read that, "Together, they [Hobbes and Boyle]

describe how God must rule, how the new King of England must legislate” (Latour 1993: 29). One must add that the interpretations of both authors are overstated: “Boyle is not simply creating a scientific discourse while Hobbes is doing the same thing for politics; Boyle is creating a political discourse from which politics is to be excluded, while Hobbes is imagining a scientific politics from which experimental science has to be excluded” (Latour 1993: 27). Latour correctly notices that Hobbes’s philosophy of politics – which elevates peace above all else – had a certain influence on Hobbes’s epistemological convictions, in which he foregrounded the possible agreement among people to the extent that he suggested the sovereign should actively foster the unity of citizens’ views about the crucial political and religious issues. Hobbes considered “the Geometrical Method,” meaning a rigorous reasoning, to be much more reliable than experience-based knowledge. And since he simultaneously did not deem reason to be an innate competence, he suggested appointing an independent judge in situations of conflict about a reasoning: “when there is a controversy in an account, the parties must by their own accord set up for right reason the reason of some arbitrator, or judge, to whose sentence they will both stand” (Hobbes 1651: 27). Since the majority of conflicts and, in consequence, wars is to stem from differences in defining notions, Hobbes postulated the state control of definitions used in public life. Nevertheless, Latour’s conclusion that for Hobbes “Knowledge and Power are one and the same thing” (Latour 1993: 26) is premature, since a definition control is not equal to the control of convictions and – even though Hobbes rejected the certainty of experience – he did not deprive it of a role in the shaping of human views (Hobbes 1954: 73). Hobbes fully acknowledged the fact that humans have varied convictions, and he thought that they should not share them in public only for the sake of social peace. As Hobbes writes: “the law is the public con-science by which he [that lives in a Commonwealth] hath already undertaken to be guided. Otherwise in such diversity as there is of private consciences, which are but private opinions, the Commonwealth must needs be distracted, and no man dare to obey the sovereign power farther than it shall seem good in his own eyes” (Hobbes 1651: 198–199). He claims that the sovereign rules the more effectively the less he refers to force and favors convincing reasoning instead, so he advises “winning men to obedience, not by coercion and punishing, but by persuasion” (Hobbes 1651: 308). Authority for Hobbes does not construct truth, but only regulates it. I cannot understand how the social contract could emerge without the preceding rational judgment of the character of own situation by the people in the state of nature. Many things suggest that, according to Hobbes, knowledge precedes power and law, and it is not created by them, as it was later claimed by strong sociology. The idea expressed in the famous Hobbes’s sentence “Auctoritas non veritas facit legem” means that the rule of law stems from the sovereign’s act of

will and not from the existence of objective norms. Thus, we now consider that Hobbes rejected the doctrine of the law of nature. Overthrowing truth as the only source of law does not mean its total rejection and substitution with politics. Hobbes's view on the genesis of law does not need to be his view on the genesis of authority.

When summing up his synthesis of Hobbes's and Boyle's views ascribed to the entire modern mentality, Latour initially interchangeably uses two different notions of representation: “[Hobbes and Boyle] are inventing our modern world, a world in which the representation of things through the intermediary of the laboratory is forever dissociated from the representation of citizens through the intermediary of the social contract” (Latour 1993: 27). Only a few sentences later may disorient readers breath with relief, when they learn that the word “representation” has no single meaning. But it means little, since Latour writes a moment later that, “these two senses are moving closer together again” (Latour 1993: 27). In this thicket of meanings and constructs we can hardly orient ourselves, but it probably means that: 1) Hobbes and Boyle meant different things when they wrote about representations, 2) however, we do not accept this difference nowadays, but 3) despite that we apply this difference to their views treated jointly in order to 4) describe a foreign to us modern mentality. It begs the question, why does Latour lead us in such a complicated way through the thoughts of two selected authors? It does not seem to be a good illustration of his constructions, and even less so of the truthfulness of his “the Great Divide.”

Latour's peculiar interpretation of Kant deems it the “canonical formulation” of “the modern Constitution” (Latour 1993: 56). Kant supposedly conducts “a total separation” of the transcendental subject from “things-in-themselves.” Between these poles there are “mediations” and hybrids as “mixtures of pure forms” (Latour 1993: 56). While Latour's metaphors may allure, they are incapable of covering the faultiness of the suggested interpretation. A subject for Kant is in no degree ontologically separated from the thing-in-itself, because it is such a thing as well: “he obviously is in one part phenomenon, but in another part, namely in regard to certain faculties, he is a merely intelligible object, because the actions of this object cannot at all be ascribed to the receptivity of sensibility” (Kant, 2000: 540). Moreover, the Kantian thread was developed in this way by Arthur Schopenhauer and the irrationalist³ doctrine of social sciences: Simmel, Nietzsche, Freud. Even if they contrasted the individual with society, they did not contrast the individual with nature. Latour overtly imposes his own dichotomy on Kant and his numerous followers.

³ Let us add that “irrationalist” refers here to the nature of reality and not to the method of thinking because, in contrast to Latour, the mentioned thinkers developed their theoretical systems systematically and thoughtfully.

We should add that – when referring Nietzsche's views – Latour enters into an overt contradiction with quoted sources: it is symptomatic that he does not provide direct bibliographical addresses to particular pages: "Nietzsche observed long ago, the moderns suffer from the illness of historicism. They want to keep everything, date everything, because they think they have definitively broken with their past" (Latour 1993: 69). In reality, Nietzsche argued that people not only did not break with their past but they feel as its products and – under its burden – they are incapable of anything that would change their future. This consciousness causes a returning to the past, since nothing can be done better (Nietzsche 2009: 77) while the moments of forgetfulness foster activity. "Breaking with the past" is Latour's own projection; he wants to turn Nietzsche into a critic of nature and culture dichotomy.

The authoritative view of history sketched by Latour presents the dichotomous discourse as a power that tolerates neither opposition nor exception, whereas the presented examples either do not confirm such a vision or contradict it outright. First, because not everyone in the eighteenth and nineteenth century believed in ideas of pure nature and free society and, second, because ideas of human and nature unity appeared and they were not just scientist. It is in the nineteenth century when we may find a relatively close approximation of Latour's metaphors of humanizing nature – or naturalizing human – in the writings of Karl Marx: "The social reality of nature, and human natural science, or the natural science about man, are identical terms" (Marx 1988: 111). However, for Marx, this idea responds to the problem of alienation. Experiencing hostile reality, the human being tries to shape it through a social revolution. Meanwhile, Latour indicates no existential or theoretical problem, which would force him to sketch his entire vision of history and grumble about the resulting rising existence of hybrids. He constructs his own notion scheme, which influences history, only to conclude in horror that neither the old world nor the modern one fit this scheme. He treats the effects of human actions as perilous hybrids: "but when we find ourselves invaded by frozen embryos, expert systems, digital machines, sensor-equipped robots, hybrid corn, data banks, psychotropic drugs, whales outfitted with radar sounding devices, gene synthesizers, audience analyzers, and so on, when our daily newspapers display all these monsters on page after page ... something has to be done" (Latour 1993: 49–50). Latour is like doctor Moreau: he created his own hybrids that lie in wait for him.

Harry Potter for Adults

My initial assessment of Latour's argument elucidates that it is very difficult to find there any common thread, main problem, thesis, or order. To find

Latour's main idea, we should observe the entirety of his scholarship and career. After his early theological studies, Latour commenced his scientific journey with the ethnographic study of laboratory practices, which resulted in a book co-authored with Steven Woolgar under the telling title *Laboratory Life: The Social Construction of a Scientific Fact* (1979). We should mention that, in the second edition from 1986, the word "social" disappeared from the title. The later evolution of Latour's views, at this point connected to the increasingly popular school of "social constructivism," proclaimed in the field of empirical studies of science also by Andrew Pickering (1984), culminated in the above discussed *We Have Never Been Modern*. Initially, Latour claimed that scientific facts are social creations but – with time – he began to reach the conclusion that the "society" itself is an artifact and the distinction between nature and culture is meaningless. Nonetheless, he still viewed facts and even discovered physical objects as constructed by scholars. Thus, he continued to represent a particular form of constructivism: the constructivism of facts⁴. One may suppose, that this idea inspired his tales of hybrids, translations, "mobilization of things," and other "wonders." Latour writes about scholars, that they keep on "constructing Nature artificially and stating that they are discovering it" (Latour 1993: 31). In order to justify the scholars, let us now focus on clarifying what is constructivism and why some of its versions are faulty and harmful.

I would like to emphasize that the discussion alluded to by Latour and briefly recapitulated here dates at least as far back as to the medieval conflict of realism and nominalism, while the very notion of "constructivism" has a variety of meanings utilized in many contexts. As a view relating to society, constructivism does not oppose common sense. No one would be surprised by a claim that a banknote – a piece of paper from a physical standpoint – is a legal tender. Labeling banknotes as money stems from an assumed consent of market participants regarding the conventions of assigning particular value to the banknotes. Accordingly, "the president" is not a physically real being but a social image that orders the treatment of a certain person in a special manner and assigns this person particular privileges and competences. Social constructivism allows for treating the majority of sociological notions merely as labels which, nonetheless, influence a plethora of real phenomena.

