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Consequences of Participating in Questionable Academia: A Global Survey of Authors of Journal Articles and Conference Presentations[1]

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Introduction

This study investigates how accusations directed at so-called predatory publishers (Beall, 2012; Sorokowski et al., 2017) and organisers of questionable conferences (Kulczycki et al., 2022) relate to the actual experiences of individual researchers who have chosen to work with such publishers and companies. The claims made in the literature on questionable academia highlight its negative impact on the reputation of science while omitting to mention whether such publication choices result in harms or benefits for the authors themselves. Considering the knowledge gap regarding the consequences of participation in questionable academia, we designed a survey as part of a project focused on the investigation of the role of evaluation regimes in coproducing questionable academia.

In this paper, we analyse 2,025 complete responses to a survey designed to investigate the consequences that directly affect researchers who have published their work in predatory journals or presented at conferences organised by companies considered to be predatory. Our study focuses either on formal consequences, such as job promotion or loss, as well as on research funding, and also on the positive or negative perception of this experience (i.e., publishing in a questionable outlet or participating in a questionable conference) by the academic community.

The term 'predatory' (publishing or conference) may be misleading, because it is not always the case that such journals or conferences are oriented towards financial profit (this is a key feature of being a predatory publication channel). We prefer to use the term 'questionable' to avoid attributing bad intentions a priori to both these conferences' participants (or publications' authors) and their organisers (publishers). Thus, when we refer to 'questionable academia' we mean the totality of practices and actors (i.e., researchers and companies) engaged in activities characterised as 'questionable' or 'predatory'.

Empirical studies on questionable academia has so far focused mostly on the geographical distribution of participants in this practice – identifying authors mainly from Asia and Africa (Demir, 2018; Shen & Björk, 2015) – and the motivations of the authors, which most often

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concern fulfilling the requirements for publishing in international outlets or, in general, the influence of the evaluation regimes on researchers' publication choices (Eykens et al., 2019; Önder & Erdil, 2017). Various studies describe the methods that predatory publishers use to pressurise authors into submitting their work such as mass mailings, often without consideration of a researcher's field (Beall, 2015; Kozak et al., 2015). Although questionable academia integrates the activities of both journal publishers and conference organisers, most of the literature on this topic focuses only on predatory journals. However, Kulczycki et al. (2022), in their study on questionable conferences, show that the practices of publishers and conference organisers follow a similar operating strategy to attract researchers.

Materials and Methods

We designed an anonymous and personalised survey to cover two main areas in our study, that is, advice before activity (i.e., publishing a paper or presenting at a conference) and the consequences of participating in questionable academia after activity.

The survey was sent using the LimeSurvey service to three groups of researchers (henceforth: three Sets) who had published their work in journals considered as predatory or questionable, as well as to researchers presenting at conferences arranged by organisers perceived as questionable. We used our previous study (Kulczycki et al., 2022) to indicate sample journals and conferences, which allowed us to build three sets of respondents. Based on the information contained in the PDF files of articles and conference abstracts, the email addresses of the authors and information about their works were collected. In March 2022, we successfully sent out 49,440 invitations.

Three Sets of Respondents

Below, we describe the groups of researchers to whom the survey was sent.

SET 1: This set consists of corresponding authors of articles published in 65 questionable journals in the social sciences who were identified for the study by Kulczycki et al. (2021). These journals were either on Beall's List or lists created by Cabell's International, a private company that reports on publishers with questionable editorial practices. The set of publications consists of 3,411 articles published between 2012 and 2018. After the cleaning process, we collected 2,991 unique email addresses related to articles' authors. For the purpose of sending a personalised survey to Set 1, we also collected each article and journal title and the publication year, which we used in the survey invitation email. The survey was successfully delivered to 2,630 (87.9%) addresses.

