come successful at attracting articles and payments from researchers, others quickly follow. Then the number of publisher multiplies, and the number of spam emails grows also. We are now beginning to see low-quality and predatory open-access publishers being established in Eastern Europe and the former Soviet Republics.

Identifying Predatory Journals

The characteristics of predatory journals are becoming well known. As mentioned, predatory journals use spam email to solicit articles, they have a fast and often fake peer review process, and they supply false information about their locations. Many now also make false claims about having impact factors or being included in prestigious academic indexes. Now it's important to verify all claims made by open-access journals, for many are dishonest.

The lists I publish also identify predatory journals and publishers, and many researchers find them useful. These lists are found at < scholarlyoa.com >. Compiled with the help and advice of many active researchers, the lists include publishers and journals that ought to be avoided by honest researchers.

Long-Term View

While publishing one's research in a predatory journal may bring temporary gain, the long-term consequences are likely to damage a researcher's reputation. It is not uncommon for predatory journals to disappear from the internet after several years. Most are one-man operations, and the published articles have no backups. Researchers may be stigmatized for publishing in easy-acceptance, pay-to-publish journals. Potential employers may reject applicants who have published articles in predatory journals.

For all researchers, the best course of action is to avoid predatory journals. Carry out high-quality research and submit it to the best possible journals. This strategy is more difficult and time-consuming, but it eliminates the risks predatory journals bring and offers researchers better and more secure long-term benefits.

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Riding with the Metric Tide: 'Predatory' Journals in Scopus

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Metrics usage in higher education management has clearly become an issue of great importance. A recent high-profile policy report on this topic, commissioned by the Higher Education Funding Council for England, is aptly named The Metric Tide. It reiterates a number of basic principles like "don't evaluate individuals using journal impact factors" or "peer review can't be substituted by metrics," and stresses that, "those involved in research assessment and management should behave responsibly, considering and preempting negative consequences [of metrics usage] wherever possible" (Wilson 2015).

One of the obvious consequences is gaming with indicators, which comes in various types and level of severity. This paper deals with one particular technique centered around so-called "predatory" journals indexed in Scopus database. It is a part of a broader research on the impact of metrics-based policy measures on various university systems. See the introductory article about "predatory" publishing by the foremost authority on this topic prof. Jeffrey Beall, p. 07.

The Roots

Scopus is one of the two standard bibliometric databases widely used in research assessment across the world. It is a reputable source backing Excellence in Research for Australia and British Research Excellence Framework nation-wide university evaluation systems amongst others. None of them actually use Scopus publication counts as direct metrics. That is natural because the objective of these evaluations is to measure quality, not quantity.

Yet, for those nations that lack a culture of elaborate — and expensive — academic evaluations but strive to develop "world-class research universities," Scopus or Web of Science metrics seem to be an affordable substitute. What's more, ignorant officials tend to oversimplify even the most

basic indicators in order to make their KPIs more achievable. In particular, average citation counts widely used in commercial rankings like THE and QS (both employ Scopus data) are substituted by metrics like "total number of publications in the Scopus" or "presence of publications in the Web of Science in the last 3 years". Another reason for using publication counts as KPIs/prerequisites instead of citation data is straightforward: while citations accumulate slowly, articles are quick to appear and allow more rapid measurement.

The whole rationale behind counting papers is based on a belief that WoS and Scopus guarantee sufficient academic quality and global reach. That is clearly not true, despite what Elsevier and Thomson Reuters sometimes tell us. But these two corporations have very different market strategies. To put it simple, WoS sells "top quality," Scopus sells "top scope," hence the number of journals indexed in Scopus is currently almost twice as high as in the WoS. Naturally, it is Scopus that is currently most plagued with "predatory" publishers.

Scopus indexes over 21,000 journals of increasingly varied reputation. Among them we have identified several hundred indexed in Jeffrey Beall's lists of "predatory" journals and publishers. These journals capitalize on aforementioned demand for Scopus papers that are used not for scholarly communication but for reporting, listing in CVs and conquering various formal barriers (e.g., in Kazakhstan and some other countries one cannot obtain a PhD without WoS/Scopus articles). Usually such journals will publish anything that vaguely resembles an academic paper for a price of $300-700 per article, mimicking peer review and editorial board activities.

