Review of: "Theory of Innovation Failure and Application in Aerospace Missions"

Potential competing interests: No potential competing interests to declare.

Summarizing successful cases is a common approach in many studies on innovation management. In this paper, the author puts forth the "Theory of Innovation Failure", which holds significant importance for the field of innovation management, particularly with regards to sustaining disruptive technological innovations. Research often deviates from established pathways, leading to a greater likelihood of failure. By embracing the "Theory of Innovation Failure", funders can develop a more tolerant attitude towards failure, ultimately improving their ability to innovate.

The author employs mathematical sets to express the relationship between various concepts with precision, facilitating precise policy implementation. Additionally, the author provides a detailed classification of various failure scenarios, aiding in accurate identification and resolution of failures. Furthermore, the author delves deeply into the concepts of faults, errors, and failures, examining their root causes. For instance, the scarcity of scientific, technical, and physical resources can lead to faults. By considering such innovative elements, the author's work will advance the field of innovation management.

However, the paper still faces some challenges.

Firstly, the case studies presented in the article primarily focus on the implementation of "big science and engineering," such as the Apollo program. However, innovation encompasses both self-improving technology and technology driven by science. Therefore, the scope of the paper may be limited in this regard.

Secondly, it would be beneficial for the author to classify different types of innovation and the failures they commonly encounter, as this would enhance the practicality of the paper.

Furthermore, Figure 1 appears to be incongruous with the text. The text outlines a causal relationship of fault->error->failure, whereas Figure 1 depicts an inclusion relationship.

Additionally, sections 2a, 2b, 2c, and 2d lack clear explanations in the text.