Against predatory publishing: the IAP report results

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1.Introduction

The problem of predatory academic publishing is that many journals and conferences pretend to have scientific standards but, in reality, have only financial motivations. They will publish anything as long as the author pays for it. Too many researchers, under the pressure of "publish or perish," have published works in predatory journals. This is very damaging to their reputation and their research associates.

Weakening the authority of academic speech is a severe social problem. Nowadays, it is common in social controversies to see vested interests basing their arguments on so-called 'scientific articles' that were not seriously peer-reviewed. The cases of climate change denial and hydroxychloroquine for COVID-19 come to mind.

It is more complex and harder to distinguish between legitimate and predatory academic publishing. While some publishing houses specialize in predatory practices, others live in a grey zone. MDPI and Frontier Media, for example, do maintain a few serious journals in front of many much less respectable outlets especially. Wiley, generally considered a serious publisher, has just bought Hidawi - a company with more questionable integrity.

In [1], we pointed out one individual measure against predatory publishing: authors should never pay to be published. While simple and efficient, there are more systemic solutions than relying on the personal integrity of the researcher. This text discusses why and how the scientific community fights against predatory journals, based on the recently published InterAcademy Partnership's international study [2].

2.Predatory journals and conferences' proliferation

Peer review is the foundation of academic publishing and evaluation, both essential to the scientific process. But standard academic publishing models, research evaluation, and peer-review systems have never been completely safe from exploitation and fraud. It hurts the quality of research and makes the scholarly communication system vulnerable to overt commercial

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predation. Even though the digitization of scholarly communication and the ongoing development of open-access models have changed many parts of science and opened up exciting new ways to access, spread, and create knowledge, they have also made this predation worse in some ways. Changing research communication, evaluation, peer review, university rankings, metrics, and business models have made it easier for predatory academic practices to take root and grow.

Predatory conferences and predatory journals are more interested in making money than in Truth. They ask researchers for articles and abstracts by taking advantage of the pressure they are under to write and present their work. These practices include, but are not limited to, fast pay-to-publish or pay-to-present models without rigorous (or even any) peer review, fake editorial boards that falsely list respected scientists, fraudulent impact factors or metrics, journal and conference titles that sound like those of real ones, paid review articles that promote fake science, and aggressive spam invitations to solicit articles and abstracts, even outside of a conference.

The COVID-19 crisis may have helped these predatory practices proliferate, as low-quality research and shady players took advantage of the confusion and sense of urgency caused by the pandemic and as new norms for managing, communicating, and using research played out.

Predatory behaviors are on the rise. They are growing more sophisticated, making it more challenging to detect, track, and monitor predatory publications and conferences and confidently separate them from legitimate, underfunded, low-quality ones. The difference between predatory and trustworthy outlets is fading away (mainly because the former are infiltrating the latter), which makes attempts to stop them much more difficult.

Binary "blocklists/safelists" that try to separate good practices from bad ones are too simple nowadays. They risk rejecting serious but minor journals and conferences while overlooking problematic practices in already well-established editors. And the picture is not black and white. The international consensus definition of predatory practices recognizes shades of grey [3].

Journals range goes from Fraudulent to Serious, with Low-Quality in between. The worst scammers exhibit outright lies and dishonest behavior, lack editorial control, skip peer review, and fraudulently use of names of reputable publications, organizations, or researchers. But even well-established, recognized venues can have borderline dubious and unethical behaviors. One example is creating a second layer of journals that publish rejected works in exchange for money. Such lighter shades of grey can be more challenging to spot, mainly since most publications and conferences (whether legitimate or predatory) operate behind closed doors. Moreover, academic journals and conference can change posture quickly, from a year to the next.

Many stakeholders may have underestimated the threat of predatory journals and conferences because they see them as a problem of young, inexperienced scientists or those in less developed

countries. Dismissive attitudes among more established research and publishing communities may have helped them grow without meaning to.

Recent research shows that there are more than 15,500 predatory journals according to Cabells Predatory Report in 2022 [2, p. 12]. While there isn't as much statistics on predatory conferences, they may be more common than real ones. Predatory academic practices used to happen mainly in Africa and Asia, but now they happen worldwide, even in the United States and Europe. Reputable institutions and top academics have also been scammed or are knowingly involved in these operations.

If predatory practices continue to expand, they will pose severe risks to the scholarly community, academic publishing, and public policy.

3.A global survey of researchers

To record the perspectives of scholars and researchers on predatory journals and conferences, the IAP conducted a unique, open, and inclusive survey of the global research community in 2021. The questionnaire was designed, in seven languages, to gauge awareness, understanding, and experience of predatory journals.

