Keynotes speakers

Trust and authority in scholarly communications

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ABSTRACT

The broad aim of the paper is to examine how emerging digital behaviours are challenging and, perhaps, changing concepts of trust and authority in the scholarly world. How researchers assign and calibrate authority and trustworthiness to the scholarly sources and channels they choose to use, cite and publish is discussed. Sources/channels like journals, websites, datasets, and social media. In particular how researchers are coping in today's crowded, dynamic, diverse and dis-intermediated digital scholarly environment where it is ever more difficult to establish the quality, veracity, authorship and authority of information is looked at. Examining also whether the growth in the use of social media and open access publications for scholarly purposes impacts on conventional practices of establishing the authority and trustworthiness of information sources and channels.

The overall study is international, although the emphasis of this paper is on the situation in the USA and UK and the study also focuses mainly on science and social science. Three methodologies (focus groups, critical incident interviews and questionnaires) were used in the broader study, but here we concentrate on the results of the focus groups, the first methodology to be employed.

The findings show that the traditional trust measures – peer-reviewed journals, impact factors and personal knowledge and networks – are still very much in place, although social media is making some headway with early career researchers.

Keywords: Scholarly communication; trust; authority; open access; social media; digital

RESUMO

O objetivo geral do trabalho é analisar a forma como os comportamentos digitais emergentes estão questionando e, talvez, modificando os conceitos de confiança e autoridade no mundo académico. É discutido o modo como os investigadores atribuem e calibram autoridade e confiabilidade às fontes e canais académicos que eles escolhem para usar, citar e publicar. Fontes/canais como publicações periódicas, websites, conjuntos de dados e media sociais. É abordado, em particular, o modo como os investigadores lidam com o ambiente académico digital atualmente sobrecarregado, dinâmico, diversificado e sem intermediários, onde é cada vez mais difícil estabelecer a qualidade, a veracidade, a autoria e a autoridade da informação. Questiona-se se o crescimento do uso dos media sociais e das publicações de acesso aberto para propósitos académicos tem impacto nas práticas convencionais de estabelecimento da autoridade e da confiabilidade das fontes e canais de informação.

O estudo é internacional, embora a ênfase deste artigo seja sobre a situação nos EUA e no Reino Unido e o estudo também se concentra principalmente em ciência e ciência social. No estudo mais amplo foram utilizadas três metodologias (*focus groups*, entrevistas de incidentes críticos e questionários), mas, neste trabalho, concentramo-nos nos resultados dos *focus groups*, a primeira metodologia a ser utilizada.
Os resultados mostram que as medidas de confiança tradicionais – jornais *peer-reviewed*, fatores de impacto, conhecimentos pessoais e as redes – ainda estão muito em vigor, embora os media sociais estejam a fazer algum progresso com os investigadores em início de carreira.

Palavras-chave: Comunicação científica; confiança; autoridade; acesso aberto; media sociais; digital

INTRODUCTION

Trust, authority and reliability are the very watchwords of scholarly communication; the scholarly communication system is built upon quality assurance. Things, however, might be changing. Thus, the digital revolution in scholarly communications, more than a decade old now, but still in its infancy (it has a long way to go yet to run its course), is beginning to muddy the 'trust' waters, possibly challenging some long cherished beliefs and practices. In today's crowded, dynamic, diverse, multi-platform and dis-intermediated digital scholarly environment it is ever more difficult to establish whose information it really is and whether it can be trusted. Greater competition among academics arising from an increase in academic numbers and a global marketplace has seemingly led to a reliance on quality proxies and metrics, like Impact Factors, and the gaming of these metrics. And then, of course, there is the emergence of some very challenging information seeking and using behaviour emerging from the Google Generation (the born digital) and smartphone users.

In order to understand what is happening as a result of these changes and possible challenges the CIBER research group and the University of Tennessee, with funding from A.P. Sloan Foundation, are currently researching how emerging digital behaviours/ platforms are challenging and changing concepts of trust and authority in the scholarly world. In particular to discover:

- How academic researchers assign and calibrate authority and trust-worthiness to the scholarly sources and channels they choose to use, cite and disseminate.
- Whether social media and open access are having an impact on conventional practices of establishing the authority and trustworthiness.