SET 2: This set consists of corresponding authors of articles published by the World Academy of Science, Engineering and Technology (WASET) – a company recognised in the literature as an organiser of questionable conferences in all areas of science. We collected 31,207 publications published between 2007 and May 2021. After the cleaning process, we collected 46,221 unique email addresses. For the purpose of sending a personalised survey to Set 2, we also collected each article title and the publication year, which we used in the survey invitation email. The survey was successfully delivered to 35,235 (76.2%) addresses.

SET 3: This set consists of the presentation authors who presented their works at conferences organised by the OMICS Group– a company recognised in the literature as an organiser of questionable conferences. We collected 17,923 abstracts of conference presentations from 2011 to 2019 in all areas of science. After the cleaning process, we collected 13,166 unique email addresses. For the purpose of sending a personalised survey to Set 3, we also collected

each presentation title, which we used in the survey invitation email. The survey was successfully delivered to 11,575 (87.9%) addresses.

Limitations of the Study

We excluded 114 email addresses (number not included in the descriptions above), which were identified in at least two sets because we decided not to send two almost identical surveys to the same person. The surveys sent to researchers from Sets 1–3 differed slightly in the invitation message (e.g., in Set 3 we chose not to indicate the year of presentation) and the wording of questions. For instance, we referred to authors' experience regarding publishing articles (Set 1) or presenting at conferences (Set 3). Moreover, we identified 11,167 email addresses that appeared multiple times within a single set. In the case of Set 1, it would be significantly difficult to design invitation messages due to the need to indicate the title of all those journals with which a specific author had collaborated. Therefore, email addresses appearing multiple times were excluded from the sample. In the case of email addresses identified multiple times within Set 2 or Set 3, we sent two versions of the invitations: one to those email addresses identified only once, and the other version to those who had more than one publication or more than one conference presentation (without information about the presentation/article title). Otherwise, the content of the survey for all respondents was the same, excluding those exceptions indicated above.

Results

Characteristics of Responses

We collected 3,235 responses: 2,025 fully completed and 1,210 partially completed. The share of complete responses for each set is similar: 68.0% for Set 1, 62.6% for Set 2 and 61.5% for Set 3. The overall response rate for the survey was 6.5% (4.1% for fully completed answers). The response rate, taking into account only fully completed responses across sets, is: Set 1: 3.8%, Set 2: 4.1% and Set 3: 4.1%.

We compared the completed answers in terms of the region of origin. In the previous study (Kulczycki et al., 2022), we determined the countries of the presenters at the conferences included in Sets 2 and 3. Thus, we could compare the countries of the presenters with the countries of the respondents from Sets 2 and 3, who account for 95% of all responses. As Figure 1 shows, the geographic distribution is similar for both sets. Only the overrepresentation of responses from Asia and the slight underrepresentation of responses from Africa are visible. Further analyses also consider Set 1.

At the time of presenting at conferences or submitting the papers for publication that we asked about in the survey, the respondents held the positions of full professor (21.8%), PhD candidate (20.9%), assistant professor (16.5%) and associate professor (14.5%). Of the respondents, 8.6% were students and 6.9% post-docs and 10.8% responses indicated a position labelled as 'other'. As Table 1 shows, nearly half of the respondents (N = 895, 44.2%) work in the area of 'Engineering and Technology' and the smallest number of responses came from researchers working in the field of 'Humanities' (N = 67, 3.3%).

