THE PREDATORY PARADOX

ETHICS, POLITICS, AND PRACTICES IN CONTEMPORARY SCHOLARLY PUBLISHING

AMY KOERBER, JESSE C. STARKEY,
KARIN ARDON-DRYER, R. GLENN CUMMINS,
LYOMBE EKO, AND KERK F. KEE

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7. Predatory Paradoxes
What Comes Next?

Many years after the demise of Beall's list, predatory publishing practices continue to be a concern for scholars, policymakers, research funders, and the general public (Elliott and others 2022; Linacre and others 2019; Xia 2021). Although most stakeholders agree on the seriousness of the problem, they disagree on how to solve it. The paradoxes we have highlighted throughout this book are at the heart of this complex situation. For example, as we have suggested, it is the same demands and changes to reform scholarly communication, such as the increased need for rapid turnaround from submission to acceptance to publication, that have created a situation in which the publishing practices often referred to as predatory have come to thrive. Along these lines, mainstream commercial journals and publishers have transformed themselves from opponents to beneficiaries of open access, in some cases seeking to dominate the lucrative open access game, and newer generations of scholars are facing challenges never imagined by the senior colleagues who are charged with training them.

In this closing chapter, we highlight some of the ways in which contradictions such as these play out for scholars and other stakeholders in scholarly communication, and we leave readers with some suggestions for moving forward. Our participants' responses, and other forms of research reported throughout this book, leave us with diverse and contradictory understandings of what it means for a journal or publisher to engage in predatory practices. These contradictions arise, in part, from the different positions that stakeholders occupy in the global scholarly publishing enterprise, and stakeholder perspectives, taken collectively, are far from optimistic. However, when considered through

the lens of some insights offered by paradox theory (Smith and Lewis 2011; Waldman and others 2019), we can glean from these perspectives some productive ways forward for those who embrace paradox — both as a means toward individual publishing success and as a step toward sustainability for the scholarly publishing enterprise more broadly.

Paradox Theory

Management scholars Smith and Lewis (2011) define paradox 'as contradictory yet interrelated elements that exist simultaneously and persist over time' (p. 382). They identify two integral components of paradoxes that exist in organizations: 'underlying tensions – that is, elements that seem logical individually but inconsistent and even absurd when juxtaposed', and 'responses that embrace tensions simultaneously' (p. 382).

   The research insights and practical recommendations we have offered in this book resonate with paradox theory in three important ways. Firstly, parallel to paradox theory in management studies, we have suggested that predatory publishing has emerged, in large part, as a response to 'contradictory demands' that are intensifying as 'environments become more global, fast paced, and competitive, and as internal organizational processes become more complex' (Smith and Lewis 2011: 381). Our chapters have highlighted numerous examples of such 'contradictory demands' in the context of scholarly publishing, including demands faced by authors, publishing professionals, and various other stakeholders in academic publishing. Corresponding with Smith and Lewis's observations, such demands are unquestionably intensifying as scholarly publishing becomes 'more global, fast paced, […] competitive, […] and complex' (p. 381).

   Secondly, we have suggested that predatory publishing is a problem that defies one-time solutions. Specifically, as we have demonstrated, resources such as watchlists, safelists, or checklists can serve as useful heuristics for individuals who are fully educated on how to use them and aware of their limitations. However, no single list or set of instructions will ever provide an adequate solution to the complex assemblage of problems that exist beneath the surface of the deceptively simple term 'predatory publishing'. This insight resonates with Smith and Lewis's

(2011) assertion that paradoxes should be understood as 'tensions' that are 'embedded in the process of organizing' (p. 388) and 'persist over time' (p. 382). As such, they emphasize the need for long-term, rather than short-term, solutions: 'purposeful and cyclical responses to paradox over time enable sustainability — peak performance in the present that enables success in the future' (p. 382). Whereas other management theories, such as contingency theory, advise choice among competing demands, paradox theory postulates that the most effective organizations and leaders are those who find ways to embrace contradictions (Smith and Lewis 2011; see also Waldman and others 2019). Smith and Lewis summarize the advantages of paradox-based approaches as follows: 'Although choosing among competing tensions might aid short-term performance, a paradox perspective argues that long-term sustainability requires continuous efforts to meet multiple, divergent demands' (p. 381).

Thirdly, the contradictions that we foreground in this analysis constitute paradoxes that exist on at least two levels: (a) contradictions among different stakeholders in scholarly publishing that arise from their different experiences and locations, and (b) contradictions that exist in the larger system and are revealed through participant comments and other forms of research we have reported in this book. These two sources of contradictions echo Smith and Lewis's (2011) observations about the reasons why paradoxes exist in organizations. As they observe, paradox has been considered, on the one hand, as 'inherent — existing within the system', and on the other hand, as 'socially constructed — created by actors' cognition or rhetoric' (p. 388). They advocate an understanding that acknowledges both qualities: understanding organizational paradox as 'embedded in the process of organizing' but, at the same time, being 'brought into juxtaposition via environmental conditions' (p. 388). Echoing Smith and Lewis, Waldman and others (2019) observe that, in paradox theory, the tensions that exist in organizations involve 'multiple demands that are both contradictory, as well as interdependent' (p. 5).