The study is global, but with a particular emphasis on the situation in the UK and USA who are dominant players in the scholarly communication field. The subject focus is mainly on academic researchers in the sciences and social sciences, although some humanities data were collected for benchmarking purposes. The study started in October 2012 and ended in November 2013. More details can be found at "http://cics.cci.utk.edu/cicsprojects/Sloan".

METHODOLOGY

A mix of methods was employed for the project as a whole:

a) Fourteen focus groups were held in the UK and USA to scope the boundaries of the research and identify important issues and questions. Typically 6-9 researchers attended each focus group. Participants were selected to ensure a gender, subject age and seniority balance.
b) Eighty critical incident one-to-one interviews were undertaken in the UK and USA, asking researchers about a recent paper they had published in order to obtain specific details about behaviour. The interviews were conducted face-to-face and via the telephone and Skype.
c) With the input from the focus groups and the interviews a questionnaire was designed using Survey Monkey. Using publisher mailing lists (six major international publishers co-operated) an invitation to take part in the questionnaire survey was sent out to authors all around the world. Around 3700 people responded.

At the time of writing the critical incident interviews and questionnaire survey have not been fully written-up, so presented here are largely the results of the 14 focus groups involving nearly 100 UK and US researchers.

LITERATURE REVIEW

With the scholarly research endeavour irrevocably transported to the digital environment, notorious as it is for the problematic nature of a lot of the information it has on offer, concerns as to the quality and reliability of internet-based sources and channels are bound to loom large. This is when the purported 'publish or perish' syndrome associated decline in the value and dependability of some of the knowledge produced and communicated these days is held to be endemic. No wonder then that the possibility of far-fetching changes in the quality assurance needs of the scholarly community, loosely defined and understood as the needs pertaining to the practices and procedures that systematically monitor different aspects of the scholarly communications processes to detect, correct and ensure that quality standards are being met, seems to be very real indeed.

In today's digital environment, transformed as it is by the novel technologies collectively dubbed 'web 2.0', the quality, credibility and reliability of information sources and channels is difficult to determine. This is largely because the cornucopia of research information available on the Web is not only avidly consumed by everybody but also increasingly produced by everybody, from governmental, scholarly or commercial content providers to Joe-public; our traditional notions of what can be considered high quality, authoritative, trustworthy, reputable, and, therefore, credible and reliable are necessarily undergoing radical changes. Thus, as Rieh and Danielson (2007) suggest, present-day information consumers, facing, as they do, greater uncertainty regarding who and what can be believed, and even who or what is responsible for the information they encounter, have to develop new skills and strategies for assessing an information source or channel.

At the same time, the greatly changed scientific culture in today's market-driven systems of higher education also seems to put in jeopardy scholars' ability to trust the

information sources and venues they utilise in their research work. This changed scientific culture, the inevitable consequence of the call upon universities to become profitable knowledge factories, providing direct and effective responses to the needs of industry and the labour market in return for financial support (Gibbons et al., 1994; Delanty, 1998; Nedeva et al., 2012), renders research productivity the top-priority requirement in present-day academe. The resulting atmosphere, in which externally imposed norms seek to bolster and gauge scholarly productivity, further amplifies the rigorous dictates of the 'publish or perish' mentality (Wilson, 1940) that has been driving the research endeavour for some time now. With scholarly success, in terms of career advances, achieving and maintaining a good reputation and securing funding for future undertakings, increasingly hinging on the quantity of papers published in high-ranking journals and the number of citations they obtain (Meho, 2006; Nicolini and Nozza, 2008), Arturo Casadevall, the editor in chief of *mBio*, quoted in a recent *New York Times* article (Zimmer, 2012), may be only too right in saying that science has turned into "a winner-takes-all game with perverse incentives that lead scientists to cut corners and, in some cases, commit acts of misconduct".

RESULTS

First I will deal with findings that embrace and relate to all the three main scholarly activities (publishing/dissemination, citing and reading/using) studied and then deal with each separately.

GENERAL

Characteristics of a reliable and trustworthy source/channel

In the focus groups few researchers really explained head-on with what they deemed to be reliability, quality and trustworthiness. Discussions usually turned into a debate about the relative merits of personal vs. proxy methods (e.g., citation metrics) of establishing reliability and quality. In general trustworthiness, a word they mainly preferred to use, was all down to the reputation of the author or journal in their research speciality. Quality could be best determined by personal inspection and judgment, but because of a shortage of time, too much material to get through and the strictures of their managers and institutions (in respect to publishing in high Impact Factor journals, for instance) this was not always feasible.

