EDUCATIONAL PHILOSOPHY AND THEORY, 2016
VOL. 48, NO. 14, 1401–1425
http://dx.doi.org/10.1080/00131857.2016.1240987

Routledge
Taylor & Francis Group

Towards a philosophy of academic publishing

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ABSTRACT

This article is concerned with developing a philosophical approach to a number of significant changes to academic publishing, and specifically the global journal knowledge system wrought by a range of new digital technologies that herald the third age of the journal as an electronic, interactive and mixed-media form of scientific communication. The paper emerges from an Editors' Collective, a small New Zealand-based organisation comprised of editors and reviewers of academic journals mostly in the fields of education and philosophy. The paper is the result of a collective writing process.

KEYWORDS

Academic publishing; scholarly communication; philosophy; new knowledge ecology; open access; digital technologies

Introduction

This article emerges from the members of the Editors' Collective, a small New Zealand-based organisation comprised of editors and reviewers of academic journals mostly in the fields of education and philosophy.[1] The mission of the Editors' Collective states:

> The academic journal was born in the seventeenth century with *The Philosophical Transactions of the Royal Society* in 1665 under the editorship of Henry Oldenburg. The Charter of the Royal Society was dedicated to 'improving natural knowledge.' The development of the academic journal as the cornerstone of the emerging global system of scientific communication and scholarship was closely tied to peer review and the history of the printing industry. Today academic publishing is undergoing dramatic changes as it shifts from print to electronic format and digital media, and also to video and new social media technologies.

The editorial collective is based around the development of a journal ecosystem comprising a number of journals in order to:

- develop an experimental and innovative approach to academic publishing;
- explore the philosophy, history, political and legal background to academic publishing;

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- build a groundwork to educate scholars regarding important contemporary issues in academic publishing; and,
- encourage more equitable collaborations across journals and editors.

At the first meeting of the group in July 2016, members decided to embark on a new project dedicated to initiating a philosophical discussion of some of the main features of academic publishing that we have called the 'philosophy of academic publishing'. There is as yet no extant literature on this issue and it is our collective intention to initiate this field. The material production and reproduction of ideas as a form of text now takes multiple forms with the emergence of new digital technologies that have transformed the nature of the academic journal, the book and the textbook and provided new forms of scientific communication. The combined effect of these changes is to change the nature of the text, of reading and writing, and to resituate learning, research and the university in the age of increased interconnectivity. The concept 'the epoch of digital reason' (Peters & Jandrić, 2015) is a catch-all phrase that refers to the magnitude of these developments, signalling an epistemological shift equal in significance to changes in the nature and organisation of knowledge that took place during the European Enlightenment. Today the advanced digital technologies that harness increases in computing power provide for greater integration of global research communities than at any time in the past. An emergent global ecosystem of scholarly communications, still largely dominated by Anglo-America, is ushering in an era that enables us to talk of 'new knowledge ecologies' and 'three ages of the journal' as the academic world moves from text to electronic and video communication. Increasingly, scholars embrace a theory of technological *disruption* to indicate fundamental changes in the system of the digital text with the rise of open access. This theory needs closer scrutiny for its technological determinism. There is still much discussion to be had about the concepts of ownership and rights in this electronic environment, and also whether the changes indicate continuities of the Enlightenment values based around universal access to knowledge and its significance for democracy. The changes in the global knowledge ecosystem do emphasise new concerns for the geographical distribution of journal knowledge and also the effects of global altmetric and peer review systems on scholarly life. A literature search shows that no such field or article with the title of 'philosophy of academic publishing' yet exists. We think that the issues we have identified require ongoing and critical discussion, and we think that the field of academic publishing is a good vehicle for doing this.

The article comprises the following sections:

(1) New knowledge ecologies and the global ecosystem of scholarly communications
(2) The three ages of the journal—text, electronic and video communication
(3) The theory of technological disruption
(4) The digital text
(5) The rise of open access
(6) Enlightenment continuities? Universal access and democracy
(7) Ownership and rights
(8) The geographical distribution of journal knowledge
(9) Peer review: history and future
(10) Peer-reviewed open access journals: the case of APCs
(11) What do altmetrics measure? Maybe the broader impact of research on society
(12) Discussion

This article is also an experiment in the collective writing process. Each contributor was invited to write 500 words on a topic that was initially arrived at through discussion and sequenced by agreement. The idea behind the process was for contributors individually or in groups to submit their work to a moderator (Richard Heraud) who sequenced the contributors as they became available and posted it to the Collective.

The second stage was one of editing and review. Two reviewers, (Professors John Ozolins and Peter Roberts) who are senior members of PESA the Society that owns the journal *Educational Philosophy*

and Theory (EPAT) and who are long term members of the review board of the journal, were chosen to engage in a process of *open peer review* before the final discussion section was written. Their remarks, restricted also to 500 words, are included at the end of this article.

A companion paper is being written that is based on the reflections of contributors on the collective writing process.

1. New knowledge ecologies and the global ecosystem of scholarly communications

It is remarkable that within the space of a few hundred years the global system of scientific communication should shift from the first journal, a twelve-page quarto pamphlet called the *Journal des sçavans* issued in 1665, to a global ecosystem of some 24,000 academic journals producing over 50 million scientific papers. The *Journal des sçavans* devoted to legal reports and church history was published in Amsterdam some three months before the appearance of the *Philosophical Transactions of the Royal Society* which began as reports by the editor Henry Oldenburg on 'natural philosophy' published at his own expense. It contained the main functions of the scientific journal including registration of some form of peer review, dissemination and archiving. Peer review did not become fully systematic and operational until the early 1830s. The journal system rested on the earlier cultural inventions of writing, paper, and later, printing. At first, the growth of journals was strongly tied to the emergence of learned societies who owned them. It was only in the 1960s that commercial publishers began to acquire previously owned and published by non-profit academic societies. Jinha (2010) reports an estimated cumulative total of some 50 million academic articles in approximately 24,000 academic journals with some scholars arguing that in the digital age of downloadable material, the individual article is the basic molecular unit of research communication.

Scholars have pointed to the changing ecology of journals infrastructure. One study shows that the market share of the five largest research publishing houses reached 50% in 2006, rising, thanks to mergers and acquisitions, from 30% in 1996 and only 20% in 1973. Vincent Larivière, who holds the Canada Research Chair on the Transformations of Scholarly Communication, together with his co-authors Stefanie Haustein and Philippe Mongeon (Larivière, Haustein, Mongeon, 2015) reveals 'The Oligopoly of Academic Publishers in the Digital Era.' They provide an analysis of 45 million documents indexed in the Web of Science over the period 1973–2013 and show that in both natural and medical sciences and social sciences and humanities, Reed-Elsevier, Wiley-Blackwell, Springer, and Taylor & Francis increased their share of the published output, especially since the advent of the digital era (mid-1990s). They conclude:

> Since the creation of scientific journals 350 years ago, large commercial publishing houses have increased their control of the science system. The proportion of the scientific output published in journals under their ownership has risen steadily over the past 40 years, and even more so since the advent of the digital era. The value added, however, has not followed a similar trend. While one could argue that their role of typesetting, printing, and diffusion were central in the print world, the ease with which these functions can be fulfilled—or are no longer necessary—in the electronic world makes one wonder: what do we need publishers for? http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0127502

There are strong connections between the development of the global journal system and the geographical distribution and spread of scientific knowledge. One discussion paper *30 years in science: Secular movements in knowledge creation* (Archambault, 2010) using bibliometric methods examines the relationship between geopolitical factors and scientific activity based on publication data from a 30-year period (1980–2009), extracted from the Web of Science database (Thomson Reuters) to reveal the fall back in scientific outputs of the countries of the former USSR and the spectacular success of Iran, Turkey and Asia, especially China—so-called 'hot zones' of scientific production—that are growing four times faster than the world average.

