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Editorial

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Predatory and unscientific practices in scientific publication

Práticas predatórias e anticientíficas em publicação científica

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Predatory journals are currently considered to be those who incessantly and insistently send e-mails aimed to lure potential authors into submitting papers, publish content indiscriminately only by paying publication fees and without guarantees of an in-depth peer review. And, perhaps worst of all, they retain the copyright of content submitted through deceits and scams unfolded in the virtual environment. They usually have titles similar to those of famous journals. This is the common perception among scientists about predatory journals and a checklist has been developed to make these journals easier to identify, the ThinkCheckSubmit[1].

As of January 2017, a list of predatory journals compiled by Colorado-based librarian Jeffrey Beall had been available online. The list has since then been abruptly taken offline. Lists are one of many possible tools for tracking and monitoring predatory journals. But, in themselves, they are insufficient: Beall's list was biased against the open access movement for example[2] and the librarian even stigmatized the Scientific Electronic Library Online - SciELO, deploying the slur “slum” to the refer to the collection[3,4]. If authors can fall for electronic scams of predatory journals, then there may be no guile. When in doubt, the authors themselves should not be penalized or negatively evaluated. What if some of those papers preyed upon and captured by the predatory journals are actually sound science?

One way out of this stalemate is to recommend papers to be evaluated one by one before it could be decided upon their quality when they are found in a journal of an overall dubious quality. At least, we should give the authors the benefit of the doubt. The opposite of this is a fallacy: not all apples are red although some of them are red indeed. Or, in other words, it is an attack on logic to try to theorize about a genus from a couple of species alone.

The lists in some way exempt authors, reviewers, editors, and readers from taking responsibility for actively scrutinizing scientific literature, even a paper that has already been peer reviewed in reputable journals. We have evidence, for example, that reputable and well-ranked journals in QUALIS CAPES may not compel their authors to necessarily adopt in their reports the best research transparency practices, namely the EQUATOR Network checklists[5]. So why should we talk about predatory journals when perhaps we should list and discuss predatory or unscientific practices? It sounds only fair. There are no easy or simple solutions in science and we certainly cannot or should rely on easy solutions such as lists.

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Quality takes effort.

Perhaps the community needs to discuss instead the conceptualization of predatory and unscientific practices in scientific publication. We already know that the best way to bring balance to any endeavor in which symbolic capital is prone to accumulating is to increase transparency science is no exception: the more transparency, the easier it is to identify misguided and / or dishonest practices[6-7].

Some studies have shed light on the problem of peer review bias and the cumulative effect this has on the scientific record available in the literature[8-9]. However, peer review remains the best tool - pre or post publication - that we have available at the moment to maintain the quality of scientific knowledge materialized in publications. What cannot be assumed is that a published article is correct and true in absolute terms, implying it has been thoroughly verified. Rarely is knowledge absolutely correct, true and exhaustively verified because knowledge exists in time[10] and, since scientific knowledge also manifests itself in time, it must be under scrutiny indefinitely or until consensus is established[11]. A published paper is not a consensus, it is just a published piece of knowledge conceivably evaluated by three specialists and two to four editors, who are they themselves prone to cognitive biases, especially the bias of thinking themselves without bias - overestimating or underestimating their own knowledge about material reality[12].

Where there are people, there are biases because cognition itself is biased. But what is normal needs not to be the norm. And the scientific community is trained to observe and recognize biases and try to prove exhaustively that their hypotheses are wrong[11]. And the way to counterfeit the effects of biases is to declare them whenever they are perceived: transparency is the best way to perfect the scientific literature[6-7]. The more transparency, the more autonomy the subject who reads and consumes the published content has to evaluate it. It is the function of the scientific community, thus, to restore the autonomy of the reader. Science is by nature democratic[10,13] and in democracy the collective that is impacted is the collective that makes the choices and inspires the norms.

So journals, reviewers, editors may manifest biases and this may result in predatory practices. But what about the authors? Can authors also behave in a predatory manner? We have evidence that yes and not only in the production of flawed experiments and original articles[14], which is the most famous set of predatory practices. In addition to more traditional bad practices such as data fabrication and manipulation, plagiarism and self-plagiarism, lack of transparency in conflict of interest disclosure, etc., we have been noticing the dawn of a new type of predatory practice by authors: a group of authors submits an original article to a journal rated lower in the QUALIS CAPES institutional evaluation, and upon receiving extensive and in-depth reviews, the group does not return to the journal with the corrected version. The article subsequently emerges published in another journal. Or, when checking the text in the anti-plagiarism software, our team realizes that the article was published elsewhere previously but not so long ago (we assume from this that it had been published the journal that evaluated the manuscript first).

The problem with duplicate submission is that, in addition to "mucking" the scientific record making it difficult to assign priority to the journal that published the paper, it disrupts citation counting software and algorithms, harming not only the journals but also the authors themselves, after all, our reward system favors the quantity of citations[11,15] as intrinsic merit of the scientific work and not of the journal. Duplicate publication in more than one Uniform Resource Locator (URL) generates stray citations[16].

We suspect that there could be two groups of authors involved in those misdeeds: authors without proper training in publication ethics and authors who deliberately make duplicate submissions because they are under pressure to innovate and publish positive findings, after all publish-or-perish culture also takes its toll in the quality of the scientific output[17].

It is plausible that the undergraduate or graduate student of a research group responsible for submitting a study report could have not been properly advised that it is necessary to submit the article for review to a journal at a time.

And there is the other group that deliberately tests their paper in less prestigious journals and then publishes it in more prestigious journals, that is a higher QUALIS CAPES. Again, we have the problem of academic publish-or-perish culture impacting the quality of content and putting unnecessary pressure on the actors involved in scientific labor[17].

It is also a serious ethical issue and not yet investigated or covered by the literature on scientific publication. Just as we have no easy or simple ways and solutions to problems related to cognitive biases, we also have no easy explanations for deviations in the scientific community. It is up to investigation and, only later, propositions. For now, we have transparency in the editorial flow as a general remedy. Where transparency is greater, corruption is more difficult.

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