Predatory open access journals in a performance-based funding model: A comparison of journals in version VI of the VABB-SHW with Beall's list and DOAJ

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1 Introduction

In academic publishing some publishers are exploiting the model of open access publishing. These publishers may e.g. accept manuscripts that are flawed in terms of scientific or scholarly quality or charge fees to authors without providing essential editorial and publishing services. These publishers are known as *predatory open access publishers*. The term 'predatory open access' (POA) was coined by Jeffrey Beall, librarian and associate professor at Auraria Library, University of Colorado, Denver, USA.

In response to a number of questions by the research community regarding the possible occurrence of predatory open access journals in the VABB-SHW¹ journal list, the bureau of the Authoritative Panel (Gezaghebbende Panel or GP) asked ECOOM-UAntwerpen to compare both lists in order to identify any overlap. ECOOM-UAntwerpen accepted this task and set out to identify the journals belonging to the publishers listed on Beall's list mid October 2013. This resulted in a report by Rahman, Dexters and Engels (2014) submitted to the GP in February 2014. As a result, the GP decided, with the support of the vice-chancellors for research, to exclude articles published with predatory open access publishers from the VABB-SHW as of version IV, launched June 2014. In addition, the GP invited all universities to raise awareness about POA publishing amongst their researchers, and asked ECOOM-UAntwerpen to provide a yearly monitoring of the occurrence of predatory journals in the list submitted to them. So far, this has resulted in one additional report for VABB-SHW version V (Rahman & Engels, 2015).

The current report presents the results of this monitoring exercise in view of VABB-SHW version VI, which will contain publications from the time period 2005–2014. This report provides a detailed comparison of (1) the journals published by publishers listed on Beall's list of POA publishers and the journals on Beall's list of stand-alone journals as of 5 November 2015 with (2) the VABB-SHW list of journals as submitted to the GP in July 2015. Furthermore, we also provide details on each potentially predatory journal regarding its inclusion in Web of Science (WoS) and the Directory of Open Access Journals (DOAJ) and we list the publishers that are, according to Beall's list, not to be considered predatory open access anymore.

This report is intended to facilitate the GP's decision making. More generally, the report may raise awareness on the prevalence of predatory open access publishing in the social sciences and humanities in Flanders.

¹ Vlaams Academisch Bibliografisch Bestand voor de Sociale en Humane Wetenschappen, www.ecoom.be/en/vabb .

2 Data sources

2.1 Beall's list

Beall's list (available at http://scholarlyoa.com/publishers) includes potential, possible, or probable predatory open access publishers. Jeffrey Beall regularly updates this list. He sets forth criteria (https://scholarlyoa.files.wordpress.com/2015/01/criteria-2015.pdf/) for categorizing predatory publications and lists publishers and independent journals that meet those criteria. According to *Nature*, Beall's list and website are "widely read by librarians, researchers and open-access advocates, many of whom applaud his efforts to reveal shady publishing practices" (Butler, 2013). Beall has instituted a four person review body to which publishers can appeal (http://scholarlyoa.com/appeals) in order to be removed from the list in case they feel their inclusion is unjust. Beall's list of predatory open access publishers has expanded rapidly, from 327 in the summer of 2013, over 492 in January 2014, 661 in November 2014 (Rahman, Dexters, & Engels, 2014; Rahman & Engels, 2015) to 903 in November 2015. The number of predatory standalone journals is 835 in November 2015.

Some concerns have been raised against Beall's list, including:

- The term 'predatory' is used for many different kinds of questionable publishing practices and obscures the kinds of problems with a given publisher.
- Because of the inherent subjectivity of deciding on the 'predatory' status of a publisher or journal, this process should be in the hands of a much broader entity, rather than a single person. Some academics feel that the list is based more on Beall's intuition and general aversion towards open access than on solid data (Bloudoff-Indelicato, 2015).
- Beall's list is a reactive blacklist, whereas a whitelist i.e., a list of journals or publishers that have been scrutinized and found to act according to a code of conduct is more reliable.

2.2 Directory of Open Access Journals (DOAJ)

To partially address the last two concerns regarding Beall's list, for each journal in the VABB-SHW that according to Beall's list should be considered 'predatory', we also check its inclusion in the whitelist of journals available from the Directory of Open Access Journals (DOAJ). DOAJ was launched in 2003, but introduced a new and much stricter set of criteria in March 2015. It currently covers 10,807 "high quality, open access, peer-reviewed journals" (https://doaj.org/).

When journals are submitted for inclusion in DOAJ, they undergo a check against DOAJ's criteria (https://doaj.org/bestpractice) for inclusion in the database. These criteria include that a journal should have a clearly described peer review process. DOAJ can remove journals from the list for various reasons, including "suspected editorial misconduct by publisher".

3 Method

The starting point of the report is the list of 12,320 journals submitted by ECOOM-UAntwerpen to the GP in July 2015². The list consisted of 8,735 journals that had previously been identified by the GP as peer reviewed or are/would automatically be considered peer reviewed because they are indexed in the Web of Science (WoS), 2,968 journals which the GP classified as non-peer reviewed, and 617 journals which occurred for the first time and hence had peer review status 'undecided'.