Max Weber described actions, social orders, and authority as certain imaginations to which we ascribe a subjective meaning, although not arbitrary. In

⁴ Some, like Ewa Bińczyk (2013), try to weaken Latour's position and interpret it as one that acknowledges facts as both constructed and real. Provided that such a view is not contradictory, it nonetheless leads to the conclusion that, for instance, the existence of dinosaurs in prehistory can merely be the object of "metaphysical belief" and not of justified scientific convictions. Accordingly, the Big Bang theory has no advantage over the Biblical narrative of the world's creation.

twentieth-century sociology existed a tendency to broaden social constructivism. Scholars proved that not only social orders are constructed but also individual identity, how we comprehend own life, and even nature and the surrounding physical world. The constructivist tendency was connected to the basic advantage: the possibility of proving that what used to be considered unchanging or necessary does not need to be so and, thus, the change of a given state of things is possible. In this sense, constructivism was productive, even when it trespassed into fields previously reserved for the natural sciences. Proof that gender is largely social and not biological⁵, or that “mental illness” is often more of a collective stigma than a physical difference, had indubitable emancipatory effects and confirmed the usefulness of social sciences. Nonetheless, it does not change the fact that in social, especially ethical issues the conflict between constructivist standpoints and realistic ones does not cease when, for instance, the ontological status of values is at stake. Do we consider something good because of the way it is, or is it such because we consider it as such? Without trying to resolve these endless and serious philosophical discussions, I would like to underline that the notion of “the social construct” seems to me reasonable and useful, especially when it refers not only to statically understood semantics but also to the dynamics of the change in social imaginations. Sociology does not limit itself to complaining about something being a “construct,” but it researches the changes of meanings. These often allow for stating that something does not have to be the way it is because it already was different.

The reason for researching constructs calls not only for treating them dynamically but also for a certain dose of realism. If everything was dependent on us or, as Latour wants it, nothing was nature, the search for natural causes of mental disorders would be redundant. Discussions that consider early autism largely focused precisely on this: whether it stems from interactions of organism type and social surroundings or from the existence of a particular gene (Hacking 1999, 180–194). These kinds of conflicts are not unreasonable, because constructivism is not a general metaphysical position in this regard but a method of argumentation based on empirical premises and with practical meaning. The significant advantage of constructivism is that it often uncovers the reflexive approach of subjects toward what objectivist explanations claim (Harris 2010: 85).

Such described social constructivism finds use in relation to every aspect of social life, including science. After all, scholarly convictions may be social constructs as well. Constructivist sociology may foster the unmasking of interests, ideologies, intellectual fashions, or interactions that condition scholarly endeavors. However, this does not mean that all – even the most absurd – forms

⁵ For a broader context that encompasses transsexuality, see Kłonkowska (2017).

of constructivism are worth accepting. I particularly refer to these positions that claim that scientific facts and even physical objects discovered during research are constructed by scholars. Such a view that postulates the dependency of facts on their descriptions⁶ also appears in Latour's writings, even if he rejects "social" constructivism due to his conviction that "society" itself is a construct, which makes him place "actants" in the position of scholars⁷.

I would like to draw a sharp distinction between Latour's perspective and the reasonable forms of constructivism, since some seem to not recognize the difference. For instance, Grażyna Woroniecka is baffled by her graduate students' doubts on the soundness of Latour's arguments:

The idea that scientific knowledge about the world is a construct, narration, story raises the opposition of surprisingly many people. ... Some reactions, such as those of several students in my graduate sociology classes, were astonishingly emotional and militant; a response the students felt obligated to show, since they considered Bruno Latour's views on laboratory analysis procedures (among other things) as a personal attack on their most treasured values (Woroniecka 2012: 7).

The quoted statement is a cause for optimism, as it shows that there are actually graduate students who refuse to accept all kinds of absurdity only for authority's sake. However, it also makes us question whether there are, in fact, any convincing arguments in favor of radical constructivism? Does the clash between the voice of reason and "sociological knowledge" force us to unquestioningly accept Latour's claim that Ramesses II could not have died of

⁶ In the remainder of the article I will also call constructivism of facts with the notion of "radical constructivism."

⁷ In the already mentioned text coauthored with Michel Callon Latour argues that his fundamental notions such as "actant" refer to hybrid reality and transgress the border between nature and culture, thus avoiding artificial "distributions" of notions done by scientists. This shows that scientific facts are constructed this way or another: either by these hybrid beings described by Latour or by the scientists who use the distinction into nature and culture. Some interpreters who strive to make sense of Latour's texts, like Barbara Tuchańska (2006), claim that Latour's non-social constructivism has neither scientists nor groups of scientists construct scientific facts but rather broadly understood social practices, which also include things. However, this operation does not abolish the purposefulness of the division into things and humans: after all, one may always claim that it is humans who construct facts under the influence of things. The difficulty of defending Latour from the accusation of social constructivism comes to light, for instance, by the fact that even Tuchańska writes: "the difficulty encountered by a researcher of physics who wants to treat the physical world as realistically as a physicist lies in the fact that referring to this reality does not suffice to describe and explicate science, since such and explication would require ... the simultaneous grasp of the influence on physics of physical factors – as physical ones – and social factors as social ones. It is indeed the difficulty noticed by Latour and the one he wants to sort out by removing from his view of science the external world that is not a social construct" (Tuchańska 2006: 105).

tuberculosis, as Robert Koch did not discover *Mycobacterium tuberculosis* until 1882 (Latour 1998)? Does the thyroid-stimulating hormone assume its polypeptide structure the moment this fact is discovered in a laboratory (Latour, Woolgar 1986: 105–149)? Perhaps the arguments in favor of such beliefs are, as a matter of fact, irrefutable?

Indeed, we must begin by noting that Latour and Woolgar provide *no* argument to justify their theory that “reality is the consequence rather than the cause of this construction” (Latour, Woolgar 1986: 237). In chapter six, in section “Creating Laboratory: The Main Elements of Our Argument,” we find the definition of several notions that supposedly “compose” such an argument. The authors argue that discussions and contentions between academics – but also the changes of researchers’ views about facts – indicate that academics are more concerned with the discussions themselves than with reality or nature. Moreover, Latour and Woolgar assert in the spirit of Thomas Kuhn’s claims that “[nature] does not help explain scientists’ behaviour” (Latour, Woolgar 1986: 237), therefore that we do not advance scientific claims on the basis of empirical evidence but negotiations of facts. After all, such negotiations are direct, observable by ethnographers, reasons for what scientists say. In turn, this approach leads the authors to the unjustified conclusion that “there is little to be gained by maintaining the distinction between the “politics” of science and its “truth” ... the same “political” qualities are necessary both to make a point and to out-manoeuvre a competitor” (Latour, Woolgar 1986: 237). Let us note that, regardless of their lack of substantiation, the increasingly overreaching theses on the dependence of science on political conditions may constitute mostly an explanation for *some motives* behind constructing scientific facts, but not evidence that the facts are being constructed.

The “ethnographic” method applied by Latour and Woolgar also requires attention. It was more broadly described and justified by Karin Knorr (1981). The rule of symmetry is the basis of this method, borrowed from the below-discussed strong sociology. Like Knorr, Latour and Woolgar reject attempts of explaining the content of scientific theories with macro-social factors and, instead, focus on what occurs in the very laboratory. As Olga Amsterdamska (1992: 145–149) accurately notices, this microconstructivism falls victim to a vicious cycle precisely at the moment when it wants not to assume any non-observational assumptions connected to the scholarly activity. It is so, because this approach has to omit the tacit knowledge shared by scholars. Ironically, it assumes its lack, thus reducing scholarly work to the manipulation of objects, relaxed conversations, and chaotic note-making. Amsterdamska proves that microconstructivists’ conclusions are largely “a direct representation of [their] methodological assumptions” (Amsterdamska 1992: 147). For instance,

the general claim that scholars' decisions in laboratories are direct reactions to accidental circumstances and not results of obeying any rules, appears less surprising when we emphasize that, first, methodology of microconstructivism *in general* does not allow for explaining anything with rules, unless they are openly articulated by the participants, since formulating such rules what oppose the attempt at minimalizing imposing the category of sociologist on reality which he strives to explain. Second, that when such rules are in fact formulated by actors, then one can always show, that they are basically attempts at legitimizing actions and not its motivations, especially in the case when these rules are not unambiguous, when there is a possibility of referring to various, oftentimes even contrasting rules (Amsterdamska 1992: 147).

The suggestion regarding the view that could motivate Latour and Woolgar's claim about creating scientific facts in laboratory is hidden in the claim: "we argue that science is entirely fabricated out of circumstance; moreover, it is precisely through specific localized practices that science appears to escape all circumstances" (Latour, Woolgar 1986: 239). The authors suggest here, as does Nancy Cartwright (1983), that what we consider the law of science is in fact a particular event only inducible in the laboratory where the various conditions of its appearance are controlled. The laws of science "lie," as Cartwright claims, since they are conditioned by a series of idealizations, which do not occur in the world of common experience. As Latour and Woolgar conclude, the facts "produced" in laboratory can reoccur in similar conditions recreated elsewhere for the sake of achieving a similar result, but they do not prove any realistic law.

The above view is threatened by at least two arguments. First, predicting that a particular event may be recreated in similar circumstances, *we assume* that there is a causal scheme which gives ground for such a prediction. As John Leslie Mackie (1974) writes, we usually describe as a cause a bundle of conditions comprised of 1) necessary and insufficient conditions and 2) a condition unnecessary but sufficient for inducing such an event. In laboratory, scholars strive for controlling as many conditions as possible by using canonical inductive reasoning to claim which of these conditions are necessary and which are sufficient. After identifying the causes, all they usually need is the knowledge of relatively few conditions to achieve the desired effect. Thus, to discover what kills a particular bacterium, they require much more controlled circumstances than necessary to give an already known medical substance to a sick person. In short, laboratory does not need to be recreated each time in the same form to achieve the same result. This necessity is spared due to the acquired *theoretical knowledge*.

The second reason why Latour's and Woolgar's argument is inaccurate is the fact that the laboratory is always a part of nature and a modification of natural conditions; not a sphere of events excluded from phenomenal reality. The difference between the laboratory and the surrounding world is gradual, and

the laws of science – directly applied only to laboratory events – successfully help in describing and projecting events in a less controlled environment. For instance, the law of free fall may be used to name the drag coefficient for objects of particular shape (Grobler 2006: 290).

