May you live in interesting times –
Publishing and Open Access in Archaeology

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Abstract – Open Access (OA) has become a topic of discussion in Archaeology, due to the recent increase in OA mandates around the world. To add to the on-going conversation about OA this paper presents an evaluation of the problems OA is attempting to solve. It will demonstrate that too many publications and publication venues are causing the issues that are driving forward the need for Open Access. The purpose of this paper is to help archaeologists understand why changes are occurring in Archaeology publishing so as to help create a strategy for the future.

Keywords – open access; archaeology; publishing; archaeological societies; learned societies

Zusammenfassung – In Folge der weltweit zunehmenden Debatte um Open Access (OA) wird das Thema nun auch in der Archäologie viel diskutiert. Der vorliegende Aufsatz versteht sich als ein Beitrag zu dieser laufenden Debatte über Probleme beim OA und bemüht sich um Lösungsvorschläge. Es wird gezeigt, dass die vielen Neuerscheinungen und Publikationsmöglichkeiten Probleme verursachen, welche eine treibende Kraft für die Entwicklung in Richtung auf den OA sind. Das Ziel dieses Aufsatzes ist es, Archäologen zu helfen, die auftretenden Änderungen im archäologischen Publikationswesen besser zu verstehen und Strategien für die Zukunft zu entwickeln.

Schlüsselwörter – Open Access; Archäologie; Verlagswesen; archäologische Gesellschaften; wissenschaftliche Gesellschaften

Introduction

In the 2012 May/June issue of Archaeology magazine the then president of the Archaeological Institute of America (AIA), Elizabeth Bartman, (2012a) denounced Open Access (OA). Stating that,

„We at the Archaeological Institute of America (AIA), along with our colleagues at the American Anthropological Association and other learned societies, have taken a stand against open access."

This 'stand against' Open Access, was heavily criticised for being factually incorrect (Kansa 2012, Kelty 2012, Lende 2012). For some archaeologists this was the first time they heard the concept of Open Access, which is the free access and the right to reuse and distribute publications (Budapest Open Access Initiative 2002, Berlin Declaration 2003). Before much of the discussion about OA and its relationship with Archaeology had occurred on blogs such as Publishing Archaeology (Smith 2015), Doug's Archaeology (Rocks-Macqueen 2015), Heritage Bytes (Alexandria Archive Institute 2015a), and Digging Digitally (Alexandria Archive Institute 2015b).

Now the topic is regularly discussed in Archaeology. There has been a special issue of the journal World Archaeology that touched upon the subject (Lake 2012). The Society for American Archaeology (SAA) has been investigating OA and recently published a discussion on the topic (Herr et al 2013). That paper was followed by other archaeologists reviewing the ethics of Open Access and encouraging the SAA to keep an open

mind towards OA (Kansa et al 2013). The 2014 Presidential Forum at the 79th SAA Annual Meeting focused on the future of publishing and brief summaries of that discussion are published in the SAA Archaeological record (Aldenderfer 2014, Ames 2014, Herr 2014, Kansa 2014, Pool 2014, Smith 2014, Szuter 2014, Yellen 2014). Other Archaeology societies are actively encouraging archaeologists to join this conversation:

„Open access has become an increasingly important issue in academic publishing, and, as a non-profit learned society, the AIA wants to engage in the dialogue. We hope that through critical inquiry and debate we will be able to find ways to balance the interests of the public with those of our authors, our subscribers, and of the Institute itself." (Bartman 2012b).

Open Access inevitable?

While this article focuses on Open Access in Archaeology it is only a small part of the larger world of publishing of which Archaeology has very little influence. The sudden increase in interest has not been driven by archaeologists but by developments in scholarly publishing. As discussed in detail by Eric Kansa (2012) there are an increasing number of OA mandates, put forward by organisations for either their own employees or those they fund to make their work OA. ROARMAP, the Registry of Open Access Repositories Mandatory Archiving Policies, which tracks the number

of OA mandates listed 190 such mandates in the first quarter of 2005 and 624 in the third quarter of 2014, a 300+% increase in less than ten years (ROARMAP 2014). The registry documents how major funders of research, like the United States Government and the Welcome Trust, and employers, such as Harvard University, are rapidly creating OA mandates. These mandates have pushed Open Access publishing to the surface of discussions in Archaeology and publishing in general. Moreover, if the major funders of research and many employers of researchers already mandate it, with more joining every year, it is hard to imagine a world in which OA does not play some sort of role.

Yet as archaeologists begin to experiment with Open Access no one has articulated why OA is needed, beyond a requirement imposed by funders and employers. This has led to much confusion about what problem OA is solving.