In order to match the VABB-SHW journal list with Beall's list of POA publishers, we matched the publisher names in the VABB list with Beall's list. Whenever two or more publisher names matched, we compared the journal titles as occurring in the VABB-SHW database with the journal titles on the publisher's website, and subsequently the ISSNs³, which were also validated by checking the ISSN.org database. Only when both journal title and ISSN matched and were correct, we identified a journal as a journal published by a POA publisher listed on Beall's list. Later we checked the journal's availability in the Web of Science (WoS) as well as its inclusion in DOAJ. Whenever a match of titles was identified, we compared the ISSN in order to validate the match.

4 Findings

4.1 Comparison of VABB-SHW with Beall's list

Out of the 8,735 journals that had been identified as peer reviewed, 36 occur in Beall's list. Among them 24 journals are not indexed in WoS, and the other 12 are in WoS. Furthermore, we find 64 out of the 2,968 non-peer reviewed journals that match with Beall's list. Finally, 28 out of 617 journals that had peer review status 'undecided' in the VABB-SHW match with a title and ISSN in Beall's list. Only one of these 28 journals is included in WoS. In sum, 128 journals on Beall's list contain at least one paper (co-)authored by an author affiliated to a Flemish university and submitted for inclusion in the VABBB-SHW. This constitutes an increase from the 109 journals in the previous report (Rahman & Engels, 2015). Table 1 summarizes the findings.

Table 1. Number of common journals in Beall's list and the VABB-SHW

VABB-SHW Status	Number of journals	Match with Beall's list
Peer reviewed	8,735	36
Non-peer reviewed	2,968	64
Peer review status undecided	617	28
Total	12,320	128

² The total number of journals is slightly lower than in the previous report (Rahman & Engels, 2015). The main reason for this is that some journals that appear both online and in print were previously counted as two separate journals. These have now been merged into one record.

³ For inclusion in the VABB-SHW, only peer reviewed journals that have an ISSN are eligible.

Subsequently, we compared the 128 journals that occur both in the VABB-SHW database and on Beall's list with DOAJ and WoS. Table 2 presents the results. We find that the journals that are included in WoS, except for one, are also in DOAJ. If a journal is not indexed in WoS, however, the picture is less clear. Of the peer reviewed journals, 13 (or 52%) are in DOAJ, whereas the proportions are clearly lower for non-peer reviewed journals (20%) and journals whose peer review has not yet been decided (18%). On the whole, there does seem to be a discrepancy between Beall's list and DOAJ: of the 128 journals that are 'predatory' according to Beall's list, 44 (a little over one third) are in DOAJ.

The list of the 128 common journals is the Annex A to this report. For each journal, its title, VABB status, ISSN, WoS status, DOAJ status, number of publications in VABB-SHW, publisher and (if applicable) remarks are provided. We note that some journals that have recently been added to WoS, are indexed in the Emerging Sources Citation Index (ESCI), a database of journals that are "considered for inclusion in other Web of Science collections" (http://wokinfo.com/products_tools/multidisciplinary/esci/) and have not yet undergone the same close scrutiny as other WoS-indexed journals. For those journals where this is the case, this is signaled in a remark.

Table 2. Comparison of journals in VABB-SHW on Beall's list with WoS and DOAJ

VABB-SHW	In WoS,	In WoS,	Not in WoS,	Not in WoS,	Total
Status	in DOAJ	not in DOAJ	in DOAJ	not in DOAJ	
Peer reviewed	12	0	13	12	37
Non-peer reviewed	1	1	12	49	63
Peer review status undecided	1	0	5	22	28
Total	14	1	30	83	128

4.2 Yearly evolution

The number of articles in predatory open access journals submitted to ECOOM-UAntwerpen by the universities in view of inclusion in the VABB-SHW is increasing in recent years. Whereas no publications in predatory open access journals appeared in 2000–2002, the yearly number remained below 5 in the period 2003–2008. For 2009, the number rose to 17, and then jumped to 34 in 2011, 67 in 2012, 73 in 2013, and 92 in 2014. The total of 316 publications in POA journals more than doubles the 138 publications found using the previous edition of Beall's list (Rahman & Engels, 2015). The increase is mainly due to the controversial inclusion of Frontiers Research Foundation (Bloudoff-Indelicato, 2015), which alone is responsible for 157 publications. Table 3 gives an overview of the number of publications in predatory open access journals per year and their status in the VABB-SHW.

Table 3. Number and status of publications in POA journals submitted to VABB-SHW

Year	Approved for VABB- SHW	Non- approved nor indexed in WoS	VABB-SHW approval to be decided	Indexed in WOS	Indexed in WoS & POA	Identified as (POA)	Total
2000	0	0	0	0	0	0	0

Total	57	0	41	151	3	64	316
2014	0	0	30	62	0	0	92
2013	9	0	11	42	0	11	73
2012	12	0	0	25	2	28	67
2011	10	0	0	13	0	11	34
2010	6	0	0	6	0	5	17
2009	9	0	0	3	0	5	17
2008	4	0	0	0	0	1	5
2007	3	0	0	0	1	0	4
2006	3	0	0	0	0	2	5
2005	0	0	0	0	0	1	1
2004	0	0	0	0	0	0	0
2003	1	0	0	0	0	0	1
2002	0	0	0	0	0	0	0
2001	0	0	0	0	0	0	0

4.3 Publishers removed from Beall's list

Six publishers that occurred in a previous report (Rahman, Dexters, & Engels, 2014; Rahman & Engels, 2015) and that have published at least one article indexed for VABB-SHW, are no longer in the latest update of Beall's list. They are:

- African Network of Scientific and Technological Institutions
- Baishideng Publishing Group
- Bentham Science Publishers
- Interscience Enterprises
- MDPI
- Research Media

With respect to Bentham Science Publishers, it is worth noting that Bentham Open, an imprint of Bentham Science that specializes in open access journals, is still on Beall's list. Moreover, eleven open access journals that previously were published by Bentham Science have recently been moved to Bentham Open (see Annex A).