In sum, although the term predatory publishing is relatively new, the phenomenon it describes must be understood as a set of problems that has many layers, has taken shape over many years, and that we can expect to exist for the foreseeable future. As such, it is a problem that demands long-term, flexible thinking and solutions that engage multiple

stakeholders rather than quick fixes. The next section of this chapter summarizes the insights we have offered throughout the chapters of this book by foregrounding eight distinct but related paradoxes in twenty-first-century scholarly publishing that emerged in our research as reported in this book.

   As demonstrated below, the paradoxes that we highlight can be understood through four categories of paradox that, according to Smith and Lewis (2011), 'represent core activities and elements of organizations' (p. 383). These categories include paradoxes of 'learning (knowledge), belonging (identity/interpersonal relationships), organizing (processes), and performing (goals)' (p. 383). (See Table 7.1).[1] While some of the paradoxes we highlight are squarely located in one of these four categories, others have elements of more than one.

Table 7.1 Categories of Paradox. Used with permission of Academy of Management, from 'Toward a Theory of Paradox: A Dynamic Equilibrium Model of Organizing', Wendy K. Smith and Marianne W. Lewis, *Academy of Management Review*, 36.2, 2011; permission conveyed through Copyright Clearance Center, Inc.

Adapted from Smith and Lewis 2011

Learning-Belonging	Learning	Learning-Organizing
Conflicts between the need for adaptation and change and the desire to retain an ordered sense of self and purpose

(e.g., Fiol 2002; Ibarra 1999; O'Mahony and Bechky 2006) | Efforts to adjust, renew, change, and innovate foster tensions between building upon and destroying the past to create the future

(e.g., March 1991; Senge 1990; Weich and Quinn 1999) | Organizational routines and capabilities seek stability, clarity, focus, and efficiency while also enabling dynamic, flexible, and agile outcomes

(e.g., Eisenhardt and Martin 2000; Teece and Pisano 1994) |

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1   The codebook and complete NVivo file that support this analysis are included in the published dataset that accompanies this chapter: https://doi.org/10.18738/ T8/3RZARP. (See "Codebook STEPP Interviews" and "NVivo file paradox theory".)

Belonging	Belonging-Organizing	Organizing
Identity fosters tensions between the individual and the collective and between competing values, roles, and memberships (e.g., Badaracco Jr 1998; Brewer 1991; Huy 1999; Markus and Kitayama 1991; Pratt and Foreman 2000)	Tensions between the individual and the aggregate, individuality vs. collective action (e.g., Murnighan and Conlon 1991; Smith and Berg 1987) **Learning-Performing** Building capabilities for the future while ensuring success in the present (e.g., Andriopoulos and Lewis 2008; Dweck 2006; Tushman and O'Reilly 1996)	Structuring and leading foster collaboration and competition, empowerment and direction, control and flexibility (e.g., Adler and others 1999; Flynn and Chatman 2001; Ghemawat and Ricart Costa 1993; Lüscher and Lewis 2008; Siggelkow and Levinthal 2003)
Performing-Belonging	**Performing**	**Performing-Organizing**
Clash between identification and goals as actors negotiate individual identities with social and occupational demands (e.g., Dukerich and others 2002; Kreiner and others 2006)	Plurality fosters multiple and competing goals as stakeholders seek divergent organizational success (e.g., Denis and others 2007; Donaldson and Preston 1995; Jarzabkowski and Sillince 2007; Margolis and Walsh 2003)	Interplay between means and ends, employee vs. customer demands, high commitment vs. high performance (e.g., Eisenstat and others 2008; Gittell 2004; Kaplan and Norton 1996)

Paradoxes of Learning

In Smith and Lewis's (2011) scheme, 'learning paradoxes surface as dynamic systems change, renew, and innovate' (p. 383). Three sets of tensions that can be understood as learning paradoxes emerged in our research: (a) tensions between old and new publishing practices, (b) tensions between science as open and science as closed, and (c) tensions between restrictions and opportunities created by open access.

Tensions between Old and New Publishing Practices

Even though principles such as open access and open science are often presented today as big new ideas, our research reminds us that these principles align with what have long been presumed to be the core fundamentals of science. For instance, the scientific method was developed as a means of systematically questioning authority and encouraging a skeptical attitude toward accepted traditional beliefs, rather than acting on blind trust in religious or other sources of authoritative knowledge. This paradox can be explained through participant insights suggesting that a lot of the problems we currently face in scholarly publishing are a product of the immense growth in science and the globalized nature of knowledge production. According to this line of reasoning, our traditional scholarly communication infrastructure was built for a world in which scholarly communities were much smaller, and experts were writing for other experts who all knew each other, so there was an inherent trust and accountability. With the globalization and expansion of the scholarly enterprise, this trust and accountability is no longer automatic, and this is why we need to implement mechanisms such as open science, which paradoxically, is promoted as a 'new' principle but actually brings us back closer to the openness and transparency that was intended at the origins of science. As stated by one participant, 'an open science is an inherent and core commitment to the scientific mission' (P48).[2] Another participant elaborated on this point:

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2   Our Texas Data Repository Dataverse includes a table showing participant demographic information. See https://doi.org/10.18738/T8/QUBMLI ("Participant Occupation and Regional Demographics Table"). All quotations from interviews

Yeah. You want to achieve a situation in which the work you published can be used by other people to build on it. So it's really a question of reproducibility. That's the key thing. Now, what used to happen in the old days, which I can remember, is that if you had a group and you got interested in a piece or area of work in science, you would send one of your post-doctorals around and we all knew each other, of course, in those days, it was a much smaller business, and I'm talking about the '60s and '70s, last century. You'd get permission for one of your staff to work in the lab of the person who had done the paperwork, which you want to build on. This was all the gentlemanly sort of situation.

But at the moment, just to read a paper, it's extremely difficult to understand how they did it, especially now as they tend to cut back on the method section. The method section is much smaller than it used to be. And so you need to have things like open data, but more important, actually, is the process. (P18)

Building on this participant's reasoning, another paradoxical aspect of these 'new' developments in publishing practices is that even though such developments made it possible for predatory publishing to emerge, they could also go a long way toward eliminating the motivations that have led to predatory publishing, if adapted in the right way. For instance, if open science principles were widely adopted to their fullest extent, some have argued, we may abandon the scientific article altogether. As stated by a European publishing professional:

At some point, probably, I expect the article as we know it now won't exist anymore. People will just contribute to some kind of […] Like Wikipedia, I suppose, but something that's a little more robust and scientific, but the same kind of thing, that's just added to by evolving research, discoveries, and contributions from people. (P29)

A communication researcher from Asia referred to a new development known as 'overlay journals', defining these as

[…] journals that are organized either by departments or by groups of interested scholars that exist outside of the traditional publishing space, where there, you can have reviewers and a process for publication in these sorts of things that exists outside of the Elseviers and the Wileys of the world. (P45)

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are reported without correction of grammatical errors or other irregularities. Some quotes were abbreviated using […] to achieve clarity of the original message.

The goal of such alternative publishing formats is for science to become self-correcting. As a result, some have speculated, there would be no incentive to pay anyone to publish your article (see Chapter 2 discussion of Mellor and others 2020). According to this line of reasoning, the publishing formats that we have clung to for so many years — like the expectation of a detailed methods section, but also the natural length constraints of print publishing and the expectation that methods will be reported in a clean, sanitized manner — are the same formats that have led us to the replicability crisis.

An important manifestation of these tensions between old and new publishing practices in the lived realities of our research participants is that senior faculty and leaders in the academy may not be well informed about predatory journals, yet they are the ones charged with training younger scholars. As stated by a publishing professional working in Asia,

> Yeah, people in leadership positions, they don't know about this stuff [...] Most professors, when they become a professor, they don't publish. They stop reading. They just get people to do their work for them. So, they are not very well informed about the current specifics of things. They have to be educated so they can educate [...] If the top is doing something bad, the person, it will only get worse when you go to the lower levels. (P27)

This participant's comment succinctly captures the learning paradox — experienced in participants' lived realities as a tension between old and new publishing practices — that is at the heart of the intense confusion that surrounds predatory publishing in today's academy. As revealed in the next section, this tension between old and new co-exists with other tensions that arise from idealized expectations about science and the way in which science is practiced.

Tensions between Science as Open and Science as Closed

A separate but related paradox that emerged in our analysis is founded in a tension between scholarly research as an endeavor that is expected to be 'open', in many different senses of the word, and the reality that many aspects of science as it is practiced are 'closed', in the sense that audiences are expected to accept scientific findings on blind faith,

trusting that processes such as double-blind peer review are being enacted rigorously and fairly, even though in traditional publishing, these processes are completely obscured from public view. This paradox is illuminated through various comments that participants made regarding open research practices. For example, as a European researcher now working in North American stated,

> Open science is essentially a commitment to accurately and honestly present research findings, and to assure the quality of science, to assure the mission of science. The mission of scientific investigation is that you don't have to believe me. I am not an authority. I cannot say, 'Oh, I'm the big [P48] or whatever, or the big [Interviewer 1]. And because I'm so smart and big and great and influential, you have to believe me.' This is anti-science. Science is about anti-authoritarian. Science is about, 'Show me the data and show me how you got the data. And if I can reproduce it and can repeat it, we come to the same conclusion and make the same true predictions.' (P48)

Along the lines of this participant's comments, it is often suggested that open science is a much-needed correction to the black-box nature of academic publishing. From this perspective, predatory publishers can do what they can because traditional publishers do everything in an opaque manner, so, as an academic community, we are all accustomed to this non-transparent approach, and we have no means to assess whether peer review has been conducted rigorously and fairly from looking at just the published version of an article. As stated by a North American communication or publishing consultant,

> Yeah, but I think you can't stop it. I think there's got to be a community-level responsibility. Publishers certainly play their part. As I've said before, I think not entirely, but to some extent predatory publishers have been able to do what they do because non-predatory publishers are not very transparent. In fact, [they are] often positively opaque about what they do. That allows that opacity to be accepted. (P21)