While nearly everyone thought that trustworthiness and quality was an important issue nobody really thought it was a big or pressing issue. They seemed to be coping. After all, most of them knew the academic ropes and had long experience evaluating the available literature. Utility and pragmatism, of course, plays a part in today's pressured and fast moving scholarly environment; sometimes you just have to grab what is useful.

Personas

Academic researchers function variously as authors, editors, reviewers, citers and users/readers of the literature and may bring different trust judgments to bear for each function. However, when they talk about trust and authority in scholarly communications they rarely preface what they say by stating that, for instance, as user or citer I do this. This could be because when they are thinking about the issues they are generally thinking about them in connection with one source - journals; for researchers journals are all about delivering quality.

Editors in particular seemed to take a different stance; their thinking was dominated by their own picture of themselves as information providers, people offering trustworthy collections of content for others to trust. They appeared much more traditional and orthodox in their outlook. They felt that the existing system was coping well and that things remained much the same as they always had. For them it was very much a case of crisis, what crisis? Those outside the journal system were more likely to raise criticisms of the current scholarly system.

In regard to the differences between dissemination, citation behaviour and reading behaviour, researchers are most discerning about the first activity and least discerning about usage. In terms of dissemination the main goal is to appear in a highly ranked journal and they are very fussy about this. Citation behaviour tends to be stricter, more focussed and complex than use. Researchers clearly have considerably more freedom as to what they use - they may use blogs, Open Access publications, etc., to their heart's content, but they would generally not cite such sources.

Peer review

It was felt that peer review usually provides a degree of certainty about the quality of a product. It shows that someone has put in an effort and that it has been validated by a community of scholars. Therefore it is an important scholarly attribute which enables researchers to search, use, cite and disseminate with confidence.

On the one hand researchers want to be published in journals that have robust peer review mechanisms (despite the heartache and disappointments involved in rejection and criticism), and on the other hand they want to feel secure in their citing and cite peer reviewed content.

While there is a strong attachment to peer review most people preface their expression of trust in peer review with recognition that there are problems with the way it is undertaken. However, when you attempt to drill down to the actual mechanisms of peer review there is very little consensus at all as to how it might be improved. A bit like democracy one researcher suggested.

So far we have been discussing editorial peer review, but another form of peer review concerns many UK academics, the upcoming Research Excellence Framework (REF) government exercise to reward research quality in British universities[1]. It was said that the biggest impact that the REF has had is in creating an *institutional* peer review system in universities throughout the UK; a system by which researchers are not just evaluated when they submit a publication, but monitored all the time.

Metrics

There was some evidence to indicate that the scholarly world was beginning to be driven and governed by algorithms and the consequence was that creativity and new ideas were being driven out by a (high) metric-driven culture, which was standardising scholarly communication behaviour and making papers less interesting.

There were some differences in attitude according to the discipline of the researchers. Scientists were largely unquestioning about the value of the metric system; social scientists were a little uneasy, but felt there was no real choice but go along with them; the

[1] http://www.ref.ac.uk/

few humanities scholars in the groups clearly felt culturally uncomfortable and alienated, but uncomfortable or not they were very much a part of it.

The most extreme case of researchers being driven by metrics came not from science as we might have expected but from Business/Economics, where researchers are expressly told where to publish and what to cite by the academic journal quality guide produced by the Association of Business Schools[2]. If the journal was listed in the guide it was OK to submit, but if not the message was don't submit there, because it will not further your career.

Early career researchers in the social sciences and humanities stood out rather from the pack and said they considered themselves as 'slaves' to a metric-based/journal focussed system; they have to adhere to the rules to climb the academic ladder, but thought the ladder was broken. In fact one focus group member put it more strongly than that: *Journals are a manifestation of all that is wrong with scholarly communication system. Yes, it's all crazy, but I am not here to reshape academe.*

Social media

Only a few – mostly young researchers – thought social media was not simply social and transient. For most others there was no question it should be trusted, and certainly unlikely to threaten the peer reviewed journal. Nevertheless, researchers, while expressing a lack of interest in social media themselves, said they knew people that used social media and felt guilty about their lack of involvement. Their non-use and general lack of interest can be mainly attributed to the fact that the social media do not constitute trustworthy sources. There are, however, other reasons:

a) many of the researchers we talked to were novices when it came to social media;
b) they were just generally antagonistic towards the social media; something about it irritated them;
c) they said they had no free time to experiment with the social media;
d) they were put off going down that route by the current Higher Education climate in the UK and USA which favoured dissemination in high ranking journals;
e) the informal language of social media was not suitable for scholarly discourse.