A policy report by the Royal Society, (2011) *Knowledge, networks and nations,* surveys the emerging global scientific landscape noting two major changes: the shift to an increasingly multipolar world with the rise of new scientific powers such as China, India and Brazil, and; the increase in international

collaboration with over a third of all scientific papers being authored collaboratively. This increase is taken to reflect the global revolution in the system of global scientific communication and the emergent global science system.

Digital technologies have significantly contributed to this revolution. Traditional print journals maintained by learned societies had been available only to individual subscribers and library users. With the advent of information and communication technologies, corporate publishers have acquired and digitalised academic journals. During this transformation, individual subscription and library access have merely moved online, and modes of access have remained, by and large, unchanged. Digital technologies have, however, radically transformed the political economy of scholarly communications. Nowadays, a typical academic journal receives all content for free—writing, editing, reviewing, and other processes related to knowledge production are conducted by academics and researchers, and indirectly paid for by their institutions. Supporting activities, such as typesetting, proofreading and publishing, can be done with very little material investment. In the face of lower costs of production, however, corporate publishers have radically raised prices of access. As they have increased their control over knowledge, big publishing houses have become highly profitable businesses (Clobridge, 2014; Larivière et al., 2015).

Since early days of the Internet, such commodification of knowledge has been opposed by various free access and open access movements. Through alternative modes of publication, learned societies and other academic associations have built a growing opposition to corporate publishers. In order to remain competitive, corporate publishers responded with various new modes of publishing and access. Currently, the global ecosystem of academic publishing consists of three main modes of access and publishing, and each of these modes contains numerous variants. The three main modes are:

(1) Traditional pay-per-view access, where the cost of production and distribution of content is transferred to the reader.
(2) Open access, where the cost of production and distribution of content is transferred to the author.
(3) Open access, where the cost of production and distribution of content is transferred to a third party (i.e. an institution).

Each of these modes brings about a mixed bag of positive and negative effects. Traditional pay-per-view is said to have the most rigorous peer review, yet it effectively prohibits access to knowledge to anyone outside academic institutions in the Global North (Clobridge, 2014). Open access funded by authors offers wider opportunities for publishing, yet it sometimes leads to negative selection of content and vanity publishing (Stevenson, 2004). Open access paid by a third party removes financial stress from publishers and writers, yet it seriously jeopardises their independence. This dynamic publishing landscape, which reveals itself even during the simplest Web search, can be nicely described by the famous quote attributed to Antonio Gramsci: 'The old world is dying, and the new world struggles to be born: now is the time of monsters' (in Žižek, 2010, p. 95).

Competing modes of publishing and access are founded on radically different theoretical underpinnings. On the one hand, maintaining the traditional pay-per-view access affirms the concept of human capital and the figure of *homo economicus*. On the other hand, new forms of openness lie in the very foundations of col(labour)ation—a theory that Michael Peters and Petar Jandrić propose 'as a basis of new forms of openness that is one of the characteristics of digital cultures' (Peters & Jandrić, 2015, p. 183), and that is based on the figure of *homo collaborans*. The struggle between modes of publishing therefore reflects much deeper tensions in the society (capitalist economy vs. communalist economy), within knowledge production (individual production vs. peer production), and within our understanding of human nature (Darwin's evolution vs. Kropotkin's mutual aid). The global ecosystem of scholarly communications is a reflection of larger social, epistemological, and ontological issues, and can be understood only in relation to the emerging knowledge ecologies.

Publications are often thought of in terms of scientific positivism along with a radically individualised idea of the creative, innovative and meritocratic individual. Even writing collaborations are usually given kudos for originality and one is privileged over others as the 'lead author'. The concept of Knowledge Ecologies tries to deal a blow to this outdated Liberal individualism, but acknowledging and elaborating the interactive network of ideas that flow through journals, memes on the internet, and other rhizomes of signification. This concept was captured in the Philosophy of Education Society of Australasia (PESA) conference theme in 2016, where the organiser wrote:

> Knowledge ecology is a term that emerges from the collaboration and file sharing of social media. But it signals something else; an ecosystem of knowledge, the rhizome of discrete and yet inter-related fields, of disciplinary depth and interdisciplinary sharing. Knowledge ecologies speaks on the intersectionality of contemporary society. It engages with the reality of new technologies, of financial collapse, of climate change, of resource exhaustion. Knowledge ecologies draws up new semiotics of epistemology that stretch concepts from one discipline area into new shapes as they re-organise and extend a field from its traditional contours, to dimensions that accommodates the demands of our rapidly changing world. (Irwin, 2016)

Ideas do not emerge from a vacuum. They are integrally interconnected to the contemporary world, whether acknowledged by their authors or not. Journals are evolving into complex networks themselves, that are less likely to need the authority of A* ranking, as the fluidity of the relationships between journals and discipline areas, and between journals and different forms of publication rapidly mutates. A case in point is the trend towards Massive Open Online Courses , which destabilise the boundaries and barriers of knowledge production.

The EPAT/PESA stable is a good example; a blend of paper and online traditional journal, which interacts via the society with blogs, Facebook, and Twitter. Knowledge ecologies suggest an organic evolution of knowledge dissemination, that involves multiple forms of interactions. There are differing 'standards' with each mode of communicating, but this rhizomatic concept attempts to engage rather than discriminate about hierarchies of knowledge formation. It opens possibilities for new potential alliances that are 'outside' and 'inside' the ivory tower.

Knowledge ecologies resituates academia and academic research and publishing in ways that are not always financially viable or amenable to intellectual property (IP). This allows better engagement from countries with less 'developed' tertiary education, but at the same time, threatens to overwhelm the worklife of some publishers who cannot pay for editorial support. At present we are in vortex, where writers are undervalued, and publication companies are over-charging. But by leaving behind the notion of the creative genius, and embracing the interactive nature of knowledge production, knowledge ecologies indicates a more egalitarian set of pathways into the future of knowledge dissemination.

2. The three ages of the journal—text, electronic and video communication

We want to perform a resistance to the teleological determinism of the three stages inherent in the title 'The three ages of the journal—text, electronic and video communication'. While there is intuitively some justification in seeing the electronic as superseding a hard copy, nonetheless both the subsequent forms—the electronic and the video, rely profoundly on the text as the electronically communicated substance of the journal or as the organising and historical underpinning. The beginnings of the academic journal emerge through the cultural practice of writing letters as the primary form of communicating ideas. It was considered the most flexible, malleable and efficient dissemination of scientific knowledge and thinking (Solomon, 2013).

