

Does a predator need prey? Examining the evolving terminology of predatory publishing / Un prédateur a-t-il besoin de proies ? Analyse de l'évolution de la terminologie de l'édition prédatrice

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Abstract

The term *predatory publisher* was introduced by Jeffrey Beall in 2010 as part of an ad hoc approach to name an emerging concept in the field of scholarly publishing. Ten years later, the concept is still evolving and the scholarly community continues to question whether the term is appropriate or sufficient. Given that an understanding of this concept and term is a necessary precursor to developing scholarly publishing literacy skills, we examine the concept-term unit through a terminological lens in order to better comprehend how it has developed over the past decade.

Keywords: predatory publisher, terminology, definition, scholarly publishing literacy, Beall's List

Résumé

Le terme "éditeur prédateur" a été introduit par Jeffrey Beall en 2010 dans le cadre d'une approche ad hoc pour désigner un concept émergent dans le domaine de l'édition savante. Dix ans plus tard, le concept évolue toujours et la communauté scientifique continue de se demander si le terme est adéquat ou suffisant. Étant donné que la compréhension de ce concept et de ce terme est un préalable nécessaire au développement des compétences dans le domaine de la littératie de l'édition savante, nous examinons l'unité concept-terme à travers une lentille terminologique afin de mieux comprendre son évolution au cours de la dernière décennie.

Mots-clés : éditeur prédateur, terminologie, définition, édition savante, littératie de l'édition savante, la liste de Beal

Introduction

The recent COVID-19 pandemic has provided some clear examples of the importance of selecting and using appropriate terminology. For instance, in the early days of the pandemic, the term *coronavirus* was widely used to describe the virus causing the illness; however, this was inaccurate since coronavirus refers to a family of viruses – a broader term – and the virus causing the illness needed to be described using a narrower term. In an attempt to provide a designation that more accurately describes the virus, the World Health Organization (WHO 2020) suggested the interim term *2019-nCoV* (for 2019 novel coronavirus). While that term might work for scientists, the media and average people found it to be something of a mouthful, and layperson

terms referring to the virus and the resulting disease began to emerge. These layperson terms included *China virus* and *Wu Flu*, which both make reference to the location – Wuhan, China – where the virus and associated disease were first observed (Zhang 2020). Unofficial names tend to spread quickly via social media and they can be hard to dislodge once they have taken hold. Therefore, the WHO and the International Committee on the Taxonomy of Viruses (ICTV) had to work quickly develop official designations for the virus and the disease that would be accurate as well as acceptable to both the scientific community and the wider public (ICTV 2020). In fact, the WHO has developed guidelines for the appropriate naming of diseases (WHO 2015), which include choosing terms that are relatively short and easy to pronounce, while simultaneously avoiding terms that could stigmatize a community. The international media storm surrounding U.S. President Donald Trump’s use of the term *China virus* on Twitter and his use of the term *Kung Flu* at a political rally revealed that this type of stigmatizing terminology can lead to acts of racism and aggression (Lee 2020; Vazquez and Klein, 2020; Wray, 2020). Hence the WHO and the ICTV wanted to get the terminology right, and they eventually settled on calling the virus *SARS-CoV-2*, while the resulting disease is now officially referred to by the more pronounceable term *COVID-19* (for coronavirus disease 2019).

While the terminology related to COVID-19 made headlines around the world, owing to the widespread nature of this disease which can affect people from all walks of life, a similarly challenging terminological situation is currently playing out in the field of scholarly communication. Specifically, the term *predatory publisher*, along with related concepts such as *predatory publishing* and *predatory journal*, among others, merit a closer look to determine whether these terms are well motivated and whether they accurately describe the associated concepts that they are used to designate, or whether it could be beneficial to change them.

In brief, the concept of predatory publishing emerged in the early 21st century with the rise of electronic publishing models. Prior to this, the traditional model for scholarly publishing had adopted the following process beginning in the mid 17th century:

- a scholar conducts research and writes a description of their results in an article;
- the scholar submits the article to a scholarly journal;
- the journal editor sends the (typically anonymized) article to one or more experts in the field who evaluate it as part of a process known as *peer review*;
- the experts make a recommendation as to the quality of the work, and they may suggest modifications to improve it;
- the editor considers the experts’ recommendations and may reject, accept or request revisions to the article;
- the scholar revises the article according to the recommendations and resubmits it for re-review by the editor and/or experts;
- the editor, once satisfied that the article is ready for publication, publishes it in the scholarly journal;

- the journal content is made available by subscription, meaning that the costs associated with the publication process are borne principally by the readers or their institutions.

This traditional scholarly publishing model remained unchanged for over 300 years. However, as subscription prices increased, scholarly journals became expensive. Meanwhile, the Internet became more established and easier to access. Eger and Scheufen (2018) suggest that these two factors paved the way for a new model of publishing known as Open Access, which began to gain momentum around the turn of the millennium.

In Open Access, readers can access the content of scholarly journals for free, meaning that the costs must be covered by some means other than through subscriptions. There are multiple forms of Open Access publishing (Crawford 2011; Caruso et al. 2013), but one type, which is referred to as Gold Open Access, charges the authors an article processing fee in order to publish in an Open Access journal. The funds to pay this fee may come from a research grant or from the author's institution, for example. However, Open Access was never intended to circumvent the peer-review process, and reputable Open Access journals still adhere to this practice.

