

# Swedish researchers' responses to the cancellation of the big deal with Elsevier

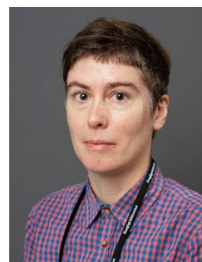
In 2018, the Swedish library consortium, Bibsam, decided to cancel big deal subscriptions with Elsevier. Many researchers ( $n = 4,221$ ) let their voices be heard in a survey on the consequences of the cancellation. Almost a third of them ( $n = 1,241$ ) chose to leave free-text responses to the survey question 'Is there anything you would like to add?'. A content analysis on these responses resulted in six themes and from these, three main conclusions are drawn. First, there is no consensus among researchers on whether the cancellation was for good or evil. The most common argument in favour of the cancellation was the principle. The most common argument against cancellation was that it harms researchers and research. A third of the free-text responses expressed ambivalence towards the cancellation, typically as a conflict between wanting to change the current publishing system and simultaneously suffering from the consequences of the cancellation. The general support for open access in principle reveals a flawed publishing system, as most feel the pressure to publish in prestigious journals behind paywalls in practice. Second, it was difficult for researchers to take a position for or against cancellation due to their limited knowledge of the ongoing work of higher education institutions and library consortia. Finally, there are indications that the cancellation made researchers reflect on open access and to some extent alter their publication pattern through their choice of copyright licence and publication channel.

## Keywords

big deal cancellation; cancellation; Elsevier; Sweden; researcher; open access



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## Introduction

The decision of the Swedish library consortium, Bibsam, to cancel their agreement with Elsevier in the spring of 2018<sup>1</sup> stirred a lot of attention, both in the Swedish research community and in international media.<sup>2</sup> Suddenly, researchers were faced with the consequences of the closed, subscription-based publishing system. Swedish vice-chancellors had favoured open access (OA) and deemed unreasonable the unwillingness of Elsevier to negotiate an agreement that combined the cost for subscriptions and OA publishing. This was the first time a so-called big deal, including many journals researchers

'This was the first time a so-called big deal ... was withdrawn from all organizations'

2 were used to having immediate access to, was withdrawn from all organizations at once – and, with the largest scholarly publisher at that. The Swedish goal is 100% immediate open access to all publicly funded research.<sup>3</sup> In negotiations, Bibsam therefore emphasizes a quick transformation to OA.<sup>4</sup>

Big deal cancellations are a fairly new phenomenon<sup>5</sup> and the impact of big deal cancellation on researchers has been unknown. We know that researchers do not only access research from publisher-controlled sites. According to a large-scale survey of readers of scholarly publications ( $n = 10,977$ ), a significant share of the research articles read is instead accessed from free resources. Such free resources include institutional repositories, free subject repositories, scientific social networking sites, copies emailed between colleagues and the illegal Sci-Hub. In the high-income countries, articles are accessed from free resources 60% of the time, as compared to 70% of the time in the low-income countries.<sup>6</sup> Much published research can thus be found freely available online (not necessarily meeting common OA standards, but still available). Elsevier is the largest scholarly publisher that Bibsam negotiates with and Swedish researchers were therefore expected to be affected by the cancellation quickly. Thanks to post-termination access clauses (PTA), most organizations within the consortium had secured access to publications issued by Elsevier between 1995 and 30 June 2018 even after cancellation, but as of 1 July 2018 Swedish researchers would no longer have access to newly published articles issued by Elsevier. Some research fields were expected to feel the impact of this sooner than others since different research fields display different patterns in publishing and OA culture.<sup>7</sup> Legal access to research publications with copyright restrictions is often granted only after an embargo, meaning researchers in rapidly moving research fields with poorly developed OA culture were expected to suffer severe negative effects from cancellation immediately. The cancellation also withdrew access to a service Swedish researchers are long accustomed to having. Researchers in lower-income countries are used to more limited access to research articles and, in consequence, use a wider range of search resources. Researchers in wealthier countries do not have this habit.<sup>8</sup>

The role of research libraries, from a researcher's point of view, is to provide access to scholarly literature. According to the triennial Ithaka S+R US Faculty Survey ( $n = 10,919$ ), the library's ability to provide access to academic resources (journals, books and electronic databases) is the library's most important function, year after year. Access was deemed so important, that '83% of faculty agreed that their library's budget should be supported when the prices of scholarly journals rise to ensure continued access to collections' in 2018.<sup>9</sup>

Much of the work of research libraries is (and, in many ways, it could be argued that it should be) unseen by researchers. Some researchers are unaware of their use of library services due to efficient proxy solutions hosted by the libraries. In recent years, library consortia have taken responsibility for identifying and centralizing payments for OA publishing in order to take control of the total cost of publishing and accelerate the transition to OA. This is in line with European guidelines as well as many of the research funders' policies.<sup>10</sup> The role of research libraries as OA champions is long standing but may not necessarily be known among researchers. In European higher education institutions (HEIs) in 2017-2018, 62% of surveyed institutions had established an OA policy on research publications. The awareness of these OA policies was deemed much higher among librarians than among their institutional leaders and the researchers at the HEIs.<sup>11</sup> The limited awareness of existing policies, and the plausible lack of acceptance or understanding of the new role of research libraries among researchers, risks being a hindering factor to the development of OA. It also risks hindering the acceptance among researchers of a decision as disruptive as a cancellation, as a means to transition to OA.

## Aim

We set out to understand how the Swedish research community was affected by the cancellation of Elsevier. The analysis was carried out to provide depth to the quantitative findings of an evaluation<sup>12</sup> commissioned by the Bibsam steering committee.

## Method

### Sample

An open link survey<sup>13</sup> was sent out within all the organizations that had an agreement with Elsevier via Bibsam at the time of cancellation. Potentially, 42,000 researchers in 29 HEIs and 15 government agencies were affected by the cancellation. From these, 4,221 researchers responded to the survey. The respondents were researchers/research students (85%), users at government agencies (7%) and students (5%). A small portion of the respondents (3%) responded 'Other' or left no response. The final question of the survey was 'Is there anything you would like to add?'. The 1,241 free-text responses to this question were subject to analysis.

'We set out to understand how the Swedish research community was affected by the cancellation of Elsevier'

Researchers from all research fields responded to the survey. We tested to see if any research field (based on the division of subject areas made by the Swedish Higher Education Authority [UKÄ]) was over-represented among those who had left free-text responses, compared to the overall sample that responded to the survey. A chi<sup>2</sup> test showed that this was not the case ( $X^2 [5, n = 1209] = 1.96, p > 0.05$ ). Thus, with respect to research fields, the researchers that submitted free-text responses could be assumed to be representative of the whole sample.

### Analysis

Two types of qualitative analyses were conducted. A brief analysis of sentiment and a main, more in-depth, content analysis.

In the analysis of sentiment, each of the 1,241 free-text responses was categorised as either strictly positive, strictly negative or ambivalent (i.e. contained arguments both for and against cancellation) towards cancellation. A fourth category was created for the answers that could not be fitted into these three categories. This analysis was conducted to ensure the ambivalence in the material was captured.