Besides the difficulties in finding Latour's and Woolgar's argument for the thesis about the constructivism of scientific facts, we can provide many convincing arguments against it. I will mention them briefly and later express my doubts regarding the very basis of Latour's scholarly strategy, that is "the rule of symmetry" borrowed from strong sociology.

Among the arguments against the constructivism of facts there often comes to the fore the commonsensical contrast of this standpoint and the conviction that certain events or objects discovered by scholars existed not only before the moments of discovery but even before the appearance of people. For instance, electrons or dinosaurs existed long before *homo sapiens*. By claiming that we created them, we postulate reversed causality, which opposes the entirety of scientific knowledge and the common understanding of the world. However, as I mentioned, this problem is of no importance to Latour, who openly rejects the concept of causality.

We should add that – regardless of their description – the existence of electrons or dinosaurs is not only connected to our attachment to causal explanations but also to the content of notions that describe them. If an electron constitutes an elementary part of the matter from which all complex beings are constructed, including humans, then how can we possibly claim that people created electrons without contradiction? The notions that describe physical objects differ in this regard from social constructs like money or countries, which from their definition require a universal intersubjective consent, and from mediums in the form of physical objects like papers, flags, or buildings (Searle 1997: 44–45).

The above argument about notional incoherency could be undermined in the constructivist spirit of Nelson Goodman (1996: 156) who claims on the example of Ursa Major that only the spectators decide what shape of the constellation they would notice among the chaotically positioned stars; thus, Ursa Major came into being only when it was labeled as such by the observer. Analogically, the same reasoning applies to all other physical objects and their interdependencies. However, this argumentation is not convincing. First, Goodman would have to acknowledge that, when conducting a vivisection of these arbitrary systems that comprise unities for the observer, we must eventually reach the most elementary beings like electrons, where we cannot apply a relativity of description (Boghossian 2006: 39–41). Second, our descriptions and distinguished systems are not arbitrary, because they depend on pragmatic factors and, eventually, also on our biological cognitive apparatus: the senses and the way in which the

brain operates. Thus, we may assume that our cognitive schemes are adequate adaptations to objective reality, just like those of a dog or a mosquito, even if the senses of other animals may be more apt to these aspects of environment that are crucial for their specific needs (Burge 2010: 291–366).

Maybe the most serious argument against constructivism relates to the differences between alternative constructions (Kukla 2000: 91–104). If we assume that in a given society there is a fact constructed that p , then p is true. But if this construction is accidental, it is possible that in another society a fact would be constructed as $\text{not-}p$, thus $\text{not-}p$ would also be true. Thus, both p and $\text{not-}p$ would be true at the same time. This would lead us to a situation in which the Earth is simultaneously flat and round, or that climate change occurs and does not occur.

The above logical arguments against constructivism do not relate to the elementary reason for which this view is formulated in its radical form, initiated by strong sociology. One of its creators, David Bloor (1976), writes that he is interested in uncovering why scholars have certain convictions, pose certain questions and hypotheses, and formulate theories. Common sense tells that the basic reason for defending one's convictions are proofs, particularly empirical experience. When I claim that the cat sits on the roof, that is because I see the cat on the roof. Bloor, and Latour after him, postulate the "rule of symmetry," according to which a sociologist needs to search not only for a similar type of causes of true and false sentences but also for rational and irrational ones. The rule of symmetry in relation to truth and falsehood appears reasonable, since both true and false claims usually rely on concrete experiences. The apologist of the thesis that the Earth is round recalls the appearance of previously unobserved stars on the sky during travel, or the Earth's outline seen on the Moon during its eclipse. On the contrary, the apologist of the flat Earth theory indicates the lack of airplane routes over the Antarctic or common intuition. Thus, the epistemic grounds for our convictions are experiences and thoughts, which authenticate them and there is no reason for thinking that they could not cause our convictions as well (Boghossian 2013: 119–122).

In practice, what is crucial for us is the possibility of telling apart claims justified sufficiently and insufficiently or even wrongly. This possibility is questioned by the rule of symmetry of rational and irrational convictions, which leads to a search for prejudices or interests of a scholar in the background of each scientific view. A good example unveiling the absurdity of such acts is provided by Gross and Levitt:

Imagine that a few of us are cooped up in a windowless office, wondering whether or not it's raining. Opinions vary. We decide to settle the issue by stepping outside, where we note that the streets are beginning to fill up with puddles, that cars are kicking up

rooster-tails of spray, that thunder and lightning fill the air, and, most significantly, that we are being pelted incessantly by drops of water falling from the sky. We retreat into the office and say to each other, "Wow, it's really coming down!" We all now agree that it's raining. Insofar as we are disciples of Latour, we can never explain our agreement on this point by the simple fact that it is raining. Rain, remember, is the outcome of our "settlement," not its cause! (Gross, Levitt, 1994: 58).

No wonder that less radical constructivism gains more supporters, whose apology we find in, say, Thomas Kuhn's *The Structure of Scientific Revolutions* (2001). Kuhn claims that even if scientific theories refer to empirical experience, the latter *is never sufficient* to justify the former. The famous "scientific revolution" or "paradigm shift" is decided by factors connected to processes that occur in scientific communities rather than new scientific discoveries. According to Kuhn, this thesis primarily finds support in the fact that paradigms – as rules of thinking, directions of scholarly interests, and conditions for acknowledging answers to scientific questions – remain incommensurable and thus mutually untranslatable. It cannot pertain to all claims of a paradigm, since there would be no possibility of claiming that compared paradigms contain disagreeing claims. It is not only partial untranslatability that is at stake, as visible in Kuhn's later declarations (2001: 341). Kuhn himself (2001: 124–142) refers to numerous examples of predictions formulated within a framework of one paradigm compared with predictions of theories from a different paradigm, which not only testifies to their comparability but also to the existence of independent tests for the rationality of statements from different paradigms. For instance, Ptolemaic and Copernican systems were compared according to the extent in which they explained and predicted the movements of planets.

Even though Kuhn's works offer many valuable analyses from the history of science, we should not judge them as supporting constructivist ideas, and certainly not relativist ideas. Kuhn himself underlines the possibility of agreement between scholars who differently use the notions of their theories: "what the participants in a communication break-down can do is recognize each other as members of different language communities and then become translators" (Kuhn 1996: 202). He writes later: "If they can sufficiently refrain from explaining anomalous behavior as the consequence of mere error or madness, they may in time become very good predictors of each other's behavior" (Kuhn 1996: 202).

Although Kuhn's works do not justify radical constructivism in the form proposed by strong sociology or Latour, they still provide some arguments in favor of an opposite position, which claims that, despite the differences and influence exerted on scientific theories by common systems of values, we can still compare scientific theories and even consider some of them as more progressive in relation to other:

Considering any two such theories [related by descent], chosen from points not too near their origin, it should be easy to design a list of criteria that would enable an uncommitted observer to distinguish the earlier from the more recent theory time after time. Among the most useful would be: accuracy of prediction, particularly of quantitative prediction; the balance between esoteric and everyday subject matter; and the number of different problems solved. Less useful for this purpose, though also important determinants of scientific life, would be such values as simplicity, scope, and compatibility with other specialties. Those lists are not yet the ones required, but I have no doubt that they can be completed. If they can, then scientific development is, like biological, a unidirectional and irreversible process. Later scientific theories are better than earlier ones for solving puzzles in the often quite different environments to which they are applied. That is not a relativist's position, and it displays the sense in which I am a convinced believer in scientific progress (Kuhn 1996: 205–206).

Even though Kuhn undoubtedly rejects the correspondence theory of truth and supports the mutual irreducibility of paradigms as distinctive sets of notions, he nevertheless strives to defend the idea of scientific progress. In a sense, Kuhn is close to Popper's anti-instrumentalist convictions, concisely characterized by Adam Grobler: "Realism fosters asking productive questions with benefit for the instrumental value of positive theories due to looking for answers, while instrumentalism hinders this inclination" (Grobler 2006: 299–300). By contradicting the possibility of comparing facts and theories according to their truthfulness or proximity to truth, radical constructivism – even if understood euphemistically – impacts the justifications of search for better theories and, as a consequence, leads to stagnation in science.

You Can "Do Anything"⁸

The lack of proper arguments in favor of Latour's convictions and numerous arguments against them do not discourage his many enthusiasts from persistent proclamation of the actor-network theory. Thus, it may not be about arguments but the allure of Latour's metaphoric and political message that constitutes the power of his influence. Maybe many sociologists find comfort in crisp poetical notional clusters offered by no other social theory? To deal with such a defense of the discussed idea we must indicate not only that Latour's notions are fallacious and illogical but also harmful or even dangerous. The most direct threat I already presented above is the detrimental influence of constructivism on the motivation for sound scientific practice. I will now present that there are even more serious threats of Latour's works.

First, constructivism targets and thus jeopardizes the sense, unity, and social authority of science. According to Latour, "we shall never know whether scientists

⁸ Latour (1993: 39).

translate or betray” (Latour 1993: 143), so instead of waiting for their explanations, we should let the things speak, as they supposedly are the same subjects as humans. According to Latour, the division into humans and non-humans is, after all, “superfluous, immoral” (Latour 1993: 143). As Latour wittingly argues “it is time, perhaps, to speak of democracy again, but of a democracy extended to things themselves” Latour 1993: 143). The aim of his postulated “Parliament of Things” should be not only to assign equal rights to humans and non-humans but also “to replace the clandestine proliferation of hybrids by their regulated and commonly-agreed-upon production” (Latour 1993: 142). Latour probably wants to impose limits on the possibility of free scientific practice, because – as we already know – scientific facts are hybrids.