Annex B provides a list of the twenty journals that are published by one of these publishers and appear in the VABB-SHW version VI. None of these journals are currently approved for inclusion in the VABB-SHW. One journal – *World Journal of Gastroenterology* – is indexed in both WoS and DOAJ. Four other journals, all published by MDPI, are indexed in DOAJ but not WoS. There are no journals that were indexed in WoS but not in DOAJ. In total, the twenty journals that are removed from Beall's list account for 27 publications in the VABB-SHW.

4.4 Hindawi Publishing

In 2014, Jeffrey Beall characterized Hindawi Publishing as 'borderline predatory'. In the previous report (Rahman & Engels, 2015), journals of this publisher were reported

separately. The GP decided not to classify journals of this publisher as POA. Beall's website no longer mentions Hindawi in the November 2015 edition that this report is based on.

5 Limitations

One limitation of this analysis is that the list of predatory open access publishers, and hence the list of journals that they produce, is constantly evolving. Publishers may be removed from the list, and, more commonly, new publishers are added. This is because new POA publishers are established all the time and more and more predatory publishing is reported to Jeffrey Beall. Publishers may also resort to (or refrain from) predatory publishing over time. Hence this report should not be seen as a definitive analysis of the occurrence of publications in predatory open access journals by scholars affiliated to social sciences and humanities units at Flemish universities. Rather, this report gives an overview of the situation as of 5 November 2015 with regard to the publications 2005–2014 that appeared in a journal with an ISSN and that have been submitted to ECOOM-Antwerpen with a view of inclusion in the VABB-SHW.

A second limitation is that some journals that have been identified as predatory open access journals may have sound peer review processes. Bohannon (2013) reported that a few journals by publishers listed by Beall did screen out his non-sensical paper after a substantial peer review process. This illustrates that publishers may be listed as predatory for other reasons than the lack of a peer review process (cf. the aforementioned link to criteria and the concern about the use of the term 'predatory').

A third limitation is that Beall's list mainly (except for a relatively brief list of stand-alone journals) consists of publishers, i.e. publisher names. Hence the matching process is subject to several steps, first matching of publishers and then matching of journal titles and ISSN. Errors in the first step, the matching of publisher names, cannot be excluded, as any writing error may result in non-identification of a match. Furthermore, experience has shown that the data source used for determining the publisher of journals in the VABB-SHW, ISSN.org, is not always up-to-date with the latest evolutions. This may lead to errors in the second step, matching journals to publishers.

6 Conclusions

The results presented in this report show that Beall's list can be a data source for detection of predatory open access journals in a database like the VABB-SHW. At the same time, the limitations of Beall's list – in addition to the practical limitations explained in section 5 – are also quite clear if one considers that 44 out of 128 journals that were encountered are indexed in WoS, DOAJ or both (section 4.1). Furthermore, the dynamic nature of Beall's list raises questions: the recent addition of a relatively large publisher like Frontiers Research Foundation could impact 157 publications in the VABB-SHW (section 4.2), while the delisting of six publishers could affect 27 publications in the VABB-SHW (section 4.3).

These issues call for a precautious approach to classifying the journals listed in this report in view of VABB-SHW VI. Taking into account the information on the (non)inclusion of these journals in WoS and DOAJ seems advisable. In case a journal or its publisher occurs on Beall's list and the journal is not in WoS nor DOAJ, it can be blacklisted automatically. Journals, however, that are indexed in WoS can probably still be included in the VABB-SHW: The articles that appear in these journals are usually included in the BOF-WoS publication count. If a common Beall-VABB journal is indexed in DOAJ but not in WoS, a possible middle road is that the journal's status remains or is set to non-peer reviewed, but it becomes possible for authors to appeal to the non-inclusion if evidence of peer review can be submitted. The same approach can be taken for the journals that are not (because of their publisher) blacklisted by Beall anymore: maintain their VABB status as not-peer reviewed, but allow authors to appeal to the non-inclusion if evidence of peer review can be submitted. A more relaxed approach might consist of taking the whitelisting of a journal in DOAJ as evidence of peer review and hence classify these journals as peer reviewed. However, this approach would raise the question on how the status of journals in other systems (e.g. Italian ANVUR, ERIH) will be handled.