Building on this participant's observations, this paradox has another dimension as well: even though we idealize peer review as the primary means of validating scientific knowledge, it has a lot of shortcomings when we consider how it is actually implemented. For example, just because an article makes it through peer review does not mean the study can actually be replicated. From this perspective, the entire system that

we use to validate knowledge is one that unfolds primarily behind closed doors, so we cannot really tell if it is happening or not; we just have to trust. And, as noted above, the whole idea of science is that it is supposed to move us away from blind faith and encourage us to be skeptical toward received wisdom. This is the paradox that motivates all the changes that are highlighted in the tensions between old and new that serve as a foundation for the learning paradox. Along these lines, another problem of traditional science that advocates claim can be solved with open science (specifically by preprints, preregistration, in particular) is the publication bias toward publishing only positive results.

On the one hand, we distinguish predatory journals from legitimate journals by saying the legitimate ones conduct peer review, but on the other hand, many participants point out that traditional peer review is not very effective. Furthermore, as we have addressed in a few high-profile examples in this book, even though we tend to focus all our negative attention on predatory journals, high-profile, well-established journals also sometimes publish bad research (see Introduction and Chapter 4 for examples).

As we have suggested, predatory publishers satisfy the desire that multiple stakeholders have expressed for faster scholarly publishing processes. However, at the same time, these publishers exploit the tendency that has long persisted in scholarly communication that the same processes we trust to ensure the quality and validity of scientific knowledge — such as peer review — take place behind closed doors, where audiences and other stakeholders simply have to trust the editors and journals that peer review is being carried out in a rigorous and trustworthy manner. Predatory publishers are able to satisfy this desire for quicker publishing by taking advantage of this long-standing trust in a system that carries out its means of legitimizing scholarly knowledge completely in a black box. If mainstream publishers were in the habit of practicing open peer review in some form (meaning that they would provide publicly available proof to document that peer review was rigorously conducted), predatory publishers would not be able to operate in the way that they do.

Tension between Restrictions and Opportunities Created by Open Access

Another example of a paradox that falls into the learning category is one that emerges in some of our participants' comments expressing mixed feelings about open access publishing. As many participants observed, open access publishing was developed as a means of leveling the playing field by ensuring that everyone, regardless of their financial resources, could have equal access to the research results produced by scholars across the globe. However, even as open access publishing addresses this problem, it creates new inequities, such as the fact that it often shifts the cost of publishing to researchers, and not all individuals or institutions have the funding to cover this cost. As stated by a European communication researcher:

> Yeah, seemingly, open access journals make the science communication more equal, but it is only for the side of the audience, only side of the readers, because we, without financial support and the appropriate resources, we can openly reach the articles. As readers, the market is more open for us, if the open access became mandatory, but as writers, as authors, it gives us more serious burdens. Additional burdens, because it's not likely that we can afford to pay these article processing charges. That's my main problem. (P35)

In addition to geographic disparities, disciplinary disparities also exist, with authors in less well-funded disciplines, particularly social sciences and humanities, less likely to have funding to cover author publication costs than those in well-funded disciplines (STEM). Thus, another important manifestation of learning paradox in the lived realities of our research participants is that open access is meant to level the playing field by expanding access to published research, but it also creates new inequities.

Paradoxes of Performing

In Smith and Lewis's (2011) scheme, 'performing paradoxes stem from the plurality of stakeholders and result in competing strategies or goals' (p. 384). Two examples of performing paradox have emerged in our research: (a) a tension between the need for top-down compliance measures and the expectation of individual responsibility, and (b) a tension between public benefit and profit as motivations for publishing scholarly work.

Tension between the Need for Top-Down Compliance Measures and the Expectation of Individual Responsibility

The whole system of scholarly communication is built around the assumption that people will do the right thing even when no one is watching. As discussed in the previous section, our existing system of scholarly communication places a lot of trust in authors, reviewers, and editors, and rests on the assumption that these individuals will do the right thing, even without any explicit monitoring. Furthermore, although we have a system in place that is supposed to include checks and balances, there is not any oversight or checks and balances on the system as a whole. As expressed by a STEM researcher in North America,

> Well, it's essential, and it isn't talked about as much as it probably should be. And um, it is challenging to you know enforce, I don't want to use the word enforce, but it is challenging to validate or look at you know because so much of the decision is that you make yourself, you know, and like I said, the moral value of honesty is essential for the scientific process to progress. (P08)

In the lived realities of scholars and other stakeholders, this performing paradox is experienced as a tension between the expectation of individual compliance with shared (but often implicit) ethical norms and a desire for regulatory efforts imposed by a top-down authority. Thus, a North American publishing consultant observed, 'I feel that's a difficult one, isn't it because I don't disagree, but I also think the author should be able to publish where they want as well' (P21) in response to a suggestion from the interviewer that funding agencies could possibly play a more active role in regulating predatory journals. As this quotation indicates, it is hard to regulate a phenomenon such as predatory journals because academic freedom suggests that scholars should be free to publish wherever they want.