On the other hand, Latour’s ideal science should cease following any rules of logic or methodology:

we continue to believe in the sciences, but instead of taking in their objectivity, their truth, their coldness, their extraterritoriality – qualities they have never had, except after the arbitrary withdrawal of epistemology – we retain what has always been most interesting about them: their daring, their experimentation, their uncertainty, their warmth, their incongruous blend of hybrids, their crazy ability to reconstitute the social bond” (Latour 1993: 142).

Thus, everything is allowed in science, though not for scholars or humans in general but for “representatives of things”⁹. In the world projected by Latour, each hybrid has its representative, which is supposed to resolve all problems stemming from our attempts at “eliminating things” or limiting their role by means of counterfactual scientific laws. Let all things speak! “Let one of the representatives talk, for instance, about the ozone hole, another represent the Monsanto chemical industry, a third the workers of the same chemical industry, another the voters of New Hampshire, a fifth the meteorology of the polar regions; let still another speak in the name of the State” (Latour 1993: 144). Indeed, if when reflecting on a problem we sought representatives of everything connected to this problem, we would have to limit the number of things; something as absurd as the very idea of equaling things and humans. Latour’s call primarily implicates the further revocation of science’s authority and legitimizes pseudo-sciences. Since everyone can express their opinion about the climate change, why should we not treat on equal footing scientists, oil industry representatives, and thermometer users? Why should we not consider the interests of anti-vaccine movements with the same gravity as the interests of the entire society? After all, such hybrids as vaccines should not spread too much...

⁹ By acknowledging that natures are present with their representatives, Latour apparently admits that things cannot speak for themselves.

Second, undermining the separation of science from politics can easily lead to the politicization of science, thus undermining the sense of the social division of labor and humanity as the main social value. According to Latour, the subject of politics is no longer human and society, because a human being may only be described by its relationships with different elements of a network (Latour 1993: 138). At the same time, Latour proposes unlimited experimentation with hybrids, including humans, and wants to condemn any resistance in this regard: “All concepts, all institutions, all practices that interfere with the progressive objectivization of Nature – incorporation into a black box – and simultaneously the subjectivization of Society – freedom of manoeuvre – will be deemed harmful, dangerous and, quite simply, immoral” (Latour 1993: 140). After all, the definitions of human rights are to anyway be “provisional and particular” (Latour 1993: 137).

In his works, Latour does not only undermine the separation of science from politics, but he undermines all the functional social differentiations that grounds the Western civilization, justified by the idea of the division of labor and competence. Latour treats the separation of powers purely metaphorically but – as an actual constitutional guarantee – he views it as an obstacle on the way to eliminating the supposedly redundant divisions between scholars, politicians, lawyers, and clergymen. This essentially antiscientific – and partly against the rule of law – aspect of Latour’s work comprises one of its most dangerous elements. Besides, considering science to be the playground of political interests does not allow for noticing the specifics of conflicts between scholars and politicians, and among scholars themselves. These conflicts are often motivated purely scientifically and not politically. To enumerate a few most spectacular examples, suffice to recall Galileo’s or Oppenheimer’s conflicts with political power¹⁰.

Third, despite of Latour’s declarations, the concept of collectives that connect humans and non-humans seems to bury the idea of moral universalism. This universalism does not emerge – as Latour would like – from identification and equalization of all possible beings with each other but on the universality of specifically human empathy. Hence, it seems by all means justified to broaden the moral community for animals or even different living creatures and promote the idea of nature’s unity expressed in Schopenhauer’s *makranthropos*. The networks of humans and non-humans provide no basis or criterion for such a unity. Moreover, universalism understood as an attitude does not mean that every particular interest should be heard, but that there is a specifically human *ability for disregarding particular interest* in the name of important common

¹⁰ For a more elaborate discussion, see Porter (1998).

values, especially for the good of other beings¹¹. That is why we now mostly need a possibly broad alliance of universalists and not a cacophony of particularisms.

Moreover, it seems to me that not only the rule of equality of all humans and things but also the detailed grading of beings according to their ability of sensing is something particularly needed today. Let us refer to the example from animal ethics. If we assumed that all humans and non-humans are equal, then the justification of vegetarianism should be broadened onto insects, plants, and bacteria. Vegetarian ethics takes power of convincing from differentiating living beings according to their complexity and approximately ascribed ability to experience suffering.

Fourth, Latour's social thought does not offer a correct answer to the current social challenges, particularly the ecological problems. Latour seems to acknowledge this when – in a recent interview – he rejects representing any sort of antiscientific standpoint and claims that at the early stage of his work he tried to “put scientists down a little” which he now links to “juvenile enthusiasm” (Latour 2017). Having no stronger remorse for the social consequences of his relativism, Latour embarks on a new mission: this time he wants to defend science from large corporations and work on a social change program in the face of warming climate.

On the one hand, we may be glad that Latour listened to Claude Allègre's instigations and decided to finally engage in the fight on the side of sound science, especially because Latour has numerous enthusiasts, which shows his skills of

¹¹ The universality of ecological movements does not rely on the defense of universal notions but on the promotion of universalist attitude and respect for the common good, even if it is about particular elements of nature: a river, bees, or even a particular tree specimen. Due to Latour's overwhelming influence, Ewa Bińczyk (2018) omits this meaning of universality in her otherwise valuable and needed book on the discourses of Anthropocene. She writes and identifies with such views: “According to Latour, one has to deal with the fact that no political ecological movement is now capable of presenting the definition of the common good “in general.” Thus, we should make the stable future of the interdependent collective of humans and non-human factors be the main theme of Anthropocene-era environmental politics” (2018: 191). Let us observe that this vision only gives place for stability but not for change. A “different and better” future is merely “acceptable” (2018: 191). When defending Latour from the accusation of blurring the responsibility in “collectives,” Bińczyk explains that “actor-network theory allows us to understand what is agency and how works action over a distance with the use of a technological infrastructure” (2018: 165). As if agency could not be understood in the classical paradigm of causal connections. What is shocking is Bińczyk's later conclusion: “It is not about protecting nature (from the industry or humans) but about the careful monitoring of the increasing variety of connections that constitute our world” (2018: 191). Such a conclusion seems highly inappropriate in a book supposed to free us from the *stagnation* of Anthropocene! Moreover, the conclusion begs the question: who “monitors” the growing connections better than the existing sciences, independent from politics?

persuasion. On the other hand, Latour's declarations remain full of a flippant approach toward science. He claims that "scientist have to win back respect," indirectly suggesting that natural science scholars and "modernists" are guilty of the "post-truth" madness, and not constructivists who foster the growth of pseudoscience. Latour's solution for regaining science's respect is highly doubtful: scholars are supposed to admit that they always practice politics. According to one interpretation of this call, a scholar dealing with measuring temperature and other markers of climate change should fleetly declare that what guides him are interests, just like the interests that guide owners of oil companies, and that everyone has "their own reality." Latour does not reject his main idea which is a deformation of Kuhn's conception that I have already criticized above: "To have common facts, you need a common reality. This needs to be instituted in church, classes, decent journalism, peer review. ... It is not about post-truth, it is about the fact that large groups of people are living in a different world with different realities, where the climate is not changing" (Latour 2017). Since someone's reality has no climate change, why should this person be concerned? A radical constructivist could argue that, if climate change is factual, then it was created by climatologists possessed by their political demons. Let them live in their world, and we will remain in ours! One does not need to add that this kind of approach facilitates neither agreement nor respect for science.

The issue does not appear much better in Latour's general strategy for coping with ecological threats on a global scale. In his last book *Down to Earth: Politics in the New Climatic Regime* (2018) Latour presents a desperate attempt at rebuilding a common strategy of combating social and environmental problems while criticizing the lobby that contradicts climate change. According to his former concept of the equality of humans and non-humans, Latour claims that we should "return to the Earth;" that is, learn how to live in accordance to our requirements and limits of our territory, meaning all that on which our survival depends. At the same time, we should cease thinking in terms of nations or a global society in order to better understand our connection to the Earth. It is unclear whether finding what secures the survival of each being should serve ensuring the best or the minimal survival conditions. We do not know whether Latour means the survival of every specimen, species, or all life on Earth.

In my opinion, even though Latour's intention of self-limitation in the name of nature protection seems undoubtedly noble, his collectives-based strategy nevertheless omits three crucial conditions of successful energy transformation, which is key for coping with climate change. I will sketch their positive outline in order to present basic drawbacks of Latour's approach.

The first condition, described above, is the regaining of common respect for science's authority; the credibility of its scientific outcomes and predictions. This will be difficult to achieve without believing in the social division of

competences and the possibility of approximating truth. What is particularly important is the strengthening of the conviction of elementary unity and internal cohesion of science, both theoretically and methodologically. It would be positive, if the advice of physicists who deal with climate change could find legitimization in the broader output of physics, including that which gains its confirmation in movements of planets, black holes, and the creation of galaxies. However, Latour directly attacks the idea of the unity of science and postulates the existence of a “critical sphere” that includes sciences and theories different from those that consider the whole universe. According to Latour, we should apply different methods and tools of scientific research in relation to the “critical sphere.” Moreover, only different scientists (sic!) should care for the sphere, because “the New World” requires “digging deep down into the Earth with its thousand folds” (Latour 2018: 81). Such a fragmentation of science due to the supposed limitation of our interests to the Earth’s surface and the lower layer of the atmosphere contradicts not only the obvious interdependency of processes that occur in the universe and influence us – suffice to mention the role of the Sun or the processes inside Earth in climate changes – but it also contradicts the fact that scholars interested in Earth use knowledge gained outside of our planet while the laws of physics are not limited to the “critical sphere.” Latour again targets the main pillar of science’s authority which he is supposed to rebuild.