There was general recognition that social media was good for some things, especially for: a) obtaining new/different ideas and hence stimulation; b) the self-promotion of publications, especially in regard to outreach – reaching practitioners and the general public. What most interested participants (when told about it) was the fact that the social media could promote their work by increasing the number of citations their publications obtained.

However, early career researchers did make extensive use of social media but were scared to embrace it fully and camouflaged their use of it from their senior colleagues who would not condone such behaviour. There are many academic benefits for them in using social media:

a) helping develop a personal network;
b) facilitating collaboration;

[2] "http://www.associationofbusinessschools.org/content/abs-academic-journal-quality-guide"

c) finding fellow researchers to work with (in real-time);
d) staying in touch with what is going on;
e) following authors whose work they are interested in (stalking);
f) it was easier to find someone with a particular point of view.

Open access

Researchers tended to be distrustful of open access (OA) publications from both an author and reader perspective. Distrust diminishes considerably (but does not quite go away) when OA journals are published by an established publisher, like they are in the case of Sage, for instance. Surprisingly, few researchers were aware of the pioneering efforts of PloS One[3] in showing that open access journals can become highly prestigious, popular and speedy in respect to the publication of articles. Although when they were told of its success story most researchers showed considerable interest in PLOS One.

Researchers from teaching intensive universities were more positive about open access dissemination, largely on the grounds that it was more open and accessible. They also felt that publishing their articles in OA journals might help their careers. The argument went like this: universities might rank Impact Factor journals more highly but the Google search engine ranks OA publications higher in hits list, so if you want to be listed first to impress head hunters then OA publication might give you an edge.

Early career researchers also liked open access in principle, again for its openness and accessibility, but they were scared to embrace it because they felt that academe has not made up its mind about it. If they published in an OA journal, or cited one, they might have backed the wrong horse and found, for instance, that they had published in a second-rate journal. As one young researcher said, *there might be a reputation threat*.

Are things better/worse than a decade ago?

Researchers acknowledged that there was more 'bad stuff' around, because the scholarly communication system is just much more accessible now and there are many more opportunities to publish, but felt, overall, that quality had actually risen over the years. The rise in quality meant they could live with the rise in *bad and boring stuff*.

The rise in overall quality is a result of more people entering the field and the greater levels of competition that comes with it. It was thought that the rise in quality has taken place mainly in the top journals and that it is the niche/specialist journals that have taken full benefit of an abundance of run-of-the-mill material. So OA journals are not being singled out for the rise in poor or mediocre content, but the big increase is in niche subscription journals.

There is a massive sea of mediocrity now because it is just easier to publish, but at the higher end the quality is better because of better training, greater competition and rewards for publishing.

Usage and reading

Researchers are really low key when it comes to issues of trust and authority in connection with using and reading scholarly content. They play down problems of usage and trust, because, if 'something' is out there that they are interested in, their long-established personal networks will tell them about it; they do not need to go looking for it.

[3] "http://www.plosone.org/"

As one researcher commented, *it is intuitive where you turned for information. But at the heart of it is all about networks of people that you had developed over the years.*

Another researcher spoke for the majority when he explained how he established worth.

If I don't recognise the author, then be careful; if additionally you don't recognise the institutional affiliation, be even more careful, and if you don't recognise the journal as well, it is definitely not even worth looking at.

The Impact Factor (IF) of a journal was not that important in determining what to read because:

a) it provided too narrow a view of research literature;
b) it is attached to a journal, not an article;
c) it is sometimes a lottery as to which journals get IFs;
d) having one meant that the journal will be bombarded by low grade authors (many from developing countries) trying to enhance their careers – it is common for payments to be made for successful publication);
e) high IF journals tend to be stylized and lack innovative and fresh papers;
f) many researchers are simply not aware of what the IF is for a given journal.

The bigger the research field the more important IFs are because in big fields, like business studies, researchers do not know all the authors and IFs act as a proxy for quality. For similar reasons IFs are useful in peripheral fields. One attraction of high IF journals from a usage perspective is that they generally possess the best referees, so papers are generally of higher merit, thanks to the input of the referees.