In the former USSR such journals are complemented by a network of publication brokers offering all-inclusive packages featuring writing, translating, packaging, choosing a journal and getting through peer review — all for an additional fee. Such brokers widely use spam and all types of ads, sometimes they even paint their phone numbers with the word "Scopus" on pavements near universities. This toxic situation has evolved here in the last 2-3 years, and still most "predatory" journals popular in CIS countries are produced in the countries where Scopus publications became an academic currency much earlier. Besides, sometimes metrics in Russia sound like "number of articles in foreign Scopus-indexed journals," so "foreign" means much more expensive and lucrative.

In the case of Russia, the incentives to boost publication counts are defined by the federal government and funding bodies. For example, to submit a grant application to the Russian Science Foundation, one has to have 11 WoS/Scopus papers in the preceding 5 years. The 5-100 excellence project (see HERB №1/2014) uses publication counts as the main metric, which has led to some of the participating universities engaging in 'predatory' publishing on an unprecedented scale. As far as we know, similar metrics and policies are being implemented in many other countries.

But enough whining, let's get to the data.

The Harvest

All in all, there are articles from more than five hundred "predatory" journals indexed in the Scopus database, according to our findings. By "predatory" we mean those currently included in the Beall's List or those stopped being covered by Scopus for quality reasons (all the articles published in them before delisting remain in Scopus forever). We did not include in our analysis journals published by Frontiers Media S.A. because we, amongst others like the Committee on Publication Ethics, consider this publisher to be ok and disagree with Jeffrey Beall. The largest included publisher in terms of the number of journals is Bentham (United Arab Emirates), which owns 190 Scopus-indexed titles. All the others are much smaller and are usually based in India, Pakistan or USA. Our list includes 531 "predatory" journals in Scopus, of which 420 were still covered by this database in 2014-2015. Of course, they differ in terms of quality but their normalized citation scores (SNIP and SJR) are on average very low. Median SNIP-2014 for the 420 journals is 0.45 and median SJR-2014 is 0.2, while the average for both metrics in the whole Scopus journal list is 1.

World "predatory" publication counts soared in 2009–2012 and stabilized in 2014–2015, primarily because Scopus finally did delist some of the most outrageous outlets. This, however, did not lead to a decrease in "predatory" publications in India and Russia. Iran, on the contrary, managed to greatly reduce the number of such articles by introducing and updating national blacklists. Such lists are currently implemented in Thailand, Nigeria, Turkey and even in war-torn Syria. Most of them use Jeffrey Beall's lists as a starting point. The overall success of such restrictive measures depends on promptness of action and the degree of control over scientists by those implementing blacklists.

Even more worrying is the next graph, which shows the shares of publications in "predatory" journals amongst all the Scopus publications produced in the following countries.

While China, Iran and some other countries have managed to reduce the share of such publications, Russia and India have increased such shares, and for the latter it has already surpassed 15%. In Indonesia the situation is even more drastic: 23% in 2015. But the real leader is Kazakhstan, where in 2013–2014 this indicator amounted to 47%–49%, dropping to circa 30% in 2015 after some of the "predatory" journals popular in this country were delisted. The former leader was Nigeria with 24%–30% in 2010–2013, then dropping to 14%. We link this decrease to the widespread implementation of Beall's lists as official blacklists by governments and universities.

Shen and Björk state in their recent paper that, "the problem of predatory open access seems highly contained to just a few countries, where the academic evaluation practices strongly favor international publication, but without further quality checks" (Shen and Björk 2015). Our analysis suggests that the problem could be much more severe and affect a wide variety of territories. In fact, today there are already 38 countries each with 1000 articles in Scopus-indexed 'predatory' journals published since 2011,

Figure 1. The number of articles and reviews in 531 "predatory" journals in Scopus by country (shown here are top 10 countries in 2015). Data for 2015 is preliminary and slightly underreported because not all of the articles published in 2015 are already indexed.