An academic librarian named Jeffrey Beall observed that a new type of publishing practice began to emerge in around 2008. Beall (2013a) reports that he began to receive emails from publishers that he did not recognize inviting him to submit articles that would be published on the publisher's website once he sent the publisher a payment. Beall (2013a, 47) determined that

The gold open access model is beset by a significant conflict of interest – the more papers a publisher accepts for publication, the more money it earns, a perfect recipe for corruption. The gold open-access publication model quickly spread, and in the years since 2009, hundreds of publishers using the author-pays model have appeared, some legitimate, and some corrupt.

This led Beall to coin the term *predatory publisher*, which he uses to describe publishers “that unprofessionally abuse the author-pays publishing model for their own profit” (Beall 2013a, 47). On a related note, Beall (2013b) also coined the term *scholarly publishing literacy*, which he continued to refine in subsequent publications (e.g. Beall 2013c), and which generally refers to the knowledge and skills that people involved in scholarly communication need to acquire in order to differentiate between potentially predatory publishers and good venues for sharing research. In our view, becoming familiar with the terminology of predatory publishing is a very good starting point for developing scholarly publishing literacy skills. It is clear that questions about the appropriateness and adequacy of the term *predatory publisher* have been raised in the literature in the decade since the term was first proposed. However, these discussions are partial and scattered and, to the best of our knowledge, no one has yet brought such opinions together for a comprehensive evaluation through a terminological lens. With this in mind, the main objective of the present article is to investigate the terminology of predatory publishing as it is used in the scholarly literature.

In this paper, we examine the evolution of the term *predatory publisher* in English, while also briefly considering how this term has been adapted into French and Spanish. To do so, we draw on principles from the discipline known as Terminology, which is closely related to the discipline of Translation, both of which belong to the field of Applied Linguistics. In the remainder of this paper, we first briefly describe some similarities between Terminology and Library and Information Science (LIS) in order to situate our readers and help them to better understand the basics of Terminology. We then introduce the main methods of terminology work, along with the methods and principles for term formation and implantation. Next, we investigate the concept-term unit *predatory publisher* in the English-language scholarly literature. In particular, we explore some challenges associated with the definition of this concept, as well as some problems associated with the term itself. We consider some alternative terms that are beginning to surface and explore the motivation behind them, and we look at whether and how these terms are treated in multilingual term banks. Finally, we offer some concluding remarks and recommendations.

Similarities between Terminology and LIS

To explain the discipline of Terminology and some of its associated notions to readers in LIS, it may help to point out some of the aspects that these two disciplines have in common. As described by Sager (1990, 2),

Terminology is the study of and the field of activity concerned with the collection, description, processing and presentation of terms, i.e. lexical items belonging to specialised areas of usage of one or more languages.

In many ways, this description calls to mind the well-known description of information science provided by Borko (1968, 3):

Information science ... is concerned with that body of knowledge relating to the origination, collection, organization, storage, retrieval, interpretation, transmission, transformation, and utilization of information.

Authors such as Bowker and Delsey (2016) have described a number of the similarities and shared goals of Terminology and LIS, including how both are concerned with types of knowledge organization and controlled vocabularies. Meanwhile, Bowker (2017) examined the ways that information science influenced the development of the field of Terminology, particularly in Canada, in the 1970s and 80s. Indeed, in some ways terminology processing resembles the work of subject analysis in the field of LIS. Terminologists begin by studying a given concept (X) in order to identify its characteristics (A, B, C), as well as its relations with other concepts. These characteristics are then used to create an intensional definition, which first makes reference to the generic or parent concept (i.e., broader term) and then describes the characteristics that differentiate concept X from its sibling concepts at the same level of the hierarchy. Finally, the terminologist assigns a term to designate the defined concept. Similarly,

Joudrey and Taylor (2018) explain that in subject analysis, LIS professionals set out to identify and describe the content of information resources. In the first stage, known as concept analysis, LIS professionals examine the information resources to determine what the work is about (i.e., aboutness). In a subsequent stage, which is referred to as translation, LIS professionals assign subject headings from a controlled list of terms.

Methods of terminology work

As described by Dubuc (1997) and Cabré (1999), terminology work can be carried out using one of two main approaches: ad hoc terminology work, or thematic terminology work. The descriptions that follow have been adapted and shortened from Dubuc (1997, 47-117) and Cabré (1999, 129-159).

Ad hoc terminology work

Ad hoc terminology work typically deals with an individual concept or term that poses an immediate communication problem. For instance, perhaps the concept is very new and does not yet have a term to designate it, or perhaps the term is known in one language, but a translation is needed in another language. Although professional terminologists may be involved in ad hoc terminology work, this type of terminology work is often taken on by other types of people. For example, a translator may decide to carry out the research needed to identify an equivalent in another language, while a subject specialist may take on the task of proposing a term for a new concept that they have discovered or observed in their field.

When non-terminologists perform specialized terminology work, the results may be more or less successful. For instance, we saw in the introductory section that subject experts used an ad hoc approach to propose the term *2019-nCoV* to refer to the novel coronavirus first observed in 2019. However, this term was not appealing to the media or to the general public because it was not very transparent or easy to pronounce. As a result, the media and the public instead began using terms such as *China virus*, which led to problems of stigmatization and racism. Therefore, a terminological committee stepped in to study the situation and to propose the term *COVID-19* before undesirable terms could fully implant or take hold. Now, *COVID-19* is well established, and the undesirable term *China virus* has largely fallen out of use. As we will discuss in an upcoming section, Beall (2010) used an ad hoc approach to propose the term *predatory publisher*, and this term has since gone on to generate some controversy.