In the main analysis, the four authors of the article conducted a content analysis<sup>14</sup> on the material. This meant that each free-text response was broken into meaningful units in a manner close to the wording. As an example, the following response was broken into two meaningful units:

'It affected me somewhat negatively' (first unit), 'but we need to make a point towards Elsevier.' (second unit)

The units were merged into codes and later categories and themes. Initially, two of the authors analysed a subset of 10% of the responses, extracted units from them and merged units into codes. All in all, 2,818 meaningful units were identified in the 1,241 individual free-text responses. At one point there were 79 codes, which were reduced to 46 in the final analysis. The codes were merged into 18 larger meaningful categories with six overarching themes. The process of analysis was iterative and meant going back and forth, analysing the free-text replies and their units, reading and re-reading the description of codes, moving units appropriately and adjusting the descriptions of codes and categories accordingly. The example above was coded as follows in the final analysis (see Table 1):

'It affected me somewhat negatively' (Category 2a, code: Researchers cannot carry out their work as before), 'but we need to make a point towards Elsevier.' (Category 1a, code: Importance of a reasonable agreement)

## 4 Results: effects of cancellation

First, the analysis of sentiment is described. Second, the content analysis is described.

The analysis of sentiment showed that out of the 1,241 free-text responses, 317 responses contained ambivalence. That is, they contained arguments both for and against cancellation. Among the other free-text responses, 384 responses were deemed strictly positive, 305 responses were deemed strictly negative and 235 responses contained something other than a stance on the cancellation. The most common indication of ambivalence included both a) an understanding and/or support for the cancellation in principle and b) an acknowledgement that the negative impact of the cancellation is difficult to manage in practice.

The content analysis resulted in six overarching themes, 18 categories and 46 codes. The themes include 1) Argument in favour of the cancellation, 2) Argument opposed to the cancellation, 3) Elicited attitudes among researchers, 4) The conflict should be resolved, 5) Uncertainty makes it difficult to take a position and 6) Questionnaire technique. An overview of the themes, categories and codes is presented in Table 1, along with the number of meaningful units in each. The illustrative quotes below are extracted from the free-text responses and presented in their unedited form, including errors in spelling. Swedish quotes have been translated to English by a professional translator.

Theme	Category	Code	Number of units	
1. Argument in favour of the cancellation	1a) Argument in favour of the cancellation on principle	Importance of a reasonable agreement	296	
		Current publishing system and business models exploit the research community	157	
		The principle of open access	147	
		Elsevier's costs and profit are disproportionate	135	
		Criticism against current merit systems	17	
		1b) Expression of support for the cancellation	Encouragement and support for the decision to cancel	140
			Cancellation was unavoidable and overdue	19
			Cancellation will be Elsevier's loss over time	8
		1c) Cancellation has caused less difficulty than expected	Cancellation has not caused any problems	49
			Not opposed despite problems	37
			Researcher or subject is not affected by the cancellation	15
			1d) Unspecified criticism of Elsevier and other publishers	Unspecified criticism of Elsevier

(Contd.)

Theme	Category	Code	Number of units
		<i>Unspecified criticism of publishers</i>	16
<i>2. Argument opposed to the cancellation</i>			1,016
	<i>2a) Cancellation complicates research</i>		636
		<i>Researchers cannot carry out their work as before</i>	347
		<i>Alternative access takes time</i>	78
		<i>Monitoring of the research field suffers</i>	77
		<i>Cancellation harms Swedish research</i>	75
		<i>Careers suffer</i>	36
		<i>Cancellation complicates the work of students and researchers of government agencies</i>	23
	<i>2b) Elsevier's merits</i>		204
		<i>Elsevier's important position in various fields makes Elsevier indispensable</i>	156
		<i>Elsevier guarantees quality</i>	20
		<i>Cancellation costs money</i>	15
		<i>Elsevier's costs are reasonable</i>	13
	<i>2c) Criticism against negotiators and the negotiation process</i>		102
		<i>Criticism against the Bibsam Consortium and the National Library of Sweden</i>	53
		<i>Researchers should have been consulted</i>	22
		<i>Sweden's weak negotiating position</i>	20
		<i>Why Elsevier?</i>	7
	<i>2d) Criticism against research policy and bureaucracy at higher education institutions</i>		39
		<i>Criticism against research policy</i>	24
		<i>Researchers' poor working conditions</i>	15
	<i>2e) Researchers see problems with the principle of open access</i>		35
		<i>Open access is too expensive</i>	15
		<i>Doubt in the peer review of open access journals</i>	11
		<i>Questioning the purpose of open access</i>	9
<i>3. Elicited attitudes among researchers</i>			419
	<i>3a) Proposal for improvements in the scholarly publishing system</i>		153
		<i>Proposal for research dissemination and use of research funds</i>	71
		<i>Proposal for how negotiations should proceed</i>	58

(Contd.)

Theme	Category	Code	Number of units
		<i>Proposal for how individual researchers can contribute to improvements in the scholarly publishing system</i>	24
	3b) <i>Changed attitudes</i>		128
		<i>Cancellation affects researchers' publishing patterns</i>	74
		<i>Withdrawn peer review and editorship in Elsevier journals</i>	39
		<i>Long-standing refusal to collaborate with Elsevier</i>	15
	3c) <i>Strategies for access</i>		121
		<i>What researchers do to gain access</i>	77
		<i>How the library services work</i>	44
	3d) <i>Unchanged attitudes</i>		17
		<i>No change in publishing patterns</i>	12
		<i>Continued collaboration with Elsevier</i>	5
4. <i>The conflict should be resolved</i>			145
	4a) <i>Resume the agreement as soon as possible</i>		81
	4b) <i>Wish for a solution</i>		64
5. <i>Uncertainty makes it difficult to take a position</i>			90
	5a) <i>Misunderstandings</i>		59
	5b) <i>Uncertain future</i>		31
6. <i>Questionnaire technique</i>			36
<i>Total</i>			2,818

Table 1. Summary of the themes, categories, codes and meaningful units identified in free-text responses left by researchers answering the question: 'Is there anything you would like to add?'

## Description of the themes, categories and codes

The following is a description of the six themes and their associated categories and codes.

### **Theme 1: argument in favour of the cancellation**

We identified a series of arguments that motivate and legitimate the cancellation. The theme includes four categories: 1a) Argument in favour of the cancellation on principle, 1b) Expression of support for the cancellation, 1c) Cancellation has caused less difficulty than expected and 1d) Unspecified criticism of Elsevier and other publishers.

#### **1a) Argument in favour of the cancellation on principle**

This category includes the four codes: 1) Importance of a reasonable agreement, 2) Current publishing system and business models exploit the research community, 3) The principle of OA, 4) Elsevier's costs and profit are disproportionate and 5) Criticism against current merit systems.

Many responses stressed the importance of a reasonable agreement and supported the demands made on Elsevier. Many also considered the decision to cancel just, correct and an important stance. The respondents considered it important to take action against a publisher that was not prepared to meet Bibsam's demands.

'I think that it was right to cancel the agreement if they did not meet your demands.'

7 Other respondents expressed understanding for the basis of the principles for why the agreement was cancelled, without necessarily giving cancellation their support.

'While I understand the reasons for, and in theory agree with, not renewing the agreement with Elsevier, it has been extremely frustrating not being able to access articles.'

Respondents thought the way publishing works needed to be changed fundamentally. The business model of Elsevier and other publishers, along with the current publishing system, exploit the research community. It is researchers who produce the manuscripts, review them and are editors for journals. Respondents criticised that public funds and researchers' unpaid work create profit for private companies.

'Personally, I strongly disagree with the operation model of companies such as Elsevier and their abuse of researchers struggling to attain the goal of "high impact factor publication". Research funded by public money should be published as open source, and certainly not in journals which pursue the paywall strategy, at the same time using editorial and review services of the community for free.'

'Respondents thought the way publishing works needed to be changed fundamentally'

It was important for respondents that academia stood up for the principle of OA. Research should be freely accessible to the furthest possible extent.

'... op access must be considered a way to a more equal world in which everyone must have access to knowledge in a reasonable manner.'

In some units, respondents discussed copyright and the fact that researchers often give away their copyright to publishers at the time of publication.