„Stepping back to take in the big picture, we would be hard pressed, having spent six years networking extensively in the academic publishing and OA communities, even to articulate what problem is OA trying to accomplish [sic]. Ask a librarian, and you will be told that OA is meant to address the serial cost crisis (the rising cost of journal subscriptions and the impact this has on their capacity to fulfil the other missions of academic libraries). Ask a researcher, and you will be told that OA will allow more researchers to read their articles, leading to more citations and – ultimately – to better dissemination of knowledge. Ask an economist, and you will be told that OA will allow small and medium sized companies which do not have access to the latest research to do so, furthering the growth of the economy and job creation. Ask some activists, and you will be told that OA is meant to deflate the margins of capitalist exploitation of public spending. Ask an activist from emerging countries: you will be told that OA is meant to allow researchers and doctors in poor countries to have access to leading research. This lack of clarity on which problem OA is trying to solve, in turn, means that it is difficult to achieve any of these goals." (ASPESI & LUONG 2014).

We see this same diversity in responses to the problem(s) Open Access attempts to solve from archaeologists. The responses range from moral and ethical concerns (KANSA ET AL 2013) to access for individuals outside of Academia (KANSA 2012) to concerns about the commercialisation of knowledge (SMITH 2014). Archaeologists reading these discussions will too be left wondering, 'what exactly is the problem that Open Access is trying to solve?'

This paper will put forth the theory that most of these different 'problems' mentioned above are in reality the symptoms of a larger issue in publishing, scaling, and it affects Archaeology. As will be demonstrated, regardless of OA mandates there are significant problems in archaeological publishing that need to be addressed.

More and bigger journals

The term scale is used to refer to both the number and size of publications. Figure 1, altered from (ROCKS-MACQUEEN 2013), shows the number of periodicals that publish new archaeological research in English as of 2012. It shows that in 1950 there were 52 archaeology focused journals. By 2012 that had almost increased by a factor of five to 247, doubling in number since 1980. This is organised by the year the journal was founded and their current publication status, thus why free access appears to exist before the Internet could make that possible.
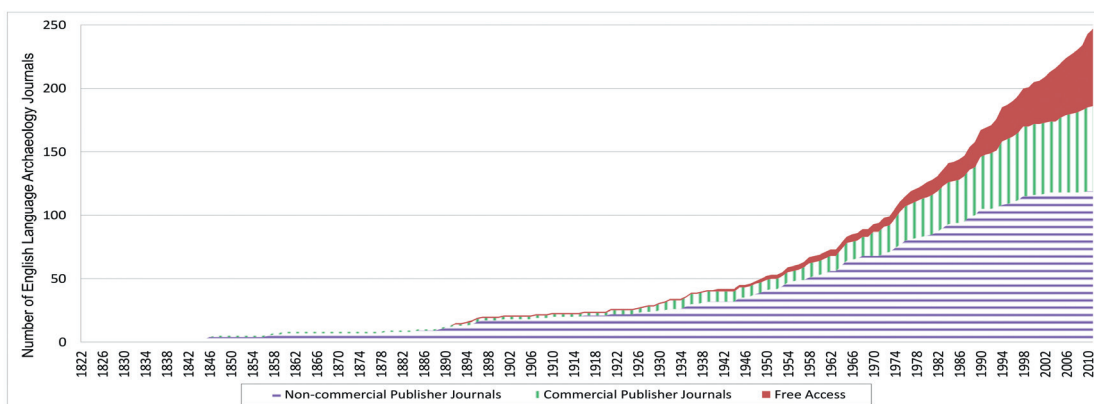

Fig. 1 The number of archaeology periodicals publishing original research. English language or accepting English language articles only. Start date from year journal first published by classification based on type of publication in 2012. Modified from Rocks-Macqueen (2013).

The sizes of journals have also increased. Figure 2 shows the increase or decrease in the number of pages published from a journal's first year of publication to the most recent year data is available. It consists of a selection of primarily archaeology related journals taken from JSTOR. The end date is the last year that JSTOR has content information on. This ranges from 2013 to three, four, or more years older depending on the agreement that JSTOR has with a journal publisher.