Thematic terminology work

In contrast to the ad hoc approach that is used by non-terminologists, terminology professionals typically engage in thematic terminology work, where they systematically attempt to map out and describe all the concept-term units that are used in a particular subject field or subfield. In this approach, terminologists usually begin by doing some background reading to familiarize themselves with the subject field, and then they compile a corpus of documentation that will be

studied in order to identify and extract pertinent concepts and their descriptions. In a way, this corpus of authentic texts has a function that is similar to the idea of literary warrant in LIS (Joudrey and Taylor 2018). Terminologists consult the corpus to see what terms are in use in the subject field.

As they work, terminologists prepare a map or concept tree of the subject field. This subject field map is not intended to provide a scientific classification of the concepts involved, but rather a functional means of categorizing the terms and concepts that are being researched. The breakdown includes two parts. The first places the research subject (e.g. *predatory publisher*) within the broader field(s) of which it is a part (i.e., *scholarly communication*). Meanwhile the second serves to structure the research and to categorize the concepts according to their intrinsic relationships (i.e., similar to *broader/narrower terms* in LIS) or extrinsic relationships (i.e., similar to *related terms* in LIS) (Joudrey and Taylor 2018). So a *predatory publisher* is a type of *publisher* (broader term) that produces *predatory journals* (related term).

Next, terminologists consult the corpus of texts to identify the concept-term units that are specific to the subject field that is being researched. Today, various tools, including automatic term recognition tools, can be used to assist with this process (Heylen and De Hertog 2015); these tools share some commonalities with automatic indexing tools that can be used to assist with the creation of back-of-the-book indexes (e.g. Nazarekno and Aït El Mekki 2007). Once a term has been identified, the context in which it is found must be analyzed to determine the concept it represents. This step is also useful for detecting synonyms (i.e., multiple terms that refer to the same concept), one of which may eventually be identified as the *preferred term* (similar to an *authorized term* in a controlled vocabulary as explained in Joudrey and Taylor 2018). When analyzing the context in which the term appears, terminologists must pinpoint the semantic features that it contains. The most significant semantic features are those which describe the nature of a concept, its purpose, function, composition, material, cause or effect. In some ways, these features resemble the notion of facets used in faceted classification systems in LIS (Joudrey and Taylor 2018).

In a subsequent step, the semantic features identified in the corpus of texts are analyzed and used to formulate a definition of the concept. In Terminology, the purpose of a definition is to provide a clear understanding of the meaning of a term as it is used *within a given subject field*; the definition links the term to the concept. To achieve this, a definition need only provide the essential characteristics of a term as it is used in a particular field or subfield, without considering how this term may be used in general language or in other subject fields.

In comparative terminology, which is terminology work that is carried out in two or more languages, the preceding steps are carried out independently in each language before the results are compared. Terms from different languages are considered to be fully equivalent when they have the same meaning (i.e., the same semantic features and definition) and are used in the same way in a given subject field.

Once the terminological research and analysis is complete, the results are documented on a record, and the collection of records is most typically housed in a type of searchable database known as a term bank. Many large organizations build and maintain term banks, which are regularly consulted by subject experts and various types of communication specialists, including technical writers, journalists and translators. According to Sager (1990, 198) “another user group consists of information and documentation specialists such as librarians, information brokers, indexers, who use term banks for the reliable identification and description of specialist documents.” In Canada, one such multilingual term bank is known as *TERMIUM Plus*, and it is managed by the Government of Canada’s Translation Bureau¹. Another well-known multilingual Canadian term bank is *Le Grand dictionnaire terminologique (GDT)*, which is managed by the *Office québécois de la langue française*². An example from outside Canada is the multilingual *Inter-Active Terminology for Europe (IATE)* term bank that is managed by the European Commission’s Directorate-General for Translation³.

In an upcoming section, we will be taking an in-depth look at the term *predatory publisher*. This term was coined in an ad hoc fashion by academic librarian Jeffrey Beall in (2010), but it has met with some resistance by a number of parties, including the publishers to whom the term has been applied, as well as some other information professionals and other players in the scholarly communication community. Unlike the case of the medical world, where sanctioned committees exist to oversee language planning activities such as the naming of new diseases, the world of scholarly communication, and even LIS more broadly, have no such language planning body. Therefore, as concepts in the field evolve, the terms that were initially coined in an ad hoc fashion to designate them may simultaneously become both implanted and less appropriate, causing a strange linguistic tension. This is what we see in the case of *predatory publisher*, which we will examine in detail shortly. First, however, we will briefly consider some techniques available for term formation, as well as the principles that appear to favour the implantation of a new term in a language, in order to better understand the case of *predatory publisher*.

Term formation techniques and principles

A number of established term formation techniques are available to anyone wishing to coin new terms to designate new concepts. As described by Sager (1997), some of the most common term formation methods include:

- **Using existing resources (semantic extension):** extending the meaning of an existing term to embrace a new concept (e.g. *mouse* to refer to a computer device as well as to a rodent).