The academic paper is inextricably linked with the development of the Enlightenment as thinkers turned from huge metaphysical questions to observable detail. The letter, however, was slightly too intimate and this material required more public airing. Hence the letters became the more public form, the journal. The invention of printing relieved the scientific community of the need to copy out letters to reach an audience beyond the original addressee (Schaffner, 1994).

The *Philosophical Transactions of the Royal Society* became one of the prototypes of the academic journal. Launched in 1665, this journal stands as the longest running journal devoted to scientific

research. Serving the function from its inception to report on scientific research that was in process and unfinished, the journal served as an important dissemination node to a burgeoning scientific community. Many of its founding tenets such as peer review, dissemination of knowledge and date and authorship acknowledgement set the blueprint for future publication practice.

The community of friends evident in communication by letter remains inherent in the scholarly community associated with the journal. The letters continue to have an influence in the form of peer review essentially an informal and collegial judgement made by people already involved in a knowledge community, such as the learned society. The learned society has the incidental effect of safeguarding the reputation of the society and the journal.

The advent of digital publishing creates the possibility of an emancipation of knowledge but with it comes the increasing control by corporations. Open Access allows academic activity to reach people normally outside of the circle; the poor, the distant, the disenfranchised. Open access coincides, however, with the tightening recruitment and control of journals by a very few large publishing houses.

Advances in technology render the hard copy journal unnecessary to scientific communication, but the accompanying diffusion of academic endeavour has the potential to weaken the intellectual integrity of the scholarly enterprise. Given the neoliberal pressure for university employees to publish as a *sina qua non* of continued employment and the promotional possibilities of editing and publishing, the risk is that quality, depth of thought and careful research are overlooked in favour of the performative function of contemporary academia.

The fundamentals of the text-based form of scholarly publication from the first scholarly letters remain embedded, we argue, within the electronic and video forms of the scholarly paper. We acknowledge McLuhan's dictum that the medium affects the message (1967). The enduring characteristics of the scholarly paper, however, remain. The scholarly production, regardless of the medium, retains the primary qualities of thinking, structuring ideas, supporting ideas with evidence (be it argumentation or empirical research) and deference to the combined knowledge and evaluation of the scholarly community.

The electronic medium provides an added dimension in its possibilities of speed, wide dissemination and fiscal efficiency. In addition, video introduces the power of the image, oracy, and the immediacy of recording the contemporary. These forms have the potential to broaden and enhance scholarly engagement. Both these forms of production require the corresponding development of appropriate contemporary forms of critique.

To return to our opening argument, these three forms of scholarly publishing should not be seen as providing a chronicity of developing intellectual communication. They retain distinctive characteristics that rely on scholarly endeavour but they cannot be assimilated to each other; one form cannot adequately be replaced by the other.

We belong now in an era with a wider landscape in which to experiment and work with the dissemination of knowledge. There will be further additions to this landscape that we cannot yet know. In this era of technological disruption, it is for scholars to develop the academic equipment that will enable them to decide which medium is more appropriate and best serves the message.

3. The theory of technological disruption

The contemporary reader, writer and editor of an electronic academic text is a participant in evolving patterns of publishing. We are currently in the algorithmic phase in which corporations have a primary interest in developing new forms of gathering data—new ways to understanding, using and profiling the user, through the user's use of electronic texts and interaction with prescribed code (see Lewis, 2001). In this phase, the sum total of electronically mediated academic behaviour provides publishing companies with some kind of script for the future of scholarly work—a script that provides evidence of the technological disruption of electronic publishing in the academic domain.

The categorisation of technology as *disruptive* has its origins in Clayton Christensen's interest in observing the ways in which small agile companies introduce and develop technological innovations

that disrupt the existing behaviours, and the very survival of more established and most often larger, companies and corporations (1997) whose products were previously the technological norm. In the study of technological disruption in South Africa, Gaiger, Le Roux and Bothma (2014, p. 271) argue that innovative publishers privilege content over form, the 'the essence of the book' being the content. A theory of technological distribution when applied to publishing suggests that the essence of the book is neither content nor form; rather, it is bundled purchasing and user behaviours that generate new forms of data and data management, new requirements for hard and software development, and new approaches to marketing. Like digital television, the electronic academic text can be theorised as a disruptive technology in terms of its power to displace and become the incumbent media.

Technological disruption is a theory that understands technological innovation as commercial innovation. Technological innovation can, however, also be thought to do the work of organisational change and social innovation, in which the electronic text has become vital in realising the social benefits of new technologies (not only using ICTs but using new ways of articulating ideas and unifying interest). More than this, a theory of technological disruption might specifically call for reflection on the value of innovation with respect to whether its commercial success benefits all parties, or whether it is merely the success of the company commercialising the new idea.

The eBook is an example of an observed disruption that requires such critical analysis. While the promotion of the university as a research institution would seem to go hand-in-hand with the affordability to the institution of the eBook, new research is delivering evidence that the eBook is an inferior research medium when it comes to the retention of the content read (Mangen, 2016), a finding that has clear implications for the merit of the research generated, and consequently the status of the university as a research institution. This shows how a technological innovation can be good for both the producer and the educational institutions, who insist upon its benefits, while not for its intended end user.

Our point here is that a theory of technological disruption does little for innovations in academic publishing if its concern ends with the impact of competition between publishing companies. In other words, the theory of disruptive technology might be thought capable of theorising a variety of disruptive experiences; which is to say, not just the disruption to the behaviour and profits of purely commercial interests.

So what about the situation of the academic researcher? In the literature on publishing and technological disruption, the academic researcher is not regarded as an actor relevant to the discussion, let alone as an active intellectual participant in the publisher's innovations. Yes, the academic researcher analyses and critiques new developments in publishing but for the most part this is *logistical back-fill* for a business strategy that seeks to conserve its existing income streams. There is a paradox in the making here: while publishers want to be portrayed as institutions that represent change, they are largely closed to the dynamic engagement of academic researchers whose motivation is to bring about change through their research and writing.

Of course, an academic's focus on publishing for change requires that researchers be motivated by change. And so there are distinctions and divisions established in the academy through the academic publishing sector's attention to the nature, meaning and application of electronic publishing and its associated technological disruptions. With a technological focus on the ways in which disruptive technologies are exploitative technologies, the mindset of academic reading, writing and editing becomes further entrenched in securing tenure, and the contribution of one's research secondary to the mechanisms through which it is distributed.

In such circumstances, academic researchers are forced to continue intellectual work in 'the commodity space' rather than being moved to invent and utilise 'the knowledge space' referred to by Pierre Lévy, in his seminal work *Collective Intelligence: Mankind's emerging world of cyberspace* (1997). Undermining the visibility of this situation, the publisher's commercial arm strategises according to the illusion that they are the operant of a dynamic project leaving the academic researcher to work with the illusion that their own institution is both static and complicit in the publishing sector's commodification of the value of knowledge. This 'political "double-bind", constituted by individualization and the simultaneous totalization of structures of modern power' (Foucault,1994 as cited in Agamben, 1998, p. 5), is only *clarified*

when the ecology of knowledges is analysed with respect to the role that the academic researcher is ascribed in relation to the simultaneous employment of the four industrial modes that turn the cogs of capitalism: 'acceleration', 'mass production', 'automation', and 'cyber-physical systems' (Bloem et al., 2014, pp. 11–12). Reading and writing require use of 'technologies of the self' and 'technologies of sign systems' (Foucault, 1997, pp. 223–251) that *cut with*, *put a hole in* or *break with* both the systemisation of knowledge and the industrial modes that reconstitute collective thought.