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Annex A

Common Journals in Beall's List and the VABB-SHW (version VI)

SI. No.	ISSN (On- line)	ISSN (Print)	Journal title	Publisher	Indexed in WoS (Period) In JCR 2014?	Indexed in DOAJ	VABB –SHW Status	Number and status of publications submitted to VABB-SHW	Remarks
1)	1991- 637X		African journal of agricultural research	Academic Journals	YES (2006-2011) Not in JCR 2014	YES	1= Peer Reviewed	1 (2007, Approved) 2 (2009, Approved) 1 (2010, Approved) 2 (2011, Approved) 2 (2012, Approved) 1 (2013, Approved)	
2)	1996- 0778		African journal of biochemistry research	Academic Journals	NO	YES	0 = Non-Peer Reviewed	1 (2008, POA)	
3)	1993- 8233		African journal of business management	Academic Journals	YES (2007-2011) Not in JCR 2014	YES	0 = Non-Peer Reviewed	1 (2011, POA), 2(2012, POA	
4)	1992- 2248		Scientific research and essays	Academic Journals	YES (2006-2011) Not in JCR 2014	YES	0 = Non-Peer Reviewed	1 (2009, POA)	
5)	2276- 6928		American Journal of Social Issues and Humanities	American Journal of Social Humanities	NO	NO	1= Peer Reviewed	1 (2013, Approved)	
6)		2165- 2228	Comprehensive psychology	Ammons Scientific	NO	YES	n.a. = Undecided	1 (2014 , Undecided)	
7)	1819- 1932		Research journal of business management	ANSInet	NO	NO	1= Peer Reviewed	1 (2011, Approved)	
8)	1745- 0179		Clinical practice and epidemiology in mental health	Bentham Open	NO	YES	0 = Non-Peer Reviewed	2 (2006, POA)	
9)	1876- 5181		The Open antimicrobial agents journal	Bentham Open	NO	NO	0 = Non-Peer Reviewed	1 (2010, POA) 1 (2011, POA)	
10)	1874- 916X		The Open communication journal	Bentham Open	NO	YES	0 = Non-Peer Reviewed	1 (2008, POA)	

SI. No.	ISSN (On- line)	ISSN (Print)	Journal title	Publisher	Indexed in WoS (Period) In JCR 2014?	Indexed in DOAJ	VABB –SHW Status	Number and status of publications submitted to VABB-SHW	Remarks
11)	1876- 391X		The open complementary medicine journal	Bentham Open	NO	NO	0 = Non-Peer Reviewed	1 (2009, POA) 1 (2010, POA)	
12)	1874- 2564		The Open food science journal	Bentham Open	NO	YES	0 = Non-Peer Reviewed	1 (2007, POA)	
13)	1874- 2793		The Open infectious diseases journal	Bentham Open	NO	YES	0 = Non-Peer Reviewed	1 (2007, POA)	
14)	1874- 9488		The Open management journal	Bentham Open	NO	NO	0 = Non-Peer Reviewed	1 (2011, POA)	
15)	1876- 8245		The Open pharmacoeconomics & health economics journal	Bentham Open	NO	NO	0 = Non-Peer Reviewed	1 (2009, POA)	
16)	1874- 9437		The Open rehabilitation journal	Bentham Open	NO	YES	0 = Non-Peer Reviewed	1 (2008, POA)	
17)	1874- 3064		The Open respiratory medicine journal	Bentham Open	NO	YES	0 = Non-Peer Reviewed	1 (2011, POA)	
18)	1875- 399X		The Open sports sciences journal	Bentham Open	NO	YES	0 = Non-Peer Reviewed	1 (2010, POA)	
19)	1923- 8401	1923- 7529	Review of economics & finance	Better Advances Press	NO	NO	0 = Non-Peer Reviewed	1 (2012, POA)	
20)	1812- 9358	1810- 4967	Investment management & financial innovations	Business perspectives	NO	NO	0 = Non-Peer Reviewed	1 (2005, POA) 1 (2011, POA)	
21)	1923- 6697	1712- 8056	Canadian social science	Canadian Academy of Oriental and Occidental Culture	NO	YES	1= Peer Reviewed	1 (2011, Approved) 2 (2012, Approved) 1 (2014, Undecided)	
22)	1927- 0496	1927- 0488	Environment and natural resources research	Canadian Center of Science and Education	NO	NO	n.a. = Undecided	1 (2014, Undecided)	
23)	1916- 9744	1916- 9736	Global journal of health science	Canadian Center of Science and Education	NO	NO	0 = Non-Peer Reviewed	2 (2011, POA)	

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24)	1925- 475X	1925- 4741	Higher education studies	Canadian Center of Science and Education	NO	NO	n.a. = Undecided	2 (2014, Undecided)	
25)	1913- 9012	1913- 9004	International business research	Canadian Center of Science and Education	NO	NO	0 = Non-Peer Reviewed	1 (2012, POA)	
26)	1916- 9728	1916- 971X	International journal of economics and finance	Canadian Center of Science and Education	NO	NO	0 = Non-Peer Reviewed	1 (2012, POA)	
27)	1918- 722X	1918- 7211	International journal of psychological studies	Canadian Center of Science and Education	NO	NO	n.a. = Undecided	1 (2014, Undecided)	
28)	1927- 7040	1927- 7032	International journal of statistics and probability	Canadian Center of Science and Education	NO	NO	n.a. = Undecided	2 (2013, Undecided)	
29)	1916- 9760	1916- 9752	Journal of agricultural science	Canadian Center of Science and Education	NO	NO	n.a. = Undecided	1 (2014, Undecided)	
30)	1927- 0895	1927- 0887	Journal of food research	Canadian Center of Science and Education	NO	NO	0 = Non-Peer Reviewed	1 (2012, POA) 1 (2013, POA)	
31)	1913- 9055	1913- 9047	Journal of politics and law	Canadian Center of Science and Education	YES (2015) Not in JCR 2014	NO	0 = Non-Peer Reviewed	1 (2012, POA)	In Emerging Sources Citation Index
32)	1913- 9071	1913- 9063	Journal of sustainable development	Canadian Center of Science and Education	NO	NO	0 = Non-Peer Reviewed	1 (2010, POA) 1 (2012, POA)	
33)	2219- 6021	2219- 1933	International journal of business and social science	Center for Promoting Ideas	NO	NO	0 = Non-Peer Reviewed	1 (2012, POA)	
34)	1934- 7332		Computer technology and application	David Pub. Co	NO	NO	0 = Non-Peer Reviewed	1 (2012, POA)	Publisher has two websites, www.davidpublishing.com and www.davidpublisher.org.
35)	1934- 8932		Journal of environmental science and engineering	David Pub. Co	NO	NO	0 = Non-Peer Reviewed	1 (2012, POA)	
36)	1934- 7391		Journal of life sciences	David Pub. Co	NO	NO	0 = Non-Peer Reviewed	1 (2012, POA)	