Peer review publications generally obtained more trust, but knowing (and trusting) the journal, editor and editorial board are more important. But peer review itself did not necessarily guarantee quality because *there is some dubious peer reviewed stuff out there*.

Researchers are not aware of the possibilities on offer in regard to filtering material by usage factors or download data. However, when they are informed of the possibilities researchers are wholly negative in their opinions. They feel:

1) Usage metrics are too easily gamed.
2) Highly used articles are not the best ones from a quality perspective (as judged by editorial opinion).
3) Downloads do not represent actual readings – people download material they do not later read.
4) Media exposure raises an articles profile greatly and is said to be a distorting factor.

Altmetrics provide another way of filtering usage[4] on usage and recommendation grounds. They provide non-traditional scholarly impact measures that are based on activity in web-based environments. These metrics track associated interactions and activity, allowing researchers to get a bigger picture of the reach and impact of academic research. Altmetrics typically cover bookmarks, likes, favourites, and recommendations. PloS One uses altmetrics extensively to help scholars select content to read.

[4] "http://altmetrics.org/manifesto/

Researchers pointed out that it is not just quality or authoritative content they are looking for; sometimes they are looking for interesting and original content. *There are occasions when authority/ranking are of secondary concern in determining usage, when researchers looking for new, fresh and creative content*. The researchers who say this are generally from the social sciences. A number of social scientists mentioned that 'quick and dirty' searches of Google/Google Scholar were especially productive in delivering interesting material.

Good writing is also a determinant of what is read. It was acknowledged that if the author was clearly an authority you would spend time reading it regardless of how well it was written, but for much material you had a choice and the choice would always be to go for something better written.

Abstracts have a very important role in determining what is read and can be trusted. There is too much published and too little time for most researchers to read what is available and this leads to the widespread adoption of a 'skittering' form of information seeking, which involves moving rapidly along a digital surface, with frequent light contacts or changes of direction. Such behaviour leads to a dependence on proxies (abstracts) in order to navigate the volume of material. Screening and cross-comparisons are made at the abstract level. So important are abstracts that one researcher said he wanted them quality-controlled, properly peer reviewed. *We need to be able to trust the abstract*. The fact that abstracts are offered free to view adds significantly to their value.

While having full-text access can be important in making trust judgements few researchers actually read the whole full-text. In fact, reading an article means looking at 5-10% of it.

Other bibliographical and content trust pulse points were mentioned: a) methodology (more so in the case of science; social scientists thought it to be too mechanistic a measure); b) conclusions; c) bibliography (who are they citing?); d) theoretical stance in the case of social sciences.

Types of sources used

Digital sources. Trust was enhanced if the digital publication was also available in print as it gave it a sense of reality. Some researchers felt that there are merits in paper and some of these merits are associated with quality/reliability. Thus: a) paper was thought to provide more confidence because it is thought to be less ephemeral; b) because there are clear length limitations in respect to paper publication this focusses the author's mind and they produce better copy. Early career researchers, however, thought the very opposite; they could not believe anyone thinks like that because they think digital is the real world and paper is for the museums.

Data. Some trust concerns were raised in regard to data because of a presumed absence of peer review. Peer review is thought to be needed because it is not possible to decide for yourself on the reliability or otherwise of data given the size and complexity of datasets. It was felt it would help if the data are attached to an article, the article giving the data authority. The name of the author was even more important in establishing the authority of the data.

Conference proceedings. In the UK it is felt that conference proceedings are not admissible for the Research Excellence Framework so they tend not to be highly regarded. It was claimed that a) peer reviewing mechanisms are poor, absent or done on the back of an abstract; b) *increasing number of sharks out there that sully the name of conferences* (organised by organisations more interested in making money than presenting quality

content); c) despite the best indexing efforts of Web of *Knowledge et al*. proceedings do not have the same visibility and standing. But it is said that in certain fields they can attract a large number of citations.

Searching

The 'trusted' big fat information pipe which researchers connect to tends not to be the publisher platform or the university catalogue or federated search engine). In fact, it is generic search engines like Google and Google Scholar that are used. Scholar was thought to be *surprisingly* good by many researchers. Librarians argue that 'discovery' is becoming increasingly difficult these days with Open access and institutional repositories muddying the waters, but not according to researchers. They actually think things are easier.