We argue that the development of the theory of technological disruption has too narrow a focus to be of much use to the aims of scholarship and academic publishing beyond the generation of a critique of certain economic conditions and constraints—that is, unless more time is given to a reflection on the significance of technology in relation to a broader concept of innovation. The theory does highlight the value of subjective and linguistic agility when considering the ways in which publishing might disrupt incumbent methodologies to work with readers, writers, and editors to open new relations between the academy, the community and the commercial domain. A scholarship of publishing should provide a critique of the theory of technological disruption through alternative theorisations of technology and innovation in publishing and effecting change.

The question is, at what point will the combining of 'technologies of the self' and 'technologies of sign systems' (Foucault, 1997 pp. 223–251) begin to demand a need for an algorithmic engagement that enables subjectivities to repossess control over the role their thought plays in how this future is assembled? Such an event will call a mode of social disruption with which the theory of technological disruption is yet to grapple.

4. The digital text

The disruptions associated with technological development have led scholars working in a range of related fields, including the philosophy of technology, the history of communication and literacy studies, to link what they identify as different periods of history with epochal technology breaks. These include the evolution of writing within cultural contexts hitherto confined to the orality of face-to-face communication; the monastic illuminated manuscript; the movable type of the Gutenberg era; and, most recently, the emergent age of electronic communication and digital text (Bolter, 1991; Goody, 1986, 1987; Havelock, 1982, 1986; McLuhan, 1962; Ong, 1982).

The various periods of human history thus identified have been characterised by changes in communication based around new modes of language and changing conceptions of the text. Theorisations of periods of human history, such as 'the mode of information' or 'the second media age,' conceptualise changes in the presentation and organisation of knowledge and, to that extent, changing sets of social practices which may loosely be described in terms of shifting 'forms of cultural life' (Poster, 1994).

The development of digital technologies and its widespread availability have bought about a fundamental paradigm shift in the ways that literary texts are written, read, disseminated and studied. Some scholars argue that this revolution is as profound as that created by Gutenberg's invention of movable type. Scholars and teachers have begun to theorise changes in text production and distribution along lines indicating how such changes have been accompanied by changes in modes of subjectivity and identity formation. These deeper epochal changes are at least partly characterised by—and occur in conjunction with—technological innovations and changes affecting the production, construction, distribution, and reception of texts within the large and complex dialectics of cultural practice and historical processes. The historical shifts in text production and distribution must be seen also as changes in the material conditions of social practices of all kinds.

This is the first age of the digital text—of e-books and online scholarly databases. New works are being composed, distributed and consumed electronically constituting a fundamental shift towards digitisation with strong consequences for nature of the literary and scholarly text and a range of new forms including webcomics, hypertext, interactive fiction, flash poetry and video games. The digital text alters the role of the reader, changes the nature of narrative, and affects the task of interpretation. It also has already changed the nature of scholarly communication with 'advances' in the development

of the online journal since the early 1990s, the emergence of journal knowledge ecosystems, and the development of altmetrics and bibliometrics that can chart 'most read', 'most cited' and provide the history of citation. New digital technologies make video and aural media much more readily available and possible as a form of scientific communication and publication, allowing demonstrations, clinical observations, performances, oral histories and interviews for an attuned new generation of viewers.

Digitisation is the process of making something available in digital form and in the digital medium: everything is expressed by assigning numeric values. This means that the text can be read by machines as well as people and the process of digitisation can be understood as a process of increasing abstraction from characters to semantic units of texts (Wittern, 2002). Understanding the new attributes of digital texts—hypertext, interactivity and web search functionality—is at the forefront of the philosophy of publishing in the age of interconnectivity.

5. The rise of open access

However one views it, the rise of open access (OA) has created a host of opportunities to challenge traditional publishing models. The monopolising effect of the big publishing houses has been shutting out smaller publishing groups from the market, but some have found strength in numbers as reported by the Scholarly Kitchen (Andersen, 2016). An example here is the new grouping of small colleges to enable a viable publishing house to emerge, called 'Lever Press', inspired by the idea that a small group can do something big (Archimedes' Lever).

Returning to Chibnik's (2015) cautionary note, it seems that all that glitters may not be gold. There are several questions that must be asked in contemplating this golden era; while others are yet to be posed as a fuller implementation of the Budapest-Bethesda-Berlin Statements (see: Suber, 2012) OA standards (Gold, Libre) are realised against emerging alternatives. The first concerns the sustainability of publishing by asking to what extent can members of scholarly societies continue to subsidise publications; the second addresses economic concerns regarding why members of not-for-profit scholarly societies, should support profit making gold journals, while the third—which may well be the elephant in the room—raises serious concerns about the scholarship itself by asking about the quality of the publication and how (and by whom) this is determined. The shades of grey that exist in between these critical questions have led to a series of complex responses—some we have tried to convey above.

We would also want to suggest that these are by no means the only questions that might be asked in further contemplation of OA. For instance, some argue (Jiménez, BoyerOpen, Hartigan, & de la Cadena, 2015) that part of the answer lies in 'reimagining who and what academic "collectivity" is'. This means rethinking the ecology of academic publishing, i.e. rethinking the current symbiotic relationships that maintain the status quo, and looking for ways to generate new relationships such as partnerships across the traditional academic silos of scholarly associations as well as reconsidering the crucial functions and possible new roles of the academic research library. Others suggest (Golub, 2015) blurring the line between 'journal, platform, and community'; lauding innovation and arguing the need for new ways of funding, new ways of writing, and shared publishing. Creating collectives for publishing that enable smaller scholarly associations to gather financial strength while upholding the quality of published material, and making the case for public donation, the use of royalties, savings in subscriptions and advertising are avenues that have been considered (Hunter, 2012). But, the former assumption needs to be questioned. How should the quality of these final products of research be evaluated in the new publishing ecology? Questions like these ought to be raised about the institution of peer review and the co-developed roles of creator and reviewer in today's high stakes, competitive research environment.

Several writers have long since argued that self-interest wins out in any competitive research environment, but at the same time it is also known that innovation takes time and experimentation. If OA is to be viewed as a publishing innovation it will need more time to develop its scope in consideration of the complex systems, practices, and ideologies in which it prospers. Given the high cost of publishing in Gold OA, it is likely that future researchers will share the burden of the cost of submission by preferring to work in collective projects and, with this, forge new kinds of publications that are more in line with

principles of collective thinking and open-ness. Further, perhaps, the ecology of open access publishing will reduce the number and therefore the diversity of research projects undertaken, but increase the mass or complexity of the more collective research projects. If so, then researchers may need to report on and evaluate our research in a different way; and begin to reconsider the problem of collectivism and competition in academia within this OA era that so clearly orients their work. In this regard all that glitters may well be gold, but the economy that evolves will need to take into account other forms of currency if OA ideals are to be realised.