'It is unfathomable that we as researchers ... give away the copyright ...'

Respondents criticised Elsevier's high prices and profit margin, sometimes referring to the benefits of digitalization.

'Systems (both for publishing and reviewing) are becoming increasingly digital, impersonal and difficult in order to reduce their costs and yet they want to be paid more!'

'It was important for respondents that academia stood up for the principle of OA'

Another factor contributing to the view that the profit margin is disproportionate was the diminishing quality of both service and publications from Elsevier.

'Elsevier has begun to increasingly feel like a part of the interest economy, their margins are audaciously high and the service that they provide is really bad.'

A few researchers in favour of cancellation criticised the role of impact factors in the current merit system in relation to cancellation and the lock-in they create. Researchers felt they were put in a difficult situation by cancellation as HEIs' and research financiers' policies do not reward OA.

'You can't have the number of articles published in "prestigious" journals as a KPI and then ask us to not publish with these same journals.'

'Respondents also argued that it is important to change the merit system'

Respondents also argued that it is important to change the merit system ...

'I opine that we need to change systematically the way we measure scientific output, and if we really want to influence Elsevier policies, detach ourselves from their metric systems.'

... and there was an awareness that this would not happen without resistance.

- 8 'Unfortunately the established professors have an enormous conflict of interest and will fight to preserve the current system.'

### 1b) Expression of support for the cancellation

This category includes the codes 1) Encouragement and support for the decision to cancel, 2) Cancellation was unavoidable and overdue and 3) The cancellation will be Elsevier's loss over time.

Many free-text responses contained encouragement, wholehearted support and cheering. Many appealed for unity and endurance. The cancellation was seen as a courageous decision and the negotiators received well wishes in continued negotiations.

'You made a brave but necessary decision, keep at it.'

According to some, the cancellation was unavoidable and overdue.

'Cancellation of the agreement with Elsevier was an entirely necessary evil.'

A small number of units indicated that the cancellation will be Elsevier's loss over time because the reduced accessibility to Elsevier material will lead to fewer citations of the material, which will put pressure on Elsevier.

'The journals will be less cited, which may put pressure on them to reach a new agreement.'

'The cancellation was seen as a courageous decision and the negotiators received well wishes in continued negotiations'

### 1c) Cancellation has caused less difficulty than expected

This category includes the codes 1) Cancellation has not caused any problems, 2) Not opposed despite problems and 3) Researcher or subject is not affected by the cancellation.

For some, the cancellation did not cause any difficulty or caused fewer problems than expected.

'I cannot say that the absence of the agreement has affected my research in any major way.'

Also, not all researchers that were affected negatively by the cancellation opposed it. Some researchers saw the cancellation as worthwhile in the short-term, despite causing them minor or even significant problems.

'... we are in a transition period from subscription-based to open-access based publication and a few things are going to be less optimal than they should be during this period.'

Some researchers did not need access to Elsevier material during the cancellation. Despite covering a wide range of research fields, Elsevier is still a minor player in many fields.

'Elsevier is not a major player in my field (Astrophysics).'

Other researchers did not need access to scholarly articles at all during the cancellation, due to their current working circumstances.

'[I am] presently working very little with research and instruction, so for this half-year, the change has not had much of an effect on me at all.'

### 1d) Unspecified criticism of Elsevier and other publishers

This category includes the codes 1) Unspecified criticism of Elsevier and 2) Unspecified criticism of publishers.

Respondents described Elsevier negatively without further explanation. The criticism included words like crooks, jokers, predators and parasites.



'Elsevier is the worst predatory publisher there is.'

Some researchers accused Elsevier of wanting to run a monopoly or for being detached from reality in their refusal to adapt to the development and needs of the modern research community.

'Elsevier is completely tone-deaf in their stance on the modern research community.'

Respondents also criticised other publishers and the publishing industry in general.

'The publishing industry holds knowledge and academics hostage ...'

### **Theme 2: argument opposed to the cancellation**

This theme relates to the negative consequences of the cancellation and arguments against the decision to cancel the agreement, negotiators, decision makers and OA. The theme includes five categories: 2a) Cancellation complicates research, 2b) Elsevier's merits, 2c) Criticism against negotiators and the negotiation process, 2d) Criticism against research policy and bureaucracy at HEIs and 2e) Researchers see problems with the principle of OA.

#### **2a) Cancellation complicates research**

This category relates to how the cancellation harmed or complicated matters for researchers and research. It includes six codes: 1) Researchers cannot carry out their work as before, 2) Alternative access takes time, 3) Monitoring of the research field suffers, 4) Cancellation harms Swedish research, 5) Careers suffer and 6) Cancellation complicates the work of students and researchers of government agencies.

Many expressed the need for access to Elsevier's journals. Not having access to Elsevier journals was limiting for many respondents. For some respondents, the lack of access entailed complications of a milder form, but for others, access to Elsevier was essential to be able to carry out their work as researchers. Some respondents indicated that the cancellation had unfairly shifted a problem from Bibsam and the HEIs to the individual and their research project.

'... as usual, it is the researchers who take the hit. Try taking the hammer away from the carpenter and see what the reaction is.'

'Not having access to Elsevier journals was limiting for many respondents'

A considerable consequence was that researchers spend more time looking for articles. For many, the change was immediately perceptible.

'It takes longer to find information about new studies and recent findings'

Respondents stressed that they need immediate access to scholarly articles. Whether or not a researcher would read an article could be dependent on having immediate access to the article. Waiting complicated the work process and, in some cases, rendered the article useless.

'It's primarily the time aspect, both in the searching phase and in the reading phase. I can order articles via my library, but then I have to have several days' notice, not only in the form of delivery time for the article, but also that I have to get started when the article comes, remember why I needed it and how it fits in with what I was in the process of writing. There is also the risk of unnecessary orders because it is not certain that the article is useful and then I have waited for the article unnecessarily. After ordering articles a few times that were not useful, I choose to no longer do it in order to avoid creating unnecessary work for the library. Then I choose to search for and locate a different article that I can access.'

The cancellation limited researchers' daily monitoring and the ability to stay up to date in the relevant field.

'... we are unaware of what is going out in our fields ...'

10 Respondents were worried about their loss of knowledge and what consequences would arise from the limited monitoring of their research field. Since the cancellation, researchers did not make the effort to look up semi-interesting, inaccessible articles.

'I would say that the cancelled agreement has limited me in my search for new articles. Often you find an article that might be useful or that you like to read out of curiosity. However the extra step to request it from the library often makes me choose not to read it as it is an extra step/hurdle to request it ...'

'Respondents were worried about their loss of knowledge'

The decision to cancel the agreement harmed and limited Swedish research overall.

'Sweden, as a research country, will take a step back if nothing is done about the situation.'

The cancellation was also harmful to individual researchers' careers. Respondents argued that they need to publish in prestigious journals (which often means in journals behind paywalls) to guarantee their future financing and continued career. Respondents feared that a lack of access to Elsevier material would diminish Swedish researchers' ability to be competitive internationally.

'This limits my ability to keep abreast in my field and I am concerned that this may result in stifling my ability to compete on the international stage.'

'Respondents argued that they need to publish in prestigious journals ... to guarantee their future ... continued career'

The cancellation complicated matters for researchers, but also students.

'The students cannot access articles for the work. How should we deal with that? Does anyone have a solution to this?'

## 2b) Elsevier's merits

This category includes four codes: 1) Elsevier's important position in various fields makes Elsevier indispensable, 2) Elsevier guarantees quality, 3) Cancellation costs money and 4) Elsevier's costs are reasonable.

A frequently recurring subject was that Elsevier covers a wide range of fields, which makes the publisher indispensable to read and publish with. They are an important part of the merit system in many research fields.

