

## The rhetoric of preprints

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### The rhetoric of research

We were intrigued when we first read a piece from Professor Richard Horton published in 1995 at BMJ and entitled 'The rhetoric of research,' as he presents a shocking question at the beginning of his argument: 'Should authors own their own words?'.<sup>1</sup> The question sounded very unusual to us as it contradicts common sense that authors are free to publish their own research.

Professor Horton's text starts with a description of his disagreement with the late Professor Douglas Altman. Horton contradicted Altman with the opinion that peer-review is not an extension to the editorial process but rather a valuable tool to underpin important issues that, when solved, would improve the final manuscript.

What follows is a depth line of argument that authors are persuasive in scientific manuscripts

and that peer-review is ultimately a form to avoid undesirable distortions to what the data can tell us and what we should conclude.

It is interesting to note that it was the first time the term spin was defined under the context in which is now widespread: 'the conscious and unconscious tricks of authorial rhetoric'.<sup>1,2</sup> This piece was undoubtedly a base for the methodological research that aims to study, categorize, and avoid spin bias.

In conclusion, Professor Horton is surgical with his analogy that a scientific paper is not an atlas with many paths to authors' terrain mapped. Instead, it is a carved path by the authors' intentions. This final message is a pungent link to the initial question of if authors should have the freedom to write the manuscript in their own words.

Although Horton does not give a final verdict to the debate he raised, the feeling we were left with is that the editorial process itself would not be enough to avoid spin and that peer-reviewers could, yes, limit authors about the way research is reported in the benefit of science.

## Why do we need preprints?

The discussion around the validity of preprints is not new. Early references, including one by Professor Horton himself<sup>3</sup>, argue that medical journals should consider preprints (or eprints as they were also called).<sup>3,4</sup>

Although preprints databases are very diffused in other scientific areas, health researchers and journals were always suspicious about making their research data available before publication. A movement towards open science and against editorial delays and strict rules are the main reasons preprints have grown in popularity in the last years.

It was, undoubtedly, the COVID-19 pandemic that has enormously contributed to an explosion in the numbers of health-related preprints.<sup>5,6</sup> The urge to make fast decisions also created a need in the community to do fast research. To this date, over 12.000 entries have been registered in the combined COVID-19 database from medRxiv and bioRxiv.<sup>5</sup>

It is clear now that the noble intention of open science and collaboration in the use of preprints databases is not free of side effects.<sup>7</sup> There is a growing 'abuse' of preprints databases with redundant, low quality, and even unethical manuscripts.

Databases of preprints are now partially a graveyard of forever unpublished and not peer-reviewed pieces translated as scientific evidence to the general public. That cannot be seen with anything less than a complete distortion of the initial purpose of preprints, and the harmful impact of this abuse in health research is yet to be in-depth analyzed.

## The rhetoric of preprints

Preprints database enables a level of scientific freedom never experienced before in health research. Virtually all written scientific pieces will be publicly available very soon after the submission to the database.

Horton's disagreement with Altman of the role of peer-review is amplified with the recent 'abuse' of preprints databases. Not only is peer-review not a part of preprints, but even the editorial process is minimized or null. Authors are free to present their analysis and conclusions as they wish, and we cannot avoid asking how much spin this freedom is introducing in health research.

The long and often extenuating peer-review process is, by far, not an ideal way to minimize spin bias in health research. Still, it is the only existing barrier before the manuscript is published.

## Conclusions

We will follow Professor Horton's path in our conclusions. In the 1995 piece, he states that it is worthy of continuing the debate around the question 'should authors own their own words?'. He leaves in the open the response if editorial or peer-review should limit the scientific freedom to reduce spin, but he gives a piece of great advice: 'the reader should be equipped with tools to decipher the often unconsciously encoded intentions of the author.'

We believe that the role of preprints in health research still needs to be debated and that the relation of journals and preprints databases should be revisited. However, we must encourage the readers to appraise scientific manuscripts, especially if they were not peer revised.

Even if we found a perfect balance in peer-review to minimize the influence of rhetoric on health research, we must acknowledge that in the end, the best is to give readers tools to read beyond the authors' intentions.

## Author contributions

Pacheco RL, Riera R participated in the conceptualization of the paper. Pacheco RL and Martimbianco ALC were responsible for writing. Riera R was responsible for review and editing. All authors approved the final version.

## Competing interests

No financial, legal, or political competing interests with third parties (government, commercial, private foundation, etc.) were disclosed for any aspect of the submitted work (including but not limited to grants, data monitoring board, study design, manuscript preparation, statistical analysis, etc.).

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