

TAMING THE DIGITAL WILDS: HOW TO FIND AUTHORITY IN AN ALTERNATIVE PUBLICATION PARADIGM

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A book is like a garden carried in your pocket.

Chinese proverb

Exchanges between academic peers cover a large and varied terrain of scholarly communication. Situated inside that large terrain is a neatly walled-off and well-tended garden: That is where formal publication resides. The borders of the idyllic secluded garden of formal publication are jealously guarded to keep it separate from the goings on in the wilds of scholarly communication at large (Fig. 1). For these wilds are a tangled mass of informal channels for discussing research findings and sparking new ideas: correspondence, news media, talks, blog posts and so on.

The process of cordoning off formal publication from the wider realm of scholarly communication has been an organic one, taking place over four centuries of print culture and continuously developing research practices. One could even argue that the current convention, in which only formal academic publications are regarded as authoritative text types, did not fully stabilise until the twentieth century. However, this convention is now so familiar that when we talk about academic publications we automatically think of books (monographs and edited volumes) and journals, and very little else.

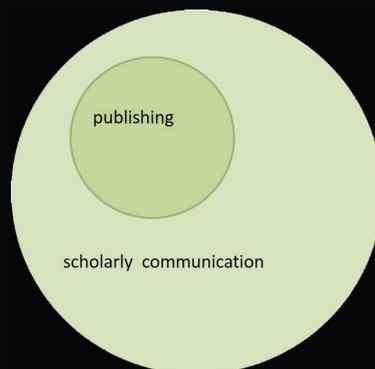


Figure 1. Academic publishing as a 'fenced garden' inside the domain of scholarly communication.

In the course of the twentieth century the academic credentialling system has grown more extensive, more pervasive – and more circumscribed. Being predominantly based on books and journals it has served to solidify the pre-eminent status of these two forms. Academic authority, however elusive that concept may be, can be said to be based largely on formal academic publication, and thus in particular on these two formats. Returning to the landscape metaphor, the ‘garden’ of formal publishing has been secluded organically over the course of time, but now the credentialling system has come to function as a man-made fence reinforcing its natural borders.

However, more recently a great deal of disturbance may be observed at the borders. This disturbance has two chief causes, both connected with the appearance of the digital medium. Firstly, there is much experimentation taking place with books and journals, the historically grown set of authoritative publication formats. In our model, this could be envisaged as the enclosed circle of formal publication, extending outward (Fig. 2). Secondly, an increasing number of researchers are clamouring for formal recognition of new forms of scholarly communication that would have been considered as belonging outside the pale of formal publication before.¹ These two developments together give rise to an increasing porosity of the boundaries between formal publication and scholarly communication.

This porosity has potentially deep-running consequences for academic authority. We suspect that formal publication is a minimal – though possibly not sufficient – condition for academic authority. So let’s explore what formal ‘inner circle’ academic publication consists in. We would like to suggest that formal publications have two types of characteristics: generally recognized explicit ones and largely implicit ones. In what follows we are especially concerned with HSS publications, but most of what we have to say about the subject will be equally applicable to other disciplines.²

Explicit characteristics of formal publications are intrinsic to publishers’ business practices, and are widely recognised and understood by the other stakeholders in the communications circuit: authors, institutions, and readers. These parties all depend on the ‘quality seal’ affixed to formal publications that results from a known and transparent publishing process. First, formal

publications have been pre-selected based on subject matter via editorial filtering. This filtering matches the topic with the ever-evolving ‘market’ for new knowledge, ensuring that formal publications are topically relevant and current. Next, the pre-selection of publications is narrowed down by formal quality standards. In a review procedure, fellow academics concur that the research presented was conducted correctly and takes into account the current state of knowledge. Last, all stakeholders are aware that formal publication results in a ‘version of record’: Each publication takes a definitive, closed-off form, to which ownership and, as a corollary, intellectual property rights are attached. This constellation of explicit characteristics is so well established and understood that scientometrics (the quantitative study of academic activity) as well as academic credentialling systems are built on them.³

Implicit characteristics, by contrast, are *de facto* practices that, without being stipulated as such, tend to be observed as a matter of course in the formal publication process. These include, for instance, the restriction to a predominantly textual format, only supplemented by the occasional use of graphs and charts or still images; the use of a rhetorically formal – even formulaic – and discipline-specific register; and adherence to a formalised and strictly methodical referencing practice.