¹ *TERMIUM Plus* is freely available online and can be consulted at <https://www.btb.termiumplus.gc.ca/>

² The *GDT* is freely available online and can be consulted at <http://www.granddictionnaire.com/>

³ The IATE term bank is freely available online and can be consulted at <https://iate.europa.eu/home>

- **Modifying existing resources:** compounding (e.g. *sit-ski*), derivation (e.g. *unfriend* from *friend*), blending (e.g. *covidiot* from *COVID* + *idiot*).
- **Borrowing:** adopting a word from another language (e.g. *karaoke* from Japanese).
- **Creating new lexical items (neologisms):** coining a completely new creation with no linguistic precedent (e.g. *byte*). This strategy is actually rare.

Meanwhile, Quirion and Lanthier (2006) discuss a range of factors that can influence whether a term will successfully “implant” in a language (i.e., whether or not it will become established and used by speakers of that language). In particular, they note that the following principles for good term formation seem to aid in the implantation of terms:

- **Conciseness:** a term that is relatively short has a greater chance of being accepted and used.
- **Number of competing terms:** a term that has few competing terms (i.e., synonyms) is more likely to implant.
- **Derivative form capability:** a term that can be morphologically derived to create other forms is more likely to implant (e.g. the prefix *re-* and the suffix *-able* can be added to *tweet* to form *retweetable*).
- **Compliance with the rules of the language:** a term that conforms to the morphological, spelling and pronunciation conventions of the language is more likely to implant.

Origins of the term *predatory publisher*

As we saw in the introductory section, the term *predatory publisher* was coined by academic librarian Jeffrey Beall. The term first appeared in the literature in 2010 in an article entitled “‘Predatory’ Open-Access Scholarly Publishers” in which Beall published a comparative review of nine different publishers that used an author-pays model for supporting their publishing efforts. In this article, Beall points out that he is not alone in observing this new publishing phenomenon, explaining that leaders in the Open Access movement, such as Stevan Harnad, have also begun to push back against it. Beall cites Harnad’s blog, which notes “There seems to be a growing epidemic of fast Gold-OA journal-fleet start-ups, based on next to no scholarly/scientific or publishing experience or expertise, and relying heavily on online spamming” (Harnad 2008).

However, Beall does appear to be the first person to use the term *predatory* to describe these publishing practices. Although he appears to give preference to the term *predatory publisher*, as evidenced by his decision to use it in the title of the 2010 article (and in subsequent articles), Beall did use several other modifiers to describe such publishers within the article, including *perfidious* and *unscrupulous*. It is not unusual to see multiple possible descriptions emerging and competing to refer to a new concept. As observed by Sager (1990, 60),

The evolution of concepts is accompanied by stages of naming, a process which is called terminologisation. In the development of knowledge, the concepts ... undergo changes; accordingly their linguistic forms are flexible until a concept is fully formed and incorporated in the knowledge structure.

In naming the concept, Beall was adopting an ad hoc approach to terminology development, where his main goal was to address the problem of a lexical gap in English: a new concept had emerged, and there was no established term to describe it. When he proposed the term *predatory*, Beall was initially tentative, which is demonstrated through his use of quotation marks to surround the term in the title and within the article itself. This ad hoc approach to naming a new concept is common, as explained by Sager (1990, 62):

Most new terms are formed as and when new concepts are created in such instances as new discoveries, restructuring of existing knowledge, incidental observations or planned industrial development. In each of these cases the new concept to be named is seen in a particular light in relation to the other concepts around it.

As a term formation strategy, Beall used the technique of semantic extension. As explained by Sager (1990, 71), "...it is common to extend the meaning of an existing term to embrace that of a new concept [...] New names may be given in analogy with existing designations and meaning may be transferred by such rhetorical figures as metaphor." Beall started with the commonly understood word *predator*, which is defined in the *Merriam-Webster* online dictionary as "an animal that preys on other animals", and he extended this definition to include scholarly publishers who prey on scholars. Indeed, Beall is not the first person to extend the definition of *predator*; the *Merriam-Webster* online dictionary actually includes a secondary definition of the term, which is "one who injures or exploits others for personal gain or profit", and this dictionary contains an example that likens some business people to predators, as well the example of sexual predators. Therefore, Beall could be reasonably sure that by extending the meaning of *predator* to apply to certain scholarly publishers, readers would quite easily be able to get the gist of the new concept-term unit *predatory publisher*.

In addition to coining a term, Beall (2010, 14-15) also put forward a tentative definition for this new concept:

We use the term 'predatory' cautiously, primarily in an attempt to initially categorize a certain class of Open-Access scholarly publishers with like characteristics. These publishers are predatory because their mission is not to promote, preserve, and make available scholarship; instead, their mission is to exploit the author-pays, Open-Access model for their own profit. They work by spamming scholarly e-mail lists, with calls for papers and invitations to serve on nominal editorial boards. [...] Also, these publishers typically provide little or no peer-review. In fact, in most cases, their peer review process

is a façade. None of these publishers mentions digital preservation. Indeed, any of these publishers could disappear at a moment's notice, resulting in the loss of its content.

Again, Sager (1990, 59) confirms that temporary definitions are common when a new concept-term unit emerges, noting that “neologisms are initially provisional, linked to a provisional concept by a stipulative definition, until the equation TERM-DEFINITION-CONCEPT becomes widely accepted and so incorporated into the lexicon of a particular special language.”

This section has described the context in which Beall first identified, named and defined the concept *predatory publisher*, but as we have emphasized throughout this section, it is common for new terms and definitions to have a provisional status, and for the concept itself to evolve over time. In the following sections, we will explore how some others in the field of scholarly publishing have reacted to the term *predatory publisher*, and we will consider how the concept has evolved.