Tension between Public Benefit and Profit as Motivations for Publishing Scholarship

Another important example of a performing paradox emerges from the tensions between the expectation of scholarly communication to report transparently on all findings — whether they correspond with our

assumptions or not — and the very real pressure that publishers face to 'sell a product' — that is, to publish results that will get audiences excited, will achieve media coverage, and will accrue great numbers of citations.

This is the kind of paradox that is often highlighted in management literature. For example, as noted by Smith and Lewis (2011), it used to be assumed that organizations could be classified as either 'profit' or 'non-profit', but now these lines are becoming blurred as 'for-profit organizations are increasingly attending to social as well as financial outcomes' (p. 396). Although many scholars would like to believe they operate independently from profit motivations, the scholarly enterprise as a whole is sustained by publishing companies that reflect Smith and Lewis's observation about the need for successful organizations to attend to both kinds of outcome.

As for the lived realities of our research participants, these tensions are often evident in participant comments about the political dimensions of scholarly publishing — for example, the idea that 'who you know' can be just as important as the quality of research that a scholar conducts. This is also experienced, for some participants, as a tension between our idealized system of scholarly publication, in which only the best knowledge rises to the top, and the actual system in which sometimes research gets published in a prestigious journal, regardless of its quality, because of relationships, networking, or other forms of political activity. In the words of a European communication researcher, it is 'like the mafia' (P35).

The conflicting goals of scholarly publishing also emerge in participant comments about writing for different audiences, including those outside the academy. Some talk about science journalism, while others talk about textbooks. Some express the opinion that sometimes science journalists 'hype' too much, and when authors seek this kind of hype in publishing their research, it perpetuates a vicious cycle that can cause even the most prestigious journals to publish poor-quality work, as shown in the #arseniclife example in Chapter 4 of this book. A European publishing consultant described a conflict between their desire to make their research results widely available, by publishing open access, and the mandate to publish in a prestigious, high-impact journal, even if it is not open access:

> As a researcher, doing my PhD or working to get tenure or any stage of my academic career, and I saw this when I was working as an academic, I'd finish a piece of research and I understand the significance of it, like a new dinosaur or a new whatever. I have a choice, then, as a researcher to publish that in an open access fully accessible journal or to go through a journal with a high impact factor. For my career and for my university assessment and my chance of getting another grant, it doesn't matter how I feel and what I feel is best for the research. I'm not going to not publish it in *Nature* if it has the chance of getting published in *Nature*. (P23)

Other participants experienced this tension in different ways, such as a tension between their desire to publish in smaller regional journals that would reach local audiences more quickly and the realization that they would need to publish in larger international journals to gain recognition from their evaluators.

Paradoxes of Belonging-Organizing

In Smith and Lewis's (2011) schema, the belonging-organizing paradox emerges when 'belonging and organizing efforts intersect via tensions between the individual and the aggregate' (p. 384). This type of paradox emerged in our analysis as a tension between the responsibility of individual authors to avoid predatory publishing and the responsibility of the scholarly community. For example, when authors continue to cite articles that are published in poor-quality journals, we might hold the larger scholarly community accountable for allowing such journals to exist, but we also need to hold accountable the individual authors who continue to cite such flawed publications. As narrated in Chapter 4, in the case of the Bohannon hoax, authors continued citing this false article even after the DOI was broken and the original article had been replaced with a retraction notice.

In our interview data, we see this tension emerging in the comments of numerous participants who observed that predatory publishing is a direct outcome, or maybe unintended consequence, of the system of evaluation that we have created — a system that continues to exist because the larger community, as well as individuals who hold power within this community, continue to participate in it. As expressed by a North American consultant:

> I've been saying that for so long. First of all, they have to change the reward system. You can't have publication be a decider of tenure because then, and especially publication in certain journals, that's what drives the system. That is the basis of the current system. If universities change that, that would be a seismic change in the industry. It would change everything. (P14)

In participants' discussion of journal impact factor and the commercialization of scholarly research as obstacles to reform of scholarly communication, we see further evidence of this tension between individual and collective responsibility for addressing the problem of predatory publishing, as expressed by a European publishing consultant:

> Oh, no. I think open research and open access is great, and that's what I'd like to see as the future of academic publishing, but until we get rid of this impact-factor-based assessment for academics, especially in STEM subjects, we're never going to see people pushing their research entirely into open access journals. There's always a commercial perspective to this as well. Somebody has to make money. (P23)

As these participant comments emphasize, a large part of scholarly publishing is the desire and need for an individual scholar to become part of a community; this is the aspect of our research data that aligns with both the belonging and organizing paradoxes as outlined by Smith and Lewis (2011). When we join the scholarly conversation, we are hoping to be taken seriously, to make an important contribution to that conversation with our novel research findings. A lot of tensions or contradictions arise as scholars attempt to achieve this task, which is becoming increasingly complex as scholars around the globe strive to join a conversation that is inherently biased against them. For example, as stated by a European communication researcher:

> Maybe at most parts of the developing world or the non-center world, they start to adopt the publish-and-perish paradigm without the quality control. That's why many, many journals can live, because many, many people want to publish, but the established journals are too much competitive. Then, of course, in [my country], for example, there are many institutions, 'Let's just fund our own journal in English, and then we can publish our stuff in this journal and we can make an appearance that we are publishing international.' This is absurd and this is a joke, because nobody reads these journals. Nobody reads these papers, but

> they just, they can fulfill the administration. These journals are just low-quality journals, or fake journals, or substitutions of real publishing, but not predatory, in a sense. (P35)

As this participant's comments suggest, even though we like to think of scholarly communication as a global endeavor, it is quite localized when we view it from the perspectives of those who live in marginalized communities. Scholars who are most successful are those who find a way to embrace these contradictions: maybe they publish some of their work in prestigious English-only journals, but they also return to their native countries and assist in establishing local journals, bringing back with them the knowledge they have gained about so-called 'predatory' publishing and so on. We also have organizations such as AuthorAid and SciDev that are trying to level the playing field. Listening to people who are trying to be successful scholars in marginalized locations also emphasizes another important aspect of the belonging-organizing paradox: that the very same systems we use to evaluate scholars, to sort out the good from the bad, are the systems that are creating the demand for 'predatory' journals, and, viewed another way, large commercial publishers are arguably just as guilty of predatory practices as those journals that end up on watchlists.

Paradoxes of Performing-Organizing

The performing-organizing paradox, in Smith and Lewis's (2011) schema, arises through 'the interplay between means and ends or process and outcome, apparent in conflicts between meeting employee and customer demands […] and between seeking high commitment and high performance' (p. 384). As an example of this form of paradox in scholarly publishing, when we measure research quality in the academy, we are often referring to abstract measurements that are far removed from the actual quality of the science that is reported in an article. As one North American publishing professional described it, when we rely exclusively on systems such as journal impact factor to assess research quality, we are 'maximizing a very poor proxy for quality, just because it's quantifiable' (P22).

Along these lines, a few participants noted that it is ultimately up to individual scholars to assess the quality of published research, and

if everyone took the time to do this, rather than relying on metrics or other sources, then predatory publishers could not exist. For example, as noted by one European publishing professional,

> It does in terms of [...] Say if you're looking at a journal that you want to submit to, you look at a few of the other articles that they've published. Are they the types of articles that you would want to associated with? Maybe you could have some kind of assessment of quality by looking at the other articles. That is one measure, I think. Actually reading the full papers is probably the only way to assess quality in the articles anyway. (P29)

The problem is that assessing the quality of research as published in individual articles, without relying on metrics, would be time consuming. For instance, it would mean that to assess a journal's quality before deciding to submit one's work there, an author would need to look carefully at other articles published in a journal, rather than simply relying on someone else's assessment of the journal's quality.

In line with these participants' observations, in Chapter 4, we discussed a high-profile example of published scientific research that accrued a lot of citations but had been cited inaccurately. As also discussed in Chapter 4, there has been a great deal of research on retracted articles that continue to get cited for years after they are retracted. As these examples remind us, impact factor and H-index are abstract measurements that tell us little about the quality of the science that is reported in a published article. When research participants discuss quality, as noted in Chapter 3, they often refer to concrete and specific aspects of published research — not just citation numbers.

Along these lines, when our research participants talked about lists, such as that of Jeffrey Beall, or more recently developed lists, they often refer to the limitations and bias they perceive in lists. As stated by a North American publishing or communication consultant,

> I don't put much stock in those as a resource because I think there is a lot of bias that goes into those lists. That's definitely true of Beall's, who went all rounding on favela publishing, famously, or infamously, as the case may be. Again, a lot of the supposedly predatory journals come from global south venues, and I do think there's a lot of colonial bias that is in there. If it's not written in good English and produced in the global north, then there's something suspect about the quality of this output. (P25)

An Asian publishing professional offers a more scathing critique of Beall's list, based on their own personal experience as editor of a journal that was included on the list:

> I had a journal that was owned by university, and it was one of the most proper journals here. It was on there for no reason. So, we sent him an email. We explained the situation. Next day, the journal was off there. The other case was there was this journal we didn't publish, but the editor, through an author, they found out that they were included in that list. Again, the journal, the editor, he was probably one of the more involved editors in the field. They had no financial gain, and they were just doing proper vetting. We still don't know why the journal was on there. We sent him, now defunct a couple of emails. He didn't respond. I haven't checked the list of that journal again. But, yeah, I know from personal experience two journals were affected by that that were not predatory. But, I know that there are predatory journals here who are not on that list. (P27)

Many participants seem to agree with these participants' assertion that no list will ever be adequate, but some also suggest that safelists may be more feasible than watchlists. Many criticize Beall for his lack of transparency, but some also criticize Cabells for charging cost-prohibitive fees to access their lists. As an Asian publishing professional said, 'They [Cabells] have started a whitelist and a blacklist which is not helpful at all, because they are charging to see the list' (P27).