Libraries were barely mentioned by researchers, but when they were it was mainly in a negative and nostalgic fashion. Researchers felt that the role of librarians is largely bound up with the buildings in which they work. Libraries, once guardians of quality, were thought not to have a role to play today. Researchers just did not see libraries as the point of entry to the information they are looking for. Libraries were seen as *incomplete* sources of information and researchers did not trust librarians to make the critical decisions on what is and what is not in the walled garden on their behalf.

Researchers mentioned a number of trusted (and traditional) searches strategies: 1) follow-up citations from trusted sources and then check the abstracts to establish their worth and quality; and 2) enter the name of a classic work in your field in Google Scholar and then look at the citations to it. They like simple searching: *Any barrier will put you off chasing something*. Early career researchers did follow people and publishers, but the big difference was that they did not do this via a publisher database, but via social media sites.

Impact of open access publishing and social media

All the researchers we spoke to were beneficiaries of the big deal, which gave them easy access to hundreds of subscription journals, so open access was no big deal. While nobody actually said they would rather not use OA material even if they wished to, what is not clear is how they could discriminate in the first place. After all publishers of subscription journals also publish OA material.

The concerns they have about poor (or absent) peer reviewing of OA articles did not result in widespread checking of OA journals' peer review polices. But the interesting thing was that the few researchers who actually did so probably did not do so for subscription journals, certainly it was not mentioned.

Scientific tweets are almost always used to point to a journal article. Researchers do use Wikipedia; they love it and are happy to say so. Academe.edu, an online community, was mentioned positively for accessing difficult to access material, material behind big deal closed doors.

CITATION BEHAVIOUR

Citation behaviour was not as liberal as use or reading behaviour. Authors weigh up sources carefully before they cite, generally rejecting social media in the process. There are political issues to consider; they need to cover their backs; there are people you have to cite to get accepted; you only have real choice over a few of your citations. There is a lot of window dressing involved in citing.

A number of citation practices and requirements were mentioned:

1) Cite your own work to raise your H index.
2) Cite papers in journal to which you submit.
3) Reviewers sometimes ask you to cite their own papers and you do it to increase the prospects of being published.
4) Cite very high impact articles because they set the agenda and represent the very pinnacles of science (halo effect).
5) Cite post hoc – use citations to support your position, give your ideas more weight; this is particularly important if your ideas are novel or controversial.
6) Cite the first published source on the topic and the most recent one.
7) Cite review articles as a bibliographical shorthand.

We know that people are gaming when it comes to citation because they say they do not do it but know people that do.

Early career researchers were pressured by their supervisors to cite peer-reviewed articles and not social media. *You see interesting things elsewhere (i.e., social media) but you cannot use/cite them*. Some got around this creatively by citing social media sources as 'personal communications'. For most academics though social media was taboo. *Twitter is not used as an information source: it would be like citing a conversation in the bar. Many blogs were just streams of consciousness stuff*.

Academics from teaching intensive universities also differed in their behaviour; many of them feel that they could not cite something they had not read and they were happy to cite anything, including trade publications.

PUBLISHING/DISSEMINATION

The biggest and most important concern for researchers was not so much the huge growth in the literature, but what was responsible for driving this growth, the increased pressure to publish. According to many this trend is creating an *avalanche of bad/mediocre journal articles*. It is a case of 'publish or perish' multiplied. And *there is a huge amount of junk floating around the [scholarly] system*. This manifests itself in massive journal rejection rates; *50% are rubbish*, coming from everywhere, but mostly developing countries.

The second biggest concern (in the UK that is) is the massive influence of the REF. As one researcher said the *REF is all-pervading and persuasive*. REF policy says citation scores are not everything but no-one believes this and they carry on attempting to publish in high impact journals. *Who is going to question an article in Nature?* said one researcher. In the long-run this leads to a negative impact on creativity and a distortion in where articles really should be placed.

The REF is also guilty of forcing people to publish more than they otherwise would, something which leads to higher volumes of poor content being published. More and more universities are prescribing metrics as a proxy for quality, meaning lower ranked universities are joining the game, when they really should not be.

Publishing: peer review

Few researchers thought that the peer review process was broken, although early career researchers were least fond of the system. For many researchers publishers were held responsible for organising peer review, it was a central role for them. Rejection rates were thought of as a badge of quality and they were readily traded around the focus groups table.