6. Enlightenment continuities? Universal access and democracy

Having open access to information, along with the capacity to independently and collaboratively reflect and analyse that information with peers, are central values historically associated with the political philosophy of liberalism. In the Enlightenment era in Europe, liberals were known firstly for their defence of the capabilities of common people in relation to religious and kingly authority. An early defence of the ability of ordinary men (and women, according to some thinkers …) to think for themselves can be found in the events of the Protestant Reformation, which served to weaken the religious authority of the Papacy over ordinary citizens, and relied on dissemination of inexpensive printing in basic languages to share Martin Luther's and others' critiques of the Catholic church broadly. (Luther's focus on understanding rather than rote memorisation and acceptance of religious doctrine among followers is also reflected in his production of the *Catechisms* and other translation works). As Russell has argued, the Reformation and conflict and widespread crisis of faith it created led to an abandonment of 'the mediaeval hope of doctrinal unity', making 'it possible to escape persecution' by emigrating and opening space for scientific and rational rejections of religious and other modes of authority within Europe (1945).

A bold defence of peoples' intellectual capabilities and their implications for social relations and specifically for greater modes of democracy can be found in Immanuel Kant's (1784/1970) 'Answer to the Question, "What is Enlightenment?"'. Here and in other texts such as *Critique of Pure Reason* (1898; 1993) Kant described reason as a kind of free-standing entity that people could only grasp through their personal liberty to think and express themselves freely. He described 'the voice of reason' as 'like the vote of citizens of a free state, every member of which must have the privilege of giving expression to his doubts' (Kant, 1993). Here, a sort of open peer review of political processes through democratic deliberation is endorsed (Jackson, 2007). Ordinary men's individual right to liberty of speech and belief against the claims of political or religious authority were thus articulated by Enlightenment and liberal thinkers. At the same time, with the rise of private market-oriented mass-produced printed newspapers and related publications came an entrenching of more inclusive print languages as 'languages-of-power' over older, elite administrative vernaculars, both trends paving the way for nationalistic models of human social contracts that were more horizontal than hierarchal, of a broad imagined community of like parts (Anderson, 1984).

This is the official view of democracy, which depends on the freedom of individual self-expression and right to personal beliefs, but it also depends on having access to good information and the capacity to effectively use information, including literacy and critical thinking skills. Yet, because 'democracy' both carries historical baggage and creates it, this may not be the whole story. Derrida (1997) points out in 'The Politics of Friendship' that 'democracy' historically in its origins (and not abandoning these characteristics), entails both xenophobia and misogyny—it is the political relationship only of genetically connected men, not of slaves, foreigners or women. Once we see 'democracy' in this light, then the privileged nature of certain kinds of language, of publications, of relationships becomes more evident. 'Access' implies inviting the helots and the hetaira into the political world, but the governmentality of democracy, and of the Internet, suggests that while existing power relations may be challenged they will not be substantially altered. As an example, the frequently abusive or dismissive response of males to women venturing to have a presence in online discussions is well documented.

Historically public media have been heralded as an important counterpart to the influence of private media, which may promote corporate sponsors' values and interrelated private interests rather than

responding to the need for good information to inform democratic participation (McChesney, 2004). That such media be independent from politics is also vital in order for journalists and others not to be overly impacted by the interests of politicians. Critical media literacy in education is emphasised above and beyond basic literacy in contexts where both media independence and public media strength are seen to falter today. Yet, critical media literacy, if it is to enhance democracy, to drive it beyond its tendencies to xenophobia and misogyny, has to be more than critical: it has to be politically aware and active.

In the last decade many have considered the rise in access around the world to technology and particularly the as a promising event for freedom of information and, increasingly, for democracy. Apparently, anyone can spread information with the use of online social networks, forums and chat rooms; online communication is seen as a powerful facilitator of social movements for democracy, in the Middle East and in East Asia, where people have used social networks to communicate about collective protest movements and other gatherings. In this context, some countries have sought to limit access to online and mobile communication in using some websites, such as Facebook and Google in China, or turning off mobile services during times of national crisis and instability. Yet others disagree, suggesting that capitalism has colonised online spaces in such a way that credible journalism is decreasing in scope in relation to the rise of government and corporate surveillance programmes that unethically use and facilitate information to benefit political and private interests over public ones (McChesney, 2014). Thus the relationship between access to information and democratic political processes remains contentious and complex at this time, as simultaneously liberal and illiberal trends can be observed in different contexts today.

7. Ownership and rights

In the academy, the knowledge of indigenous peoples has often been used to establish the boundaries around what is considered 'real' knowledge e.g. science. Indigenous knowledge has been used as anthropological data, and mined for pieces of information of scientific (pharmacological, etc.) value. No questions were asked about rights and ownership of knowledge when white people arrived in the Global South (Moorehead, 1966). The situation at the ideological level mirrors the ecological—now that the forests are bare and the waters polluted, pieces of land (mostly in national parks) are being 'returned', in Aotearoa at least, to their traditional iwi owners. After over a century of science appropriating Māori knowledge, IP rights are finally on the table.

The question must be raised in relation to digital scholarship and publishing—where we can work wherever and whenever we like—of ownership and rights over the material products of one's intellectual labour. As the opening section noted above, much of the labour of academic publishing (peer reviews, also editing work in many journals) is done by academics 'for free'—meanwhile the publishers reap huge profits by selling our own intellectual products back to us through library subscriptions!

Digitisation of publishing has added to existing concerns about plagiarism, particularly for university students. The whole point of the Internet is to make it easy to access and copy information. On the other hand, there is 'nothing new under the sun'. In the field of education, nobody 'owns' ideas: when you give them away you end up with more, not less than you started with. The vision of 'open access' is democratic and radical: it appears to transgress and endanger the current profit-making nature of the academic journal.

Most academics find disagreeable the idea of authors paying a charge to publish their papers, both on principle (shades of vanity press) as well as for the practical reason that most already struggle to get enough funding for their research. But it may be that Gold OA (where the author pays a one-off charge on publication to make their published article freely available in the public domain) is an interim arrangement. It is a choice: authors are under no compulsion to choose it. Green OA, where the author uploads the pre-publication version of their paper to a public domain repository, is the other choice—to date, no doubt, the more popular, in this period of transition.

The open access movement aims to recover control—to assert our rights and ownership as creators—over the material products of our academic labour, and in that sense is politically radical. At

present both open access and traditional publishing models coexist. Whatever the future brings, it is surely worth experimenting with the possibilities.

7.1. Legal rights of ownership

The opportunities that open access brings are, to a large extent, defined by legal rights of ownership and control of IP as well as questions of rights to, and control of, academic labour. If a new eco-system exists in open access, and in collaborative works, digital exchanges and authorship, then how does one protect intangible rights of authorship, and where lies the relevance of moral rights?

'Intellectual Property' is a collective term for a bundle of rights or interests that are legally enforceable. The law affords protection for creative or intellectual ideas in 'fixed' form, in something one has made or created. The outcome of these efforts is legally identifiable as intangible property.

IP laws assert that copyright subsists in literary works (written), dramatic and musical works, artistic works and recordings including video works, film, television and sound broadcast. Protection is afforded to digital databases, computer software, and plant varieties, as well as the production of inventions, industrial or scientific processes. It is a curious thing that the quality of the expression is not an issue in IP laws—a racing card or list of figures or set of instructions could attract copyright as could a literary work. Hence for academic publishing the peer review process is crucial. Without this quality control an academic could, theoretically, gain credit for publishing a list of academic duties, for example. As far as the IP legal regime is concerned that list deserves protection if it is original. The theory of labour turns to the originality of the labour: it is the original form of expression in the work, rather than the length of time taken in the pursuit, which must be found for the work to be deserving of protection.