'Elsevier is one of the most important publishers in my field (sustainable and environmental architecture) ...'

It was expressed that Elsevier journals maintain high quality and that Elsevier is an esteemed publisher.

'Many of the journals under the Elsevier umbrella are fantastic assets to the scientific community.'

'cancellation generated hidden costs'

It was also noted that cancellation generated hidden costs of an increased administrative workload for researchers and research libraries, in addition to the costs for inter-library loans and alternative access services.

'Cost wise, just to contact author, getting papers, emailing maybe cumulatively take 30-60 min of administrative work and additional delays. Each article may cost Chalmers additional money of time and loss of productive time.'

According to some, Elsevier provides an important service that the HEIs themselves do not offer.

- 11 'Publishers like Elsevier provide a service that universities are not prepared to cover themselves, and we should accept that those services must be paid for.'

## 2c) Criticism against negotiators and the negotiation process

This category includes four codes: 1) Criticism against the Bibsam consortium and the National Library of Sweden, 2) Researchers should have been consulted, 3) Sweden's weak negotiating position and 4) Why Elsevier?

Respondents called into question Bibsam's credibility and ability to negotiate.

'My faith in Bibsam is almost completely gone.'

The cancellation was sudden and researchers found it baffling that Bibsam could not reach a solution other than cancellation. Researchers were unprepared for what happened.

'Cancelling from one day to another a so important subscription is irresponsible.'

Researchers should have been consulted or included to a greater degree before the decision to cancel.

'It is problematic that there is no broad consultation with the research community before measures such as cancellation are taken.'

Some thought Bibsam should have assured alternative means of access to the Elsevier material before the cancellation so as not to cause any interruption in access for researchers.

'Researchers should have been consulted ... before the decision to cancel'

'Other ways to access quality journal articles should have been made available before the cancellation.'

Some opined that Sweden on its own has a negotiating position that is too weak and that the country is too small to have any real effect on Elsevier.

'Sweden is too small to be able to affect a giant like Elsevier'

Some raised the issue of why Elsevier specifically was subject to cancellation.

'Unreasonable discrimination against a company ... there is no logic behind singling out Elsevier when the entire sector behaves in a similar fashion.'

## 2d) Criticism against research policy and bureaucracy at higher education institutions

There was a sense of indignation and distrust against research policy, decision makers and bureaucracies. This category includes the codes 1) Criticism against research policy and 2) Researchers' poor working conditions.

Research and researchers should not be controlled by political decisions.

'I am opposed to any political decisions preventing me from getting a hold of relevant research.'

Some viewed the political and academic decision makers as being incompetent.

'It is a decision that was made by imbecilic activists that don't realise the harm they are doing!'

The terms for research, in general, had worsened.

'When the overheads go up and simultaneously the working conditions worsen ... one should not expect positive reaction from the researchers.'

12 Some mentioned the importance of access for researchers at government agencies.

'It is important that governmental agencies have access to as broad a spectrum of scientific articles as possible, because decisions should be based on objective arguments that are well-substantiated.'

## 2e) Researchers see problems with the principle of OA

This category includes three codes: 1) OA is too expensive, 2) Doubt in the peer review of OA journals and 3) Questioning of the purpose of OA.

Respondents questioned the costs related to OA.

'... open access journals are charging unreasonably high amount of open access fee ...'

Respondents raised a concern about the quality of the peer review process with OA publishers. They feared that OA publishers will not guarantee the same level of quality as more traditional publishers.

'There is a very real and large concern in the scientific community regarding peer-review in the new open-access journals.'

Finally, respondents questioned the purpose of OA and the general public's desire and ability to understand scholarly publications.

'However, I think that OAP [open access publishing] is in a totally free form accessible to anyone is strange. The likelihood that people outside of academics need to have free access is a sort of overly democratic pursuit that is hardly in demand.'

'respondents questioned the purpose of OA'

### ***Theme 3: elicited attitudes among researchers***

Researchers were forced to adjust to the cancellation. To a certain extent, they reacted or acted in new ways due to it. This theme includes four categories: 3a) Proposal for improvements in the scholarly publishing system, 3b) Changed attitudes, 3c) Strategies for access and 3d) Unchanged attitudes.

#### **3a) Proposal for improvements in the scholarly publishing system**

This category includes three codes that all contain proposals intended to improve the scholarly publishing system. The codes are 1) Proposal for research dissemination and use of research funds, 2) Proposal for how negotiations should proceed and 3) Proposal for how individual researchers can contribute to improvements in the scholarly publishing system.

The respondents were critical of the business models and the publication system as a whole and suggested a change to those structures. They proposed ways to use research funding more efficiently. Universities could handle and take control of their research results. With today's technology and researchers' review and editorial contributions, academics should be able to handle their research dissemination at a lower price. This could take place through academic publication platform initiatives...

'all universities in Sweden should evolve their platforms to be a publisher of all research for their own students and staff without using external commercial companies.'

... support for other publication channels to promote the development of OA ...

'I would like to see a serious discussion about substantial economic support for establishment of independent, free journals. It would be possible to create an infrastructure for financing through which Bibsam, for instance, could support a plethora of free journals in all fields.'

... the promotion of green OA and the preprint system ...

'We should promote more to publish in open archive document that are not shaped as clean as what Elsevier is doing but does it matter really to have clean nicely presented paper. Nope.'

... or by creating or purchasing publishers at European Union level.

'However, I think that it is time for significantly more controversial methods. It seems reasonable to start a national or European publisher where we publish for the self-cost price. The distribution is not a major cost and the money that comes in should go to editors and reviewers. Of course, everything should be published open access.'

One person proposed that money could be saved by closing down the university libraries.

'It is better to think about new approaches. For example, by closing down university libraries and instead investing those resources in agreements with publishers and a central library/depository for all academic institutions with a good remote borrowing system.'

Some requested knowledge of the actual costs.

'A constructive way forward would be to ask Elsevier (and the other publishers) for a transparent report of how the costs have been calculated. Comparing those costs should be revealing.'

Respondents also gave suggestions on how negotiations should be carried out and proceed. They stressed the importance of international participation and collaboration in negotiations. Sweden should collaborate with other countries and the negotiations should preferably take place on the European level.

'Isn't it possible to get together at an even higher level (EU) and drive the negotiations?'

Some gave their full support for an expanded boycott in which Bibsam would cancel several agreements.

'I would give my full support to a collective cancellation of agreements in order to put a little pressure on more publishers.'

Some respondents expressed a desire to be involved and help put pressure on Elsevier. Some thought that researchers should start a researcher initiative like the Finnish #nodealnoreview.

'It would be good with a researcher initiative like the ones in Finland and Germany about refusing to work for free for Elsevier for as long as the period without an agreement continued.'

The movement towards OA is important and believed to be the researchers' responsibility to push.

'I find it quite embarrassing that the library needs to make such an effort to achieve this, rather than the scientific community taking action.'

Some suggested alternative ways to pressure Elsevier, e.g. by affecting how researchers publish. Respondents considered this a more effective means of asserting the power to change Elsevier's attitude.

'The only/best way to pressure the publisher is that the researchers choose primarily to publish in journals other than Elsevier's and to refuse to contribute as reviewers/editors.'

14 The Bibsam steering committee had not recommended any restrictions on what researchers could or could not, should or should not do during cancellation. Some respondents were unsure of, if and how they were expected to support the cancellation to apply more pressure on Elsevier. They lacked guidelines on whether they 'could' publish, review and be editors for journals issued by Elsevier and called for recommendations on how to publish strategically to promote OA and the negotiations.

'I would like more information about other journals and their approach in order to be able to make a strategic decision that benefits free research ...'