Results demonstrate that these practices have permeated all parts of the world across multiple disciplines and career stages. Over 80% of the 1,800+ respondents from 112 countries who voluntarily participated indicated that predatory journals and conferences are already a severe problem or on the rise in their country, with the highest level of concern expressed by those in low- and middle-income countries: researchers in South Asia, Latin America & the Caribbean and Sub-Saharan Africa significantly more so than those in the EU.

Respondents worldwide are concerned that, if left unchallenged, predatory academic practices risk infiltrating and undermining the research enterprise, fueling misinformation with potentially damaging public policy consequences and widening the research gap between low-income and high-income countries in an already biased system heavily weighted towards high-income countries. Respondents cited a lack of awareness as the main reason for falling prey to predatory practices, highlighting an urgent need for awareness-raising campaigns, training, and mentorship resources to protect researchers at all stages of their careers.

There was also evidence of individual and institutional collusion: researchers knowingly publishing in predatory journals and attending predatory conferences; institutional complacency or acceptance of predatory behavior; and leading institutions hosting predatory meetings to generate income while conferring a veneer of credibility on predatory operators. 14% of survey respondents admitted to publishing in predatory journals or attending predatory conferences, primarily because they were unaware at the time or to advance their careers. In comparison, 10% were

unsure, demonstrating how difficult it can be to distinguish predatory practices. Others, despite the anonymity of the question, may have been hesitant to self-report this activity for fear of repercussions.

Extrapolated, 14% of the world's researchers equates to more than 1.2 million researchers. This represents billions of dollars in research budget wasted. Some commentators argue that the economic waste of predatory publishing is a drop in the bucket when compared to research waste caused by poor design or procurement, but this overlooks a critical concern: the loss of public trust in research and research integrity if predatory practices and flawed and misleading research are allowed to flourish. Recognizing this worry, more than 90% of poll respondents said predatory publishing must be stopped.

4. Tactical tools to combat predatory practices

Interventions designed to mitigate predatory journals and conferences are numerous and diverse. They serve to (i) expose or stigmatize these practices with block/safe watchlists[2]; (ii) train researchers so they can avoid these practices and minimize their own risk with guides, checklists[3] and training programs; (iii) apply regulations to create disincentives with national and institutional policies; and (iv) assist all journals and (to a lesser extent) conferences, including low-quality and local ones that may show some predatory characteristics but are well-intentioned, by setting principles of transparency and editorial best practice. While examples are numerous, evidence of these interventions' impact is limited. They will likely need further sustenance to keep up with the adaptability and increasing range of tactics predatory outlets use.

Researchers should practice due diligence to minimize the risk of using predatory outlets and not rely exclusively on watchlists. The checklist to help recognize good practices from bad ones is a popular support. Still, they risk disadvantaging less-established journals. And they need freshness to keep up with the dynamic predatory publishing field. The time invested in researching an appropriate journal or conference is only a fraction of the time spent researching and writing the manuscript.

Common survival tips against predatory publishing include:

- The logic is for publishers to pay providers for quality contents, not the other way round.

- Think in quality levels, not in black and white.

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[2] https://beallslist.net/ publishes blocklists for free as an effort for self-organized research communities. https://www2.cabells.com/ provides blocklists and safelists commercially.

[3] Checklist-based evaluation tools include https://thinkchecksubmit.org/, https://app.lib.uliege.be/compass-to-publish/, http://ptc.uquebec.ca/pdci/editeurs-predateurs.

- Get familiar with the standard and most reliable characteristics/traits of predatory journals and conferences discussed in this article. If the journal or conference meets more than two of these, this should ring alarm bells, and they should be avoided.

- Check the claim if a journal claims to be in a reputable index, e.g., Scopus or Web of Science. If it is not valid, avoid the journal.

- Check if DOAJ (Directory of Open Access Journals) references the journal: if it is, the journal is less likely to be problematic because it has been vetted; similarly, if a journal is a member of COPE (Committee on Publication Ethics), where it must follow COPE's publication ethics (COPE Core Practices).

- Be cautious with your institution's list(s) of acceptable and unacceptable journals; it may be outdated. Due diligence implies cross-checks.

- Seek advice from mentor/supervisor/colleagues: if they need to be more informed, encourage them to train up.

- Be suspicious if a journal offers to publish the paper in an unrealistic short time: good peer review requires time.

- Ignore SPAM emails: they will likely be SCAM emails. Wrong scientific domain, flattery, mistakes in one's name, too broad academic coverage, and repeat unsolicited emails are red flags.

