

## Summary of Michał Piksa's PhD Dissertation: Psychological, cognitive, and pharmacological correlates of susceptibility to (mis)information in humans

In the digital age, disinformation has become a global threat, influencing political, health, and social decisions. The aim of this doctoral dissertation was to explore the mechanisms underlying susceptibility to misinformation. I focused on misinformation related to the Covid-19 pandemic, which provided an ideal context for analyzing this phenomenon. In collaboration with the University of Oslo, I also developed a Disinformation Susceptibility Scale, utilizing headlines styled as Facebook posts.

In the first study, included in this dissertation, and published in *Frontiers in Psychiatry* (2023), I analyzed the impact of verifiable truthfulness, alignment with recipients' beliefs, and presentation style on users' assessment of veracity, and behavioral engagement with an information. The results indicated that while truthfulness was crucial for the veracity rating, the alignment with recipients' beliefs had the strongest influence on their willingness to share the content.

The second study, included in this dissertation, also published in *Frontiers in Psychiatry* (2022), aimed to identify individual differences in cognitive processes and personality traits that influence susceptibility to misinformation. For this, I distinguished four phenotypes of susceptibility to (mis)information: doubters,

consumers, knowers, and duffers, each differing in cognitive processes and personality traits such as anxiety, narcissism, and sensitivity to reinforcement.

In the third study, published in ACS Chemical Neuroscience (2024), I examined the impact of sertraline, an antidepressant, on susceptibility to misinformation.

The obtained results suggest that individuals taking sertraline are more likely to share information regardless of its truthfulness, indicating a non-specific influence of serotonin on information processing.

In summary, the presented studies reveal the complex mechanisms of susceptibility to misinformation, combining psychological, cognitive, and medical perspectives.

The results lay a foundation for further research into effective methods of countering misinformation and understanding its role in a psychiatric context.