7.2. Where did IP laws come from?

IP laws provide for inviolate rights to private property. The power and control of ideas in British law has a long and fascinating history dating back to Roman law, but it was the 1476 advent of Claxton's printing press that made ideas publically available at an ever-increasing scale, and printers soon saw a need to protect their rights to publication. Enter the Stationers' Company (trade guild) in whose hands lay the regulation of publishing and printing. But the labour of authors was not to be overlooked and eventually the Statute of Anne 1709 otherwise known as the Copyright Act, codified rights for authors. Enacted in 1710, it was the first statute to acknowledge that private interests in copyright deserve protection by state and juridical processes.

For over 120 years, the enforcement of IP has attracted intergovernmental interests formulated in various treaties. The 1883 Paris Convention for the Protection of Industrial Property, and 1886 Berne Convention for the Protection of Literary and Artistic Works, which established that copyright subsists when the creative or intellectual work is 'fixed' in some way, led to the establishment in Stockholm of the World Intellectual Property Organisation Convention (see: World Intellectual Property Organization Convention, n.d.). As a specialised agency of the United Nations, and today with 189 member states, WIPO has a significant administrative role in global IP protocols.

The IP regime (with little substantive difference between civil law and common law provisions) includes copyright laws protecting original forms of expression, design laws to protect original designs, patent laws protecting inventions, trade mark laws protecting symbols, words, even colours that signify a particular commercial product or business, circuit layout and plant variety laws, as well as protection for confidential information, trade practices and business reputation. In New Zealand one of the earliest examples of IP legislation was the 13th Ordinance of New Zealand in 1842 giving copyright protection to the Reverend Robert Maunsell's book, *A Grammar of the New Zealand Language*, considered later to be the most substantial book written on the Māori language in the mid-nineteenth century (Auckland Libraries, n.d.). In 1861, pursuant to the Patent Act 1860, the first patent in New Zealand was granted for the preparation of flax fibres (Phormium tenax, harakeke) for use in manufacturing goods (Derby, 2016). Relevantly, economic benefits from IP protection in the use of harakeke would not have gone

to the indigenous people as the patent covered the use of harakeke, not the traditional knowledge it held—and in those days colonial enterprise would not have accorded a cultural or economic value to traditional knowledge.

Today, UNESCO defines 'traditional knowledge' as 'the cumulative and dynamic body of knowledge, know-how and representations possessed by peoples with long histories of interaction with their natural milieu … generally held collectively' (UNESCO Bureau of Public Information, 2006, n.p.), but benchmarks were not set until the Convention on Biological Diversity (United Nations, 1992) requiring in Article 8(j) that state parties 'protect, preserve and maintain knowledge innovations and practices of indigenous and local communities …' (p. 6). In New Zealand today pursuant to the requirement for 'approval and involvement of the holders of such knowledge' (p. 6), a Māori advisory committee advises the Commissioner of Patents, Trade Marks and Designs of any Māori interests. This is a world first to provide guidelines and regulations around the use of traditional motifs and terms, such as moko or koru.

7.3. Academic labour in writing and publishing: a tradeable asset?

The ideas upon which we labour are tradeable assets when published—attracting IP protection of our Lockean exertion upon the 'natural' resources of the mind. The usual rules of IP are that the creator/author/originator/inventor owns the rights, which are 'proprietary' in nature: they may be assigned, licenced, sold, commercialised, or left to beneficiaries under a will. But the ideas need a 'container' to attract protection: as Idris (2003) in conjunction with WIPO states, IP conveys intangible ideas and imaginative thought, which 'become valuable in tangible form as products' (p. 8). So academics need publishers just as artists need exhibitions, and innovators need commercial outlets. For academics, the ideas expressed ('fixed') in material form of writing (literary, artistic, scientific works) are protected under this regime. Hence the value of academic labour lies in the writing, publishing and distribution of those original thoughts, ideas, expressions; and the 'chattel', the object, the journal or book held in the hand or read on the screen, is needed for this purpose. Whether we like it or not, as producers of original ideas we are in a symbiotic relationship with producers of material products that hold and distribute our ideas. That is our economy of scholarly publishing.

Do we also have a similar symbiotic relationship with the corporate university who is paying for our academic labour? Protecting economic benefits, every university now has an IP policy to ensure the central concentration of ownership of inventions, patents, and other commercialisable outputs of academic labour. Who is advantaged/disadvantaged here? If we have a mutuality of relationship premised on the value of labour then contract law must come into legal play as well as IP laws to ensure shared economic benefit—and academics need to keep an eye on the rules of the game.

7.4. Moral rights and collective authorship

But what of the demand upon academics who collaborate? In collective authorship there is a displacement of the unity of the speaking subject, and fragmentation of the unity of individual labour. An economic demand may persist, and also a moral one: the multiple labouring subject calls to be heard in terms of an ethics of care of the other.

Implicit in the new knowledge ecologies are moral rights of authorship. If one's work is not acknowledged it is somehow debased, so the integrity of both authorship and the work itself is at stake. The underlying principle is that the work in the form the author intended is deserving of protection from alteration, mutilation or distortion. Even after assigning a work to a third party, the moral rights of the author subsist. In terms of academic publishing, this means that if a publisher subsequently alters the work without permission, the academic's moral rights would have been transgressed.

What if one's collaborator alters the work? If Author X writes the skeleton of an article and Author Y changes it or overwrites it, and Author Z turns it figuratively upside down, and Author X ridicules Y's and Z's writing, then who is transgressing whose moral rights? Scenarios are many, but the situation does point to the basic tenet that along with rights come obligations. A shared commitment to collaborative

labour makes a demand on each academic writer to activate the lexicon of trust and care, one to the other. A greater degree of certainty exists for any individual in some instances, to be sure. In the digital environment in Aotearoa, the copyright holder's right to broadcast as a right to communicate is theoretically assured, pursuant to the Copyright Act 1994 (NZ), and thus the law apparently scribes the parameters of the holder's relationship with others in a general sense. Ultimately, though, there is a certain level of undecidability to the labour of collective authorship. It evokes the Derridean trace in the text, and Cixous' voice of other, along with Noddings' ethics of care, yet remains open to address by juridical agents and courts.

8. The geographical distribution of journal knowledge

8.1. A healthy Ecosystem?

In the space of academic publishing, there are many instances of cooperation and competition; and while more and more academic labour is a result of collaboration and coalition, it is often performed under the veil of academic pressures. Academic publishing has become a currency, which no longer only serves the need for disseminating knowledge, but also serves the academic institution as a source of income. In return, many academics' positions are directly linked with publishing and wider international dissemination. These agendas point to a unique publishing ecosystem. What sustains a healthy ecosystem involves many interacting parts, the editors of the *Journal of Scholarly Publishing* claim (Holzman & Brown, 2016). Some of these are obvious, and some are not. What might this healthy ecosystem look like in academic publishing, and what does it mean in the geographical distribution of academic journals?