### 3b) Changed attitudes

This category relates to respondents' altered thinking and acting in terms of publishing, peer review and editorial work with Elsevier. Respondents perceived these changes in their publishing as positive or negative. The category includes 1) Cancellation affects researchers' publishing patterns, 2) Withdrawn peer review and editorship in Elsevier journals and 3) Long-standing refusal to collaborate with Elsevier.

Respondents echoed the sentiment that the cancellation affected researchers' publishing patterns. Some respondents indicated that they no longer wanted to send articles to Elsevier for publication or that the cancellation made them consider other channels. One editor for an Elsevier journal confirmed that their journal had received fewer article contributions after the cancellation.

'I think twice now when I choose a journal to publish in, and for now, I prioritise other publishers.'

It seemed out of the question for some to publish an article behind Elsevier paywalls in light of the cancellation. We understood this to be, at least in part, due to the reduced likelihood of being read by (Swedish) colleagues.

'... it is not only a hinder to see the research of others, but also the possibility of sharing your own. Double negative'

Some indicated that they 'had' to publish OA in Elsevier journals because of the cancellation. The respondents wanted to ensure that their articles were accessible to others – and that this cost them a great deal.

'I have had to pay high Open Access fees (€3000 each) for two major papers since July 2018, in order to ensure that they are visible to my peers.'

Others did not consider this a problem but appreciated that the cancellation had influenced them to publish OA to a greater extent.

'Forced me to publish in an open access journal and to think more about open access, which is very positive.'

Some respondents indicated that they had stopped doing reviews and no longer worked as editors in Elsevier journals as a result of the cancellation.

'I have had associations with Elsevier as an author, reviewer and editor (all of which have been essential to my career development as a young researcher and crucial to the success that I have had), and this decision from the Swedish libraries made me deeply reconsider all of these roles. I have since stopped reviewing and editing for Elsevier journals but have submitted an article to a special issue in my field that is hosted by an Elsevier journal.'

Others had taken a stance against Elsevier long ago, referring to their high profit margins and business methods.

'I have signed <http://thecostofknowledge.com/>. In other words, I have not done any editorial or publication work for Elsevier for several years.'

- 15 Some shared the email templates they used to refuse to collaborate with Elsevier-owned journals. Some encouraged their students and colleagues not to publish with Elsevier. Others indicated that they spread information to others about the cancellation when they can.

'When invited to do reviews or when writing authors to ask for reprints, I explain the situation and link to the blog post and ask them to use their power to pressure Elsevier to change.'

### 3c) Strategies for access

This category includes 1) What researchers do to gain access to unavailable articles and 2) How the library services work for alternative means of access.

It was common to mention the library, a colleague or an author as a solution when an important article was unavailable. Many, however, refrained from requesting articles unless they were confident they needed them. Not everyone had the time or was comfortable contacting the library or the author. If possible, researchers preferred to find an alternative to the article.

'If a piece of work is absolutely crucial, of course, it is possible to obtain it via some other method (ask the author, inter library loan, ask a friend/colleague, buy access, etc.)'

'If possible, researchers preferred to find an alternative to the article'

Another recurring response was what some researchers called 'creative solutions', suggesting illegal ways of gaining access to articles.

'Scientists are very creative and if we must get the articles we will find a way to do it such as Sci-Hub.'

Even if several respondents were very positive and thankful for Sci-Hub, most of those who mention Sci-Hub were critical of the need to resort to such solutions.

'I can see the value of open access but as things are now you are forcing Swedish scientists to use methods that may even be illegal to do their daily work.'

Some used peer review as a way to gain access to otherwise unavailable articles.

'I have made sure that I personally have free access through peer review ...'

Approximately half of the units that dealt with how the library services (e.g. inter-library lending or article delivery services) work were positive. These respondents had received good service from their library and were not seriously affected by the extra waiting time involved with ordering an article via the library.

'My research would have suffered if it hadn't been for Chalmers still providing the article the same day.'

'They preferred, and were accustomed to, immediate access'

When respondents described dissatisfaction with libraries' services, they mentioned that the lack of immediate access was limiting. They preferred, and were accustomed to, immediate access. One difficulty was that the library's traditional inter-library lending services did not provide electronic copies. Researchers were then unable to cut and paste exact quotations or add the articles to their electronic reference library unless they OCR-scanned the paper copy themselves. Additionally, alternative access services for article delivery did not allow orders ahead of print nor access to the article's supplementary information such as data.

'I have to request the article using an interlibrary loan form, and then fetch it IN PAPER from the library. I work with electronic copies of the articles in Endnote, which means that I now need to scan the paper article to be able to add it to my electronic library.'

## 16 3d) Unchanged attitudes

For some respondents, the cancellation did not lead to any change in attitude or behaviour. This category includes the codes 1) No change in publishing patterns and 2) Continued collaboration with Elsevier.

Some asserted cancellation would not change publishing patterns and that the number of articles submitted to Elsevier's prestigious journals would not decrease simply because Swedish readership decreased.

'It is unlikely that the publishing in the near future will move to other journals even if Sweden and certain other countries have cancelled the agreement.'

A few respondents expressly indicated that they would continue to peer review and edit for Elsevier journals.

'I am one of their most frequent reviewers and I will not stop out of loyalty to the international research field and the colleagues and reviewers who are there.'

### ***Theme 4: the conflict should be resolved***

Many respondents wished that Bibsam would resolve the conflict and restore access. The respondents varied in how strongly they expressed this desire (some opposed the cancellation and others supported it). The theme includes two categories: 4a) Resume the agreement as soon as possible and 4b) Wish for a solution.

#### **4a) Resume the agreement as soon as possible**

Respondents described the need for Elsevier publications as urgent. The units in this code expressed that a solution should be reached as soon as possible. Some indicated that the need for access was so serious that the agreement should be resumed immediately.

'It is VERY important that the agreement with Elsevier is renewed immediately ...'

'Respondents described the need for Elsevier publications as urgent'

#### **4b) Wish for a solution**

Some expressed a less urgent desire for a solution but wanted to ensure that a solution would be found in the long term because they needed access to Elsevier journals.

'I would like to have access to the research that is published at Elsevier again at some point in time'

### ***Theme 5: uncertainty makes it difficult to take a position***

This theme represents a certain measure of uncertainty. Some respondents had difficulty deciding their position on the cancellation. Misunderstandings sometimes hindered an initiated opinion. The theme includes two categories: 5a) Misunderstandings and 5b) Uncertain future.

#### **5a) Misunderstandings**

There are units in the free-text responses that demonstrate misunderstandings or a lack of knowledge. Some respondents reported that they knew too little or wanted to know more before they commented on whether it was right to cancel the agreement.

'I can't take a stance on whether the cancellation was justified, because I do not know exactly what costs/difficulties were associated with the process, what demands were made, etc ...'



17 Others made inaccurate statements based on their misunderstandings. For example, it could involve the belief that access to material is a matter of publishers' bad or goodwill rather than negotiated terms.

'...several publishers have taken the negative step of blocking older publications in order to force universities/institutions to subscribe.'

There were also several accounts of misunderstanding concerning what was permitted during the cancellation.

'There is a rumour at [institution] that you 'can't publish in Elsevier journals', but I don't care and don't know if it's true, either.'

### 5b) Uncertain future

There was uncertainty concerning what the cancellation would entail in the long term.

'It works for me right now, but it is uncertain what the future will bring.'

While the cancellation had not caused problems for some, many recognized that the cancellation will bring increased consequences over time. More will be affected by the cancellation in step with the growing amount of unavailable material and as the available material becomes increasingly dated. Some conclude that six months after the cancellation is too short a time to be able to fully assess the cancellation's consequences.