on of publications. That data was gathered with a simple search of books with the term archaeology by each year of publication. The 1900 and post 2012 data appears to be data entry issues; there was not a collapse in publishing in 2012. The trend shows a fairly constant growth for the last few decades. Now over a 1500 books are published about Archaeology in the United States each year.
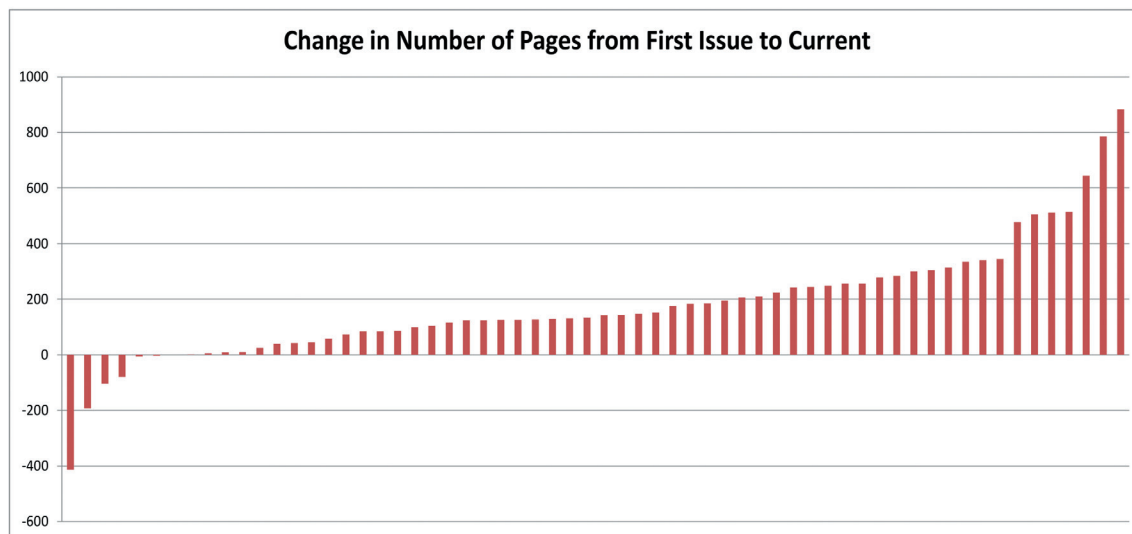
A similar trend is seen when examining the

Fig. 2 The change in number of pages from first publication to last publication for JSTOR archaeology journals.

While not every journal has increased in size since their first publication the majority have. On average the journals sampled have grown by 180 pages; a median of 138. The distribution is varied with some journals launching with only a few dozen pages of content and growing to hundreds of pages. Other journals have launched with hundreds of pages and grew very little, or now publish fewer pages of content. Given the diverse nature of journals covered – regional, national and, international journals, society publishers, commercial publishers – this data makes a good sample of archaeology journal publishing. It demonstrates that not only is the number of archaeology journals growing but the amount of content offered in each journal has grown too.

More Books

A similar trend is seen in the number of books produced. Examining the Library of Congress catalogue from 1900 to 2014 for 'Archaeology' books shows a very similar trend in the expansi-

British and Irish Archaeology Bibliography for monographs. The massive jump in the 1990s is the result of grey literature publications of Commercial Archaeology digs. While not traditionally included in the discussion about Open Access and beyond the scope of this paper, it is worth pointing out that many of these reports are sold and only add to the amount of background re-
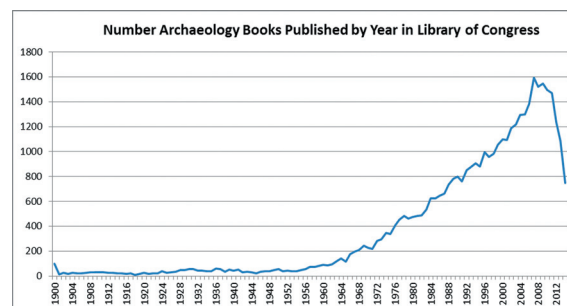

Fig. 3 Number of 'Archaeology' books published by year in the Library of Congress.

search that needs to be conducted and materials purchased to do so. In the future grey literature
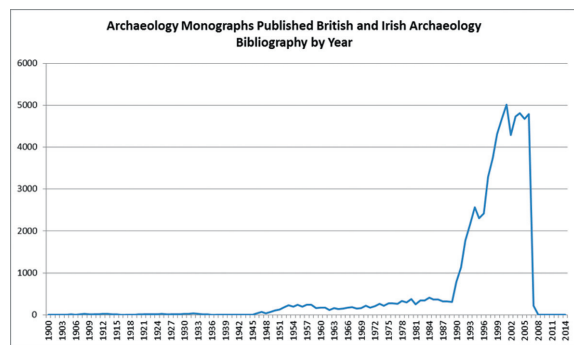
Fig. 4 Number of 'Archaeology' monographs published by year in the British and Irish Archaeology Bibliography database.

maybe included in the discussion of Open Access and greatly increase the volume of publications involved.

Symptoms of growth

Almost all of the problems that OA is meant to solve, as mentioned in the Aspesi and Luong (2014) quote, can be attributed to this growth in journals:

– The 'Serial Cost Crisis';
– Barriers to the dissemination of knowledge;
– Small and Medium Enterprises (SME) lacking access to research;
– No or limited access to research publications in poor countries.

