

Review of: "Facilitating Constructive Criticism of Established Scientific Paradigms"

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Potential competing interests: No potential competing interests to declare.

Facilitating Constructive Criticism of Established Scientific Paradigms

The topics of this paper are interesting, but I suggest improving the structure and content to better explain the implications for scientific development.

The abstract has to clarify the goal, epistemological stance, and implications for science and research policy for scientific development.

The introduction has to better clarify the research questions of this study and provide more theoretical background about scientific development and the role of orthodoxies in science. After that, the authors can focus on the topics of this study to provide a correct analysis for fruitful discussion (See suggested readings).

In Section 2, the author writes "scientific innovation," but this is not correct because science advances with discoveries, new theories, and inventions; innovation is mainly directed to applications. The probability of discovery and acceptance depends on the scientific field and institution...(see suggested paper). So, clarify these terms and the theoretical background.

The epistemological stance of this study can be clarified with a flow chart.

The role of Figure 1 is not clear...I suggest an alternative figure with bar graphs showing rejected and accepted articles, considering the number of accepted and rejected papers rather than citations...data available in many journals...

A case point is better if called a case study.

If this "Peer review for extraordinary science" is the proposed approach, it has to be well justified...in any case, how this "Well-Founded Extraordinary Science" supports science advance is not clear compared to blind review...the role of orthodoxies has to be clarified...

In the discussion, first, the authors have to synthesize the main results in a simple table to be clear for readers and then show what this study adds compared to other studies.

The conclusion has to be inserted as a section. The conclusion has not to be a summary, but the authors have to focus on the manifold limitations of this study and provide implications for science policy, showing that science advances and new

theories are affected by manifold factors, such as funding, institution, leadership of a nation, reputation of scholars, and other aspects. See the suggested paper on Nobels.

Overall, then, the paper is interesting, but the structure and content can be improved. The theoretical framework is weak, and some results create confusion...the structure of the paper has to be improved; the study design, discussion, and presentation of results have to be clarified.

Suggested readings of relevant papers to improve the theoretical framework of the study and discussion.

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