Reactions to the term *predatory publisher*

According to Kimotho (2019), in the decade since Beall first introduced the concept and term *predatory publisher*, his efforts have met with both praise and criticism in nearly equal measure. On the one hand, there is a consensus that the increasing flood of poor quality scholarship is a problem that needs to be addressed urgently, and Beall's work is recognized as being a critical factor in launching efforts to regulate publishing firms and to assure quality and ethical practices among Open Access journals. On the other hand, some scholars have criticized Beall's work, including raising objections to both the term *predatory publisher* and its definition.

Following the publication of his 2010 article, in which he conducted a comparative review of nine publishers that used an author-pays model, Beall began to use his blog to maintain a list of publishers that he felt were predatory in nature. This list became known as “Beall's List” and it was maintained until early 2017, when it was taken down. On it, Beall regularly used hedging terms such as *potential*, *probable* or *possible* to describe the *predatory publishers* as an acknowledgement that establishing clear criteria was difficult and could be subjective. Nonetheless, according to Kimotho (2019, 9), “most of the critics [of Beall's List] have decried the use of the term ‘predatory’ which they say is *a loaded and pejorative term* and a threat to academic freedom.” Indeed, some dictionaries, such as the *Cambridge Dictionary*, have added a usage label such as “disapproving” to the entry for the term *predatory*. These critics note that calling for a ban on predatory journals could represent a challenge to freedom of speech and to the choice of researchers about where to publish their work (Kimotho 2019).

Meanwhile, it is clear that the publishers themselves object to the label *predatory*, and there are a number of examples of librarians or researchers who have been sued for identifying publishers as potential predators. For instance, New (2013) describes a lawsuit that was brought against a librarian and his Canadian university employer after the librarian referred to a publisher as “dubious” on his personal blog. Todd (2018) relays that a different Canadian researcher was

suspended after identifying some publishing practices at his university as being predatory (Pyne 2017), and it was only after a lengthy legal battle that he was reinstated. Even Beall stopped maintaining his list in 2017 when faced with legal threats (Beall 2017b).

Buitrago-Cirio and Bowker (2020), in an examination of 20 Canadian and American university library websites, note that while the term *predatory* is used on almost half of the sites, alternative terms are also used, including *deceptive*, *suspicious*, and *undesirable*. Memon (2019, 4) similarly notes that “several names such as dodgy, fraudulent, pseudo, questionable, sham, and illegitimate have been previously used for the ‘predatory’ journals.” It was noted previously that Beall (2010) himself had used descriptions such as *perfidious* and *unscrupulous* in his original article, and indeed he continued to use other terms alongside *predatory* in his later works, including *questionable* (Beall 2013b) and *counterfeit* (Beall 2017a). What’s more, Beall has since acknowledged that the term that he initially proposed may not be the best choice:

I came up with the term predatory publisher (Beall, 2010) in 2010 to identify a new type of open-access publisher I observed beginning in 2008. Now, almost seven years later, the term persists, even though it still may not be the best term to describe the concept. (Beall, 2017a)

Evolution of the concept

Often, our understanding of an emerging concept evolves, which may bring about a change in the term used to refer to it. Alternatively, it may result in different terms being used to describe different parts of the semantic space that had previously been covered by just one term. The original term may then go on to be used in either a broader or a more restricted way (Sager 1997). For instance, consider the notions of *camera* or *wristwatch*. In the pre-digital days, these terms necessarily referred to analogue devices. However, once their digital counterparts were invented, it became necessary to carve up the semantic space covered by the concept *camera* or *wristwatch* differently (i.e., so that these terms could now refer to both analogue and digital devices and could be subdivided into the two more specific concept-term units). It also became necessary to invent new terms to describe the original concept (e.g. by adding *analogue* to the term so that what was formerly just a *camera* became an *analogue camera*).

To date, no consensus has been reached on the precise definition of *predatory publisher*. Kimotho (2019) relays that scholars have been unable to agree on the criteria that should be used to decide whether or not a publisher can be deemed predatory. However, Grudniewicz et al. (2019) recently made another attempt to define the concept. At a Predatory Summit organized in Ottawa, Canada, on April 19-20, 2019, a group of participants from ten countries, who represented various stakeholders affected by predatory publishing (e.g. authors, funders, academic institutions, librarians and information scientists), spent over twelve hours hammering out the following description:

Predatory journals and publishers are entities that prioritize self-interest at the expense of scholarship and are characterized by false or misleading information, deviation from best editorial and publication practices, a lack of transparency, and/or the use of aggressive and indiscriminate solicitation practices. (Grudniewicz et al. 2019, 210)

Though a useful starting point, this definition lacks concrete detail, illustrating the challenge involved in trying to definitively describe this slippery and still evolving concept. For instance, Hatherill (2020) is one author who laments the decision of the Predatory Summit group to omit the question of peer review from their definition. Nevertheless, Cobey et al. (2018, para. 2) emphasize that until a definition can be established, researchers may remain vulnerable: “in the absence of a clear definition, it is difficult for stakeholders such as funders and research institutions to establish explicit policies to safeguard work they support from being submitted to and published in predatory journals.” Therefore, it would seem worthwhile to continue trying to come up with a workable definition that will aid in the acquisition of scholarly publishing literacy skills.

