

A fruitful encounter between Cognitive Science and Science & Technology Studies

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Scholars deriving from different schools of thought, especially if these grow out of different traditions, do not meet too frequently, and it is even more rare for these meeting to result in creating theories or research practices that would be cognitively surprising or rich in refreshing ideas. Therefore, the material we present in the current issue of *Avant* (1/2013) is exceptional. In the following part you can read articles by representatives of the so-called Toruń (post)constructivist school, “(Post)constructivism on the subject of techno-science” by Ewa Bińczyk and “A-socio-logy of a condition. A study of controversies surrounding etiology, diagnosis and therapy of ADHD” by Łukasz Afeltowicz and Michał Wróblewski. In a special issue of *Przegląd Kulturoznawczy* (2013/1), devoted entirely to its research, the readers may familiarize themselves in detail with the school’s character, the assumptions it adopts, examples of conducted research, and I wholeheartedly invite them to do so. In addition to a competent knowledge of STS trends, the aforementioned Authors have many a time manifested their interest in cognitive science, especially the embodied trends and enactivism¹⁶⁵, in part thanks to the cognitive studies unit

¹⁶⁵ Cf. E. Bińczyk, „Technonauka w społeczeństwie ryzyka. Filozofia wobec niepożądanych następstw praktycznego sukcesu nauki” [„Technoscience in society of risk. Philosophy in the face of unwanted consequences of the success of science”], Toruń 2012 (especially part III), Ewa Bińczyk, „„Ucieleśnione” i „rozproszone” poznanie a obraz praktyk naukowych” [““Embodied” and “distributed” cognition and the picture of scientific practice”]; Ł. Afeltowicz, “Modele, artefakty, kolektywy. Praktyka badawcza w perspektywie współczesnych studiów nad nauką” [„Models, artifacts, collectives. Research practice in the perspective of contemporary studies over science”], Toruń 2012; M. Wróblewski, “Polityka standardów. Konstruowanie pola obiektywności w diagnostyce psychiatrycznej na przykładzie DSM-III” [„The policy of standards. Constructing the field of objectivity in psychiatric diagnostics on the example of DSM-III”], *Kultura i Edukacja*, 2012/4; M. Wróblewski, “Wyzwanie biomedycyzacji. Socjologia medycyny oraz socjologia zdrowia i choro-

that is thriving in Toruń¹⁶⁶. The Toruń community is thus an example of a perhaps accidental, but, nevertheless – as I brazenly dare to state – synergy of accomplishments of both disciplines named in the title that is successful institutionally and cognitively.

It is worth asking what the connection between cognitive science and science & technology science is, since the two undeniably formulate their aims in different ways and have different methods of research at their disposal. A thorough answer can be obtained only by reaching for the research developed in the texts of the authors that draw on both fields of study; nonetheless, when encouraging to read the articles by Bińczyk, and by Afeltowicz and Wróblewski, I will present several suggestions.

Cognitive scientists, especially in the broadly understood trends of embodied, distributed and situated cognition, convincingly explain the efficiency of cognition and cognitive practices. Similarly, as Ewa Bińczyk shows in her article, thanks to an appropriately understood (post)constructivist approach, we are able to explain why science and technology are efficient. It is worth emphasizing that due to the reasons that are comprehensively discussed in the article, we should consistently avoid the misleading term “social constructivism.” Both schools, in different, and hence extremely interesting ways, show the unsuitability of descriptions that do not account for the flexibility of cognition, changeability of situation, a differentiating influence of heterogeneous factors on the activities of cognitive systems. To exaggerate slightly, one can say, using evolutionist rhetoric, that successful adaptation in humans can be measured in how both on the cognitive and on the technological level humans can create such innovations that would allow them to adapt to changing conditions (cf. Bruno Latour, 109 in this issue). Indeed, these levels should be treated as intertwined.

Both cognitive scientists (especially the proponents of enactivism and embodied cognition), and postconstructivists emphasize that they treat cognition as an action and they study its circumstances and why it succeeds. Neither the

by “podszyte” teorią aktora-sieci” [„The challenge of biomedicalisation. Sociology of medicine and sociology of health & illness”, *Przegląd Kulturoznawczy*, 2013/1.