SI. No.	ISSN (On- line)	ISSN (Print)	Journal title	Publisher	Indexed in WoS (Period) In JCR 2014?	Indexed in DOAJ	VABB –SHW Status	Number and status of publications submitted to VABB-SHW	Remarks
37)	2159- 5542		Psychology research	David Publishing Co	NO	NO	0 = Non-Peer Reviewed	1 (2012, POA)	
38)	2159- 5534	2159- 5526	Sociology study	David Publishing Co	NO	NO	0 = Non-Peer Reviewed	1 (2012, POA)	
39)	1934- 7359		JOURNAL OF CIVIL ENGINEERING AND ARCHITECTURE	David Publishing Company	NO	NO	1= Peer Reviewed	1 (2011, Approved)	
40)	2160- 6579		Journalism and mass communication	David Publishing Company	NO	NO	0 = Non-Peer Reviewed	2 (2012, POA)	
41)	1986- 8103	1840- 2291	HealthMed	DRUNPP	YES (2007-2012) Not in JCR 2014	NO	0 = Non-Peer Reviewed	1 (2012, POA)	
42)	1986- 3497		Online journal of communication and media technologies	Eastern Mediterranean University, Faculty of Communication and Media Studies	NO	YES	1= Peer Reviewed	1 (2012, Approved) 1 (2013, Approved)	
43)		2146- 4138	International journal of economics and financial issues	EconJournals	NO	YES	n.a. = Undecided	1 (2014, Undecided)	
44)	1842 - 8517	1841- 0464	European Journal of Science and Theology	Ecozone	YES (2008-2013) Not in JCR 2014	NO	1= Peer Reviewed	1 (2008, Approved) 2 (2008, Approved)	
45)	2234- 943X		Frontiers in oncology	Frontiers Editorial Office	YES (2015) Not in JCR 2014	YES	n.a. = Undecided	1 (2014, Undecided)	In Emerging Sources Citation Index
46)		1663- 4365	Frontiers in aging neuroscience	Frontiers Research Foundation	YES (2009-2015) In JCR 2014	YES	1= Peer Reviewed	2 (2014, Undecided)	
47)		1662- 5153	Frontiers in behavioral neuroscience	Frontiers Research Foundation	YES (2007-2015) In JCR 2014	YES	1= Peer Reviewed	1 (2011, Approved) 2 (2012, Approved) 1 (2013, Approved) 4 (2014,	

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								Undecided)	
48)		1662- 5188	Frontiers in computational neuroscience	Frontiers Research Foundation	YES (2007-2015) In JCR 2014	YES	1= Peer Reviewed	1 (2009, Approved) 1 (2013, Approved) 3 (2014, Undecided)	
49)		1663- 070X	Frontiers in evolutionary neuroscience	Frontiers Research Foundation	NO	YES	1= Peer Reviewed	1 (2012, Approved)	
50)		1664- 8021	Frontiers in genetics	Frontiers Research Foundation	NO	YES	1= Peer Reviewed	2 (2012, Approved) 2 (2013, Undecided)	
51)		1662- 5161	Frontiers in human neuroscience	Frontiers Research Foundation	YES (2008-2015) In JCR 2014	YES	1= Peer Reviewed	1 (2009, Approved) 2 (2010, Approved) 2 (2011, Approved) 8 (2012, Approved) 14 (2013, Approved) 14 (2014, Undecided)	
52)		1662- 5145	Frontiers in integrative neuroscience	Frontiers Research Foundation	YES (2015) Not in JCR 2014	YES	1= Peer Reviewed	1 (2011, Approved) 1 (2012, Approved)	In Emerging Sources Citation Index
53)		1662- 5196	Frontiers in neuroinformatics	Frontiers Research Foundation	YES (2012-2015) In JCR 2014	YES	1= Peer Reviewed	1 (2014, Undecided)	
54)	1662- 453X	1662- 4548	Frontiers in neuroscience	Frontiers Research Foundation	YES (2011-2015) In JCR 2014	YES	1= Peer Reviewed	1 (2010, Approved) 2 (2013, Approved)	
55)		1663- 9812	Frontiers in pharmacology	Frontiers Research Foundation	YES (2010-2015) In JCR 2014	YES	1= Peer Reviewed	2 (2010, Approved) 1 (2011, Approved) 1 (2013, Approved)	