When editor and publisher select a text deemed worthy of publication, perform careful proofing, and fix the final shape of the text before it is multiplied or made available for access, the resulting publication has all of these explicit and implicit characteristics. Together they enable formal publications to achieve their authors’ goals: certifying research results, claiming them as theirs, disseminating them for readers’ access, and archiving them for reference purposes.⁴ We would like to propose that the authority of academic publications, whatever else it may derive from, is based minimally on this set of practices that are universally observed in formal publishing.

Not surprisingly this set of historically grown practices in turn largely depends on salient properties of the print medium, such as the finality and fixity of the printed text, and its inherent duo-modality of text and images. Given the transformative nature of the current move from paper to digital publication formats, two ques-

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tions arise. First, to what extent can, or indeed must, the characteristics of formal publication listed above be met digitally, and, second, how do the salient characteristics of publication in digital media affect academic authority?

Some digital text forms are little more than an additional and efficient support for existing formal publication practices: chiefly PDFs. These forms largely, if implicitly, abide by the standards of paper, so the net effect of implementing them is business as usual. However, much more is possible in the digital realm than creating digital surrogates for familiar print products. Indeed, it may be claimed that the full capabilities of the digital form can only be properly explored by going out on an experimental limb. If the salient properties of the digital form actually invite – or even demand – communication practices that do not conform to the characteristics identified above, what might this do to the concept of formal publication? And if the different salient properties of digital text forms warrant unconventional practices, can they still accrue an authority somehow equivalent to that of print?

Current experimentation with alternative digital practices in formal publication takes many shapes. All of these depart from one or more of the set of formal characteristics identified above, even if not from all of them at once. From the perspective of the Order of the Book, for example, the instability of digital texts is perceived as a threat to the concept of a definitive version: the version of record.⁵ But could it not be constructed as an advantage that digitally one can always read the most current idea of the author? Springer Nature have just taken the unprecedented step of making their publications not just shareable (in a bid to compete with the growing popularity of scholarly collaboration networks such as Academia.edu or ResearchGate), but making them into living publications that include the discussions that they engender and any updates.⁶ Interactive monographs, such as those envisaged for example in the Manifold Scholarship project, deliberately break away from the notions of fixity and final form. Instead of solidifying research into stable long-forms, Manifold Scholarship will allow readers to engage with drafts and authors to iteratively revise, expand and develop them.⁷ Media Commons Press experiments with another formal characteristic, namely that of quality selection through formal peer review. Instead of submitting texts to a small number of anonymized reviewers, they are presented online for open discussion, in which authors can engage directly, or respond indirectly by revising their work.⁸

Other initiatives play with the *implicit* characteristics of formal publication. Academic blogs, for instance, usually move away from the traditionally required formal and formulaic register. In the digital realm, less context needs to be included with the argument than in the print world; much contextual information can now be linked to, or even embedded within the publication. Hyperlinks come to replace print-based footnotes or endnotes, although the traditional instrument of the bibliography is more often than not still present. Several publication platforms also experiment with converging modalities that challenge the dominance of text. Many journals and books are now ‘enhanced’ by datasets illustrating the reported findings, and some, such as Philippe Aigrain’s *Sharing* even include software tools with which the readers can repeat analyses, or add their own.⁹ The *Journal of Visual Experiments (JoVE)* extends this convergence even further and features primarily videos accompanied by text instead of the other way around.¹⁰