That is because while growth in the number of publications can have positive outcomes, such as more choice in venues to publish or read, more publications also equates more costs. Using the 2012 Archaeology journal data and conversion rates at that

of costs for individuals is due to a lower price for concessions e.g. students. For institutions the difference in costs is depended on if they receive access online only or paid for both online and hard copies.

These costs are not what Universities actually pay for journals. Many times journals are sold as bundles in which Universities pay for multiple journals at once for a reduced price. There are also discounts and price negotiations. As seen by recent freedom of information requests Universities pay a whole range of prices for the same journals (BERGSTROM ET AL 2014). What they do indicate is the general level of costs for individuals, who cannot usually negotiate prices, and a rough indication of the costs to access journals for institutions. That amount of money eliminates access for people living in poor countries, archaeology SME, independent researchers, and even many Universities. Harvard, the richest University in the world, is famous for stating that it could no longer afford to buy every journal it needed (The Faculty Advisory Council 2012).

Does this matter?

These numbers indicate that the growth in the number and cost of journals has priced most people out of access to research. That is assuming that archaeologists need access to all archaeological publications, they may not. An argument in favour of the current publishing system mentioned to the author in conversations is that everyone who 'matters' has access to the resources they need. Conversely in many conversations with OA advocates the alternative scenario has been put forth that most people do not have access. Neither

	Individual- Lowest Possible Cost	Individual- Highest Possible Cost	Institute-Online Only Access	Institute- Highest Possible Cost
£	7,402	9,617	19,347	24,792
€	8,411	10,928	21,985	28,173
$	12,134	15,765	31,716	40,643

Fig. 5 Table of total costs to access all English Language Archaeology Journals in 2012. Pounds, Euros, and Dollars presented. Rates used to convert were as follows: Pound 1; Euro to Pound 0.88; $ to Pound 0.61; AUS to Pound 0.64; NZ to Pound 0.49; SA Rand to Pound 0.08; CAN $ to Pound 0.63.

time it was found that an individual would have to spend between € 10,500-13,650 ($ 12,000-15,700) a year to access the non-OA journals. Institutions would spend between € 27,800-35,650 ($ 32,000-41,000) a year in subscription costs to access these 192 subscription journals. The difference in range

side has attempted to quantify these assertions.

On the matter of the need for access to a diverse range of publications it is possible to find rough indications. Looking at citations to and from Archaeology journals using the Thomson Reuters' Web of Knowledge (http://login.webof-

	Individual Publications	Other	Estimated lowest	Estimated Highest
American Antiquity	389	1338	1058	1727
Antiquity	349	1600	1149	1949
Archaeological and Anthropological Sciences	214	818	623	1032
Archaeology In Oceania	100	411	305.5	511
Australian Archaeology	126	543	397.5	669
Field Methods	88	291	233.5	379
International Journal of Osteoarchaeology	424	1310	1079	1734
Journal of Anthropological Archaeology	658	2320	1818	2978
Journal of Archaeological Method And Theory	310	1146	883	1456
Journal of Archaeological Research	271	1127	834.5	1398
Journal of Archaeological Science	2359	7714	6216	10073
Journal of Material Culture	86	698	435	784
Journal of Social Archaeology	129	855	556.5	984
Oceania	104	629	418.5	733
Praehistorische Zeitschrift	75	426	288	501
Trabajos de Prehistoria	159	581	449.5	740

Fig. 6 Archaeology Journals indexed in ISI Web of Knowledge and the number of other publications cited by each journal.

knowledge.com/ [27.4.2015]) portal shows that archaeologists cite a diverse range of sources. The data is not perfect, it does not give individual entries for works cited two times or less and puts those journals into an 'other' category. Though based on a high count of the others category (all 'others' were cited once) or low count (cited twice) journals will cite between 230 to 6,000-10,000+ different sources **(Figure 5)**. The amount of time covered varies from journal to journal in the Web of Knowledge but generally this data represents the last decade of citations.

Using another source of data, The SCImago Journal & Country Rank (http://www.scima-gojr.com/index.php [27.4.2015]), it was possible to get a more detailed measurement of need.

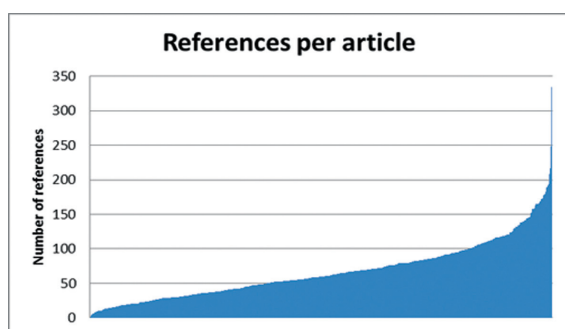**Fig. 7** Distribution of the number of references per article from a sample of 627 articles in SCORPUS.'