SI. No.	ISSN (On- line)	ISSN (Print)	Journal title	Publisher	Indexed in WoS (Period) In JCR 2014?	Indexed in DOAJ	VABB –SHW Status	Number and status of publications submitted to VABB-SHW	Remarks
56)		1664- 042X	Frontiers in physiology	Frontiers Research Foundation	YES (2010-2015) In JCR 2014	YES	1= Peer Reviewed	2 (2013, Approved)	
57)		1664- 0640	Frontiers in psychiatry	Frontiers Research Foundation	YES (2015) Not in JCR 2014	YES	1= Peer Reviewed	2 (2013, Approved) 2 (2014, Undecided)	In Emerging Sources Citation Index
58)	1664- 1078	1664- 1078	Frontiers in psychology	Frontiers Research Foundation	YES (2010-2015) In JCR 2014	YES	1= Peer Reviewed	1 (2010, Approved) 7 (2011, Approved) 13 (2012, Approved) 15 (2013, Approved) 31 (2014, Undecided)	
59)		2296- 875X	Frontiers in surgery	Frontiers Research Foundation	NO	YES	n.a. = Undecided	1 (2014, Undecided)	
60)		1662- 5137	Frontiers in systems neuroscience	Frontiers Research Foundation	YES (2015) Not in JCR 2014	YES	1= Peer Reviewed	1 (2011, Approved) 1 (2012, Approved) 3 (2013, Approved) 1 (2014, Undecided)	In Emerging Sources Citation Index
61)	1929- 5812	1929- 5804	Decision science letters	Growing Science	NO	YES	n.a. = Undecided	2 (2014, Undecided)	
62)	2010- 3689		International journal of information and education technology	IACSIT	NO	YES	1= Peer Reviewed	1 (2013, Approved)	
63)	2347- 7474		International journal of advances in social science and humanities	IJASSH Publication	NO	NO	1= Peer Reviewed	1 (2013, Approved)	
64)	2223- 4934	2227- 393X	International journal of social sciences and education	IJSSE	NO	YES	1= Peer Reviewed	1 (2012, Approved)	
65)	2040- 2589		Literacy information and computer education journal	Infonomics Society	NO	NO	0 = Non-Peer Reviewed	1 (2012, POA)	

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66)	2378- 9670	1546- 2609	Review of business research	International Academy of Business and Economics	NO	NO	0 = Non-Peer Reviewed	1 (2009, POA) 1 (2012, POA)	
67)	1796- 217X		Journal of software	International Academy Publishing (IAP)	NO	YES	1= Peer Reviewed	1 (2009, Approved)	
68)		2315- 568X	Journal of Research in Nursing and Midwifery	International Research Journals	NO	NO	1= Peer Reviewed	1 (2012, Approved)	
69)	1092- 406X		The Internet journal of anesthesiology	Internet Scientific Publications	NO	YES	0 = Non-Peer Reviewed	1 (2009, POA)	
70)	1532- 0642		The Internet journal of asthma, allergy and immunology	Internet Scientific Publications	NO	YES	0 = Non-Peer Reviewed	1 (2006, POA)	
71)	1531- 2941		The Internet journal of mental health	Internet Scientific Publications	NO	NO	0 = Non-Peer Reviewed	1 (2010, POA)	
72)	2248- 9010	2250- 0715	International review of social sciences and humanities	IRSSH Research Group (Interdisciplinary Research Group in Social Sciences and Humanities)	NO	NO	1= Peer Reviewed	1 (2013, Approved)	
73)	1817- 3195	1992- 8645	Journal of Theoretical and Applied Information Technology	JATIT	NO	YES	1= Peer Reviewed	1 (2008, Approved) 1 (2009, Approved)	
74)	2229- 6891		International research journal of applied finance	Kaizen Publications	NO	YES	1= Peer Reviewed	1 (2012, Approved) 1 (2013, Approved)	
75)	0970- 9274		Journal of Human Ecology	Kamla-Raj Enterprises	NO	YES	1= Peer Reviewed	1 (2003, Approved) 1 (2006, Approved)	
76)	1929- 6029		International journal of statistics in medical research	Lifescience Global	NO	NO	0 = Non-Peer Reviewed	1 (2012, POA) 2 (2013, Undecided)	
77)	2375- 7167	1545- 0740	Nature and science	Marsland Co	NO	NO	0 = Non-Peer Reviewed	1 (2012, POA)	
78)	2299-	2299-	Journal of Entrepreneurship,	Nowy Sacz Bussiness	NO	YES	1= Peer	1 (2012, Approved)	