The types of communication mentioned have been branded as new, experimental and progressive. On such grounds some specific projects have even attracted financial support from organisations invested in ‘reinventing’ academic publishing.¹¹ However, the fact that publishers, scholars and funders still continue to see these forms of communication as experimental, shows to what extent these stakeholders are truly *homines typographici*.¹² They lean on the established authority of the Order of the Book, and operate within the paradigm of established publication practices, analysing how new media may challenge and perhaps affect them. From this predisposition, the digital medium is seen as, at best, an *extension* of the established publication paradigm, the online environment offering a new production and distribution platform that nevertheless continues existing communication practices. Implicit in this attitude is also the assumption that the values connected with the incumbent medium, print, will continue to dominate communication practices; the print-based genres can be imitated and extended in the digital realm, but they will still be the gold standard that novel forms are measured by when it comes to authority. The *Journal of Visual Experimentation*, for instance, on its homepage boasts its ‘Impact Factor’, which is generated by traditional citations in other publications instead of being based on more digitally native potential criteria such as video views or download statistics. Similarly, the University of Minnesota Press reassures readers that Manifold Scholarship will extend rather than supplant the traditional genre of the monograph.¹³

If all print-based characteristics listed above were considered to be essential, formal digital publication, and by extension authority, would be possible only in the case of print-like digital publication formats such as PDF, or by translating each feature of the new communication forms back to the practices of paper-based genres. This would deny such inherent salient properties of the digital medium as fluidity (as against paper's fixity), multimodality (as against paper's duo-modality) or 'flat' two-way architecture (as against paper's one-way hierarchical architecture).

However, what if we embrace the notion that, if only in view of their growing prevalence, alternative digital practices need somehow to end up yielding authoritative academic output? Might conventions of digital publication be formalized in such a way as to both obey the demands of the salient properties of digitality and at the same time substitute entirely the criteria of conventional paper publication? Could we not, by way of a thought experiment, analyse the digital formats from a fundamentally challenging perspective: *Viz.*, by regarding the digital medium as a completely new paradigm, with its own inherent salient properties that open as yet unexplored ways of communicating, the results of which could claim a similar formal status in the digital world as books and journals have gained in print (Fig. 2)? The inherent properties of the digital medium may appear to collide with the characteristics of formal, print-based publications in a number of ways, but might we be able to discern new markers of authority precisely in these inherent properties, and could they perhaps become equivalent to the traditional print-based values if these are absent in digital forms?

One of the most prominent properties of the digital medium – its architectural flatness – may serve as an example. Online environments consist of networks of interacting authors and readers who stand in two-way communication directly and without intermediation (other than that of the platform itself). This is in contrast to the message from author to reader in the domain of print, which is one-way and strictly controlled by the publisher. The traditional and formal quality control systems of editorial filtering and peer review, which were born and developed within the hierarchical structuring of the print medium, are in the digital realm increasingly complemented by emphasis on

collaborative pre-publication feedback by networked, usually disciplinary, communities.¹⁴ Rules on these platforms vary: Reviews may or may not be actively solicited; authors' and reviewers' identities may or may not be withheld. There is, however, always one crucial difference compared to the traditional, formal publishing process: 'Open' reactions from the disciplinary community at large replace 'closed' feedback by selected peers. This means that one crucial, authority-

bestowing task in the publishing process is transferred from the publisher to that network of peers itself. If the distinct publisher's 'stamp of approval' resulting from controlled filtering and review is thus absent in these environments, is there an equivalent that is acceptable from a reader's perspective? Put more concretely, how would a relative outsider determine which texts on such a platform would carry enough authority to be worth reading?

Firstly, it should be noted that anyone can participate in reviews on these online review platforms, yet articles are posted not directly by authors, but through moderators. With this

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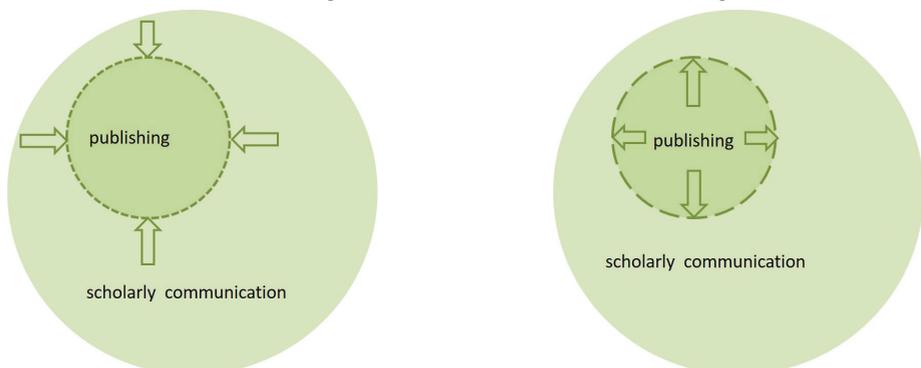