SCImago uses SCOPUS (http://www.scopus.com/ [27.4.2015]) as a data source which a similar database to Web of Knowledge run by Elsevier. This provided data on the average number of references per document in the journal for 97 Archaeology journals around the world. There were more journals but those with less than five documents were excluded to eliminate outliers. The median journal's articles reference 55 sources, with a range of 13 to 331. That was for the year 2013.

Gathering data directly from SCOPUS a sample of 34 journals was examined on a per article bases from the year 2014. 627 articles were examined with the lowest referencing only two sources and the highest 334. The distribution can be seen in figure 7. The median for the articles was 60. Assuming that a citation means the person read the work and used it in their research what this data demonstrates is that a typical archaeologist will need access to a multitude of resources to conduct research. This will of course vary from subject of the journal and paper with some people needing to have read hundreds of resources and others would only need dozens.

Some of these references are to the same journal or edited volume. This could mean that the actual number of sources could be less. A sample of 104 of the articles showed that a median of 15% of the sources cited come from the same publication

e.g. journal, edited book, etc. However it cannot be assumed that the author had full access to the complete publication. They could have obtained photocopies or downloads of individual articles or book sections from multiple sources and not have access to the complete set.

The idea that a person could subscribe to one or even a dozen journals to fulfil their research needs is not supported by archaeologists' current research habits. Most likely they would need access to 50 or several hundred resources from journals to books to write a single article. The true number is probably much higher as not everything one reads will get cited in a publication. Unless one goes back 60 years we have already surpassed the point in which individuals subscribing to a handful of journals and buying a few books each year can meet their research needs and they can afford such a prospect. Coupled with the fact that large institutions like Harvard claim they cannot afford to pay to access all this research one can see that increasing number of publications is pricing archaeologists, and most everyone, out of the ability to read the research required to do their work.

What Open Access does and does not do

Open Access solves some these symptoms:
– With OA there are no subscriptions and thus no serial crises;
– OA removes barriers of access to independent researchers, SME, and those in poor countries;
– Archaeologists have the access to literature they require and are again given a choice in what they read.

However not all Open Access is the same and there are several routes to achieve free access to publications. There is Gold Open Access in which the author pays, it changes who pays for publishing but does not eliminate it. Copyediting, website hosting, archiving and other costs associated with publishing still needs to be paid for and are done through Gold Open Access. There is Green Open Access, when papers are made available through an archive either immediately upon publication or after an embargo period (usually a year). There is also Ultra low cost Open Access, sometimes referred to as Platinum Open Access. That low cost model runs on a mainly volunteer workforce who handles the management of the peer review, copy editing, etc. There are several examples of respectable archaeology journals running on this low budget model like Mesolithic Miscellany (https://sites.google.com/site/mesolithicmiscellany/ [27.4.2015]) and AP: Online Journal in Public

Archaeology (http://www.arqueologiapublica.es/index.php [27.4.2015]). In the case of Mesolithic Miscellany that journal uses the free Google sites so they do not even pay for a domain name.

The implications of Open Access and the different ways to implement it could affect different groups, from authors to publishers to readers, in different ways. For example, societies are particularly vulnerable to changes in publishing, because many of them are heavily dependent on publishing to fund their organisations (Rocks-Macqueen 2012) or they believe, rightly or wrongly, that people are only members because of the access to journals they provide. Gold OA ensures societies and publishers still receive a stream of income and that all readers get access. The problem with Gold OA is that it does not address the underlying problem of scaling not with current prices of € 1800 ($ 2,000) per paper. Even lower charges like those offered by Ubiquity press (£ 250-300 / € 330-400) can be out of the reach of many would be authors. Essentially, this model switches who pays but does not address the fact that money has to come from somewhere. The constraint falls from the reader to the writer and the results could usher in an era in which only an elite can afford to be published.

Green Open Access does not have the problem of putting costs onto writers, but it does not solve the 'Serial Crises'. It could exacerbate the problem because Libraries can cut journal subscriptions and their patrons will still have a form of access. It does nothing to address the issues of societies needing to provide member benefits or for publishers to be compensated for the services they offer, whatever they maybe. Moreover, it delays access to research by a year or more for some users. Green Open Access is a more legal form of what currently happens on the Internet in many cases.

