

Peer Review

Review of: "Publishing Test-Ready Hypotheses When Experiments Are Out of Reach"

Willem Halffman¹

1. Radboud University of Nijmegen, Netherlands

The paper presents a scheme for publishing justified and elaborated hypotheses before they are experimentally tested. The rationale is that, in this way, researchers who have the idea but lack the means to test it, or patent it, could publish the idea to the benefit of all, while receiving credit for the contribution.

The paper presents a string of strong arguments for why such publications could be a good practice. However, I believe the paper suffers from a series of fatal flaws.

As an idea, the paper is almost self-exemplary, as the paper itself presents an idea without being able to test it – although in this case not a very specific hypothesis. That is: the paper presents principles for the publication of testable hypotheses, without being able to test these ideas in the practices of one or several journals. However, in the principles it proposes, the paper articulates that such papers should investigate and present “near-neighbors”: related ideas from the literature. Suggestions for the publication of elements of papers, including hypotheses (but also methods, data, analyses), have already been made and are in fact already being tried out (see, for example, researchequals.com). In other words, the paper here does not follow its own advice. The paper only presents a brief discussion of the closely related registered reports, but these are so similar that registered reports could already simply be used for this idea and, where planned research is not executed for whatever reason, they already are.

Second, the paper presents examples of hypotheses that have been published in the literature already, including some of the author’s own work. It would appear that there is already a practice going on here, provided the hypothesis is found to be of sufficient interest by the publishing journal.

Third, the paper does not specify a research field but presents this as a model for any research field that tests hypotheses (although there is a suggestion that it pertains to experimental research and the use of the biomedicine-specific term “translation” suggests a more specific focus). This generalisation is problematic in light of the enormous diversity of scientific practices in research fields. For example, in mathematics, the publication of hypotheses or even conjectures is not uncommon and can drive new waves of research. In other research fields, publishing hypotheses is part of theoretical work, publishable in and of itself and highly regarded, such as in theoretical physics. Issues of patenting, recognition for contributions, publication practices, and available alternative publication/communication platforms all vary wildly between research fields.

Fourth, the inclusion of LLMs in the argument as “probabilistic, imperfect experts” opens a side argument about language models as more than just predictors of the next word that is not essential for this proposal, that is highly debated, and that is distracting from the main argument.

In sum, I am afraid the paper is now a schematic that is too disconnected from actual publication practices, although it might be a relevant proposal for a journal in a medical field.

Declarations

Potential competing interests: No potential competing interests to declare.