Figure 2. Boundaries of formal publishing become porous, as new ways of communication clamour for recognition

moderation by senior scholars and the threshold for participation it constitutes, the disciplinary communities of researchers have self-controlling admission mechanisms in place, and although the moderators' methods are perhaps more inclusive than those of gate-keeping publishers in the print domain, their role is not dissimilar. This means that content selection in the form of market matching, the initial action of an editor in print-based publishing, is still performed in these online environments, too – only by a different agent, or rather, a collective of agents. Readers thus still rely on prestige and authority, albeit that of the platform's user collective instead of that of the publisher. Gatekeeping decisions continue to be made by the agent who controls scarce resources in the communication system. Whereas in the print domain it is paper and presses that are in short supply, in the digital domain it is attention, and today's forum moderators use their authority to control digital visibility – accruing further authority as they do so.

Secondly, in these frameworks, the extent to which the audience engages with a publication might be interpreted as a proxy for its topicality and currency: Rather than the editor assessing the fit of the publication into current research dynamics, it is thrown into the stream directly. The fact that a text attracts engagement thus signifies that many scholars feel the need to interact with it, and this could legitimize the text as a valuable contribution to an existing debate. For prospective readers, intensive engagement with a presented work may thus be a promising sign, and one that accompanies the text directly. Here, a salient property of the digital medium – architectural flatness – complements rather than replaces the traditional markers of authority in texts, adding to a publication a direct 'layer' of discussion that is not available in print.

One step removed from such a possible layer of direct engagement with its content are the text's metadata, intrinsically linked to it in the digital domain. Of course, descriptive metadata in more or less controlled forms allow for convenient search and retrieval, but for the analysis of academic authority usage statistics are especially important. Readers of scholarly publications leave no traces in print, except when they explicitly reference a publication in their own work. These referencing practices stand at the basis of scientometrics, the analysis of citations as indicators of an article's impact. Scientometrics depart from the premise that authors cite high-quality, topical, relevant and well-conducted research.¹⁵ In the digital domain, the inherent presence of metadata allows for the use of additional quantitative indicators: Down-

load counts, but also page views, bookmarking, and, for instance, mentions on Wikipedia might be measured as quantifications of textual authority.¹⁶ However, considering that the premise that citations reflect impact is contested, these alternative metrics should be approached even more critically. Bookmarking or downloading does not equal reading (and reading does not equal approval) – and Wikipedia is not always without fault. The ample availability of quantitative indicators, a direct consequence of the digital medium's salient properties, might be of help in pointing to authoritative texts, but might also increase the danger of conflating popularity with authority.

Any exploration of digital authority should also feature the most prominent, omnipresent filter-gatekeeper of the online realm: Google. Certainly, being a high-ranked search result adds to the perceived prestige of a text. This is the result of Google's algorithms, which take many parameters into account, such as literal keyword matches or location, and, significantly, 'backlinks' (the number of pages or documents that refer to a specific text) and the clicks on backlinks.¹⁷ The use of backlinks depends on an assumption not dissimilar to the premise underlying citation counts, namely that 'more important websites are likely to receive more links from other websites'. This quantitative way of thinking is conducive to a similar mix-up between popularity and authority.¹⁸ However, the use of backlinks indicates not only that a text is being referred to, but also that readers of contextually related material actually actively seek to read that text in particular – which may hint at appreciation, beyond simple use. In any case, Google derives its undeniable dominance from its scope of analysis. Whereas citation counts measure the accumulation of references in the academic corpus exclusively and at one given point in time, the search engine is known to crawl all content available (or at least a larger share of it than any other party), and does so continuously. A text's high ranking in Google's results thus at least signifies that it outperforms related texts in the most current context.