Platinum Open Access scales much better than a Gold Open Access model. Software like Open Journals Systems allow for multiple journals to be hosted on a single system. In a sense all aspects that can be scaled in publishing is done so at a central location and those activities that cannot, like editing, is done by volunteers. A scenario mentioned earlier in this paper and used by some Open Access journals. Yet in this model societies and publishers do not gain any revenue and have to pay some of the costs. It essentially turns publishing from a for-profit activity into a public good or charitable activity.
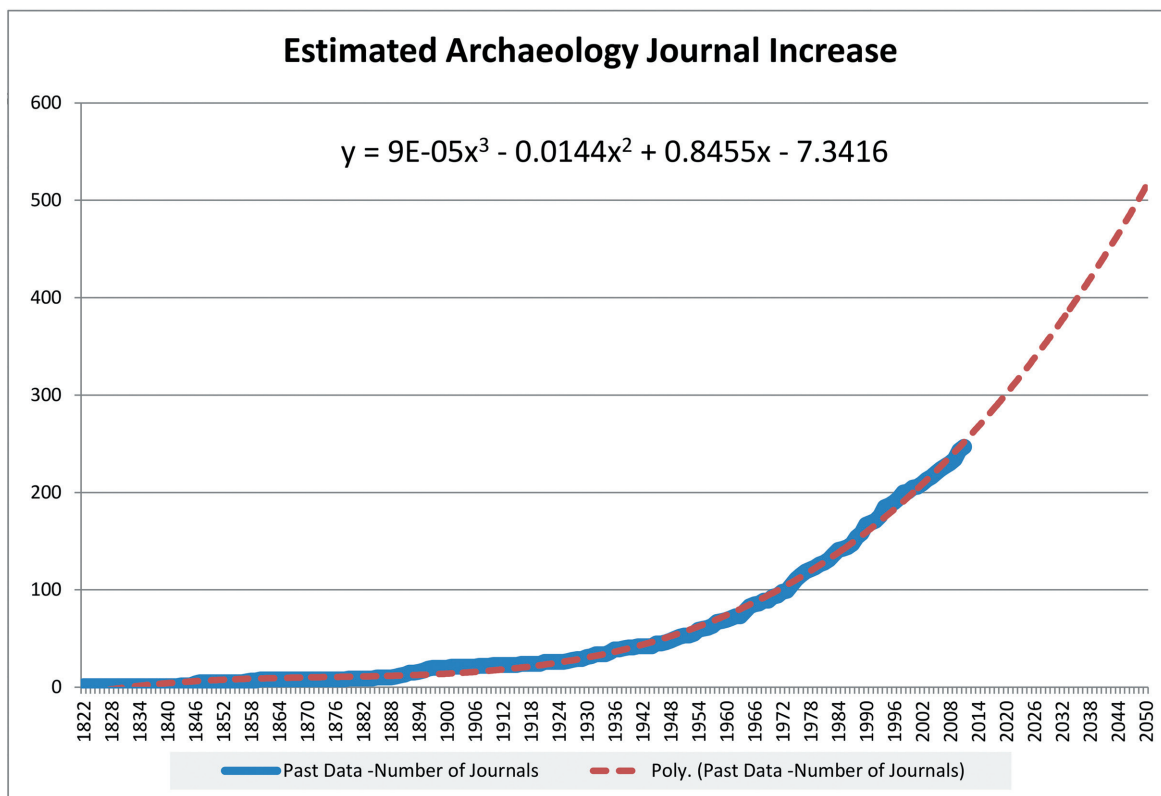
Estimated Archaeology Journal Increase

$$y = 9E\text{-}05x^3 - 0.0144x^2 + 0.8455x - 7.3416$$

Fig. 8 The number of journals published based on Figure 1 data including a polynomial trend line to the year 2050 to estimate the potential number of journals in the future.

Discussion

Mark Lake (2012) when writing his introduction to the special issue of World Archaeology on Open Archaeology, remarked how quickly Open Access has moved up the agenda of many archaeologists:

„When I first proposed a World Archaeology issue on Open Archaeology I failed to anticipate just how rapidly the open dissemination of scholarly publications would rise up the political agenda. For example, the period between making that proposal and writing this introduction has seen, in the USA, the 2011 introduction of the Research Works Act and subsequently the promotion of the Federal Research Public Access Act (both discussed by Kansa) and in the UK the 2012 publication of the report of the British Government's Working Group on Expanding Access to Published Research Findings (2012) – perhaps better known as the 'Finch Report'."

Unlike debates about theory in which archaeologists have years to build a consensus this topic is unpredictable and facts on the ground change very quickly. To contribute to such contemporary events this paper will move from examination of the past events to speculation about the future.

The goal of this speculation is not to predict the future. There are too many examples of how such endeavours go wrong. The goal of the speculation is to raise a range of possible futures that need to be discussed by archaeologists who are concerned about publishing and how the impacts of changes in the current system could affect the institutions of our discipline. With an understanding of possible outcomes we can start to form plans to dictate the future of publishing instead of continuing to be surprised by new developments.

