

Course: **Cognitive Science Seminar III [Seminarium Kognitywistyczne III]**

Instructor: **Dr. Mateusz Hohol**

Target group: **MSc students in Cognitive Science at the Jagiellonian University**

Semester: **Spring 2020**

ECTS: **5**

Institutional code: **WFz.IF-K2SK3**

Venue: **every Monday, 2:30-4:00 pm, Collegium Broscianum, room 96 (Faculty of Philosophy, Jagiellonian University)**

Abstract: The purpose of the seminar is to discuss recent problems, crucial topics, and challenges of cognitive science. Each meeting is dedicated to one issue introduced in 1-2 recently published paper(s).

Topics & Materials:

Is cognitive science (still) alive? [Czy kognitywistyka (jeszcze) istnieje?]

Núñez, R. E., Allen, M., Gao, R., Miller Rigoli, C., Relaford-Doyle, J., & Semenuks, A. (2019). What happened to cognitive science? *Nature Human Behaviour*, 3(8), 782–791. <https://doi.org/10.1038/s41562-019-0626-2>

The replication crisis: Is cognitive science credible at all? [Kryzys replikacyjny: Czy kognitywistyka jest wiarygodna?]

Miłkowski, M., Hensel, W. M., & Hohol, M. (2018). Replicability or reproducibility? On the replication crisis in computational neuroscience and sharing only relevant detail. *Journal of Computational Neuroscience*, 45(3), 163–172. <https://doi.org/10.1007/s10827-018-0702-z>

New trends in cognitive science: How extended are cognitive mechanisms? [Nowe trendy kognitywistyki: Dokąd rozciągają się mechanizmy poznawcze?]

Miłkowski, M., Clowes, R., Rucińska, Z., Przegalińska, A., Zawidzki, T., Krueger, J., ... Hohol, M. (2018). From wide cognition to mechanisms: A silent revolution. *Frontiers in Psychology*, 9(2393), 1–17. <https://doi.org/10.3389/fpsyg.2018.02393>

Methodological and conceptual challenges of cognitive science: Problems with embodied cognition [Wyzwania metodologiczne i pojęciowe kognitywistyki: Problem z ucieleśnionym poznaniem]

Ostarek, M., & Huettig, F. (2019). Six challenges for embodiment research. *Current Directions in Psychological Science*, 1–7. <https://doi.org/10.1177/0963721419866441>

Wołoszyn, K., & Hohol, M. (2017). Commentary: The poverty of embodied cognition. *Frontiers in Psychology*, 8(845). <https://doi.org/10.3389/fpsyg.2017.00845>

The language-mind relationship revisited [Relacja język-umysł przemyślana na nowo]

Dove, G. (2018). Language as a disruptive technology: abstract concepts, embodiment and the flexible mind. *Philosophical Transactions of the Royal Society B: Biological Sciences*, 373(1752), 20170135–20170139. <https://doi.org/10.1098/rstb.2017.0135>

Free-energy principle and predictive coding: A unified mind theory? [Zasada swobodnej energii i kodowanie predykcyjne: Ostateczna teoria umysłu?]

Badcock, P. B., Friston, K. J., & Ramstead, M. J. D. (2019). The hierarchically mechanistic mind: A free-energy formulation of the human psyche. *Physics of Life Reviews*, 1, 1–18. <https://doi.org/10.1016/j.plrev.2018.10.002>

Are emotions natural kinds? [Czy emocje to rodzaje naturalne?]

Barrett, L. F. (2017). The theory of constructed emotion: an active inference account of interoception and categorization. *Social Cognitive and Affective Neuroscience*, 12(1), 1–23. <https://doi.org/10.1093/scan/nsw154>

A psychiatrist goes to the cognitive scientist: How to classify mental disorders? [Przychodzi psychiatra do kognitywisty: Jak klasyfikować zaburzenia psychiczne?]

Colombo, M., & Heinz, A. (2019). Explanatory integration, computational phenotypes, and dimensional psychiatry: The case of alcohol use disorder. *Theory and Psychology*, 29(5), 697–718. <https://doi.org/10.1177/0959354319867392>

Core cognition: Between blank slate and nativism [Rdzenne poznanie: Między tabula rasa a wrodzonością]

Vallortigara, G., & Salva, O. R. (2017). Toolkits for cognition: From core knowledge to genes. In V. Tucci (Ed.), *Handbook of neurobehavioral genetics and phenotyping* (pp. 229–252). Hoboken, NJ: Wiley Blackwell.

Do only large brains have their minds? [Czy tylko duże mózgi mają umysły?]

Perry, C. J., Barron, A. B., & Chittka, L. (2017). The frontiers of insect cognition. *Current Opinion in Behavioral Sciences*, 16, 111–118. <https://doi.org/10.1016/j.cobeha.2017.05.011>

Barron, A. B., & Klein, C. (2016). What insects can tell us about the origins of consciousness. *Proceedings of the National Academy of Sciences*, 201520084–201520089. <https://doi.org/10.1073/pnas.1520084113>

Social engagement of cognitive science [Kognitywistyka społecznie zaangażowana]

Aron, A. R. (2019). The Climate crisis needs attention from cognitive scientists. *Trends in Cognitive Sciences*, 23(11), 903–906. <https://doi.org/10.1016/j.tics.2019.08.001>

Miton, H., & Mercier, H. (2015). Cognitive obstacles to pro-vaccination beliefs. *Trends in Cognitive Sciences*, 19(11), 633–636. <https://doi.org/10.1016/j.tics.2015.08.007>

Where neuromyths come from and how to dispel them? [Skąd biorą się neuromity i jak je zwalczać?]

Macdonald, K., Germine, L., Anderson, A., Christodoulou, J., Mcgrath, L. M., & Charlton, S. (2017). Dispelling the myth: Training in education or neuroscience decreases but does not eliminate beliefs in neuromyths. *Frontiers in Psychology*, 8(1314), 1–16. <https://doi.org/10.3389/fpsyg.2017.01314>

Roboethics: Moral challenges of AI [Roboetyka, czyli moralne wyzwania sztucznej inteligencji]

Bigman, Y. E., Waytz, A., Alterovitz, R., & Gray, K. (2019). Holding robots responsible: The elements of machine morality. *Trends in Cognitive Sciences*, 23(5), 365–368. <https://doi.org/10.1016/j.tics.2019.02.008>

Etzioni, A., & Etzioni, O. (2017). Incorporating ethics into artificial intelligence. *Journal of Ethics*, 21(4), 403–418. <https://doi.org/10.1007/s10892-017-9252-2>