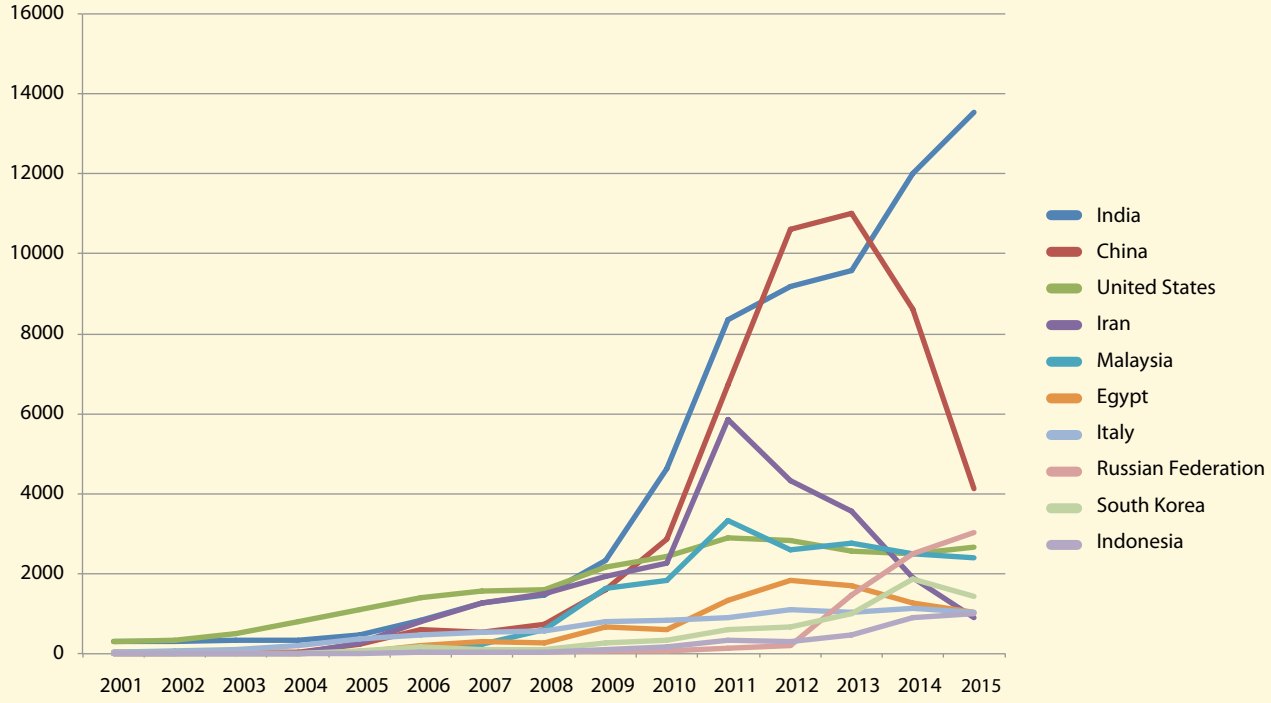
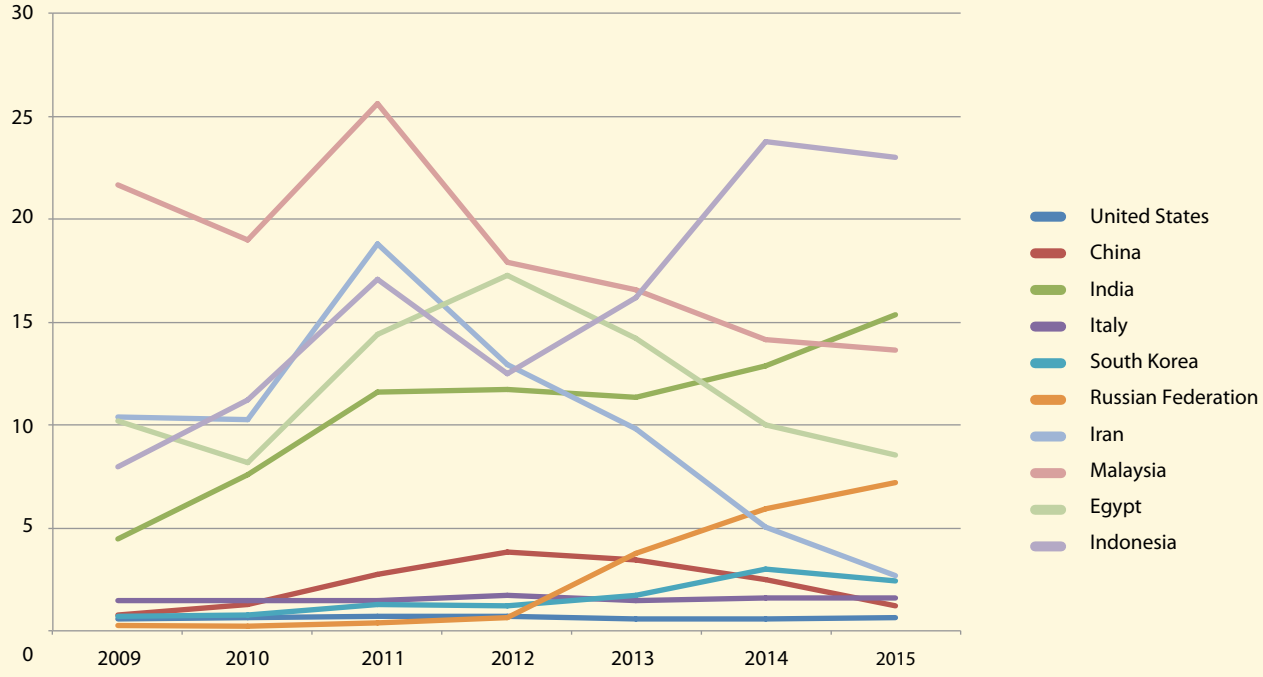