As to the actual practice of peer reviewing researchers: a) liked blind reviewing – reviewers were freer to comment on articles; b) had mixed opinions about the benefits of

author-suggested referees (a disadvantage mentioned was that authors would suggest their friends; an advantage mentioned was that you could avoid referees who the author suspected of foul-play); c) did not like light touch peer review as thorough peer review leads to better papers; d) felt open refereeing inhibits the reviewers; e) were not sure about post publication peer review; f) felt that editors should be the ultimate judges; they should be proactive and not always heed the comments of reviewers; g) thought that editors should function as a release valve for the peer-review process when it fails to allow for difference, freshness and innovation; h) thought that referees improve an article even if they rejected it. *It is worth submitting to Nature, even if you had no chance being accepted, just to get quality feedback*.

The main weakness of the system – universally shared – was that it was too slow. There was a general consensus that there was a need to obtain a decision within two months. It was a weakness predatory OA publishers take full advantage of (in their advertising, if not in reality). Also of concern was the quality of reviewing which was thought to be too variable for comfort and this was put down to the pressures on reviewers to get the job done quickly; as a consequence *quality is being sacrificed*.

Plagiarism and unethical practices

With the article avalanche comes *dodgy* content. It is considered to be more rife and widespread than generally thought, although confidential publisher data shown to the author of the paper shows the levels of plagiarism and duplication detected to be down from 30% to 10% of manuscripts in the last 3 years.

While early career researchers agreed that plagiarism was a no-no, they are less antagonistic towards limited cut-and-paste behaviour, providing attributions were given. While academics from teaching intensive universities were not supportive either, they were not as critical about it as researchers from research intensive universities. They thought that it was a fuzzy area and understood the reasons/pressures for doing it. Self-plagiarism they seemed to think was a less serious offence; maybe not an offence at all.

There is also the case of fabrication. Everyone knew cases, senior academics included. There is heavy pressure to do so in some parts of the world, where everything hangs on publications. It was alleged that it could be found in 10-20% of manuscripts submitted in the biological sciences.

Open access publishing

Few researchers admitted to having published in an OA publication; there was a clear deep-seated dislike of OA for many, but not all, researchers. Some felt it was being imposed on them for political reasons, rather than being something they actually needed to aid their dissemination efforts. Its open anyway, said one researcher, meaning that most everything could be found on the Web. Surprisingly, few realised that traditional publishers produce OA articles and journals.

There were worries about OA:

1) OA material is of poor quality. Crap was one term used to describe it; other terms used included *vanity publishing and self-deluded authors. Why would you want to (pay to) publish in something in a start-up, which is easy to get into and has no reputation or pedigree. The journal would have to have a brand for me to consider it*.
2) The business model underpinning OA (author pays) was liable to undermine rigorous review; there are concerns about a possible two track peer review process, with OA

articles being treated more leniently because of the money they attracted; there was definite unease about the author pays model that underpins gold OA publishing. The passing of money seems to sully the transaction. Some researchers are concerned that you could pay your way into publishing.

4) It was poorly run and unprofessional: *It fails to recognise that there is a good deal of professionalism and standards behind publishing*.
5) There were concerns that, because of institutional pressure, academics might have to publish in OA journals and that subscription journals might end up featuring different content and authors.

Social Media

Hardly anyone saw social media as even being a poor alternative to journal or book publishing. However, for early career researchers in the social sciences especially social media was thought to provide them with a way of communicating ideas and information that they could not get published In the world of IF journals, which were in the hands of a cabal of senior academics. Tellingly, young career workers talk about social media enabling them to have a *conversation*.

CONCLUSION

- The main findings of the focus groups are:
- Traditional quality metrics (e.g., impact factor) are still trusted and used probably more than ever, even though the problems associated with them are widely recognized.
- Tenure, University and Government (e.g., the REF) research policies influence heavily where scholars publish, and, sometimes, cite.
- The Impact Factor of a journal is more important for publishing than reading or citing. Researchers are generally free to read what they like.
- Readers pay attention to content (abstract, methodology, and citations) and the authors' reputation to determine trustworthiness. Their own personal networks help considerably in pointing them to quality content.
- Some things are changing in the scholarly communications world, but perhaps not as fast as might be expected given rapid technological change. Social media and open access publishing are still struggling to sit at the academic top table. Early career researchers just might help them get there, but the jury is out on this.

We shall see later in the year whether the international questionnaire study bears these findings out.

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