Other authors have identified the term *predatory* as being problematic in part because it implies that there must be victims who are being preyed upon. This points to the fact that the notion of questionable scholarly publishing activities has continued to grow, shift, and evolve. As a result, the term *predatory* may no longer be appropriate or sufficient for referring to all of the activities that fall under this umbrella of questionable publishing practices. The concept may need to be subdivided and narrower terms and definitions may need to be developed in a more systematic way. In other words, while the term *predatory publisher* was first put forward as part of an ad hoc terminology strategy, it may now be time for professional terminologists to undertake a more thematic terminological investigation of this subfield of scholarly publishing.

Indeed, we can already see preliminary attempts to reorganize the semantic space in the literature. For instance, while some researchers may indeed be lured into publishing in predatory journals, Anderson (2015), Ray (2016), Pyne (2017), Eriksson and Helgesson (2018), Cobey et al. (2019), Frandsen (2019) and Linacre et al. (2019), among others, all point to cases where authors may intentionally submit and pay for their work to be published in questionable journals. The motivation for doing so may be to get an easy or quick publication, or because of frustrations with traditional journals (e.g. long time-to-publication period), or because of previous rejections or difficulty publishing in another journal (e.g. for reasons such as language quality or low originality of research). However, if an author is a willing participant, then can the publisher be labelled as *predatory*? Ray (2016) distinguishes between *predatory publishing*, where authors are not aware of the nature of the journal, and *fraudulent publishing*, where authors knowingly participate. Meanwhile, Anderson (2015, np) advocates for a wholesale change of terminology:

I suggest that we simply do away with the term ‘predatory’ in the context of scholarly publishing. It’s a nice, attention-grabbing word, but I’m not sure it’s helpfully

descriptive, given the wide spectrum of behaviors to which it can reasonably be applied. [...] More helpful, I think, might be simply to talk in terms of *bad faith*. Publishers who falsely promise peer review or lie about having an Impact Factor are operating in bad faith; so are authors who intentionally pay for (and benefit from) review and certification services they know to be fraudulent; so are peer reviewers who only pretend to do rigorous review.

Eriksson and Helgesson (2018, 182) make a similar argument:

we would be better served if we could distinguish between journals that deceive scientists and the very ethos of science, thus posing such a profound threat, and journals that are just amateurish, annoying, or of low quality. That way, it would be possible to take a firm stand against deceptive journals while simultaneously accepting that challenges meet new forms of publishing and acknowledge that such failings are sometimes present in traditional forms of publishing as well. We propose to distinguish between two sets of criteria for what is presently called predatory journals, criteria that have significantly different characteristics and point to two distinct types of flaws: being deceptive and being of low quality.

Although Eriksson and Helgesson (2018) do propose some criteria to distinguish the two types of journals, researchers such as Memon (2019) find that the proposed criteria are not sufficiently robust to clearly differentiate between deceptive versus low quality journals and call for more work to be done.

Meanwhile, Bell (2017) presents an alternative view of predatory publishers by viewing them as examples of parody, mimicry or spoofs instead of as predators. Viewed in this way, these journals expose the relations of authority that traditional forms of scholarly publishing depend on. In the words of Bell (2017, 660):

Without wishing to deny the questionable ethics of some of these publishers, they nevertheless expose the problems with contemporary knowledge production in academia, in terms of its commercial context, our methods for ascertaining quality and value, and the ways it systematically privileges scholarship from the 'centre' and marginalises and excludes that from the 'periphery'. Viewed in this light, such journals reveal not the dark side of the open access movement, but the dark side of academic knowledge production itself.

Another way in which the field related to *predatory publishing* is evolving is that it has expanded to include concepts such as *predatory conferences* (Gillis 2018), *predatory authors* (Dreybrodt 2020) and *fake science* (Hopf et al. 2019). These concepts do not necessarily fall under the umbrella of predatory publishing in a strict sense, but they are certainly related concepts that could be worth exploring in a broader thematic terminology project.

Treatment in multilingual term banks

The term *predatory publisher*, and related terms such as *predatory publishing* or *predatory journal*, have not yet entered into mainstream general language lexicographic resources such as the *Merriam-Webster* online dictionary, the *Cambridge* online dictionary, or the *Oxford* online dictionary. However, this is not too surprising since this term is most commonly used as part of the specialized language of scholarly publishing and not as part of everyday language. However, as previously mentioned, the results of terminological research may be recorded in a searchable database known as a term bank. In a country such as Canada, which has more than one official language, a term bank often acts as a translation resource. However, a term bank might also have a sort of prescriptive or language planning function, where it encourages the use of preferred or approved terms and discourages the use of unapproved or less desirable terms (similar to a controlled vocabulary in LIS, which indicates both authorized and unauthorized terms). For example, in the French Canadian language, a less desirable term might be an Anglicism (e.g. *le tweet*) whereas the approved term might be one that is in correctly formed French (e.g. *le gazouillis*).

We searched for the term *predatory publisher* in the three multilingual term banks mentioned previously:

- *Grand dictionnaire terminologique (GDT)*, maintained by the *Office québécois de la langue française*;
- *TERMIUM Plus*, maintained by the Government of Canada's Translation Bureau; and
- *Inter-Active Terminology for Europe (IATE)*, which is maintained by the European Commission's Directorate-General for Translation.

Note that because term banks are *concept*-based and not *term*-based, it means that all synonyms for a given concept are listed on the same record. In this way, a term bank is more like a thesaurus (which groups synonyms), and less like a dictionary (which lists synonyms in separate entries). Therefore, when searching a term bank for a concept such as *predatory publisher*, there is no need to search independently for synonyms (e.g. *deceptive publisher*) because these will automatically appear on the same record.