As noted in the previous section, participants also comment on larger changes to the system that would help address the problem of predatory publishing, sometimes suggesting that without these changes, the motivation to pursue a fast and easy publication will always be there, and some publishers will prey on it. Some also talk about the impact factor and the added pressure it creates, and some talk about the uneven playing field faced by scholars in the global south. As for distinguishing legitimate from predatory journals, participants mention cues like getting a solicitation email for a journal far outside their discipline. Others mention the gray areas and how hard it can be to discern predatory journals in some cases.

Productive Ways Forward

Even as we acknowledge the challenges that scholars, especially junior scholars, face because of the paradoxes that are confronted by these individuals on a daily basis, we offer several suggestions for moving forward in the context of these challenges. Firstly, faculty mentors in the research process have an opportunity to better prepare graduate students and early-career scholars for these challenges by increasing their transparency about the research processes they go through. Being increasingly open in their discussion of failed projects, rejections by journals, strenuous research collaborations, and ugly peer reviews can benefit graduate students who envision themselves stepping into research positions and make them better prepared when they begin faculty positions and begin their pursuit of tenure. This could be done both through ad-hoc discussions on an individual level and through department or college-level initiatives to integrate ethical research practices into graduate curricula. Part of this discussion should also focus on the perils of predatory publishing practices, along with candid conversations about the potential career ramifications of submitting research to predatory publications.

Secondly, given the unanimous agreement among scholars and the existing literature on the central importance of peer review, the scholarly establishment needs to make a more concentrated effort to educate future faculty on how to critique scholarly work. While there are numerous blog posts and web-based articles listing the attributes of quality peer review (e.g., Dhillon 2021; Stiller-Reeve 2018), these are suggestions aimed at junior faculty who have already entered the field of academia and who are now expected to learn these new skills in addition to performing their new professorial duties. Instead of leaving this essential component of the entire scholarly knowledge production process to on-the-job, self-guided training, there is an opportunity to integrate this type of training into graduate programs or other institutional structures. As one innovative example of this practice, a leading journal in the communication field has initiated a 'Third Reviewer Program', where a PhD student conducts a peer review of an article in their focus area under the guidance of a faculty mentor. Especially if it is complemented with formal classroom training, this apprenticeship model could go a long way toward offering junior

scholars the support they need to understand what makes peer review effective. Given that, in traditional scholarly publishing, the only real 'gatekeeper' of the 'gatekeepers' (peer reviewers) in scholarly publications are the journal editors themselves, it seems logical to ensure that the peer reviewers have the best possible training before they enter into the arena of judging their peers' work. Yet, as was discussed in previous sections, there is almost no formal reviewer training in the academy — most junior researchers learn the skill on the fly — and often through receiving terrible reviews and swearing they will never commit the same grave mistakes. But an even more glaring problem is the fact that peer reviews are almost exclusively undertaken as 'volunteer' work — and little institutional recognition is awarded for those efforts. While there are some attempts to rectify this through initiative such as Publons or journals publishing an end-of-year 'thank you' that lists all the reviewers for the year, the work of reviewing our peers' work goes largely uncelebrated — despite being lauded as the cornerstone of all that is scholarly knowledge production. While our participants almost exclusively agreed that peer review is still the main way to ensure the quality of manuscripts being published in academic journals, several offered mechanisms to improve or expand the peer-review process to make it more open or credible. The primary suggestion was to use technology to better facilitate both finding reviewers (P05, P09), and assessing the quality of peer reviews (P28), using metadata to ensure peer-reviewed status (P44), or open-source platforms such as 'wiki journals' (P19). Reviewing data sets (P19) or even going to a fully blind system where not even the editor knows the identity of the author (P35) show the range of options that could be used to make the peer review process more transparent.

Thirdly, given the emphasis on transparency and rigor as markers of quality in the knowledge production process, one of the primary means of addressing the problems affiliated with predatory publishing is through the tools and solutions offered by the open science movement, as elaborated in Chapter 2. Some of the components of open science, such as preprints and registered reports, offer solutions for engaging peers in the earlier stages of research production, whereas open peer review offers transparency at the later stages of knowledge production and dissemination. In terms of actions individuals could take to improve the quality of their research output, one of the most frequently

discussed mechanisms was the need to be critical of your own work, and to have a strong moral compass to do the right thing, even when no one is looking. To that end, integrating ethical research practices into all graduate courses and building internal networks for discussing research before it reaches the publication stage seems to be the best course for improving the quality of scholarly communication. In fact, transparency seems to be the biggest actionable item that stakeholders suggest could improve the scholarly publication process. Increasing levels of transparency — from how the research was conducted, to how it was reviewed, and how it can be disseminated — seems to be the primary recommendation of both the emerging literature on evaluating scholarly knowledge production and the participants in our study.