The ecosystem of academic publishing is fairly unbalanced. Most of the international journals with a wide reach are located in Western countries, with less distribution to the countries in the Global South or elsewhere. Further to be factored into the academic publishing scene, is Google Scholar, Research Gate, academia.edu and other sources, such as Facebook or Twitter, that have changed the way we perceive academic publishing, and the way that knowledge is distributed. The ecosystem is very fragile, and struggles to achieve a balance between publishing houses and the small outlets of individual academics seeking to disseminate their work widely. What we are currently dealing with, alongside the shift to digital and online publishing, and the changing dissemination of knowledge, is a whole new way of scholarly, academic and journal communication, as the ecosystem as a whole teeters carefully to balance the continued evolution of the systems that drive its journals' dissemination. As has been pointed to before, however, access to the Internet and downloads are a privilege in themselves, which in some countries remain heavily regulated, gentrified and even censored.

Furthermore, academics have seen the rise of massively large publishers, changes in funding sources and supplies that underwrite the costs of communication. This has in turn altered the perceptions of scholarship and the production of knowledge. New forms of knowledge have become available to a smaller and smaller readership, as access, governed through subscriptions, ultimately changes the career paths and goals of all human subjects involved in the process. Scholars, publishers, administrators, librarians, universities and other research institutions, learned societies, students, distributors, typesetters, printers, and governments local and national, struggle to seize the opportunities afforded by new technologies while avoiding the pitfalls they pose. We have entered the era of a knowledge economy, where publishing has become associated with monetary exchange, but often bypasses the producer of the academic labour.

Open access (OA), as noted earlier, has caused ripples through the publishing system, affecting the distribution of academic knowledge. The OA movement has widened the gap, in some sense, increasing visibility for some scholarship while creating difficulties in covering the costs of disseminating other scholarship. The geographical distribution of journal knowledge has become directly linked to a privileged world and sidelined those who struggle.

8.2. Knowledge—flourishing, in stasis or in jeopardy?

What journal knowledge is distributed depends on what is known about knowledge. Understanding the epistemological phenomena, the physicality and the implications of geographically distributing knowledge across space and place, has long been contested, debated, perpetuated and silenced: it has been shaping and forming epistemologies about knowledge since before Plato. The term, the act, the performance, arise in some suggestions through definitions, where having knowledge is seen as a certain 'truth', resting on a particular certainty, evidence, practical proof or wide agreement across members of society, or at least across a particular relevant group. This raises the question, for example, of whether scholarly communications published by journals are flourishing, in stasis or in jeopardy (Holzman & Brown, 2016). We argue that all of these attempts at defining knowledge are problematic in themselves, as each is contestable and therefore provides little in the way of certainty, stability—or stasis. Therefore, if knowledge is seen as problematic, so is its distribution.

At the same time, as argued above, journal knowledge is also flourishing, with its many forms of contemporary distribution. But who is benefiting from this new order of academic publishing? Who is academic publishing for, and who is distributing this knowledge? Dare we question whether there is any new knowledge? Is knowledge fixed, then, fluid or simply an outright representation of the tensions between human subjects? Perhaps, following Hegel (1952/1977), knowledge is fixed, absolute and knowable. But perhaps journals then merely ruminate in what is already known, stirring it up in diverse configurations, offering different perspectives, but elevating none in the form of new knowledge? On the other hand, maybe what is necessary is the chaos Wittgenstein (1984) urged, or Kristeva's idea of a revolt, where thought itself is the truest form of dissidence (1986)? And perhaps it is this disturbance and uncertainty that ultimately governs and drives the distribution of journal knowledge?

But somehow we suspect that journal knowledge may be in jeopardy. In Bauman's (2009) conception of society as a liquid modernity, where information supersedes itself without time to evolve, where competition, rapidly made decisions, short-term solutions and superficiality could lead to detriment and failure—the jeopardy of depth, long-term commitments, perseverance in knowledge distribution and relationships. Peters, Besley, and Araya (2013) point to the importance of knowledge and openness, in the new development paradigm and knowledge economy. The increasingly prolific dissemination of knowledge through increasingly prolific journals, publication ratings and the push for liquidly modern rapid decisions on peer review may indeed place knowledge in jeopardy. Editors distributing the knowledge of their authors cling on to their rigorous processes, in the face of author pressure, filtered down from the establishments charged in the first place with their roles as critic and conscience, of the very society that is creating this pressure. In this space, the increasing globalisation of scholarly research, cross-continent collaborations and their dissemination rely on a certain openness, in the geographic dispersal and distribution of knowledge.

The EPAT journal provides an insight into the idea of global distribution of journal knowledge. Despite the journal being based in Australasia, many submissions originate from outside of this geographical realm. While the journal receives article submissions mainly from the countries from the Global North, and its readership and subscribers are mostly from Western countries, over the past years submissions have increasingly come also from countries outside of the realm of the West. Moreover, the inclusion of special issues that feature editors from Taiwan and non-English text, have created further global outreach.

Relatedly, as universities from China, Hong Kong, and Singapore grow in global prestige as reflected in global rankings, debates over the importance of language and culture to epistemology and to knowledge production and consumption have become unavoidable in the Asia Pacific region, and in Western institutions seeking to benefit from East–West collaboration. Chinese-context institutions in China and Singapore suffer from an international reputation of lacking academic freedom in relation to the larger societies' human rights challenges. On the other hand, government provisioning for higher education and research across disciplinary areas in these societies (as well as in Hong Kong) has clearly resulted in tremendous research productivity, increasing Western scholars' interest in collaborative research with

colleagues in these institutions. Yet as globally prestigious knowledge dissemination practices take place predominantly in English, Chinese scholars continue to be stymied from participating in an equitable way in important journal publication processes. Scientific genres of academic writing across disciplinary areas have taken hold in these contexts, as they enable authors to skirt issues related to the level of English fluency required for publication in competitive, rigorous, high-impact journals. Such practices at the same time tend to bind scholars based in the Asian Pacific region to positivistic research attitudes, approaches, and assumptions; through practices of traditional peer review, this genre norm excludes academics in Asia who use qualitative, phenomenological, critical theoretical, and related approaches.

Sticky debates across East and West arise in these contexts, regarding whose perspectives and voices can be or should be authoritative locally. And as Chinese institutions rise in prestige, new peripheries of academic publication emerge, as Chinese-language journals are compared negatively to English-language journals within Chinese societies, and as culturally Chinese academics work for respect and recognition in an English-language academic world; while at the same time Western academics strive to interact with Chinese scholars and institutions in an equitable way within an inequitable linguistic and cultural order.

Academic publishing is thus rapidly changing. The increasing significance to scholars of creating an online presence, and pressure on authors to publish and disseminate their work, is changing the contemporary publishing landscape and the way we understand knowledge. Furthermore, what journals such as EPAT demonstrate is that journals have agency as a productive force in connecting what are simultaneously geographical and cultural divides, by creating spaces within which publishing can connect wide readership and foster global knowledge. There is much work to be done to bridge the gaps to the Global South, both in the production of journals in the West, as well as in their readership. At the same time, the rise of Asian and particularly Chinese cultural contexts of academic research raise new questions about epistemology, language and equity against a larger backdrop of academic competition for funding and prestige. The knowledge ecosystem, like the scholarship it disperses, is delicately balanced, flourishing, in stasis and in jeopardy.

