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ZOMBIE HYPOTHESES IN SCIENCE

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Existing models of scientific inquiry have pointed to different ways in which industry funding can disrupt scientific consensus formation. Weatherall et al. (2020) showed that the so-called tobacco strategy (Oreskes and Conway 2011), consisting of selective reporting of scientific results and the production of biased research, can cause policymakers to diverge from the scientific consensus (see also Schöppl 2025). Similarly, Holman and Bruner (2017) and Pinto and Pinto (2023) showed that selective funding of scientists who independently produce industry-favorable results can prevent the community from converging on the correct hypothesis. These studies explore situations in which scientists either follow the evidence to the wrong conclusion or converge but fail to communicate their findings properly.

In this paper, we investigate another potential negative effect of industry bias: situations in which scientists fail to reach consensus due to the emergence of “zombie hypotheses.” Zombie hypotheses are theories and ideas that scientists continue to pursue despite their lack of epistemic support. We first provide a typology of different types of zombie hypotheses and present case studies from different fields of science. Then we develop a novel agent-based model to explore whether industry-sponsored research can drive the formation of zombie hypotheses, and if so, under what conditions?



Martin Justin is a PhD student of philosophy at the University of Maribor, Slovenia. His research interests are in philosophy of science and epistemology. Currently, he is working on higher-order evidence and using computer simulations to study science. His research has been published in *The British Journal for the Philosophy of Science*, *Episteme*, and *Synthese*. Additionally, he acts as an editorial assistant at the journal *Acta Analytica* (Springer).

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