The second condition of successful energy transformation is the shaping of supralocal or even supranational strategies for limiting carbon dioxide emissions and creating energetic networks by using small local power plants. We should emphasize that the need for the local production of energy does not weaken the necessity for creating global energy strategies, within which local endeavors gain more sense. A political agreement that would bridge divisions will obviously require much courage and farsightedness from politicians and representatives of various economy sectors. Even if it is unusually difficult to achieve such an agreement and still seems unlikely, it can be fostered by suspending all socio-political conflicts unrelated to climate change and working on an extraordinary “rescue plan” in the face of global warming. But this requires a distinct *separation of political issues and the actions connected to environment protection*, which would give scientist the decisive voice. If politicians of different nations understood that we do not have to solve all the complex sociopolitical problems to act for environment’s sake, then the chance of saving humanity would increase. After all, scholars know very well what and how should be done to prevent scenarios dangerous for our planet, while we are still far from knowing particular methods of dealing with such social issues as inequalities, prejudices, and conflicts of interest. In other words, politicians must understand that they have the means of control over nature but not over society. Alas, Latour not only does not understand that, but he promotes a contradictory thesis. He claims

that – as humans – we do not control nature but social processes: “If we do not change the common dwelling, we shall not absorb in it the other cultures that we can no longer dominate, and we shall be forever incapable of accommodating in it the environment that we can no longer control” (Latour 1993: 145).

The third condition of a successful energy transformation, in my opinion, lies in igniting bottom-up processes in favor of environment protection, such as lifestyle change, volunteering for nature, or local prosumer incentives. In a sense, Latour acknowledges it in his postulate of “Terrestrial” politics. Despite what he claims, these processes do not require all beings inhabiting the surface of Earth including atmosphere to be “inventoried, surveyed, measured, centimeter by centimeter” (Latour 2018: 94) to create their alternative descriptions that would reveal on what their fate depends. If it were so, then we should follow Latour to indeed reach the conclusion that we all depend on the soil on which our nutrition grows, and we should “attach ourselves” to this “attractor” to which we belong and which requires care due to its “materiality, heterogeneity, thickness, dust, humus, the succession of layers, strata” (Latour 2018: 92). The reason for this enumeration would be the fact that for each “agens” the differentiation between the local and the global is distinct. Just as in his earlier works, Latour postulates the kind of a global census of humans and things, including writing down their interests. By postulating a redefinition of every “agens,” Latour once again wants to refer to the global/local division, whose weakness he criticized earlier, thus he copies the shortcomings of his fixation on nature/culture. Moreover, it is unclear why the prevention of climate change should be guided by the fact that “CO₂ is not spatialized in the same way as urban transport systems” or that “antibiotics globalize the world in a way quite different from that of Islamic terrorists” (Latour 2018: 93). Latour seems to sense that it is more important to create a sense of connection of people with the world as a whole and the simultaneous release of attitudes that foster local-level action for nature (2018: 92). However, we still do not know how new descriptions of all beings in categories of their needs for survival should lead to a desirable change in attitudes.

Once again it becomes clear that Latour overvalues our relationships with things, whereas the problem lies in *human attitudes to each other and different animals*. For example, the problem is not our lack of connection with “dust and humus,” but our attitude toward people who cultivate soil, just like the lack of sufficient engagement in establishing city farms or insect dwellings. Accordingly, the problem is not our approach to plastic bags, but our approach to the client who does not buy such a bag and brings along his non-disposable one. The problem is not in our approach to meat or slaughterhouses as such, but the capability of empathizing with animals and our tolerance of family members and acquaintances who do not eat meat. The problem is not our approach to cars, but whether we can organize commute in rural areas or talk our friends into

buying a bike. The change of attitudes and interaction schemes at a micro-level seems particularly needed and deserves in-depth empirical studies, which slowly begin to appear (Joy 2018). Latour's constructivism not only does not help these studies but even sabotages them by defining ecosystems as "the landscapes" of "geo-social struggles" (Latour 2018: 95), in which the stakes only lie in the defining of new political fronts with existing structures of interests.

"But also its Opposite"

The above logical and practical problems of Latour's doctrine, quite apparent and intuitive, do not discourage his numerous enthusiasts. Nevertheless, the developments and continuations of what we find in Latour's oeuvre often appear far more orderly and precisely formulated than his own claims. At the same time, his followers more distinctly reveal the absurdities to which Latour's reflection leads if we reach its logical conclusions. I would like to indicate a few examples limited to the Polish supporters of Latour, whose thought has become remarkably popular in Poland¹², where it gains in influence¹³.

¹² See Abriszewski (2008), Bińczyk (2013), Gdula (2016), Pietrowicz (2016), Stasik (2019), Zaród (2017). There is no place for a detailed analysis of these otherwise valuable works, but all of them to a certain extent pay tribute to Latour; sometimes by praising his theory and sometimes by pinpointing that certain empirical conclusions cannot be explained differently than with the aid of actor-network theory. Usually, the "use" of Latour's theory hinders the understanding or ridicules worthy scientific conclusions. For instance, Stasik notices the difficulties in estimating the hazards connected to shale gas extraction and the consequences of unfounded claims to knowledge by politicians or entrepreneurs. She arrives at the conclusion that broad social consultations and dialog of many communities should determine the questions posed to scientist and precede commissioned research. Unfortunately, Stasik's Latour-inspired claims that knowledge about shale gas is "co-created" and should be "developed at a hybrid convention that rejects the strict separation of science and politics" (Stasik 2019: 296) not only obscure her meaning but also reveal the harmfulness of "applied" Latourism. We may consider as amusing such incrustations of Stasik's book as the following: "Shale gas may appear in the community only under the condition that we would find methods for this resource's coexistence with each of the groups: geologists, politicians, investors, underground water reservoirs, cultivated fields, bird's breeding grounds in the Natura 2000 area, environmentalists, mayors, and various parts of local communities" (Stasik 2019: 297). Such sentences come into being probably in line with Latour's claim that, in actor-network theory, "all the actors *do something* and don't just sit there" (Latour 2005: 128). No wonder that Stasik casts shale gas in the role of a discussant with whom we should come to terms.

¹³ As a trivia fact, let us remember that Political Critique's guidebook on ecology (Ostolski 2010) presents Latour as a real guru: two of his articles were printed in the introduction as if he was an expert in the field of ecology. It is difficult to find a better example of the Matthew effect, especially since the book is meant to "explain notions and concepts without which it would be difficult to discuss ecological challenges."

One of the consequences of “Latourism” not much visible in Latour’s own works appears distinctly in the works of Łukasz Afeltowicz, especially those coauthored with Krzysztof Pietrowicz and Radosław Sojak. Let us emphasize that the way in which Afeltowicz formulates arguments surpasses the standard set by Latour. Afeltowicz is a particularly systematic and inventive scholar, has courage to touch upon themes important for sociology but rarely discussed, he also goes beyond the territory of his own discipline. Unfortunately, his fascination with Latour’s constructivism sometimes results in the emergence of quite grotesque concepts. Thus, Afeltowicz claims that we deal nowadays with “laboratorization of the world” because – according to the abovementioned thesis by Latour – laboratory products are local, so we must recreate the entire laboratory to recreate the product. Such a conclusion leads Afeltowicz to the practical postulate of creating “social machines;” that is, constant, relatively isolated systems based on therapeutic groups or micro-loan communities, whose continuous existence would allow for the constant reproduction of the same effects planned by a social engineer.

According to Afeltowicz, the sociologist’s role is not to explain what happens in the “machine” but to simply freely experiment by introducing various changes. After all, explanations are prohibited by Latour’s philosophy! Afeltowicz feels justified in his experimental postulates, and he refers to the examples of innovations by “organization theoreticians” which “momentarily spread in the corporate world.” The unexpected results to which such experiments may lead do not bother Afeltowicz. *Wszystko ujdzie o ile działa* (Anything Goes If It Works) reads the subtitle of his book coauthored with Pietrowicz, even though Latour’s doctrine offers no guarantees that what works today will work tomorrow.

Without explaining the mechanism that decides whether the machine works, Afeltowicz should not claim that “it is difficult to find in social reality an analogical creation that would not result from social sciences’ intervention” (Afeltowicz 2013: 184). After all, there is no obvious reason for which the “machine” must be created in order for the observed mechanism to work. Afeltowicz is so reluctant to believe that successful communication or character change may last outside of meeting groups that he postulates their constant existence. Since – as he claims after Latour – “the products of natural sciences require isolation and infrastructure to function” (Afeltowicz 2013: 186), then he has good advice for the participant and, particularly, the moderator of a meeting therapy: “never leave your laboratory!” As a result, Afeltowicz’s research-engineering program invokes horror:

While working with small groups we may utilize the isolation ensured by university laboratories; it would be an endeavor comparable to the famous prison experiment by Philip Zimbardo. For larger teams we may use the existing space of workplaces: enterprises

offer the means that allow for efficient intervention in experimental human networks (imposed top-down directives), isolate them (building walls and security systems), observe (electronic means of work overview), and finally modify what Susan Leigh Star (1999) calls the infrastructure of social life (Afeltowicz 2013: 187).

What testifies to the lack of any boundaries of Afeltowicz and Pietrowicz in “arranging puzzle pieces” (Afeltowicz and Pietrowicz 2008: 64) is the fact that they also want to encompass sociologists at universities with their engineering ideas. For instance, they write: “Theoretical sociology is deprived of a distinct institutionalized system of reward and punishment, a mechanism of prestige distribution or means of social control that would allow to discipline fellow scholars” (Afeltowicz and Pietrowicz 2008: 55).