What the future may hold, and driving forces

Will the future see continued growth and higher research costs? Figure 8 shows that by mid-century there could be 500 journals that publish English language articles on primarily Archaeology, if current trends are extrapolated. This does not take into account all the other journals that also publish Archaeology research but only as a minority of its articles. The number of 500 journals is based on the assumption that the underlying data has captured all the possible journal publications. Since the data was first complied

(see Rocks-Macqueen 2013 for details of methods) I have become aware of many more journals, some that have been publishing for decades. That includes this journal, Archäologische Informationen, which I was not aware of until recently. These additional findings lead me to believe that this data represents a minima and the actual number could be higher.

Possible 500 journals – but how probable?

How likely is it that we will reach 500 or more English language Archaeology journals by mid-century? There are two trends indicating that this trajectory will continue. One is that the infrastructure required to run a Journal is now inexpensive. Martin Paul Eve (2012) has demonstrated that using the Open Source software Open Journals Systems it is possible to run a journal for $ 350 (€ 320) a year. That includes Digital Object Identifiers (DOIs) for each article. That is for an all-digital
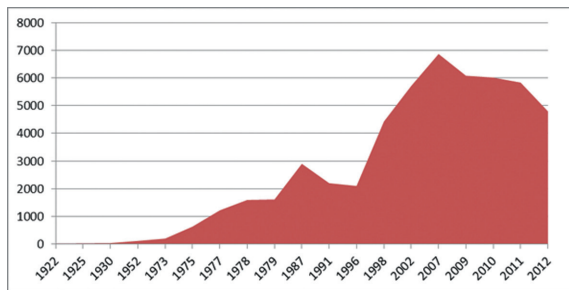

Fig. 9 Number of professional archaeologists in the UK between 1922-2012. Image from Profiling the Profession 2012-14. CC-BY Copyright Aitchison and Rocks-Macqueen.

journal but print on demand services can be contracted to print the journal if required. Currently the barriers for the creation of a new journal, the supply side, are very low and almost anyone can start a journal with similar levels of quality as professional publishers for very minimal costs.

More Archaeologists

If supply is not holding back journal creation what about demand – does Archaeology need 100+ Archaeology journals let alone 500? The number of archaeologists who could potentially publish appears to be expanding. Figure 9 shows data on the number of professional archaeologists in the UK over decades. There are drops due to changes in the economy but the general trend is for more archaeologists. While the data from

other countries does not extend that far back the general consensus is that we have more archaeologists in the world than ever before. That could mean more demand for places to publish.

The 'Serial Crises' and 'Big Deal' trap

There is also demand from publishers for more journals. Since the 1980s journal prices have increased faster than Library budgets which themselves grew more than inflation as shown by data from the Association of Research Libraries' annual ARL Statistics reports (Poynder 2011). This forced libraries to cut journal subscriptions to balance their budgets. Faced with falling revenue publishers raised their prices, which put pressure on library budgets who then had to cull more journal subscriptions and a viscous feedback loop was created in which costs went up and journal subscriptions went down. Thus the 'Serial Crises' was born (Poynder 2011).

In 1996 Academic Press created a solution to this problem known as the 'Big Deal'. Instead of paying for each journal individually publishers bundled all of their journals into a single subscription (Frazier 2001). Libraries were offered discounts, which they liked, and publishers found a way to stop the spiral of journal cancellations because libraries thought twice about cancelling 500, 1000, or 2000 journals all at once (Poynder 2011).

The problem with the 'big deal' is that it did not solve the serial crises problem, but only delayed it and arguably made it worse. For the big deal to work publishers had to have a large enough catalogue to run such a deal. This meant that the size of the collection mattered and publishers were incentivized to add more journals to their bundles in hopes of a better price negotiation advantage. Libraries created consortiums, sometimes covering whole countries, to negotiate with publishers for better deals. Meanwhile individual societies with single or only a couple of journals continued to experience cuts in subscriptions because the big deals were taking more of the libraries budgets (Crawford 2013).

Big deals have made the serial crisis worse; because when a consortium and publisher cannot agree on prices 100,000s of people lose access to journals. Recently reported in the news was the breakdown in negotiations between Elsevier and the Netherlands (VSNU 2014). Dutch universities will lose access to the thousands of Elsevier journals, including archaeological journals, at the beginning of 2015. While Elsevier owns relatively

few Archaeology journals, archaeologists had no input into the decision to cut the journals. The big deal has taken much of the control out of the hands of archaeologists in determining what journals they need.