¹⁶⁶ In 2002, the Polish Cognitive Science Society was established in Toruń, which was also the location of its first meetings. For years there have been edited cognitive science journals: *Kognitywistyka i Media w Edukacji* [*Cognitive Science and Media in Education*] and *Theoria et Historia Scientiarum*, as well as *Avant* (cognitive sciences as well as science, technology and society studies); there have been organized international conferences (CAT: Cognitivist Autumn in Torun). There exists the Unit of Cognitive Studies and Epistemology at the Nicolaus Copernicus University Institute of Philosophy, and, thanks to the recently established Nicolaus Copernicus University Centre for Modern Interdisciplinary Technologies, cognitive scientists will be able to cooperate with, among others, *Coma Science Group from Liege*, a world leading centre for altered mental states. The Nicolaus Copernicus University Institute of Philosophy offers cognitive studies programs on both levels of studying (www.kognitywistyka.umk.pl).

conditions nor human products are given once and for all in an unchangeable shape; therefore, adaptation skills and methods of stabilizing the environment become a key element of efficient functioning in the world, both when we think about an individual, and, for example, products of science. As Afeltowicz and Wróblewski show, objects are the more stable, the more resources their possible deconstruction would entail; they show the complex processes of stabilization on the example of ADHD.

In my opinion, the fruitful results of the meeting between cognitive science and STS derive from the fact that it allows for obscuring the imperfections that each of the schools undoubtedly displays in the extended network of its various trends. STS, diverging from the individualistic understanding of the subject, draws our attention to the collective character of the production of knowledge, to heterogeneous connections between the actors, including non-human factors. Conversely, the embodied trends in cognitive studies supplement this picture with the role of the body, corporeality and first-person experience. None of these elements can be omitted in a comprehensive description of knowledge.

References

Afeltowicz, Ł & Wróblewski, M. 2013. A-socjo-logia choroby. Studium kontrowersji wokół etiologii, diagnozy i terapii ADHD. *Avant*, 1/2013: [this issue].

Afeltowicz, Ł. 2012. *Modele, artefakty, kolektywy. Praktyka badawcza w perspektywie współczesnych studiów nad nauką*. Toruń: Wydawnictwo Naukowe Uniwersytetu Mikołaja Kopernika.

Avant. Toruń-Warsaw: Centre for Philosophical Research.

Bińczyk, E. 2011. „Ucieleśnione” i „rozproszone” poznanie a obraz praktyk naukowych. S. Butryn, M. Czarnocka, W. Ługowski i A. Michalska, red. *Nauka w filozofii. Oblicza obecności*. Seria Archai. Warszawa: Wydawnictwo IFiS PAN: 119-137.

Bińczyk, E. 2012. *Technonauka w społeczeństwie ryzyka. Filozofia wobec niepożądanego następstwa praktycznego sukcesu nauki*. Toruń: Wydawnictwo Naukowe Uniwersytetu Mikołaja Kopernika.

Bińczyk, E. 2013. (Post)konstruktywizm na temat technonauki. *Avant*, 1/2013: [this issue].

Kognitywistyka i Media w Edukacji. Toruń: Wydawnictwo Adam Marszałek.

Latour, B. 2013. Technologia jako utrwalone społeczeństwo. *Avant*, 1/2013: [this issue].

Przegląd Kulturoznawczy, 2013/1. [Toruńska szkoła konstruktywistyczna.] Kraków: Komitet Nauk o Kulturze Polskiej Akademii Nauk oraz Wydział Zarządzania i Komunikacji Społecznej Uniwersytetu Jagiellońskiego.

Theoria et Historia Scientiarum. Wydawnictwo Naukowe Uniwersytetu Mikołaja Kopernika.

Wróblewski, M. 2012. Polityka standardów. Konstruowanie pola obiektywności w diagnostyce psychiatrycznej na przykładzie DSM-III. *Kultura i Edukacja*, 2012/4: 64-87.

Wróblewski, M. 2013. Wyzwanie biomedycyzacji. Socjologia medycyny oraz socjologia zdrowia i choroby „podszyte” teorią aktora-sieci. *Przegląd Kulturoznawczy*, 2013/1.