'I can imagine the situation will deteriorate as time goes by and a bigger fraction of current research becomes unavailable'

There was also some uncertainty concerning how the respondents' own Elsevier publications would reach an audience.

'It is primarily a worry about the articles that I published at Elsevier myself. Will they be read and cited?'

### **Theme 6: questionnaire technique**

Some of the identified units relate to the questionnaire.

Some respondents noted that questions 10 and 11 were formulated incorrectly.

'Questions 10 and 11 are worded in a bit complicated way and I hope I answered them properly.'

Some had comments on the division of the fields in the questionnaire (based on the Swedish higher education authority classification) and that their field was missing.

'My field is Educational Sciences. It is strange that the alternative was not available in the list under number 3.'

The study was welcomed. Some also appreciated the link attached to the questionnaire with information about the cancellation and alternative access.

'Thanks for an important investigation!  
it was nice that you added a link with info in open access ...'

## Discussion

The cancellation is engaging researchers, to which the large number of free-text responses attest. One third of the 4,221 respondents of the survey left free-text responses.

The 1,241 free-text responses analysed contained 2,081 meaningful units. The analysis on these units resulted in six themes, 18 categories and 46 codes. The themes include 1) Argument in favour of the cancellation, 2) Argument opposed to the cancellation, 3) Elicited

18 attitudes among researchers, 4) The conflict should be resolved, 5) Uncertainty makes it difficult to take a position and 6) Questionnaire technique. Three main conclusions are drawn from the analysis.

First, there is no consensus among researchers on whether the cancellation was for good or evil. Approximately a third of these responses were in favour of cancellation. One quarter opposed it and another quarter were ambivalent, i.e. put forth arguments both for and against cancellation. The remainder of the free-text responses did not mention the decision to cancel. A majority of the identified units (1,112 units) are arguments in favour of cancellation. By comparison, 1,016 units were arguments opposing cancellation. The analysis revealed why researchers opposed or supported the decision to cancel. There was a broad support for the principles of OA. The opposition to cancellation mainly had to do with its practical, negative consequences for researchers. This points to the conflict between researchers' principles (and OA policy) on the one hand and researchers' practices on the other.

'there is no consensus among researchers on whether the cancellation was for good or evil'

Second, the analysis indicated that the knowledge of OA and the awareness of the role of HEIs, research libraries and library consortia in negotiations for OA was low. There was a seemingly low level of trust in the decision-making bodies designated to represent researchers among the negatively inclined.

Third, the analysis gives valuable insight into how researchers reasoned in their publishing decisions during cancellation.

These three conclusions will be explained and discussed in the following.

### Principle versus practice – a flawed system

The arguments for and against cancellation are mainly on separate levels. The main arguments in favour of cancellation refer to *principles* (752 units). They involve a critique of the publisher's business model, their unreasonable costs and unwillingness to negotiate OA. We understand this as a critique both against Elsevier and as a more general critique of the principles that currently rule publishing. The main argument against cancellation refers to the cancellation's consequences *in practice* (636 units). The main argument opposing cancellation is its practical hindrance for researchers and research. As noted previously, researchers expect libraries to provide the services they need.<sup>15</sup> There is broad support for the reasons behind cancellation and for OA in principle, both among those positive to cancellation (384 individuals) and among the ambivalent (317 individuals). That is, the principle of OA is seldom explicitly questioned or opposed (35 units, category 2e) but cancellation (as a means to achieve it) sometimes was. Only a small portion of units (39 units, category 2d) expressed the concern that on principle research should not be steered by research policy or bureaucracy.

The conflict between researchers' principles (support for OA) and their practice (relative reluctance to publish OA) reveals a known flaw in the system for scholarly publishing: that OA policies are at odds with the merit system. The merit system steers researchers to publish in certain journals and holds a central role in maintaining a behind-paywall practice in scholarly publishing. The League of European Research Universities (LERU) has recommended changes in the merit system to recognize and reward open science practices.<sup>16</sup> Yet, explicit criticism against the merit system was identified in relatively few units in this study. The views expressed in the free-text responses suggested incremental rather than upending alterations to scholarly publishing (with the exception of a few creative suggestions in code 3a).

'The main argument against cancellation refers to the cancellation's consequences in practice'

## 19 Knowledge of the OA role of libraries, negotiations with publishers and OA in general

There is general support for OA, but the knowledge of OA and of research libraries' role and ongoing work to achieve OA is seemingly low. Researchers present suggestions on how one ought to better go about negotiations and achieve OA (153 units, category 3a). The suggestions included joining forces with other countries in negotiations, starting university-owned presses or putting pressure on publishers by influencing researchers to publish and cite differently and thereby steering towards OA. Most of the suggestions indicate that researchers are either unsatisfied with or unaware of the ongoing work of HEIs, research libraries and library consortia to achieve OA. Bibsam negotiates with gold OA publishers and strives for OA in all agreements with traditional publishers while collaborating with other consortia in Europe. Consortia worldwide meet regularly, share data and evaluation criteria (e.g. Open APC data and the ESAC Transformative Agreement Registry) and discuss strategies. Some researchers wished that negotiations were more internationally synchronized. One impediment to such co-ordination is that consortia in different nations have different assignments and therefore different strategies, timelines and priorities. As for the work of HEIs and research libraries, many fund researchers' OA article processing charges (APCs) through different means. Many support OA initiatives and infrastructure services such as COAR, OASPA or DOAJ and some host university presses. They also support the work at the National Library to transition the Swedish scholarly publishing system to OA,<sup>17</sup> for instance the creation of a national platform for Swedish OA scholarly journals, similar to the solutions of Finland and Denmark.<sup>18</sup>

The cancellation highlighted a part of the ongoing work towards OA to researchers. Some applauded and encouraged it (167 units, Category 1b). Others questioned the legitimacy of Bibsam and the National Library to advocate for OA and interfere with research work in such an intrusive way, without consideration for the consequences for researchers and with their work (102 units, Category 2c). It is plausible that those critical do not feel represented by Bibsam or are unaware that Bibsam operates on behalf of the HEIs and that heads of HEIs and HEI libraries are represented in both the steering committee of Bibsam and in the Association of Swedish Higher Education (SUHF) who took part in the cancellation decision.

Researchers' general knowledge of OA, OA research policy and copyright is low.<sup>19</sup> To some extent, limited knowledge is acknowledged also among the respondents of this study. One of the themes (Theme 5) identifies units that hindered researchers from taking an informed stance. This theme includes misunderstandings, lack of knowledge and uncertainties. Some respondents reported that they knew too little to have an opinion on the cancellation, or that it was too soon to tell what cancellation would entail, both in terms of what harm and what good it might achieve. Also, it was reported that any negative or positive consequences of cancellation need to be weighed against the duration of the cancellation. A hesitance to take a position on cancellation is not surprising given the many factors – of which researchers, in general, do not possess expertise – that underlay the decision to cancel. Negotiations of publisher agreements can be based on data on previous subscription costs, on publication (actual and predictive OA and non-OA publication data, and the associated publishing fees), on usage (reading and citing) and strategic priorities. These data are largely inaccessible to the public and often even to the negotiators and publishers. Even when accessible, data may still not be straightforward to use. The Swedish cost of publication (the cost of subscriptions, OA publishing fees and the administrative costs combined) was unknown/inaccessible up until 2018, when the National Library was first assigned to compile and make these costs known.<sup>20</sup> The relative inaccessibility of economic and publication data obstructs researchers' ability to evaluate the decision to cancel the agreement with Elsevier. We fully agree with Lawson, Gray and Mauri, that researchers need to be more included and informed about these data to accelerate the necessary systematic changes.<sup>21</sup>

'Researchers' general knowledge of OA ... policy and copyright is low'

There are other indications that researchers are doubting OA. Some express doubt in the peer review process of OA journals and question the value of OA (35 units, category 2e). As for the latter, it was questioned if the public have the interest in or even the ability to comprehend/assimilate research findings. Apart from being condescending, such remarks fail to recognize the value of OA to specialized professionals in trade, industry and public agencies. Applied research can be implemented by professionals in hospitals, schools and government agencies, to the benefit of all.<sup>22</sup> As for the rigorousness of the peer review process, there are strengths and weaknesses associated with any peer review, independent of the copyright of an article and of the prestige of a journal or its issuer. This is recognized in well-known initiatives, such as Think. Check. Submit.<sup>23</sup>, that help researchers to assess the credibility of a journal and DORA<sup>24</sup> that provides guidelines for researchers, institutions and publishers on how to responsibly assess merits. The framework and transparency of the review process along with the competence and the effort put in by the reviewer is what can warrant research quality.

