

Trust and authority in scholarly communications in the light of the digital transition

Much scholarly communication now goes on in the digital environment and, as a consequence, scholars and researchers, especially younger ones, appear to be changing their views regarding what is authoritative, good or can be trusted. This could be having an impact on their behaviour in regard to what they read and cite, and where they choose to publish. If this is indeed the case then it strikes at some very fundamental scholarly beliefs, especially those related to assessing quality, like peer review and Impact Factors.

Clearly then this is a strategic topic that urgently needs researching as it has major implications for universities, funding bodies, publishers, librarians and scholarship itself. Unsurprisingly perhaps, there is a good deal of vested interest in this area, which makes it difficult to obtain adequate, 'blue sky' funding to research the topic and therefore we are glad to announce a major grant from the Alfred P Sloan Foundation to research the topic.

The project will be undertaken by Professors David Nicholas (CIBER) and Carol Tenopir (University of Tennessee) and will start September 2012 and finish November 2013.

Background

The evolution of the system of communications between scholars, as well as between scholars and those interested in the results of research, has been built upon quality assurance and trust: establishing trusted sources, channels and metrics for the exchange of scientific and other scholarly information. But rapid changes in technologies, services and behaviours mean that it is increasingly important for everyone involved in the scholarly communications process to examine how established, peer-reviewed, channels of communication (such as scholarly journals) are viewed and used alongside the many other emerging scholarly information sources and services available on the Web.

Aims, objectives and scope

The broad aim of the research is to examine how emerging digital behaviours are challenging and, perhaps, changing concepts of trust and authority in the scholarly world. We shall study how researchers assign and calibrate authority and trustworthiness to the sources and channels they choose to use, cite and publish in. However, given the 'shifting-sands' nature of the topic we shall tread very carefully, avoiding where we can, assumptions and preconceptions, and investigate current discovery/citation/publication behaviours afresh in order to better understand the concepts of trust, authority and choice. The study will be undertaken in a grounded, evidence-based way as there is a need to

rebuild the topic from the bottom up, and the deep log analysis we shall undertake at the outset will provide us with the means of doing this.

Changes in trust and quality can manifest themselves in the discovery process (finding information), in the citation process (formally using information) and where and how researchers choose to have their work published (disseminating information). In regard to the first two we are interested in how researchers decide on what to spend their scarce time to read and how they decide what to cite in their published work. In fact, the discovery and citation patterns of a researcher are connected: what is read will affect what is cited.

Key research questions

1. What digital behaviours suggest themselves as possibly challenging our understanding of trust and authority in the scholarly environment?
2. In today's crowded, dynamic, diverse and dis-intermediated digital scholarly environment it is ever more difficult to establish the quality, veracity, authorship and authority of information. How does this manifest itself in the ways researchers seek, select, cite and publish information?
3. Do today's scholars, setting out to choose 'the best' in terms of quality, trustworthiness and authority of the host of information sources and channels at their disposal, use new or at least additional measures and processes for the purpose?
4. What role does the increasing trend of including data sources in publications have on decisions of trust and authority judgments? Scholars are now able to cite data directly and also to examine the data behind studies. How do academics feel about this, both as producers and users of information?
5. Does the growth in the use of social media for scholarly purposes impact on conventional practices of establishing the authority and trustworthiness of information sources and channels, such as the practice of journal citation?
6. How does work published in conventional journal channels compare to that published in rapid publication and preprint channels (PLoS, arXiv etc.), and is trust assigned differently by users/authors in each channel?
7. Is there diversity in researchers' present-day customary practices of information-source and dissemination evaluation, by age, seniority, discipline and country of origin? And if there is, what are the circumstances and factors driving the differences?
8. How have academics' decisions on where to publish changed in terms of gaining prestige through trusted publication venues? Are new measures of impact developing, including not only citations from a new range of sources but also data on views, downloads, etc., that may challenge the 'holy grail' of papers in high impact journals?

Timeliness of the research

- a. Disintermediation, the increasing reliance on search engines and gateway services, and the fact that it is much more difficult to discern ownership in the virtual scholarly space, means use decisions are based more on ease of access, speed and visibility ('first one up') rather than on established grounds of quality (based perhaps upon quantitative citation ranking or the qualitative reputation of publisher);
- b. The research community and the outputs they produce are expanding, and the growth of non-expert interest and involvement in research means that the numbers of those seeking authoritative information is growing fast (courtesy of Google, we are all scholars now and attached to the 'big, fat information pipe' that was once, courtesy of the Big Deals, the preserve of only the very top universities);
- c. The growth in the use of social media by researchers at all stages of their careers is making communication between researchers, and the establishment of new networks, much easier, and has the potential to challenge established channels
- d. The increasing importance of citation impact as a measure of research impact needs to include awareness and knowledge of the increased range of citation sources (i.e. no longer just scholarly journals but also 'work in progress', blogs, and open access journals). What kind of authority do these have and how much weight should we give them as measures of scholarly esteem?
- e. There are strong arguments from those advocating that exposure of well-formed research data or its organisation should be given as much status as publications. There are even those who see academic papers becoming a thing of the past as trust is given supremely to the evidence rather than the interpretation;
- f. With the impending switch from the use of static to mobile platforms to access the Internet – mobile platforms are forecasted to be the platform of choice by 2013 – changes in information behaviour are only to be expected. This, because internet use via mobile phone and tablet offers a different user experience: on the go, from virtually anywhere and at any time, and on smaller devices, which typically have less functionality;
- g. Overall hangs the challenge of adapting trust and authority within a turbulent financial and economic environment where there is an increasing requirement from funders to see useful outputs rather than citation metrics emerging from their support and funding. New types of business models are also emerging which have an impact on trust and authority vested in the scholarly communication process.

Methodology

The study will be international but with a special focus on the USA and UK. The USA and the UK are major research players and sources of scholarly

communication. The study will focus on science and social science. The main methodological challenges for projects are: 1) we are dealing with a slippery topic, where terminology is soft and not universally understood or agreed; 2) things are changing fast as new channels, platforms and sources enter the scene; 3) people carry a lot of intellectual baggage in this area and there is not a high degree of consensus; 4) people have poor recall of how they behave in the virtual space. Therefore, asking questions in this area are fraught with difficulties. Fortunately, we have been here before in CIBER studies-- for instance, those on open access and digital repositories. Thus, we have developed a research strategy based firmly on a large evidence base, typically through logs (evidence of what people do, not what they say they did or thought they did), but also the results of a meta-analysis of the existing literature. Explanation and causal factors are elicited from focus groups, which we have found offer much in this regard. In-depth interviews enable us to get closer to the issues and practicalities. Finally, the questionnaire offers an opportunity to extend reach and contextualise the data.