Figure 1. Geographical distribution of WASET & OMICS presenters and survey respondents

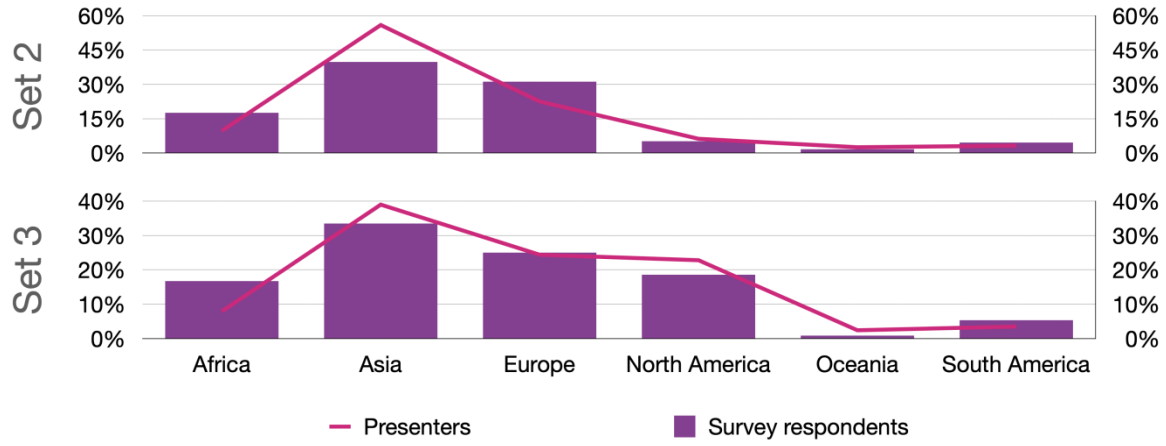


Table 1. Number of responses per sets and fields of science

Field of Science	Set 1	Set 2	Set 3	Total
Agricultural Sciences	0	62	28	90
Engineering and Technology	4	856	35	895
Humanities	17	50	0	67
Medical and Health Sciences	1	66	256	323
Natural Sciences	3	139	95	237
Social Sciences	69	184	25	278
Other	6	96	33	135
Total	100	1,453	472	2,025

Before Participating in Questionable Academia

We asked the respondents whether, at the academic institutions with which they were affiliated while working on their article or conference presentation, anyone had known about their publication choice before they submitted it. As Table 2 shows, 39% (N = 797) of researchers admitted that someone had known about it. The differences in geographic data were not large. Of these 797 researchers, 39% (N=311) received various types of advice related to the work being prepared.

Table 2. Feedback before submission

Continent	Total number of responses	Someone at my institution knew about my publication/conference choice before I submitted my work		Someone from my institution who knew my plans gave me advice	
		N	%	N	%
Africa	354	145	41%	68	47%
Asia	778	308	40%	150	49%
Europe	591	240	41%	64	27%
North America	178	58	33%	15	26%
Oceania	30	8	27%	0	0%
South America	94	38	40%	14	37%
Total	2,025	797	39%	311	39%

Respondents may have indicated several different non-exclusive pieces of advice they received. Therefore, the shares in Table 2 do not add up to 100%. One-third (35%) of these

311 researchers indicated that they had received advice that their publication/presentation would positively affect their reputation as a researcher or the reputation of their institution. Over half of the respondents indicated that they received advice in favour of their publication choice because it was an international journal/conference. This characteristic of 'internationality' was crucial in European institutions (61%). The quality of venue ('good journal/conference') was the justification for the advice given to one-third of the researchers. Only 1–2% of respondents received advice against choosing such a publication or conference venue.

Table 3. Advice received before submission

Type of advice	Subject of advice	Africa	Asia	Europe	North America	South America	Total
In favour	It would positively affect my reputation as a researcher or my institution	40%	37%	25%	33%	43%	35%
	It was an international journal/conference	51%	52%	61%	47%	43%	53%
	It was a good journal/conference	37%	32%	28%	47%	43%	33%
Against	It was a journal/conference with a bad reputation	0%	3%	2%	7%	0%	2%
	Organisers did not conduct a reliable review of papers	0%	1%	6%	0%	0%	2%
	Journal/conference could have a bad impact on research culture	0%	1%	0%	0%	0%	1%
None of the above		4%	6%	19%	20%	7%	9%

After Participating in Questionable Academia: Feedback in and beyond the Institution

We asked respondents whether anyone at their institutions had reacted to their publication/presentation after publishing papers or presenting at conferences. As Table 4 demonstrates, one-third (N=712) of researchers were met with reactions: the highest share relates to respondents from Africa (47%) and the lowest from Oceania (20%).