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	7326	7075	Management and Innovation	School - National-Louis University			Reviewed		
79)	2155- 6148		Journal of anesthesia & clinical research	OMICS Publishing Group	NO	NO	0 = Non-Peer Reviewed	1 (2011, POA)	
80)	2155- 6180		Journal of biometrics & biostatistics	OMICS Publishing Group	NO	NO	n.a. = Undecided	1 (2014, Undecided)	
81)	2167- 0870		Journal of clinical trials	OMICS Publishing Group	NO	NO	n.a. = Undecided	1 (2014, Undecided)	
82)	2155- 6156		Journal of diabetes & metabolism	OMICS Publishing Group	NO	NO	n.a. = Undecided	1 (2014, Undecided)	
83)	2157- 7110		Journal of food processing & technology	OMICS Publishing Group	NO	NO	n.a. = Undecided	1 (2014, Undecided)	
84)	2165- 7912		Journal of mass communication & journalism	OMICS Publishing Group	NO	NO	0 = Non-Peer Reviewed	1 (2013, POA)	
85)	2332- 0761		Journal of political science & public affairs	OMICS Publishing Group	NO	NO	n.a. = Undecided	1 (2014, Undecided)	
86)	2167- 1079		Primary health care	OMICS Publishing Group	NO	NO	n.a. = Undecided	1 (2014, Undecided)	
87)		2277- 0844	Online Journal of Social sciences Research	Online Research Journals Ltd	NO	NO	0 = Non-Peer Reviewed	1 (2012, POA)	
88)	1923- 6662	1923- 6654	OIDA International Journal of Sustainable Development	Ontario International Development Agency	NO	NO	1= Peer Reviewed	1 (2010, Approved) 1 (2014, Undecided)	
89)		2229- 5518	International journal of scientific and engineering research	Ravi Mittal	NO	NO	n.a. = Undecided	1 (2013, Undecided)	
90)	1923- 4031	1923- 4023	International journal of financial research	Sciedu Press	NO	NO	0 = Non-Peer Reviewed	1 (2013, POA)	

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91)	1927- 6052	1927- 6044	International journal of higher education	Sciedu Press	NO	NO	0 = Non-Peer Reviewed	2 (2013, POA)	
92)	1927- 9515	1927- 9507	Journal of business administration research	Sciedu Press	NO	NO	n.a. = Undecided	1 (2014, Undecided)	
93)	1925- 4059	1925- 4040	Journal of nursing education and practice	Sciedu Press	NO	NO	0 = Non-Peer Reviewed	2 (2012, POA)	
94)	1925- 0754	1925- 0746	World journal of education	Sciedu Press	NO	NO	0 = Non-Peer Reviewed	1 (2011, POA)	
95)	2326- 5884	2326- 5876	Engineering management reviews	Science and Engineering Publishing Company	NO	NO	1= Peer Reviewed	1 (2013, Approved)	
96)	1558- 6332	1553- 3468	American journal of biochemistry & biotechnology	Science Publications	NO	YES	0 = Non-Peer Reviewed	1 (2010, POA)	
97)	1558- 6340	1553- 6203	American journal of infectious diseases	Science Publications	YES (2015) Not in JCR 2014	YES	0 = Non-Peer Reviewed	1 (2007, POA)	In Emerging Sources Citation Index
98)	2394- 1073		Journal of agriculture and ecology research international	ScienceDomain Interantional	NO	NO	n.a. = Undecided	1 (2014, Undecided)	
99)	2320- 7035		International journal of plant and soil science	Sciencedomain International	NO	NO	n.a. = Undecided	1 (2014, Undecided)	
100)	2374- 9091		Journal of neuroscience and rehabilitation	ScienceScript	NO	NO	n.a. = Undecided	1 (2014, Undecided)	
101)	1792- 9660	1792- 9040	Journal of earth sciences and geotechnical engineering	Scienpress Ltd	NO	NO	n.a. = Undecided	1 (2014, Undecided)	
102)	2372- 2495	2372- 2487	SOP transactions on theoretical physics	Scientific Online Publishing, Inc	NO	NO	n.a. = Undecided	2 (2014, Undecided)	
103)	2156- 8561	2156- 8553	Agricultural sciences	Scientific Research Pub	NO	NO	n.a. = Undecided	1 (2013, Undecided)	

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104)	2160- 8849	2160- 8830	American journal of operations research	Scientific Research Pub	NO	NO	0 = Non-Peer Reviewed	1 (2013, POA)	
105)	2328- 4919	2328- 4900	Current urban studies	Scientific Research Pub	NO	NO	n.a. = Undecided	1 (2013, Undecided)	
106)	2157- 9458	2157- 944X	Food and nutrition sciences	Scientific Research Pub	NO	NO	0 = Non-Peer Reviewed	1 (2012, POA)	
107)	1949- 5005	1949- 4998	Health	Scientific Research Pub	NO	NO	0 = Non-Peer Reviewed	1 (2009, POA) 1 (2010, POA) 1 (2012, POA) 1 (2014, Undecided)	
108)	2156- 8367	2156- 8359	International journal of geosciences	Scientific Research Pub	NO	NO	0 = Non-Peer Reviewed	1 (2013, POA)	
109)	2160- 5874	2160- 5866	Journal of behavioral and brain science	Scientific Research Pub	NO	NO	0 = Non-Peer Reviewed	2 (2011, POA)	
110)	2152- 2219	2152- 2197	Journal of environmental protection	Scientific Research Pub	NO	NO	0 = Non-Peer Reviewed	1 (2013, POA)	
111)	2158- 7086	2158- 706X	Natural resources	Scientific Research Pub	NO	NO	0 = Non-Peer Reviewed	1 (2013, POA)	
112)	2165- 3925	2165- 3917	Open journal of applied sciences	Scientific Research Pub	NO	NO	0 = Non-Peer Reviewed	1 (2013, POA)	
113)	2163- 9442	2163- 9434	Open journal of philosophy	Scientific Research Pub	NO	NO	0 = Non-Peer Reviewed	1 (2011, POA)	
114)	2164- 0513	2164- 0505	Open journal of political science	Scientific Research Pub	NO	NO	0 = Non-Peer Reviewed	1 (2013, POA)	
115)	2162- 2485	2162- 2477	Open journal of preventive medicine	Scientific Research Pub	NO	NO	0 = Non-Peer Reviewed	1 (2012, POA)	
116)	2152-	2152-	Psychology	Scientific Research Pub	NO	NO	0 = Non-Peer	1 (2011, POA)	