In addition, since the records are concept-based, this also means that equivalents in other languages also appear on the record. Therefore, a search for the English-language term will also return the equivalents in other languages. When looking back on his choice of the term *predatory publisher*, Beall (2017a, 55) commented that “the term does not always translate well into other languages.” We therefore thought it would be interesting to see what these term banks propose as equivalents in other languages.

When searching for the term *predatory* in the subject field publishing we got hits in both of the Canadian term banks; however, nothing was returned by *IATE*. The results that we found in the *GDT* and *TERMIUM Plus* in English, French and Spanish are presented below.

GDT

As summarized in Table 1, the *GDT* contains English-language entries for three concepts: 1) *predatory publisher*, 2) *predatory publishing*, and 3) *predatory journal*. In all cases, *deceptive* was listed as a synonym, but there was no mention as to whether one of the terms was preferred.

In French, these three concepts had multiple terms that could be used to describe them. While acknowledging that all variants are “acceptable”, the *GDT* actually recommends that the terms using the expression *pseudo-* are more authentic in French than the terms using *prédateur*. It is worth noting here that the *GDT* has a specific mission to promote and preserve the French language in Canada. Therefore, it promotes the use of the construction *pseudo-* rather than *prédateur*, the latter of which it describes as a calque or literal translation of the English.

The *GDT* did not return any Spanish-language terms for the concept *predator* in the subject field publishing.

English	French	Comments
<ul style="list-style-type: none">• predatory publisher• deceptive publisher	<ul style="list-style-type: none">• éditeur• prédateur n. m.• éditrice• prédatrice n. f.• pseudo-éditeur scientifique n. m.• pseudo-éditrice scientifique n. f.	All terms have the status “acceptable” though it is noted that the term <i>éditeur prédateur</i> and its feminine equivalent are considered to be calques (literal translations) of the English and that the <i>Office québécois de la langue française</i> encourages the term <i>édition pseudo-scientifique</i>
<ul style="list-style-type: none">• predatory publishing• deceptive publishing	<ul style="list-style-type: none">• édition• prédatrice n. f.• édition pseudo-scientifique n. f.	Both terms have the status “acceptable” though it is noted that the term <i>édition prédatrice</i> is considered to be a calque (literal translation) of the English and that the <i>Office québécois de la langue française</i> encourages the term <i>édition pseudo-scientifique</i>
<ul style="list-style-type: none">• predatory journal• deceptive journal	<ul style="list-style-type: none">• revue• prédatrice n. f.• pseudo-revue scientifique n. f.• pseudo-revue n. f.	All terms have the status “acceptable” though it is noted that the term <i>revue prédatrice</i> is considered to be a calque (literal translation) of the English and that the <i>Office québécois de la langue française</i> encourages the term <i>édition pseudo-scientifique</i>

Table 1. English and French terms related to *predatory publishing* as found in the *GDT*.

As illustrated in Table 2, *TERMIUM Plus* contains records for two concepts: 1) *predatory publisher*, and 2) *predatory journal*. These terms are labelled as being “correct” and there are no English-language synonyms listed. With regard to French, there is one equivalent term listed for each of the two concepts, and these are also labelled as being correct. In addition, for the concept *predatory publisher* only, *TERMIUM Plus* also provides two possible Spanish equivalents – one in the masculine form and one in the feminine form. Both are labelled as “correct”.

English	French	Spanish	Comments
• predatory publisher	• éditeur prédateur n. m.	• editor depredador n. m. • editora depredadora n. f.	All terms are “correct”
• predatory journal	• revue prédatrice n. f.	--	All terms are “correct”

Table 2. English, French and Spanish terms related to *predatory publishing* as found in *TERMIUM Plus*.

In summary, we can see that the very literal translations for the English term *predatory publisher* have been carried over into French (*éditeur prédateur*) and Spanish (*editor depredador*), and these literal translations are recognized as being correct or acceptable. However, the *GDT*, which has a specific mission to promote and preserve the French language in Canada, has actually recommended that the term *pseudo-éditeur scientifique* is a more authentic French term.

Discussion

We mentioned at the beginning of the article that it is possible for less-than-ideal terms to implant in a language relatively quickly, and that it can be hard to dislodge these terms. For example, we still *cc* our emails to people even though there is no carbon paper used to make the copy, and we still *dial* our cell phones, even though these devices have a keypad rather than a dial. Whether by accident or design, the term *predatory publisher* does check many of the boxes that Quirion and Lanthier (2006) identified as increasing a term’s chances of implanting in a language: it is relatively concise, it can produce derived forms (e.g. *predatory journal*, *predatory conference*), and it complies with the rules of English.

Does this mean that it is impossible to dislodge the term? Cukier et al. (2020) report on a discussion that took place at the previously mentioned *Predatory Summit* that was organized in Ottawa in April 2019. One of the items that the participants discussed was whether or not the term *predatory* should be changed. No consensus was reached, and in fact the group’s opinion was divided roughly into thirds, with 29% of the participants being against a name change, 37% of participants being in favour of a name change, and 34% of participants remaining neutral on the issue. As part of the discussion, four alternative names were considered to replace the term *predatory publisher*: *dark publisher*, *deceptive publisher*, *illegitimate publisher*, and *publisher operating in bad faith*. The option that received the most support was *deceptive publisher*, with

67% of participants finding it to be the best choice. However, overall participants felt that there would be significant challenges associated with trying to change the established term, such as difficulties in identifying literature, problems disseminating and promoting a new term internationally, and challenges updating existing educational materials and funder statements. As reported by Cukier et al. (2020, 4):

At the Summit, it was concluded that changing an already established term would likely be confusing to the scientific community and not in the best interest of moving this agenda forward. It was recommended that the term ‘predatory’ continue to be used and that limitations to the term [...] be recognised.