This pressure for publishers to have more journals has led to a very interesting development in Archaeology publishing. When data was gathered in 2012 the publisher Maney had a total of 15 Archaeology or Archaeology-related journals. When the journals were re-examined towards the end of 2014 that number had climbed to 30. This growth came from absorbing the journals of smaller publishers like Oxbow and Left Cost Press, being contracted by societies to manage their publications, and creating brand new journals. At this pace in less than five years they could control more than half of the subscription based English language market in archaeology, if trends hold. That will give them a very powerful negotiating platform in Archaeology.

This pressure to increase collections is not unique to archaeology. At the beginning of 2015 the publishers Springer and Macmillan merged (SPRINGER 2015). A sample of people working in publishing found that most of them expect to see more mergers like this in the future (MICHAEL 2015). The general trend in publishing is for larger publishers.

What is the future of publishing in archaeology?

The near future looks to be very messy and unpredictable. The trends of more from both archaeologists and publishers makes it very probable that we will see more and more journals and books published with each year putting pressure on everyone. The large number of Open Access mandates is forcing the implementation of some forms of Open Access. They exist alongside traditional subscription models and the 'Serial Crises'. Different requirements in different countries are creating a patchwork of implementation. We could be heading towards a sudden change over in publishing, a breaking point when enough articles are published Open Access that subscriptions collapse. A recent study found that publishing may have reached the point where 50% of articles published are accessed freely on the internet (CHEN 2014).

Open Access, even with the rapid increase in mandates, may not be the only option for the future with smaller publishers being squeezed out and consolidation Archaeology and research publishing in general may end up a monopoly or oligopoly. In such a situation the serial crises may end and the publisher may have enough clout to stop the expansion of OA publishing or to control it.

Moreover, small changes to these models may allow the prolonging of the current or future system. Some Journals, such as Internet Archaeology, and some publishers, like Ubiquity Press, will waive fees Gold Open Access fees for those that cannot afford it. Currently such a waiver is not widespread practice. However, if adopted across the sector it could mitigate some of the pain felt by those who cannot afford to pay. This might diminish the problems of Gold Open Access and make it more appealing to some.

As the saying goes – may you live in interesting times.

Are we dreaming big enough?

With the knowledge that publishing venues and materials have expanded greatly over the last century and that they are likely to keep expanding then we must ask ourselves, 'are we asking the right questions?' Is our thought process too narrow when thinking about the possible future of publishing?

When the AIA asked archaeologists to discuss 'ways to balance the interests of the public with those of our authors, our subscribers, and of the Institute itself' we have typically framed our responses in form to maintain the status quo. We consider that Green Open Access will undercut their subscription model without replacing the revenue for societies. The same goes for Ultra low cost Open Access. We see as Gold Open Access replacing the revenue but could result in a cut of society's membership. These are all in terms of preserving the current models of publishing and operations of societies.

Not discussed are the other problems associated with scale – how does one discover the right material with 500+ journals and 10,000+ books. While an obvious answer might be Google Scholar even now many archaeology journals are not indexed in Google, the normal search engine or Scholar. Some of this is because of use of technology like Flash but some of it is poor website design. If we cannot easily find information in our current publications what happens when we double the number of publications?

This same question could be asked of preservation of the publications. We all know that the process of Archaeology destroys the data and the only ethical way to handle such destruction is to

publish the results so others can learn. Yet, many journals have no preservation plans. We are looking at cases where publications are disappearing and the knowledge they contain is gone forever. If we do not publish than we are no better than glorified looters and if publications disappear than that is in affect not publishing.

Access to research, preservation and discoverability are all problems that are exacerbated by an increasing quantity of publications and there are many others as well. Is it possible to maintain the current system and still address these issues? Will authors be able to submit their manuscripts to whichever journal they please without concern for costs? Will societies still be able to function as a publisher to provide this benefit to their members? Or do we need to start thinking about what scholarly societies might look like if they do not provide a publication as a benefit? What if publications becomes centralised into one location to handle preservation, access and discoverability issues and the hundreds of scholarly organisations find themselves in need of another calling? These are the questions we need to be asking and probably should have been asking for the last few decades.

Abbreviations

AIA	Archaeological Institute of America
CRM	Cultural Resource Management
OA	Open Access
ROARMAP	Registry of Open Access Repositories Mandatory Archiving Policies
SME	Small and Medium Enterprises
SAA	Society for American Archaeology

Acknowledgements

I would like to thank Quonya Huff and the anonymous reviewers who helped make this a much better article.

Declaration of conflicts of interest

I have tried to the best of my ability to make a fair and balanced review of the data. I am however a proponent of Open Access and believe that it is the best route forward. I have tried to back up any such assertions with facts and data while trying to avoid making ideological arguments.

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