Digital inherent properties allow for publication forms and practices that do not necessarily conform to all criteria listed for formal publication in the conventional print-based paradigm. We have explored how one salient property of the digital medium – its architectural flatness – enables, or even invites, publication practices that flaunt some of the principles of formal publication but that may nevertheless be construed as conferring authority. Authority cannot be supplied on demand or derived by decree, but we have learned over time to attach it to

formal publication in the inner circle. However, exchanging certain notions of authority based on practices that evolved over centuries for new ones, we might come to accept that alternative publication practices are nevertheless able to confer authority on scholarly output. Thus, at least in the move from a paper to a digital publication paradigm, the mechanism would appear to be the reverse of the one hypothesised earlier. It is not the fact that a publication conforms to a set of formal publication characteristics that gives it authority. Rather it is the fact that certain practices give the text sufficient authority that is a precondition for granting it the seal of formal publication. If we can indeed accept the digital medium as a completely new paradigm that, despite having its own inherent properties and its own attendant practices, can still attract sufficient authority for it to be deemed to constitute formal publication, digital communication will no doubt prove a very disruptive force in the market for authoritative scholarly texts.

Notes

- 1 Both types of developments have been identified as current issues here: Michael, Ann. 'Ask the chefs: What do you see on the horizon for scholarly publishing in 2016?'. *The Scholarly Kitchen*. 21 January 2016. Web. 27 June 2016.
- 2 'HSS' is 'Humanities and Social Sciences' in academic publishing opposed to 'STEM', which is Science, Technology, Engineering and Medicine.
- 3 For a concise introduction to scientometrics and academic evaluation systems, see Wouters, P. F. & L. Leydesdorff. 'Introduction: STC And Scientometrics'. *Scientometrics* 38.1 (1997): 3-5. Print.
- 4 Roosendaal, Hans E. & Peter A. Th. M. Geurts. 'Forces and functions in scientific communication: an analysis of their interplay'. Conference proceedings *CRISP97* (1997). Eds. Karttunen *et al.* Web. 27 June 2016.
- 5 Van der Weel, Adriaan. *Changing our Textual Minds*. Manchester: Manchester University Press, 2011. Print.
- 6 Page, Benedict. 'Shareable content at heart of Springer Nature thinking'. *The Bookseller* 1 April 2016: 6-7. Print.
- 7 University of Minnesota Press, Press Release. 'New model focuses on transforming longform scholarly authorship'. 20 April 2015. Web. 27 June 2016.
- 8 MediaCommons Press. <http://mcpres.media-commons.org/>.
- 9 Aigrain, Phillippe. *Sharing: Culture and the Economy in the Internet Age*. Amsterdam: Amsterdam University Press, 2011. Print. An augmented edition is available from the author's website: <http://www.sharing-thebook.com/>.
- 10 *Journal of Visual Experimentation* (since 2006). <http://www.jove.com>.
- 11 MediaCommons was assisted with a grant by the National Endowment for the Humanities; Manifold Scholarship has received substantial support from the Mellon Foundation; to substantiate just two examples.
- 12 Van der Weel. *Changing Our Textual Minds*.
- 13 University of Minnesota Press. 'New model focuses on transforming longform scholarly authorship'.
- 14 Although the humanities seem only hesitatingly to follow the sciences, where these interactive forums are more widespread, the phenomenon is on the rise. See Tattersal, A. 'For what it's worth: The open peer review landscape'. *Online Information Review* 39.5 (2015): 649-663. Web. DOI: http://eprints.whiterose.ac.uk/90139/3/WRRO_90139.pdf. Specifically catering to the humanities, MediaCommons is probably the oldest platform, but not a very prolific one.
- 15 Paul Wouters analyses referencing practices and derivative citation-measurements in his dissertation: *The Citation Culture* (University of Amsterdam, 1999). Of course, the debate continues both on the justification of using a quantitative instrument at all, and on the precision of the instruments currently used – but their weight can no longer be denied.
- 16 *Bulletin of the American Society for Information Science and Technology*. 39.5 (2013) special issue: 'Altmetrics: What, why and where?'. DOI: 10.1002/bult.2013.1720390404.
- 17 Google. 'Algorithms'. *GoogleInside Search*. Web. 23 May 2016.
- 18 Sullivan, Danny. 'What is Google PageRank? A guide for searchers and webmasters'. *Search Engine Land*. 26 April 2007. Web. 23 May 2016.