We should give to Afeltowicz and Pietrowicz that their creative development of Latour’s doctrine seeks a rational reason to justify the rejection of the preexisting philosophy of science. They find this reason in the works of Andrzej Zybertowicz, an effective popularizer of Latour’s ideas in Poland. Afeltowicz and Pietrowicz summarize their rationale as follows:

Where would lead scientists their attempts to rigorously define notions, create protocol sentences, or special languages as entry conditions of research? What value added would bring to scholarly work the implementation of complex procedures of logical deduction or the restrictive following of procedures postulated by verificationism? What amount of Popper’s critical attitude is necessary for scholars and what is harmful from the standpoint of science’s progress? How many scholars would refrain from announcing significant results of their research if each time they would seek a potential falsifier of their hypotheses?” (Afeltowicz and Pietrowicz 2008: 72).

The view behind these questions – according to which scholars do not realize the rules formulated by philosophers of science – stems from a misunderstanding of what philosophy of science deals with. No serious philosopher ever claimed that scholars must frame their deductions according to logical formalism. Just as every logically thinking human, scholars do not necessarily reflect on procedures that they implement. Instead, the goal of philosophers of science is *the reconstruction* of the scientific train of thought and research practice based on existing scientific output and historical analyses. This reconstruction formalizes what scholars usually do spontaneously but still not without reflection or logic. Accordingly, a scholar characterized by creative imagination does not need to understand the psychological laws of the creative mind.

The specter of social engineering that haunts Afeltowicz’s books shows in its entirety the meaning of Latour’s works, should they be treated seriously and systematically. Another example of the possible results of the fascination with Latour is the work by Afeltowicz and Sojak (2015) devoted to research styles in science. It shows how Latour-inspired fixation on physical objects leads to

deforming the essence and practical meaning of science. If, as Latour claims, the only reasonable element of scholarly work is manipulating objects in a laboratory, then every mental activity – asking questions or formulating hypotheses and theories – seems to have no special significance. Thus, Afeltowicz and Sojak seek the genesis of the figure of a modern scholar in two historical figures: the aristocrat and the craftsman. The structure of their work implies that Afeltowicz and Sojak earnestly reduce scholarly practice either to aimless theorizing for prestige or tinkering in a workshop. This vision leads Afeltowicz and Sojak to formulating a doubtful postulate of a good scholar, comprised of aristocratic and craftsman qualities. Such a combination can supposedly protect the scholar from the tragic alternative of succumbing to authority (the aristocratic code of conduct) or creating desirable artifacts without social support (the craftsman situation).

This is a false alternative that recreates lingering stereotypes about academic work. Science is not based either on a thoughtless submission to authority or the creation of items but on asking questions and systemically searching for answers. The historical divide presented in Afeltowicz's and Sojak's *Arystokraci i rzemieślnicy* (Aristocrats and Craftsmen) seems to me an arbitrary attempt at justifying a typically Latourian aversion to theoretical thought. This time, theory appears as merely an "aristocratic pastime" of those who – thanks to their upper class affiliation – have nothing but contempt for physical labor and manual abilities (Afeltowicz and Sojak 2015: 145). Afeltowicz and Sojak force the thesis that this pastime was motivated only by the competition for viewer's attention and not curiosity and search for truth. Meanwhile, science was for a long time something separate from both language games and tinkering in a workshop. Many decades ago, the fact was brilliantly presented by Florian Znaniecki in *The Social Role of the Man of Knowledge* (1940). Znaniecki notices the broad spectrum of roles assumed by those who create new knowledge and indicates among them the role of the explorer as the seeker of new theory alongside the explorer as the seeker of facts. Afeltowicz and Sojak disregard the possibility of the former, from the onset prohibited by the division into aristocrats and craftsmen, inspired by Latour's treatment of science as a completely opportunistic activity.

Fascinations with Latour do not necessarily lead to dangerous and dehumanizing visions of science. Sometimes they prevent interesting research plans. An example of such effects is Sojak's book *The Anthropological Paradox* (2018; Polish original from 2004), in my opinion the most sophisticated Polish work dedicated to analyzing the presumptions of social sciences next to Piotr Sztompka's work from 1979. Sojak exceedingly competently and astutely researches the structures of various theoretical systems to reach their underlying and – as it appears – contradictory assumptions. Sojak defines

the key contradiction as “the entanglement of the human into the dialectics of being created and defined by means of what is objective, collective, factual, theoretical, and structural and, at the same time, of exceeding this condition in what is subjective, individual, connected with values, and practical” (Sojak 2018: 167).

The very representation of this paradox's anatomy seems to be Sojak's particularly valuable achievement, but he also decides to propose his solution signalized in the book's subtitle: *The Sociology of Knowledge as Perspective of the General Theory of Society*. This solution is supposedly delivered by Latour, despite Sojak's observation that the former “reject[s] sociological terminology” and instead proposes “a-socio-logy” (2018: 156), as if the “anthropological paradox” would boil down to linguistic issues.

There is little doubt that a serious approach to the idea that rejects all possible dichotomies – particularly between humans and things or between descriptions and described objects – would allow us to resolve all dilemmas of social theory. However, Sojak seems to comprehend that he possibly threw out the baby with the bathwater, as the “solution” to the problem may be equal to its neglect. Thus, Sojak ends his book with a reference to Richard Rorty and soberly asks: “Are we truly to stop thinking about ourselves as “irreducibly” different from inkwells or atoms? Are we supposed to lose the sense of our ontological and epistemological separateness in respect to the world? In the name of what?” (Sojak 2018: 229). Sojak knows that the price is high but is reluctant to admit it and claims with Latour-worthy flippancy: “It could become apparent that society in its current shape is no longer needed” (Sojak 2018: 231). What comes to him less easily is admitting that people are also no longer needed, but acute readers would deduce it themselves:

If we were to add impeding the capabilities of augmenting men with a variety of artificial implants (are not pacemakers, artificial hearts and electrodes used for treatment of Parkinson's disease just such devices?), then we should discover that Latour's shockingly anti-essentialist statement claiming that objects are us could be better fitting for our contemporary world than an attempt to stubbornly search for a humanistic element in all of it (Sojak 2018: 235).

How is it possible that Sojak so easily rejects his refined analytical-synthetic studies of complex human reality for the sake of dehumanizing monism? The answer to this question calls for the work of an experienced sociologist of knowledge, but some answer emerges from Sojak's chapter “Escape plan from the anthropological paradox.” Instead of treating Kant's work more seriously than Latour¹⁴, Sojak refers to the categories mentioned by Andrzej Zybertowicz

¹⁴ See above p. 9.

and known to us from Latour's disquisitions: "one of the fundamental elements of the objectivistic model of cognition is the support it is granted by strong, ontological juxtaposition of the subject and the object, of the cognition process. The opposition between culture and nature is a correlate of that differentiation" (Sojak 2018: 103). In this approach, the practical orientation of Kant's philosophy escapes the field of vision unnoticed. The projection of culture on the subject and nature on the object allows Sojak to omit the juxtaposition of the subject and object so as to boldly claim that the "opposition of nature and culture – that foundation of the anthropological paradox – has to be rethought as a difference of vocabularies" (Sojak 2018: 175). This "rethinking" does not last long as already the next page offers the postulate of a "de-ontologization of human nature that would not highlight its exceptional nature in any way" (Sojak 2018: 176)¹⁵. Thanks to this operation, Sojak inscribes himself in Latour's idea that you can "do anything but also its opposite" (Latour 1993: 39).

Sojak certainly gives judgment on social theory with grace, through veiled categorial shifts, and by aptly guiding readers through the meanders of various authors' thoughts. Dangerous postulates appear in Sojak's work only with his later publication from 2014, in which he follows Latour's manner to undermine the division into facts and values, just as he does to the idea of axiological neutrality of social sciences (Sojak 2014: 234). This postulate directly stems from the influence of Andrzej Zybertowicz, who expressed his views in the book *Przemoc i poznanie* (Violence and Cognition; 1995) and in a later retrospective text "Konstruktywizm jako orientacja metodologiczna w badaniach społecznych" (Constructivism as a Methodological Orientation in Social Studies; 1998). Referring to Henryk Domański's critical comment that the search for an independent empirical test for formulating hypotheses is crucial to science, Zybertowicz unambiguously defines his views as a symmetrist and radical constructivist:

When we reject the assumption of two separate orders, then there emerges the issue of creating or – as I prefer to call it – constructing truth. Two confronted spheres of the real – of hypotheses and of reality – are elements of a single *whole governed by the same sociological laws*. Simply put, the perception of these elements as separate results from a historical success of scientist ideology and related empirical-practical initiatives, including the technological revolution. *Both hypotheses and data are our constructs, just as the procedures for confronting them with each other* (Zybertowicz 1998: 1–10; italics in the original).

¹⁵ Let us add that even Richard Rorty, often mentioned by Sojak in the discussed fragment, has more subtlety when considering humanity, which is visible in his concepts of suffering avoidance and private sphere protection.

Even though Zybertowicz's example of a controversial research project that finds no widespread support in the academia does not contradict the possibility of objective testing of hypotheses – even against the academic community – it nonetheless pushes Zybertowicz toward a truly Latourian vision of science:

What is at stake is gaining the largest possible number of influential allies and resources, getting connected to an influential network, and – if it proves impossible – creating own network. On the way to this goal purely rational and empirical arguments comprise merely a minor element of the game, less important than numerous techniques of persuasion, temptation, or even intimidation. Some researchers already gained such a position for their field (e.g. a sub-discipline) that they already forgot about the earlier “fraction wars” (Zybertowicz 1998: 14).

From Zybertowicz's standpoint, scientific practice does not differ from the Machiavellian party war, so scientific output is political in its nature just like for Latour. At the same time, it reveals Zybertowicz's depreciating attitude toward science, whose echoes we later find in Afeltowicz and Sojak: “empirical studies reveal the ordinary, down-to-earth, and nearly pedestrian character of science and research practice: they reveal that there is nothing extraordinary in science what would ennoble scientific cognition and elevate it over a highway construction, governing a municipality, or producing television contests” (Zybertowicz 1998: 18). Later, we also read:

Abstracting this matter – without previous assumptions, including axiological ones – what a scientist like a sociologist claims about the society is no way more binding than what is said by a politician, a film star, a bishop-intellectual, a religious zealot, or a citizen who expresses himself in a street survey. The very fact that some expressions are supported – that is justified – by a series of earlier conducted and more-or-less methodologically refined studies does not automatically give them special credibility (Zybertowicz 1998: 20).