Fourthly, scholars who participated in our study, with the exception of a few, did not seem to view librarians as a source for determining journal or publisher credibility, but the librarians viewed themselves as having a critical role, and often expressed frustration at academics for not using them as the resource they are intended to be. This suggests that within institutions, there needs to be a more concerted effort to direct researchers — both new and experienced — to the librarians who can guide them through the increasingly complex publishing landscape. As discussed in Chapter 6, there is no shortage of training materials available (many of them free for any user, not just members of the institution) related to ethical publishing practices, yet researchers still submit their work to predatory journals, whether unknowingly or not. Among Euro-American scholars who participated in our study, there was a predominant view that it is easy to determine if a journal is predatory by spending a few minutes going through their website, looking at past publications, the editorial board, and doing a quick assessment of the quality of the journal's public face. These statements are often juxtaposed with comments that indicate researchers outside the more affluent Euro-American regions may not know to look at these things to determine publisher credibility, or that due to different (and often implied to be inferior) standards, it may not matter whether a journal is predatory, as long as the researchers get the expected numbers. Other tools, such as lists, indexes, and peers, were all mentioned as resources available for authors to take responsibility for avoiding publishing in a predatory journal and to protect or improve the quality in scholarly knowledge production.

In Closing

For a point of contrast to our present situation, we might consider the mid-nineteenth century, when citizens of England were trying to fight a cholera outbreak that was killing tens of thousands of people. Authorities were desperate to understand the origins of the outbreak, and their main strategy was to tell people they should avoid breathing in toxic vapors that were believed to travel through the air in certain parts of the city. This so-called 'Miasma Theory' was, at this time, the prevailing belief, and it could not be proven or disproven because it was based purely on superstition. By contrast, 'Germ Theory', providing an explanation closer to our contemporary understanding of disease, was still in its infancy and not widely accepted by the medical community at this time (Tulchinsky 2018). In this context, when John Snow published a report in 1849, 'On the Mode of Communication of Cholera', suggesting the disease was caused by contaminated water that people were drinking, no one believed him (Snow 1849). We might say this was an idea that emerged prematurely, before audiences were ready to accept it (Bynum 2013). It was not until several years later that Snow was able to support his theory by collecting extensive data on cases in a particular district of London and demonstrating that those who were getting sick had all been drinking water from a specific pump that drew water from a well that had been contaminated with sewage; in 1855, he published an extended version of the earlier report, incorporating all of this data (Snow 1855). His idea was accepted at this time, leading to removal of the contaminated Broad Street water pump, and the end of this particular cholera outbreak, after tens of thousands of lives had already been lost.

As this example indicates, the game of scientific knowledge production has been around for a long time, and the rules of the game are continually evolving and changing. However, one thing has remained constant amid these changes: as a global society, we benefit greatly from this game. Without it, we would still be making guesses, based purely on hunches and superstitions, that could never be substantiated with any amount of scientific evidence. We might think COVID-19 is caused by mysterious, invisible vapors in the air, without any idea where these vapors come from. Or we might still be thinking, as was the case for

many centuries, that most of women's health problems can be attributed to the fact that the womb is a wild animal that wanders uncontrollably throughout the female body and can only be made to hold still by intercourse or pregnancy. So, in other words, even though our current system may not be perfect, at least it is a system.

In this book, we have highlighted the many complexities that surround the term predatory. We have offered insights and anecdotes based on our interviews with forty-eight individuals who are stakeholders of various sorts in the game of scholarly publishing — ranging from real-life stories of authors who have fallen 'prey' to predatory publishing practices to people involved in the publishing industry who feel their publications have been wrongly accused of being 'predatory' in some capacity. We have examined the misunderstandings and misperceptions that many people have about predatory publishing, and we hope we have provided readers with accurate and complete information to combat these misunderstandings and misperceptions. We advocate a view of predatory publishing that emphasizes gray areas and individual responsibility rather than lists or hard-and-fast distinctions between journals or publishers that are predatory and those that are not. As is the case for any qualitative study, the primary limitation is that our findings cannot be generalized to larger populations.

Another important limitation is that scholarly publishing is evolving so quickly that it is virtually impossible to keep up with every new trend or development. One glaring example is Artificial Intelligence (AI), which exploded in the popular imagination when ChatGPT became publicly available in November 2022, just as we were putting the finishing touches to this manuscript. Experts are beginning to speculate on the potential impacts of AI-generated writing for scholarly communication. Perhaps not surprisingly, some are optimistically touting its benefits as a writing aid, suggesting it could automate the drafting of routine components of scholarly writing, while others are expressing alarm about the extent to which such automation will exacerbate the "publish or perish" mandate, leading to even higher expectations about the quantity of publications and further diminishing concerns about quality (Kubacka, 2023). For these reasons, as suggested in the Epilogue to Chapter 1, the role of AI in scholarly communication will certainly be an important topic for future researchers to address, and it will likely have

a profound impact on many of the other trends and phenomena we have explored in this book.

Despite these limitations, our interview population, in conjunction with the other forms of research reported throughout the book, is diverse enough to extend scholarly conversations about the complex array of factors that have enabled predatory publishing practices to emerge and flourish and to leave readers with some concrete suggestions for moving forward. Through these suggestions, supported with examples from textual analysis and interviews offered here, we hope to leave readers with a set of tools and knowledge that prepare them to succeed in the game of scholarly publishing and to mentor those who come after them to be similarly equipped.

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