'There are other indications that researchers are doubting OA'

In terms of costs, there is a widespread critique of publishers' high profit margins. Negative media attention and initiatives such as 'The Cost of Knowledge' have specifically called out Elsevier in the past. A very small number of the units identified criticize OA (transformative deals and APCs) as being expensive and recognize it as a new source of revenue for savvy publishers. The critique of costs of OA and the employed means to achieve OA is relevant, even if scholars may not be particularly initiated in the costs or the pros and cons associated with different means available to achieve OA. The OA2020 route to OA for scholarly publications<sup>25</sup> – which is adopted by Bibsam<sup>26</sup> – proposes immediate gold OA. Consortia are still learning whether this route and the recent years' signing of transformative agreements (previously known as offsetting, read-and-publish or publish-and-read agreements) has successfully transformed the landscape of scholarly publishing into OA. In the UK, Jisc concluded that their offsetting agreements signed between 2015 and 2017 have greatly increased the number of OA articles published and given British researchers more OA for their money. On the other hand, the agreements risk reinforcing the large publishers' already dominant role by promoting hybrid OA in expensive big deals, at the expense of smaller publishers or innovative publishing initiatives.<sup>27</sup> This risk was also identified in the evaluation of the first Swedish offset agreement (Springer Compact).<sup>28</sup> According to the Max Planck Digital Library in Germany it is no longer a matter of discussion – the transformative way is the way forward.<sup>29</sup>

To conclude, many researchers are in practice hindered about whether to take an informed stance for or against cancellation. This is due both to the complexity of the issue and the relative inaccessibility of cost and publication data. Dedicated experts in different European library consortia continuously work to predict and compare the costs of transitioning to OA for scholarly publishing to the costs of the behind-paywall system, to achieve the most effective transition.

### Cancellation's impact on practice

The cancellation forced researchers to adapt to circumstances. They spent more time searching for articles and were reluctant to request inaccessible articles from libraries, colleagues and authors. This is corroborated by the quantitative finding that the use of library services did not increase as dreaded or anticipated.<sup>30</sup> The cancellation had made researchers reflect on OA and affected the peer review and publishing patterns of some (128 units, category 3b). Some avoided publishing in Elsevier's journals in solidarity with the cancellation or in believing that they were not permitted. Others had stopped collaborating with Elsevier a long time ago. The importance of being read by Swedish colleagues emerged as one explanatory factor to why researchers considered publishing OA rather than to continue to publish with journals locked behind Elsevier's paywalls following cancellation. Some reported that they had chosen to publish OA in fully OA journals. Others had chosen to publish hybrid OA in journals issued by Elsevier, with increasing costs for the individual project/person as a result. Some did

'The cancellation forced researchers to adapt to circumstances'

21 this willingly, others reluctantly. Researchers also sought recommendations on how to promote open science and on what approach they should take to publishing with Elsevier or other publishers in the future. There are, in other words, indications that the cancellation affected Swedish researchers' publishing patterns to some extent. The cancellation forced researchers to look at their choice of copyright licences and publication channels in ways they had not felt necessary before.

Swedish publishing has previously shown to be sensitive to changes in external conditions. In 2009 a performance-based resource allocation for faculty funding was introduced in Sweden.<sup>31</sup> The model is partly bibliometric, based on international peer-reviewed publications and citations. This model was later criticized.<sup>32</sup> The period after the introduction of the model saw an increase in peer-reviewed articles and articles published in English in the humanities, despite the fact that this evaluation model was sometimes at odds with the common understanding of merits in those fields.<sup>33</sup> It thus appears as though this allocation model steered Swedish authors into publishing in English, in international (peer-reviewed) journals, even when their main readers were Swedish. Following the same reasoning, it is likely that cancellations with publishers can influence researchers' publishing practices. Particularly if cancellation is perceived as in line with researchers' general attitudes – in support of OA – rather than at odds with them. When research funders and HEIs simultaneously help finance (if not reward) OA publishing, changes in publishing practices are even more likely.

'Where some saw an important message to publishers, others saw a punch into thin air'

## Conclusions

We make three main conclusions based on this study.

First, there is support for OA in principle, but researchers disagree on the consequences, impact and importance of the cancellation. The current publishing system is flawed as it steers researchers to publish behind paywalls, despite it being against researchers' principles. Researchers had varying hopes and expectations of what a cancellation could and would achieve. Where some saw an important message to publishers, others saw a punch into thin air. The relatively large amount of ambivalence made clear that the value of the cancellation could for many only be esteemed in hindsight, once researchers knew how long the cancellation would last and at what cost to their research.

Second, researchers cannot evaluate whether cancellation was for good or evil as a whole, since they lack pivotal information to base that evaluation on. The knowledge of Elsevier's bad reputation appears more widespread than the researchers' actual knowledge of OA policy or the read-and-publish agreement Bibsam strived to achieve. The cancellation has been efficient in raising awareness and interest in topics in which researchers otherwise rarely show interest. For some the credibility of Bibsam is increased, for others it is decreased.

'cancellations can impact attitudes and behaviours'

Third, cancellations can impact attitudes and behaviours. As many perceive the current publishing system as flawed, it is hopeful to learn that cancellation made some of them consider altering their publishing habits. To transform into an OA scholarly publishing system all parts of the system need to be involved.

### Data accessibility statement

The survey and its corresponding data are made available here:

Olsson, Lisa, Camilla Hertel Lindelöw, Lovisa Österlund, and Frida Jakobsson, "Surveys Swedish Elsevier Cancellation," figshare, January 31, 2019, <https://doi.org/10.6084/m9.figshare.7654952.v1>

Olsson, Lisa, "Survey Data – Researcher Responses," figshare, January 31, 2020, <https://doi.org/10.6084/m9.figshare.11777475.v1>

### Abbreviations and Acronyms

A list of the abbreviations and acronyms used in this and other *Insights* articles can be accessed here – click on the URL below and then select the 'full list of industry A&As' link: <http://www.uksg.org/publications#aa>.

### Competing interests

The authors have declared no competing interests.