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	7199	7180					Reviewed	1 (2014, Undecided)	
117)	2164- 5337	2164- 5329	World Journal of Cardiovascular Diseases	Scientific Research Pub	NO	NO	n.a. = Undecided	1 (2013, Undecided)	
118)	2329- 7808	2329- 7832	Health care	Sciknow Publications, Ltd	NO	NO	n.a. = Undecided	1 (2014, Undecided)	
119)	1553- 5827		The business review, Cambridge	The Business Review	NO	NO	1= Peer Reviewed	1 (2019, Approved)	
120)	1694- 0814	1694- 0784	International Journal of Computer Science Issues	unknown	NO	YES	n.a. = Undecided	1 (2013, Undecided)	
121)		1450- 2887	International Research Journal of Finance and Economics	unknown	NO	NO	1= Peer Reviewed	1 (2010, Approved) 1 (2013, Approved)	
122)	2077- 4303	2077- 429X	Risk governance & control: financial markets & institutions	Virtus Interpress	NO	NO	1= Peer Reviewed	1 (2011, Approved)	
123)	2168- 264X	2168- 2631	International journal of cooperative studies	World Scholars	NO	NO	0 = Non-Peer Reviewed	1 (2011, Approved)	
124)		1109- 9577	WSEAS Transactions on Acoustics and Music	World Scientific and Engineering Academy and Society	NO	NO	0 = Non-Peer Reviewed	2 (2012, POA)	The journal is discontinued, as stated by the publisher. (http://www.wseas.org/cms.a ction?id=43)
125)	2224- 3429	1991- 8747	WSEAS transactions on applied and theoretical mechanics	World Scientific and Engineering Academy and Society	NO	NO	0 = Non-Peer Reviewed	1 (2009, POA) 1 (2010, POA)	
126)	2224- 2902	1109- 9518	WSEAS transactions on biology and biomedicine	World Scientific and Engineering Academy and Society	NO	NO	0 = Non-Peer Reviewed	1 (2012, POA)	
127)	2224- 2899	1109- 9526	WSEAS transactions on business and economics	World Scientific and Engineering Academy and	NO	NO	0 = Non-Peer Reviewed	1 (2006, POA)	

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				Society					
128)	2224- 3496	1790- 5079	WSEAS transactions on environment and development	World Scientific and Engineering Academy and Society	NO	NO	0 = Non-Peer Reviewed	1 (2011, POA) 1 (2012, POA) 1 (2014, Undecided)	

Annex B

Journals delisted from Beall's list

ISSN (print)	ISSN (online)	Journal title	Publisher	VABB-SHW status	In WoS	In DOAJ	Publications in VABB VI
1607-9949		African journal of science and technology	African network of Scientific and Technological Institutions	0	NO	NO	1
1007-9327		World Journal of Gastroenterology	Baishideng Publishing Group	0	YES	YES	3
1573-3963		Current pediatric reviews	Bentham Science Publishers	0	NO	NO	4
1573-3947		Current cancer therapy reviews	Bentham Science Publishers	0	NO	NO	1
1573-4080	1875-6662	Current enzyme inhibition (Print)	Bentham Science Publishers	0	NO	NO	1
1573-3955	1875-631X	Current immunology reviews (Print)	Bentham Science Publishers	0	NO	NO	1
1573-4013	2212-3881	Current nutrition & food science (Print)	Bentham Science Publishers	0	NO	NO	1
1573-4005	1875-6441	Current psychiatry reviews (Print)	Bentham Science Publishers	0	NO	NO	1
1573-398X		Current respiratory medicine reviews	Bentham Science Publishers	0	NO	NO	1
1573-3971		Current rheumatology reviews	Bentham Science Publishers	0	NO	NO	1
1573-4048	1875-6581	Current women's health reviews (Print)	Bentham Science Publishers	0	NO	NO	1
2210-3031		Drug delivery letters (Print)	Bentham Science Publishers	0	NO	NO	1
1871-5281	2212-4055	Inflammation & allergy. Drug targets (Print)	Bentham Science Publishers	0	NO	NO	1
1567-2034		Medicinal chemistry reviews	Bentham Science Publishers	0	NO	NO	1
1466-6650		International journal of global environmental issues	Interscience Enterprises	0	NO	NO	2
1424-8247		Pharmaceuticals (Basel)	MDPI	0	NO	YES	2
2075-4698		Societies (Basel)	MDPI	0	NO	YES	1
2072-6694		Cancers (Basel)	MDPI	0	NO	YES	1

ISSN (print)	ISSN (online)	Journal title	Publisher	VABB-SHW status	In WoS	In DOAJ	Publications in VABB VI
2078-2489		Information (Basel)	MDPI	0	NO	YES	1
2041-4552		International innovation	Research Media	0	NO	NO	1