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, 14:30-16.00, MS Teams**

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:

1. Organizational meeting [Spotkanie organizacyjne]

2. Is cognitive science (still) alive? #1 [Czy kognitywistyka (jeszcze) istnieje? #1]

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

3. Is cognitive science (still) alive? #2 [Czy kognitywistyka (jeszcze) istnieje? #2]

Gentner, D. (2019). Cognitive science is and should be pluralistic. *Topics in Cognitive Science*, *11*(4), 884–891. https://doi.org/10.1111/tops.12459

Bender, A. (2019). The value of diversity in cognitive science. *Topics in Cognitive Science*, *11*(4), 853–863. https://doi.org/10.1111/tops.12464

4. The replication crisis: Is cognitive science credible at all? #1 [Kryzys replikacyjny: Czy kognitywistyka jest wiarygodna? #1]

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

5. The replication crisis: Is cognitive science credible at all? #2 [Kryzys replikacyjny: Czy kognitywistyka jest wiarygodna? #2]

Poldrack, R. A., Baker, C. I., Durnez, J., Gorgolewski, K. J., Matthews, P. M., Munafò, M. R., Nichols, T. E., Poline, J. B., Vul, E., & Yarkoni, T. (2017). Scanning the horizon: Towards transparent and reproducible neuroimaging research. *Nature Reviews Neuroscience*, *18*(2), 115–126. https://doi.org/10.1038/nrn.2016.167

6. New trends in cognitive science: How 'wide' are cognitive mechanisms? [Nowe trendy kognitywistyki: Jak 'szerokie' są mechanizmy poznawcze?]

Miłkowski, M., Clowes, R.W., Rucińska, Z., Przegalińska, A., Zawidzki, T., Gies, A., Krueger, J., McGann, M., Afeltowicz, Ł., Wachowski, W.M., Stjernberg, F., Loughlin, V., 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

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

Ostarek, M., & Bottini, R. (2021). Towards strong inference in research on embodiment–possibilities and limitations of causal paradigms. *Journal of Cognition*, *4*(1), 1–21. https://doi.org/10.5334/joc.139

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

Dove, G., Barca, L., Tummolini, L., Borghi, A. M. (2020). Words have a weight: language as a source of inner grounding and flexibility in abstract concepts. *Psychological Research*. https://doi.org/10.1007/s00426-020-01438-6

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

Litwin, P., & Miłkowski, M. (2020). Unification by fiat: arrested development of predictive processing. *Cognitive Science*, *44*(7), e12867. https://doi.org/10.1111/cogs.12867

10. Unfinished discussion: Are emotions natural kinds? [Niedokończona dyskusja: 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

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

Cuthbert, B. N. (2014). The RDoC framework: facilitating transition from ICD/DSM to dimensional approaches that integrate neuroscience and psychopathology. *World Psychiatry*, *13*(1), 28–35. https://doi.org/10.1002/wps.20087

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

12. Between blank slate and nativism: Core cognition [Między czystą tablicą a wrodzonością: Poznanie rdzenne]

Ritchie, J.B. (2020). What's wrong with the minimal conception of innateness in cognitive science?. *Synthese* (online first). https://doi.org/10.1007/s11229-020-02543-0

Kinzler, K. D., & Spelke, E. S. (2007). Core systems in human cognition. *Progress in Brain Research*, *164*, 257–264. https://doi.org/10.1016/S0079-6123(07)64014-X

13. 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

Simons, M., & Tibbetts, E. (2019). Insects as models for studying the evolution of animal cognition. Current opinion in insect science, *34*, 117–122. https://doi.org/10.1016/j.cois.2019.05.009

14. The prevalence of cognitive effects in experimental tasks at the individual level [Rozpowszechnienie efektów poznawczych w zadaniach eksperymentalnych na pozimie indywidualnym]

Rouder, J. N., & Haaf, J. M. (2018). Power, dominance, and constraint: A note on the appeal of different design traditions. *Advances in Methods and Practices in Psychological Science*, *1*(1), 19–26. https://doi.org/10.1177/2515245917745058

Rouder, J. N., & Haaf, J. (2020). Are there reliable qualitative individual difference in cognition? *PsyArxiv Preprints*. https://doi.org/10.31234/osf.io/3ezmw

15. Social engagement of cognitive science [Kognitywistyka społecznie zaangażowana]

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

Berenbaum, M. R. (2021). On COVID-19, cognitive bias, and open access. *Proceedings of the National Academy of Sciences*, *118*(2), https://doi.org/10.1073/pnas.2026319118