## References

1. "Sweden stands up for open access – cancels agreement with Elsevier," National Library of Sweden, <https://www.kb.se/om-oss/press.html#/pressreleases/sweden-stands-up-for-open-access-cancels-agreement-with-elsevier-2508242> (accessed 15 September 2020).
2. National Library of Sweden, *Evaluation of cancellation of the Bibsam Consortium's journal agreement with Elsevier: Consequences of the cancellation 2018-2019*, February 2020, <https://urn.kb.se/resolve?urn=urn:nbn:se:kb:publ-52> (accessed 15 September 2020).
3. Government Bill 2016/17:50 11 Ref: 2018- 874–878, *Regeringens proposition: Kunskap i samverkan – för samhällets utmaningar och stärkt konkurrenskraft*, 2016, p 167, <https://data.riksdagen.se/fil/276B2209-A8A3-411E-AF7F-1706658FB9EB> (accessed 15 September 2020).
4. Anna Lundén, Camilla Smith, and Britt-Marie Wideberg, "National Licence Negotiations Advancing the Open Access Transition – a View from Sweden," *Insights* 31, (2018): 12, DOI: <https://doi.org/10.1629/uksg.413> (accessed 15 September 2020).
5. SPARC, *Big Deal Cancellation Tracking*, <https://sparcopen.org/our-work/big-deal-cancellation-tracking/> (accessed 15 September 2020).
6. Tracy Gardner and Simon Inger, *How readers discover content in scholarly publications: Trends in reader behaviour from 2005 to 2018*, August 2018, p. 38, figure 34, <https://renewconsultants.com/wp-content/uploads/2018/08/How-Readers-Discover-Content-2018-Published-180903.pdf> (accessed 24 September 2020).
7. Rob Johnson, Anthony Watkins, and Michael Mabe, *The STM Report: An overview of scientific and scholarly publishing*, October 2018, [https://www.stm-assoc.org/2018\\_10\\_04\\_STM\\_Report\\_2018.pdf](https://www.stm-assoc.org/2018_10_04_STM_Report_2018.pdf) (accessed 15 September 2020).
8. Gardner and Inger, "How readers discover content", p. 19, figure 14.
9. Melissa Blankstein and Christine Wolff-Eisenberg, "Ithaka S+R US Faculty Survey 2018," *Ithaka S+R*. Last Modified 12 April 2019, DOI: <https://doi.org/10.18665/sr.311199> (accessed 15 September 2020).
10. European Council Conclusions, *The transition towards an Open Science system*, 2016, <https://data.consilium.europa.eu/doc/document/ST-9526-2016-INIT/en/pdf> (accessed 15 September 2020);  
cOAlition S, *Plan S: Making full and immediate Open Access a reality*, 2018, <https://www.coalition-s.org/> (accessed 15 September 2020).
11. Rita Morais and Lidia Borrell-Damián, *2017-2018 EUA: Open Access Survey Results*, April 2019, p. 14, <https://eua.eu/downloads/publications/2017-2018%20open%20access%20survey%20results.pdf> (accessed 15 September 2020).
12. National Library of Sweden, "Evaluation of cancellation of the Bibsam Consortium's journal agreement with Elsevier";  
Lisa Olsson, Camilla Hertel Lindelöw, Lovisa Österlund and Frida Jakobsson, "Cancelling with the World's Largest Scholarly Publisher: Lessons from the Swedish Experience of Having No Access to Elsevier," *Insights* 33, no. 1 (2020): 13, DOI: <https://doi.org/10.1629/uksg.507> (accessed 15 September 2020).
13. Lisa Olsson, Camilla Hertel Lindelöw, Lovisa Österlund and Frida Jakobsson, "Surveys Swedish Elsevier Cancellation", figshare, January 31, 2019, DOI: <https://doi.org/10.6084/m9.figshare.7654952.v1> (accessed 15 September 2020).
14. Christen Erlingson and Petra Brysiewicz, "A hands-on guide to doing content analysis," *African Journal of Emergency Medicine* 7, no. 3 (September 2017): 93–99, DOI: <https://doi.org/10.1016/j.afjem.2017.08.001> (accessed 15 September 2020).
15. Blankstein and Wolff-Eisenberg, "Ithaka S+R US Faculty Survey 2018".
16. Paul Ayris, Alea López de San Román, Katrien Maes, and Ignasi Labastida, *Open Science and its role in universities: A roadmap for cultural change*, May 2018, <https://www.leru.org/files/LERU-AP24-Open-Science-full-paper.pdf> (accessed 15 September 2020).
17. National Library of Sweden, *The transition to an open access scholarly publishing system*, March 2019, Final report on the National Library studies on open access to scholarly publications, <https://urn.kb.se/resolve?urn=urn:nbn:se:kb:publ-44> (accessed 15 September 2020).
18. "Swedish Open Access Journals on Joint Platform," National Library of Sweden, <https://www.kb.se/samverkan-och-utveckling/nytt-fran-kb/nyheter-samverkan-och-utveckling/2020-04-30-swedish-open-access-journals-on-joint-platform.html> (accessed 15 September 2020).
19. L. Olsson, H. Francke, C.H. Lindelöw and N. Willén, "The first Swedish Read & Publish agreement: An evaluation of the Springer Compact pilot," *LIBER Quarterly* 30, no. 1 (2020): 1–33, DOI: <https://doi.org/10.18352/lq.10309> (accessed 22 September 2020);  
Morais and Borrell-Damián, "2017-2018 EUA".
20. "Utgifter för vetenskaplig publicering [Total cost of publication]," National Library of Sweden, <https://www.kb.se/samverkan-och-utveckling/oppen-tillgang-och-bibsamkonsortiet/utgifter-for-vetenskaplig-publicering.html> (accessed 15 September 2020).
21. Stuart Lawson, Jonathan Gray and Michele Mauri, "Opening the Black Box of Scholarly Communication Funding: A Public Data Infrastructure for Financial Flows in Academic Publishing," *Open Library of Humanities* 2(1), p.e10 (2016), DOI: <https://doi.org/10.16995/olh.72> (accessed 15 September 2020).
22. National Library of Sweden, "The transition to an open access scholarly publishing system".

23. Think. Check. Submit., <https://thinkchecksubmit.org/> (accessed 15 September 2020).
24. San Francisco Declaration on Research Assessment (DORA), <https://sfdora.org/read/> (accessed 15 September 2020).
25. OA2020, [https://oa2020.org/learn\\_more/#frequently](https://oa2020.org/learn_more/#frequently) (accessed 15 September 2020).
26. Lundén et al., "National Licence Negotiations".
27. Stuart Lawson, *Evaluating UK offset agreements (2015–17)*, (Geneva: Zenodo, 25 June 2019), DOI: <https://doi.org/10.5281/zenodo.3256643> (accessed 15 September 2020).
28. National Library of Sweden, "Evaluation of offset agreements".
29. Ralf Schimmer, Presentation held at "LIBER Webinar: The Anatomy of a Transformative Agreement," 22 April 2020, <https://www.youtube.com/watch?v=Ij2nYZMqmd0> (accessed 15 September 2020).
30. Olsson et al., "Cancelling with the World's Largest Scholarly Publisher".
31. Government Bill 2008/09:50, *Regeringens proposition: Ett lyft för forskning och innovation*, 2008, p. 23, <https://www.regeringen.se/rattsliga-dokument/proposition/2008/10/prop.-20080950/> (accessed 15 September 2020).
32. *En långsiktig, samordnad och dialogbaserad styrning av högskolan. Betänkande av Styr- och resursutredningen (Strut)*, Statens offentliga utredningar (Stockholm: Norstedts Juridik, 2019: 6): 25, <https://www.regeringen.se/490b23/contentassets/b81affc4c0754122b1f7bbb24f23832c/en-langsiktig-samordnad-och-dialogbaserad-styrning-av-hogskolan-sou-20196> (accessed 15 September 2020).
33. Björn Hammarfelt and Sarah de Rijcke, "Accountability in context: effects of research evaluation systems on publication practices, disciplinary norms, and individual working routines in the faculty of Arts at Uppsala University," *Research Evaluation* 24, no. 1, (2015): 63–77, DOI: <https://doi.org/10.1093/reseval/rvu029> (accessed 15 September 2020).

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