These increasingly far-reaching claims have me ask how Zybertowicz justifies his claim about science being a political game in which facts are products of conflicts of interest. Many readers may be astonished when – to prove his views – Zybertowicz does not refer to Latour or strong sociology but philosophers Kazimierz Ajdukiewicz and Hilary Putnam. Zybertowicz ascribes to Ajdukiewicz the view that objective facts come from “the rules of cultural interpretation” and are “co-created by what is deemed real or not” (Zybertowicz 1998: 22). Zybertowicz manipulates his readers here, because Ajdukiewicz in no way justified the thesis of social or cultural creation of scientific facts. On the contrary, Ajdukiewicz writes, and he does so in the text quoted by Zybertowicz, that,

One could understand our thought that – when we shift from one language to another, untranslatable one, that is from one notional apparatus to another – we achieve a fact

that one sentence is true only in one language, while the equivalent sentence in the other language is false; as if in a magical way one could cause that, for instance, the sentence “this paper is white” would be true in one language, while its translation into another language would be false. It would be a complete misunderstanding (Ajdukiewicz 1985: 183).

Provided that Zybertowicz does not limit his readings to the first pages in order to save time, he should also reach Ajdukiewicz’s final notes that pertain to the evolutionary tendencies of notional apparatuses. Ajdukiewicz formulates the idea of science’s goal, deducible from the general development tendencies of the notional apparatuses, which are 1) decreasingly internally contradictory, 2) capable of solving as much problems as possible without experiential data, 3) substituted by languages in which less problems have an insoluble character, and finally 4) more empirically sensitive. The primacy is given to these apparatuses that ignore as few experiential data as possible and react to different empirical data in possibly different ways (Ajdukiewicz 1985: 193).

The objectivist overtones of Ajdukiewicz’s idea do not impress Zybertowicz, maybe because the author of *Przemoc i poznanie* did not read the explanation in the preface to the quoted collection of Ajdukiewicz works, in which the Polish philosopher once again directly warns of the interpretation forced by Zybertowicz:

some distorted the statement I call the thesis of radical conventionalism, which claimed that worldview depends on the selected notional apparatus (which boils down to the banal claim that a set of theses deduced according to the rules of language depends on these rules). They substituted the claim that the set of language’s theses depends on the reception of the notional apparatus with a claim that the set of true statements in a given language depends on the reception of the notional apparatus, and later that the world on which we report in true statements depends on the notional apparatus (Ajdukiewicz 1985: vii).

Putnam also defends epistemic objectivism, but Zybertowicz tries to use also this name to legitimize his standpoint: “The maximum of what can be achieved on the basis of constructivism is local “objectivity,” relativized into the used notional apparatus and the unconsciously assumed rules of gathering and interpreting data proper to the current type of discourse [in a footnote: I refer here to Hilary Putnam’s concept of internal realism]” (Zybertowicz 1985: 21). Again, this is a manipulation, because Putnam does not relativize truth to the “current type of discourse.” On the contrary, Putnam writes: “All I ask is that what is supposed to be “true” be warrantable on the basis of experience and intelligence for creatures with “a rational and a sensible nature” (Putnam 1990: 41). Taking into account Zybertowicz’s light approach toward sources, we can hardly find a better illustration of Latour’s maxim that it is “possible to do anything” (1993: 39).” And if you can in science, then why not in politics?

The above brief overview of Latour's followers in Poland suffices to legitimize the serious doubts regarding both the logical basis and possible practical effects of the actor-network theory. Let us add that ANT gains numerous proponents with various scientific interests and political views. Indeed, ANT combines the worst qualities of Marxism and Nietzscheanism: strict materialism (a physical objects fetishism) along with radical relativism and triumphalism (Latour calls his idea a "Copernican counter-revolution;" Latour 1993: 76). That is why we should constantly remind that ideas have consequences and they are the most perilous when few suspect what they may lead to.

A Sociological Riddle

Taking into account that the critical arguments against radical constructivism are raised for a long time – and that Alan Sokal's and Jean Bricmont's *Fashionable Nonsense* (1999) is certainly well known to the Polish enthusiasts of Latour – we may ask why so many scientists are enchanted by ANT. This sociological riddle is even bigger, because Latour actually revokes sociology's reason for existence and, even more, he depreciates science and its empirical basis for legitimacy. Do we deal with a kind of a suicidal amok, a momentum toward originality, or such a serious crisis of the discipline that we hardly find something more convincing than *Pandora's Hope*? It is truly a riddle, which requires a serious sociological study. Meanwhile – before Latourists place me in a "machine" – I am tempted to sketch a few initial hypotheses. Some of them are indirectly formulated with the help of Latour himself. One of his undoubtful merits is the revival of interest in the somewhat forgotten classics of the philosophy of science and sociology: Ludwik Fleck (Latour 2005: 112–114) and Gabriel Tarde (Latour 2005: 243–244). It is the output of these two thinkers that prompts some explanations of Latour's popularity.

The first explanation – brought to my mind after reading Tarde – would tell us that the popularity of a theory or doctrine does not need to stem from its logical cohesion or abundance of testimony but from the fact that it includes content which, for one reason or another, is easier to repeat and rhetorical figures which are easy to imitate. Indeed, Latour's works include attention-grabbing, contrasting content, which sets them apart from more monotonous "vocabularies" and allows young sociologists to distinguish themselves from the scholars who practice science in the proper way, which by necessity is more standard. Latour's eristic method of "a stream of nonsensical words" linked with – still popular among his Polish supporters – *argumentum ad verecundiam* causes the discussed doctrine to gain advantage over the concepts that require more care for the proper rigors of thought for their repetition.

The second explanation is suggested by my reading of Ludwik Fleck's works. The idea of a "thought collective" allows us to better understand why Latour becomes popular not in a dispersed manner but rather in particular groups – called in Poland "the Toruń school" or gathered around the Political Critique think-tank – which can define their distinction and identity thanks to adopting Latour's ideas. As Fleck writes: "Although the thought collective consists of individuals, it is not simply the aggregate sum of them. The individual within the collective is never, or hardly ever, conscious of the prevailing thought style, which almost always exerts an absolutely compulsive force upon his thinking and with which it is not possible to be at variance" (Fleck 1979: 41). Moreover, some suppositions may emerge from Fleck's division into esoteric and exoteric groups of thought collectives (Fleck 1979: 162) and into science elite and rank-and-file (Fleck 1979: 119). The use of language difficult for exoteric circles but easy for esoteric circles may raise the authority of the latter, even with no substantial basis. Promoting the cult of craftsmanship and simple everyday objects, just like deprecating science from (supposedly) esoteric positions, means seeking support from the masses when the authority of scientists is decreasing (Fleck 1979: 162). Such practices undoubtedly lead to even further deprecation of science because, sooner or later, the consequences of veiled dilettantism would emerge. Before it happens, the mechanisms of fashion will come to power, of which Fleck writes:

The special mood of a thought collective of fashion is constituted by a readiness immediately to notice that which is fashionable and to consider it of absolute importance, by a feeling of solidarity with other members of the collective, and by an unbounded confidence in the members of the esoteric circle. The most dedicated followers of fashion are found far out in the exoteric circle. They have no immediate contact with the powerful dictators forming the esoteric circle. Specialized "creations" reach them only through what might be called the official channels of intracollective communication, depersonalized and thus all the more compulsive. Nothing is motivated in petty style; they are simply told "ce qu'il vous faut pour cet hiver" [what you need for this winter] or "à Paris la femme porte" [in Paris, women are wearing], or "Lancé au printemps par quelques jeunes femmes de la société parisienne" [presented to the public in the spring by several young ladies of Parisian society]. It is coercion of the strongest kind, because it appears in the guise of a self-evident necessity and is thus not even recognized as a coercive force (Fleck 1979: 107–108).

In the end, let us consider the connection between the rising popularity of Latour and the institutional context of science. What is characteristic for a part of Latour's enthusiasts is their often resurfacing fear that sociology may cease to be useful, while the roles of sociologists may soon become occupied by the representatives of natural sciences (recently Pietrowicz 2018: 64–69). Latour supposedly helps sociologists in defending their "field" by proposing an easy-to-use concept and transgressing the traditionally understood object of

sociology – the society – toward “hybrids” and networks. The fear of Latour’s proponents corresponds with their understanding of science as a brutal game of interests, in which the search for truth is merely a euphemism that veils the political “tug-of-war.” It is an image of science which best explains what Latourians do themselves: fighting for scientific survival and research grants. It shows that the institutional shape of the university – in which the range of quotations, popularity, and influence become the crucial goal of scientific practice – foreshadows the appearance of a growing number of books and articles that will cater to essentially anti-scientific attitudes. Moreover, this means that what gains special importance in the wake of the commercialization of science is the role of sober judgment and individual critical assessment of transferred content; even if it is popular, frequently quoted, and full of superiority over everything written so far.