Figure 2. The share of articles and reviews (%) in "predatory" journals amongst all articles and reviews indexed in Scopus.



and for several very large countries the situation is very worrying, to put it lightly. In some countries the whole scholarly communication and academic reputation domains are completely altered by this new phenomenon. It is mostly true for those nations where the majority of researchers have no experience of publishing papers in respectable peer-reviewed international journals. For them simply buying a Scopus article is the most natural reaction towards governmental- or institutional-level pressure. Some of these researchers are so disconnected from the international academic community that they simply don't understand that they are doing something wrong and spoil their CVs instead of improving them.

The situation for universities in the affected countries is even worse. Most of them are desperately trying to gain international recognition and get into ranking tables; they are subject to regular government evaluations based on primitive Scopus and WoS indicators. Increasing publication counts in "predatory" journals not only makes direct reputational damage clearly visible for anyone with access to Scopus but also significantly decreases the average number of citations per paper, which is the main indicator used in several international rankings. Citations are slow to accumulate and because of that we cannot yet measure the effect of the recent "predatory" boom in Russia. Nevertheless, we can use the share of publications in the most cited journals (top 10% by SNIP, SciVal data accessed on Feb 17, 2016) as a rough proxy. One of the leading Russian universities, a participant of the 5-100 excellence initiative which published 1500+ articles in Beall's List journals, managed to bring this share down to 2.5% in 2014. This is really low comparing not only to Harvard (39%) or EU average (23%) but even to Russia's average of 7.6%.

In line with well known earlier research (Butler 2003), our findings show that when oversimplified metrics turn up, quality goes down. This is an important lesson for those who devise such metrics, and they'd better learn from it as quick as possible.

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Publish or Perish? The Highly Productive Research Elite in European Universities from a Comparative Quantitative Perspective

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Introduction

Research in higher education has consistently shown that some academics publish a lot, while others publish at moderate rates or not at all. Institutional reward and promotion structures have always been focused on research achievements — that is, on publications, and academic prestige comes almost exclusively from research. As shown over the decades by Alfred Lotka, Derek de Solla Price, Robert K. Merton, Jonathan R. and Stephen Cole, Paula Stephan, and Philip G. Altbach, among many others, the majority of university research production comes from a minority of highly productive academics.

Literature identifies a number of individual and institutional factors that influence research productivity, including size of the department, disciplinary norms, reward and prestige systems, and individual-level psychological constructs such as a desire for an intrinsic reward of puzzle-solving. Faculty orientation towards research is generally believed to predict higher research productivity; so are: the time spent on research, being a male, faculty collaboration, faculty academic training, years passed since PhD completion, as well as a cooperative climate and support at the institutional level.

The "publish or perish" theme refers to both research non-performers (or non-publishers) and top performers. Here we shall focus on high research performance and its correlates from a comparative European perspective.

Data and Methods

Primary data come from the global CAP and European EUROAC research projects on the academic profession ("Changing Academic Profession" and "Academic Profession in Europe"). The total number of returned surveys was 17,211; it included 1,000 to 1,700 surveys from most European countries and 3,700 surveys from Poland. There were 13,908 usable cases of research-involved academics from 11 countries: Austria, Finland, Germany, Ireland, Italy, the Netherlands, Norway, Poland, Portugal, Switzerland, and the United Kingdom. The combined CAP/EUROAC