With regard to Cukier et al.’s (2020) observation that it would be difficult to disseminate and promote a new term internationally, one reason that this can be challenging is that there is no overarching body to protect or promote English, as there is for other languages. For instance, the *Académie française* is France’s official authority on the vocabulary, grammar and usage of the French language, while the *Real Academia Española* is Spain’s official royal institution with a mission to ensure the stability of the Spanish language. In Canada, the *Office québécois de la langue française* is responsible for language planning activities for Canadian French, which includes suggesting French terms for new concepts or suggesting French terms to replace terms that have been borrowed from English. These language planning authorities can be very influential in mandating or encouraging the use of preferred terminology, thus it is easier to influence term choice in a language that has the backing of an official authority. Since the English language has no similar body, and since the field of scholarly publishing does not have a committee similar to the previously mentioned International Committee on the Taxonomy of Viruses that named *SARS-CoV-2* and *COVID-19*, there is no easy means of selecting, disseminating and promoting a new term to replace *predatory publisher* in English.

In contrast, as noted above, the *GDT* term bank, which is developed and maintained by the *Office québécois de la langue française*, suggests that the French term *pseudo-éditeur scientifique* is actually a better choice than the term *éditeur prédateur*, which is a calque or literal translation from English. Since this term was suggested by the *GDT* only in April 2018, not enough time has passed to allow us to see whether *pseudo-éditeur scientifique* will take hold and displace *éditeur prédateur* in the French-language discourse on this subject; however, it will certainly be interesting to see how this develops in the coming years.

Concluding remarks

In this article, we have seen that Beall’s initial term choice *predatory publisher* – which he coined in 2010 to discuss an emerging phenomenon in the field of scholarly publishing – has been questioned and criticized as the associated concept has continued to evolve and grow, meaning that the initial definition and term now seem less appropriate. Nevertheless, this term

has implanted into the English language and appears in two major Canadian term banks, and it has been carried over more or less literally into other languages, such as French and Spanish.

Making good terminological choices is ideal because it facilitates clear and precise communication. So when we are able to get it right, or to make an early correction (e.g. heading off *China virus* by introducing the preferable *COVID-19*), so much the better. However, terms are not always coined in ideal conditions, and there is not always a committee or a language planning authority who can step forward and take responsibility for getting it right. Most often, people who do not have a background in applied linguistics but who want to share a new idea just do the best that they can. Moreover, language and knowledge are dynamic, and terms can evolve along with the concepts that they describe. This evolution can take the form of introducing a new term (e.g. in golf, replacing the term *wood* with *driver* once the golf clubs that were formerly made from wood started to be made from metal), or it can take the form of extending or remapping our understanding of what a term means (e.g. *cc*). Language speakers are resilient – they are capable of “translating” what it means to *cc* a message, even when there is no carbon paper involved.

Beall (2017a, 55) himself has acknowledged that his choice of the term *predatory* might not have been the best one, but he then goes on to state:

Some get hung up on the term, focusing on whether it’s appropriate or not. [...] The term is not so important — what is important is protecting early-career researchers and researchers based in developing countries from becoming the victims of these publishers.

Beall (2013b, 2013c) has been a strong advocate for increased scholarly publishing literacy, and others such as Zhao (2014), Johnston and Boczar (2019), and Swanberg et al. (2020) have followed suit. In particular, all have emphasized the fact that academic libraries have an important role to play in supporting researchers and in helping them to obtain the knowledge and skills needed to be able to differentiate between good and poor publication venues. Meanwhile, the stakeholders (including librarians and information scientists) at the Predatory Summit have shown that it is possible to continue moving forward on this issue, even when faced with less than ideal terminology (Grudniewicz et al. 2019; Cukier et al. 2020).

Nevertheless, having a good understanding of the concepts, terms and definitions—as fluid and imperfect as it may be—is valuable for developing scholarly publishing literacy skills. Memon (2019, 5) observes “there is a need of a well-formulated, uniform terminology for predatory publishing practices. The responsibility collectively lies with journal editors, institutions and organizations.” To this we could add that there is scope for professional terminologists to assist with this task. We suggest that perhaps the time has come for professional terminologists to undertake a thematic terminology project in the field of scholarly publishing. As noted earlier, the term *predatory publisher* was coined as part of an ad hoc terminology development strategy; in other words, the term was proposed in response to a need for an immediate solution. This is

very common when a new concept emerges and needs to be named in order to be shared and discussed. However, now that a broader “domain” of predatory publishing has been established over the past decade, which includes a number of branches and related concepts (e.g. predatory conferences, predatory authors, fake science), it could be worthwhile for terminologists to undertake a more extensive and thematic terminology project and to map out this field and its concept-term units more clearly and carefully and to incorporate a fuller description of this domain into existing term banks. At present, the terminology of this domain is not well represented or explained in contemporary term banks or similar resources. However, as the final step in completing this article, we have taken the initiative to contact the Government of Canada’s Translation Bureau and the *Office québécois de la langue française*, the groups who develop and maintain the *TERMIUM Plus* and *GDT* term banks, with this suggestion.

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