Bibliography

- Abriszewski, Krzysztof. 2008. *Poznanie, zbiorowość, polityka. Analiza Teorii Aktora-Sieci Bruno Latoura*. Kraków: Universitas.
- Afeltowicz, Łukasz, Pietrowicz Krzysztof. 2008. „Koniec socjologii jaką znamy, czyli o maszynach społecznych i inżynierii socjologicznej.” *Studia Socjologiczne* 3(190), pp. 43–73.
- Afeltowicz, Łukasz, Pietrowicz Krzysztof. 2013. *Maszyny społeczne. Wszystko ujdzie, o ile działa*. Warszawa: WN PWN.
- Afeltowicz, Łukasz, Sojak Radosław. 2015. *Arystokraci i rzemieślnicy. Synergia stylów badawczych*. Toruń: WN PWN.
- Ajdukiewicz, Kazimierz. 1985. *Język i poznanie*, vol. I. Warszawa: PWN.
- Amsterdamska, Olga. 1992. „Odmiany konstruktywizmu w socjologii nauki,” in: *Pogranicza epistemologii*, ed. J. Niżnik. Warszawa: Wydawnictwo IFiS PAN, pp. 136–154.
- Bińczyk, Ewa. 2013. „(Post)konstruktywizm na temat technonauki.” *Avant* 1(4), pp. 54–75.
- Bińczyk, Ewa. 2018. *Epoka człowieka. Retoryka i marazm antropocenu*. Warszawa: WN PWN.
- Bloor, David. 1976. *Knowledge and Social Imagery*. London: Routledge.
- Boghossian, Paul. 2013. *Angst vor der Wahrheit. Ein Plädoyer gegen Relativismus und Konstruktivismus*. Frankfurt a. M.: Suhrkamp.
- Burge, Tyler. 2010. *The Origins of Objectivity*. Oxford: Clarendon Press.
- Callon, Michel, Latour Bruno. 1992. “Don’t Throw the Baby Out with the Bath School! A Reply to Collins and Yearly,” in: *Science as Practice and Culture*, ed. A. Pickering. Chicago: University of Chicago Press, pp. 343–368.
- Cartwright, Nancy. 1983. *How the Laws of Physics Lie*. Oxford: Clarendon Press.

- Fleck, Ludwik. 1979. *Genesis and Development of a Scientific Fact*. Chicago: The University of Chicago Press.
- Fleck, Ludwik. 1986. *Powstanie i rozwój faktu naukowego*. Trans. M. Tuskiewicz. Lublin: Wydawnictwo Lubelskie.
- Gdula, Maciej. 2016. *Uspołecznienie i kompozycja. Dwie tradycje myśli społecznej a współczesne teorie krytyczne*. Warszawa: Wydawnictwo Krytyki Politycznej.
- Goodman, Nelson. 1996. *Notes on the Well-Made World*, in: *Starmaking: Realism, Anti-Realism, and Irrealism*, ed. Peter McCormick. Cambridge: The MIT Press.
- Grobler, Adam. 2006. *Metodologia nauk*. Kraków: Wydawnictwa Aureus i Znak.
- Gross, Paul R., Levitt Norman. 1994. *Higher Superstition. The Academic Left and Its Quarrels with Science*. Baltimore: The John Hopkins University Press.
- Hacking, Ian. *Was heisst 'soziale Konstruktion'? Zur Konjunktur einer Kampfvokabel in den Wissenschaften*. Transl. J. Schulte. Frankfurt a. M.: Fischer.
- Harris, Scott R. 2010. *What is Constructionism? Navigating Its Use in Sociology*. London: Boulder.
- Hobbes, Thomas. 1651. *Leviathan*. McMaster University Archive of the History of Economic Thought <https://socialsciences.mcmaster.ca/econ/ugcm/3113/hobbes/Leviathan.pdf>.
- Hobbes, Thomas. 1954. *Lewiatan*. Trans. Cz. Znamierowski. Warszawa: WN PWN.
- Joy, Melanie. 2017. *Beyond Beliefs. A Guide to Improving Relationships and Communication for Vegans, Vegetarians, and Meat Eaters*. Petaluma: Roundtree Press.
- Kaczmarczyk, Michał. 2018a. *Towards a Dialogical Sociology*, in: M. Freise (ed.). *Inspired by Bakhtin. Dialogic Methods in the Humanities*. New York: Academic Studies Press, pp. 51–76.
- Kaczmarczyk, Michał. 2018b. „When Philosophy Met Social Psychology. An Interpretation of The Polish Peasant in Europe and America.” *European Journal of Sociology* 59, pp. 257–299.
- Kant, Immanuel. 2000. *Critique of Pure Reason*. Trans. P. Guyer, A.W. Wood. New York: Cambridge University Press.
- Kłonkowska, Anna M. 2017. *Płeć: dana czy zadana? Strategie negocjacji (nie)tożsamości transpłciowej w Polsce*. Gdańsk: Wydawnictwo Uniwersytetu Gdańskiego.
- Knorr, Karin. 1981. *The Manufacture of Knowledge: An Essay on the Constructivist and Contextual Nature of Science*. Oxford: Pergamon Press.
- Kuhn, Thomas S. 1996. *The Structure of Scientific Revolution*. Chicago: The University of Chicago Press.
- Kuhn, Thomas S. 2001. *Struktura rewolucji naukowych*. Trans. H. Ostromecka. Warszawa: Fundacja Aletheia.
- Kukla, André. 2000. *Social Constructivism and the Philosophy of Science*. London: Routledge.
- Latour, Bruno, Woolgar Steve. 1986. *Laboratory Life. The Construction of Scientific Facts*. Princeton: Princeton University Press.
- Latour, Bruno. 1998. “Ramses II est-il mort de la tuberculose?” *La recherche* 307, pp. 84–85.

- Latour, Bruno. 2005. *Reassembling the Social. An Introduction to Actor-Network Theory*. Oxford: Oxford University Press.
- Latour, Bruno. 2009. *Polityka natury. Nauki wkraczają do demokracji*. Warszawa: Wydawnictwo Krytyki Politycznej.
- Latour, Bruno. 1993. *We Have Never Been Modern*. Trans. C. Porter. Cambridge: Harvard University Press.
- Latour, Bruno. 2013. *Nadzieja Pandory. Eseje o rzeczywistości w studiach nad nauką*. Ed., trans. K. Abriszewski. Toruń: Wydawnictwo Naukowe UMK.
- Latour, Bruno, de Vrieze Jop. 2017. "Bruno Latour, a veteran of the 'science wars' has a new mission (interview)." *Science* 10.10.2017.
- Latour, Bruno. 2018. *Down to Earth: Politics in the New Climatic Regime*. Cambridge: Polity Press.
- Levine, Donald. 1995. *Visions of the Sociological Tradition*. Chicago: Chicago University Press.
- Mackie, John Leslie. 1974. *The Cement of the Universe: A Study of Causation*. Oxford: Clarendon Press.
- Marx, Karl. 1988. *Economic and Philosophic Manuscripts of 1844*. New York: Prometheus Books.
- Nietzsche, Friedrich. 2009. *Vom Nutzen und Nachteil der Historie für das Leben*. Stuttgart: Reclam.
- Ostolski, Adam, ed. 2010. *Ekologia. Przewodnik Krytyki Politycznej*. Warszawa: Wydawnictwo Krytyki Politycznej.
- Pickering, Andrew. 1984. *Constructing Quarks: A Sociological History of Particle Physics*. Chicago: University of Chicago Press.
- Pietrowicz, Krzysztof. 2016. *Podejścia sieciowe w socjologii. Przyczółki, splecenia i przeobrażenia dyscypliny*. Bydgoszcz: Epigram.
- Porter, Neil A. 1998. *Physicists in Conflict. From Antiquity to the New Millennium*. Bristol: Institute of Physics Publishing.
- Putnam, Hilary. 1998. *Wiele twarzy realizmu i inne eseje*. Trans. A. Grobler. Warszawa: WN PWN.
- Putnam, Hilary. 1990. "A Defense of Internal Realism," in: *Realism with a Human Face*, ed. J. Conant. Cambridge, MA: Harvard University Press, pp. 30–42.
- Searle, John. R. 1997. *Die Konstruktion der gesellschaftlichen Wirklichkeit. Zur Ontologie sozialer Tatsachen*. Trans. M. Suhr. Reinbek: Rowohlt.
- Sojak, Radosław. 2004. *Paradoks antropologiczny. Socjologia wiedzy jako perspektywa ogólnej teorii społeczeństwa*. Wrocław: Wydawnictwo Uniwersytetu Wrocławskiego.
- Sojak, Radosław. 2014. *Spełniona obietnica. Szkic do stylów badawczych na przykładzie socjologii wiedzy*. Bydgoszcz: Epigram.
- Sojak, Radosław. 2018. *The Anthropological Paradox: The Sociology of Knowledge as Perspective of the General Theory of Society*. Frankfurt am Main: Peter Lang Verlag.
- Sokal, Alan David, Bricmont Jean. 2004. *Modne bzdury. O nadużywaniu pojęć z zakresu nauk ścisłych przez postmodernistycznych intelektualistów*. Trans. P. Amsterdamski, A. Lewańska. Warszawa: Prószyński i S-ka.

-
- Stasik, Agata. 2019. *Współwytwarzanie wiedzy o technologii. Gaz łupkowy jako wyzwanie dla zbiorowości*. Toruń: Wydawnictwo Uniwersytetu Mikołaja Kopernika.
- Sztompka, Piotr. 1979. *Sociological Dilemmas: Toward a Dialectic Paradigm*. New York: Academic Press.
- Tuchańska, Barbara. 2006. „O Sokalu z Bricmontem, Latourze i o tym, co z tego (nie) wynika.” *Nauka* 1, pp. 93–111.
- Woroniecka, Grażyna. 2012. „Konstruktywizm a myślenie potoczne – zamiast wprowadzenia.” *Principia* 56, pp. 7–22.
- Zybertowicz, Andrzej. 1995. *Przemoc i poznanie. Studium z nie-klasycznej socjologii wiedzy*. Toruń: Wydawnictwo Naukowe UMK.
- Zybertowicz, Andrzej. 1999. „Konstruktywizm jako orientacja metodologiczna w badaniach społecznych.” *ASK* 8, pp. 7–28.