Authors should stop knowingly publishing in, or citing, predatory journals or presenting at predatory conferences and wasting time and money on them. Lecturers should decline to act as reviewers for them or sit on their editorial committees. Jury members should assess the journals that candidates and principal investigators have published to impose consequences.

Institutions should support and train lecturers and professors. Supervisors or mentors have a special responsibility to get on top of this issue to help students appropriately. Members of learned societies, academies, or scientists' unions have an active duty to protect the profession's integrity.

All these tools and interventions play their part, especially in raising awareness to mitigate personal risk. But global interventions and those that address systemic issues driving predatory practices and behaviors and their intended and unintended consequence still need to be included.

5.Long-term strategy against the drivers of predatory practices

Little attention has been paid to the drivers of predatory practices. Known predatory publishers undoubtedly exploit the digitization of academic publishing, commercial (or gold) open access, and author-pays models to their advantage. Research evaluation criteria based on quantity, not

quality, will likely continue to fuel predatory practices. Three main drivers of predatory academic journals and conferences which, if addressed, would have a long-term, sustained impact:

a) the increasing monetization and commercialization of the scholarly enterprise, including an academic publishing system whose proprietary and commercial interests may lead to conflict with research integrity, with the author-pays (pay-to-publish, pay-to-present) model being especially prone to abuse by predatory actors;

b) the predominance of quantity-over-quality research evaluation systems, together with the institutional drivers and incentives that shape the behavior of individual academics; and

c) serious challenges and weaknesses in the peer-review system, notably the need for more transparency (whether fully open, anonymized, or hybrid) in the peer-review process and the lack of training, capacity, and recognition of peer reviewers.

The combat against predatory journals and conferences is on these three fronts. The key stakeholders whose influence or action can effect change include researchers, leaders of Higher Education Institutions, science academies, research funders, libraries and indexing services, publishers, and international science governance organizations. Stakeholders can win a global fight against predatory journals and conferences and destroy the drivers, structures, and associated services supporting them.

In response to a), all key stakeholders have a responsibility to promote an open, inclusive, and global discussion on how to transition to more sustainable, less profit-motivated economic models of open-access publishing [1], including devising alternatives to author-pays or pay-to-publish / pay-to-present models to cover the costs associated with academic publishing.

Responding to b) requires admitting that research evaluation systems' publish-or-perish (quantity over quality) nature creates perverse incentives for researchers to use predatory publishing knowingly. Research governance institutions - universities, research funders, and professional and representative bodies, such as academies - are responsible for reforming the research evaluation system so that it is fitter for purpose, building on an already growing momentum of responsible research assessment led by some scholarly organizations and research funders.

As for c), peer review is the research process's least supported and documented area. The double-blind procedures, originally designed to minimize bias in the system through confidentiality, enables predatory practices to go unnoticed and unchallenged. The lack of professional recognition of, and training for, peer-review creates disincentives to serve as a peer reviewer and, as demand exceeds supply, incentives to cut corners and reduce rigor, making the promise of predatory services all the more appealing. Increasing peer-review transparency (whether fully open, anonymized, or hybrid), training, fostering, and rewarding good practice are all required urgently, as is further research on models for its evolution as research outputs diversify.

Some actions can be implemented immediately; others require longer-term, sustained implementation to effect systemic change. All must recognize that knowledge/research production, communication, and governance systems continue to evolve, so space must be made for new, more innovative, and inclusive actors. Most immediately, raising awareness of the threat posed by predatory journals and conferences among the academic communities must be a priority and mandatory broad guidance must be provided to researchers.

6.Conclusions

Awareness and understanding of predatory practices and behaviors could be better, including how to avoid them and the consequences of not doing so; indeed, the economic, policy, research, professional and personal impacts are underplayed in current literature. Further, more than low-quality research finds its way into predatory outlets; quality research can also be lost to them. There is an urgent need to deliver robust training at all levels of scholarship – from graduate students to senior researchers, supervisors, mentors, and librarians – to raise awareness and minimize their risk, vulnerability, and the temptation to use or promote these practices.

Predatory journals and conferences risk becoming ingrained in research culture. Some researchers knowingly use predatory outlets to advance their careers, satisfy timelines or peer pressure, and there are indications that predatory practices are becoming institutionalized to elevate institutional ranking. Institutional good practice, due diligence, and disincentives for repeat offenders should be embedded in all Higher Education Institutions, supported by science funders and science governance organizations, and championed by learned societies and national academies.

7.References

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