Table 4. Reactions by colleagues from an institution

	Yes		No		Total
Continent	N	%	N	%	
Africa	168	47%	186	53%	354
Asia	316	41%	462	59%	778
Europe	139	24%	452	76%	591
North America	51	29%	127	71%	178
Oceania	6	20%	24	80%	30
South America	32	34%	62	66%	94
Total	712	35%	1,313	65%	2,025

Of the 712 researchers who received feedback after publishing or presenting at a conference, 428 indicated that colleagues from their institutions congratulated them and 271 that supervisors congratulated them. Only 54 researchers indicated that their work was criticised by colleagues and 32 by supervisors.

When we asked about the general feedback (outside researchers' institutions) on their publication/presentation 332 researchers replied that they received congratulations because of its scholarly value and 304 received congratulations due to the international nature of the journal or conference. Only 84 respondents replied that their choice (publication venue or conferences) was criticised and only 19 researchers replied that they received criticism for the low scholarly value of publication/presentation.

Moreover, we asked whether respondents included their publication/presentation in questions on lists of their academic accomplishments like CVs, social media profiles or in lists of achievements presented during the performance assessment. Two hundred and forty-nine (12%) of the respondents indicated that they had not included this publication/presentation in their lists of accomplishments.

Table 5. Reporting publication/presentation on the list of accomplishments

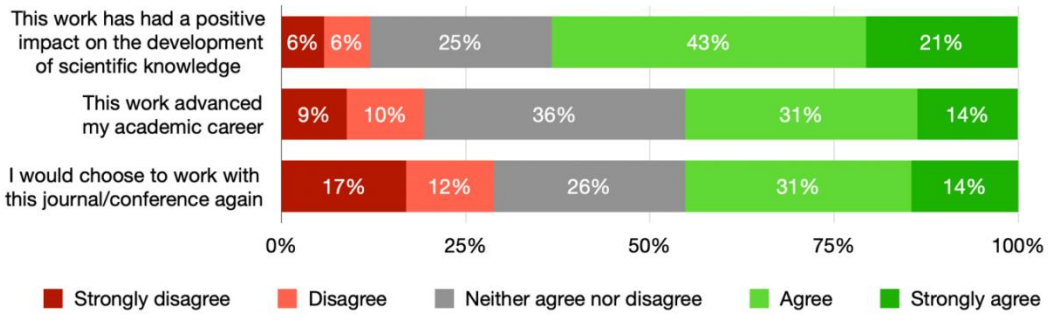
Continent	Total number of respondents	Not present/share	%
Africa	354	37	10%
Asia	778	94	12%
Europe	591	78	13%
North America	178	22	12%
Oceania	30	6	20%
South America	94	12	13%
Total	2025	249	12%

When we asked whether the publication/presentation had any positive impact on their academic career, 471 replied that the impact was passing a performance assessment, 314 that the impact was obtaining a degree, 270 that the impact was a promotion or a job offer received afterwards and 90 researchers replied that the impact was obtaining a financial award.

By contrast, when we asked about any negative impacts, 269 researchers replied that the publication/presentation was not taken into consideration in their performance assessment, 18 researchers replied that they were required to return research funding because of the activity in question, 14 researchers were reprimanded and nine researchers were fired.

Figure 2 shows the distribution of responses to questions related to researchers' opinions on whether the publication/presentation has had a positive impact on the development of their knowledge (over 60% agreed), whether it advanced their academic career (almost one-half agreed) and whether they would choose to work with this journal/conference again (almost one-half agreed and almost one-third disagreed).

