

Torn between higher cost pressure and better science: Does this spell an end for ECRs?

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Scientific research incurs various costs, including professional fees, expenses, field schedules, and database subscription fees. It also involves other financial barriers during the publication of scientific work, including editing services, publication fees, and open access fees. Costly scientific work and its publication and declining funding rates worldwide make it not easily affordable for scientists, especially those from low-resource contexts [1]. Meanwhile, transition countries like Vietnam still need to rely on education and science as essential means for a better future. Subsequently, to attract world-class experts to realize the national development goals, an agenda always results in a bigger spending plan [2]. Despite priceless achievements in science, Vuong [2] also reported that the scientific enterprise, at times, is attacked by politicians and taxpayers. While the rationale behind the attack on wasteful science remains questionable, this undoubtedly leads to further cost-cutting for science. This poses a question:

Torn between higher cost pressure and better scientific contributions, is this the end of the world for scientists?

Science has always been attacked. For example, Galileo's discoveries with the telescope led to the acceptance of the Copernican heliocentric system but also an inquisition process against him; or Alan Turing was chemically castrated after admitting to homosexual acts in the 1950s, you name it. Despite it all, science lived past the pain and grew remarkably.

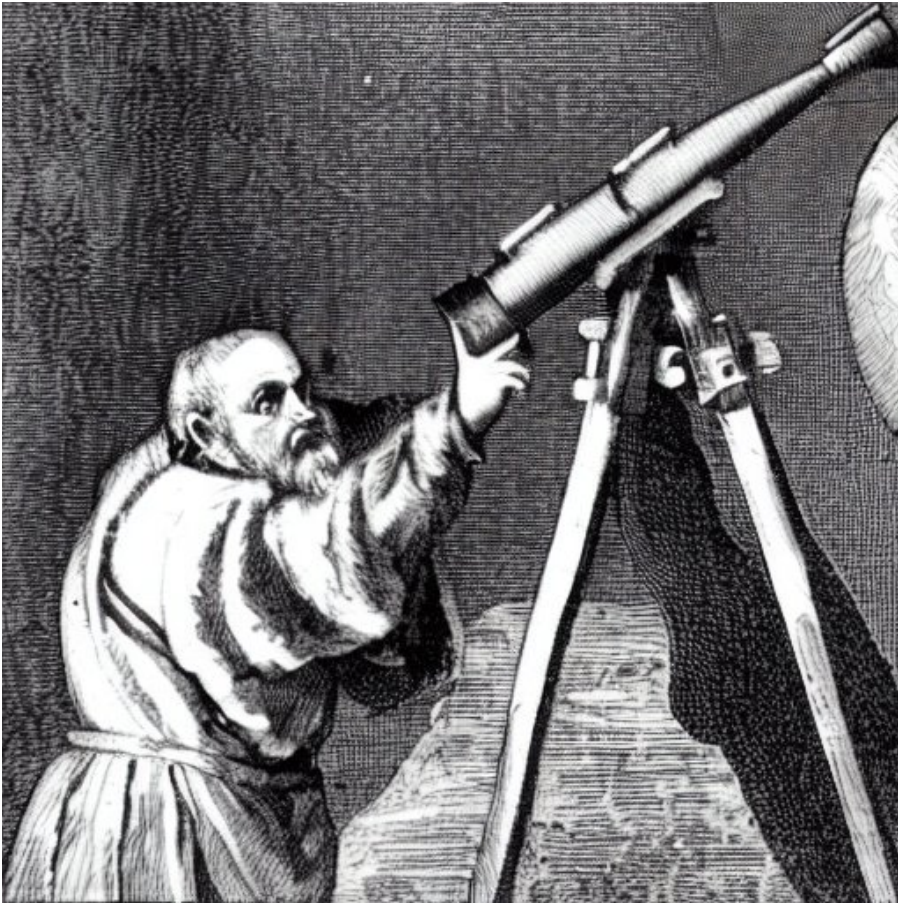


Illustration: “Galileo’s discoveries with the telescope” generated by Stable Diffusion (<https://stablediffusionweb.com/>)

As long as the costs are concerned, Vuong [3] noted that researchers can utilize extant datasets because various prestigious databases consisting of reliable data repositories such as Harvard Dataverse, Open Science Framework, Mendeley, UK Data Archive, depositing data for public use and replication are now in place for public use. Scientific Data goes even further to the idea of removing restrictions on the use of open data for commercial purposes by advocating the practice of generating economic value through commercial enterprise and showcasing the potential benefit for society and the economy. This, however, is not sufficient as early career researchers (ECRs) and researchers from less developed countries are deprived of guidance and a good philosophy before they embark on their bumpy journey. A hallmark example of solving the aforementioned dilemma is the establishment of the SM3D Portal, which aims to provide a platform to support ECRs and researchers in low-resource contexts through on-the-job coaching activities [4]. Less than a year after its birth, the Portal assisted more than 70 researchers and achieved significant publications in the highest-ranked articles recognized by world-class journal ranking indicators such as SCImago, CiteScore, and JCR (e.g., [5]).

While it is too soon for the SM3D Portal’s Team to rest on laurels, the excellent initial outcomes indicate a proper approach for scientists with limited resources to catch up with

powerful peers in the fiercely competitive academia. This inspiring initiative reminds us of the David and Goliath story, an iconic and celebrated tale from the Old Testament of how the plucky underdog could defeat someone much bigger than him against the odds. This also possibly sows a hope that “underdogs” in the scientific community one day will have their chance to thrive in the academic world.

References

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