Figure 2. Opinions of researchers on the impact of their work



Discussion and Conclusion

We designed a survey to examine the consequences of publishing in predatory journals and presenting at questionable conferences. The response rate of 4.1% is low, but expected, primarily because of the sensitivity of the subject matter. Nevertheless, as we have shown by comparing the responses obtained from all presenters (Figure 1), the geographical distribution of the responses allows us to draw more general conclusions. The results deserve further analysis and presentation in an expanded form. In the next step, we plan to deepen the present quantitative analysis and cross reference it with a qualitative analysis of the more than 600 responses we obtained to the open questions.

Our survey shows a positive effect for individual researchers related to the activities we asked about. This can be seen both in the fact that, if researchers obtained advice before submitting an article to a journal or conference, this advice was in favour of a given outlet. Reactions from the close academic scientific community, as well as reactions beyond it, show that many researchers were congratulated and felt that this publication/presentation had a positive impact on their work. However, it is important to note that 13.3% of respondents indicated that the publication/presentation we asked about was not considered in their evaluation and nine researchers were fired because of this publication/presentation.

One of the objectives of our study was to emphasise the perspective of researchers who choose to cooperate with questionable journals or conference organisers. Although numerous previous studies have presented the harmful effects of predatory academia, the majority of respondents indicated positive consequences of their choice. Both the authors' positive judgement regarding their papers' impact on science, as well as the positive formal consequences of such a choice of publishers, may indicate that such papers can encourage the rethinking of academic policies. The prevalence of the phenomenon may suggest that it is profitable for many authors to function within the predatory academy. Nonetheless, besides profiting individuals, it is detrimental to the wider scientific community. Thus, it is crucial to encourage researchers to function within credible means of scholarly communication, which would meet not only their own specific needs but would also be advantageous for the scholarly community.

References

Beall, J. (2012). Predatory publishers are corrupting open access. *Nature*, *489*(7415), 179–179. https://doi.org/10.1038/489179a

Beall, J. (2015). Predatory journals and the breakdown of research cultures. *Information Development*, *31*(5), 473–476. https://doi.org/10.1177/0266666915601421

Demir, S. B. (2018). Predatory journals: Who publishes in them and why? *Journal of Informetrics*, *12*(4), 1296–1311. https://doi.org/10.1016/j.joi.2018.10.008

Eykens, J., Guns, R., Rahman, A. I. M. J., & Engels, T. C. E. (2019). Identifying publications in questionable journals in the context of performance-based research funding. *PLOS ONE*, *14*(11), e0224541. https://doi.org/10.1371/journal.pone.0224541

Kozak, M., Iefremova, O., & Hartley, J. (2015). Spamming in scholarly publishing: A case study. *Journal of the Association for Information Science and Technology*, *14*(4), 2009–2015. https://doi.org/10.1002/asi.23521

Kulczycki, E., Hołowiecki, M., Taşkın, Z., & Doğan, G. (2022). Questionable conferences and presenters from top-ranked universities. *Journal of Information Science*. https://doi.org/10.1177/01655515221087674

Kulczycki, E., Hołowiecki, M., Taşkın, Z., & Krawczyk, F. (2021). Citation patterns between impact-factor and questionable journals. *Scientometrics*. https://doi.org/10.1007/s11192-021-04121-8

Önder, Ç., & Erdil, S. E. (2017). Opportunities and opportunism: Publication outlet selection under pressure to increase research productivity. *Research Evaluation*, *26*(2), 66–77. https://doi.org/10.1093/reseval/rvx006

Shen, C., & Björk, B.-C. (2015). 'Predatory' open access: A longitudinal study of article volumes and market characteristics. *BMC Medicine*, *13*(1), 230–230. https://doi.org/10.1186/s12916-015-0469-2

Sorokowski, P., Kulczycki, E., Sorokowska, A., & Pisanski, K. (2017). Predatory journals recruit fake editor. *Nature*, *543*(7646), 481–483. https://doi.org/10.1038/543481a