9. Peer review: history and future

There are many standard introductions to peer review and its importance generally offered by publishers such as Elsevier that make similar statements about its purpose:

> Reviewers play a central role in scholarly publishing. Peer review helps validate research, establish a method by which it can be evaluated, and increase networking possibilities within research communities. Despite criticisms, peer review is still the only widely accepted method for research validation. (http://www.elsevier.com/reviewers/what-is-peer-review)

Big publishers see peer review as a process that both validates research and is deemed essential to vouchsafe the quality of the journals they publish.[2]

Kathleen Fitzpatrick (2009) in a Media Common Press early release of a chapter from her *Planned Obsolescence: Publishing, Technology, and the Future of the Academy* (2011) acknowledges that while peer review has its origins in state censorship 'it was intended to augment the authority of a journal's editor rather than assure the quality of a journal's products.' Formalised peer review, she claims, did not become a part of scientific method or scholarly publishing until the middle of the twentieth century.[3] As Fitzpatrick acknowledges, formalised scholarly peer review can be traced to the establishment of 'The Committee on Papers' of the Royal Society's journal Philosophical Transactions in 1752 but the Edinburgh Royal Society seems to have had a peer review process as early as 1731.

It could be argued that the concept of peer review is considerably older than previously thought and that it has its origins in the idea and process of trial by a jury of one's peers. If this connection is historically sound then the notion dates back to fifth Century BCE Ancient Greece where members of the Boule or Council were selected by lot from the body of citizens. The jury and the Boule was thus at the core of Athenian democracy. In the modern context, the practice apparently evolved from the Germanic tribes and Vikings where the custom was for good men to judge alleged crimes and criminals. In particular,

the Vikings used the notion that free men in the court could play a central role. The mediaeval custom was then developed during the reign of Henry II in the twelfth century as a basis for local government that depended on jurors' first-hand knowledge, the forerunner of today's 'expert knowledge,' and original investigation beyond the realm of hearsay and rumour. Magna Carta contains the provision and guarantee that no free man may suffer punishment without 'the lawful judgement of his peers.' Much later, the system was reformed with the passing of the Bill for Better Regulation of Juries in 1730.

Practices of mutual performance evaluation by colleagues have also been in place for centuries in a number of professions—most notably medicine, dating back at least to the *Ethics of the Physician* written by Ishāq ibn 'Alī al-Ruhāwī (854–931), which recommended that doctors write duplicate case notes and show them to a panel of other doctors at the end of treatment.

In scholarly publishing, the specific practices used to implement peer review—though they might seem hegemonic to the contemporary scholar slaving in his or her disciplinary silo—have, as noted, been in constant evolution since the early modern period. Although the model of submitting a 'paper' to a 'journal' which is assessed by two or three blind reviewers is now extremely widespread, there is a lack of consensus on such matters of detail as what exactly is meant by 'blind', whether reviewers should be required to justify their decisions to authors, and how long the whole process should take. Moreover a series of institutional pressures are increasingly fraying the edges of this system—first 'publish or perish' imperatives in response to oversupply in the academic job market vastly increased reviewers' workloads while simultaneously decreasing time left over from their own research, then advances in computing power, such as word processing and the Internet, enabled easier reproduction of unoriginal work. Scientific research has also recently been rocked by instances of fraud and misconduct which have occurred despite the supposed validation of peer review—so much so that the issue now has its own blog—Retraction Watch (http://retractionwatch.com). In some cases, this has happened because the fraudster has contrived to review their own paper, but in most cases, two or three independent reviewers of the piece in question have not noticed any problems. Some commentators have now begun discussing whether peer review is 'broken' (e.g. Csiszar, 2016; Gould, 2012; Rip, 1985).

An early initiative to bypass peer review was the arXiv database of preprints, begun in 1991 by physicist Paul Ginsparg at Los Alamos National Laboratory, out of frustration at time into print. Its use quickly spread to other sciences, such as mathematics, computer science and astronomy. Authors now self-archive and freely share papers, numbering around 8000 per month (as at 2014). A more recent initiative is so-called 'post-publication peer review'. PubPeer is a notable example. Set up in 2012 by a coalition of early career researchers, it has already been used enthusiastically by the scientific community as a forum for reporting errors and alleged fraud which slip past the (now) limited resources of pre-publication refereeing. This has led to a number of high-profile publication retractions and also 'legal heat' as at least one researcher who had problematic data pointed out anonymously on PubPeer and subsequently lost a job offer has subpoenaed to obtain the commenters' names so he can sue. PubPeer has refused to comply, and the parties are currently attempting to resolve the 'poorly defined interface between the law of defamation and the scientific process' (nature.com).

Finally, Wikipedia is a fascinating case study in the governance of the new knowledge economy. As 'the free encyclopaedia that anyone can edit', is this another instance where peer review has seemingly been made redundant? In the project's early days, many commentators claimed that it would obviously quickly fail through lack of quality control, and attempts were made to recruit academic specialists to 'oversee' supposedly improved versions (Nupedia being one example). But those initiatives dwindled while Wikipedia went from strength to strength. In fact Wikipedia has its own unique form of peer review, arguably of a much more constant and rigorous kind, with an ever-evolving set of internal rules or protocols for how its pages are collaboratively edited (so-called Wikiquette), and the ability to restore vandalised pages at lightning speed.

It seems clear that procedures and practices of scholarly peer review will continue to evolve into the future, along with the knowledge work that they scrutinise. That is not to say though that there is no continuity underlying these changes. What all such practices arguably have in common is an attempt

to capture a special kind of communicational act which Joseph Ransdell (following Charles Peirce) has usefully summarised in four basic principles:

> Scientific publication proper…is (1) communication that occurs within a special public (2) which consists of all persons—living dead and as yet unborn—with a common interest in a certain subject matter … and (3) the common interest being to come to a better understanding of that subject matter … and (4) who understand that what binds them together in a communicational community is not their personal affinities and likenesses but their common concern that that subject matter should be increasingly well understood by all who are similarly concerned. (Ransdell, 1998)

10. Peer-reviewed open access journals: the case of apcs

Since 2003, the open access (OA) market has been progressively conquered by professionally published journals, which subsidise themselves by charging contributors article processing charges (APCs). Since 2009, the OA journal setting has been altered significantly with the expanded potentiality of APC-funded commercial publishers. Lately the main commercial and society publishers have gradually started new OA outlets (Peters, 2013) and have reorganised several subscription journals into APC-financed models. Journals that embraced the autonomous scholar-published OA journal model anticipative are hardly ever contingent on APC-funding, which may be a hindrance for some potential contributors without resources or mechanisms to pay for their articles (Beaubien, Garrison, & Way, 2016). Despite the fact that OA literature is accessible without restriction to readers, there are nevertheless expenses related to producing or publishing OA material. In the established subscription model, the readers of the journal bear most of the expense of producing it. The producer-pays model may bring about the expenditure being transferred to the authors of the article. The latter may confront detrimental outcomes (Peters, Liu, & Ondercin, 2011). as academic publishing shifts from a user-pays to a producer-pays model (peer reviewed OA outlets may have the same attention to detail and quality as their subscription-based equivalents). Even though some contributors use grant funds to cover the fees, there is still a substantial percentage of authors who either cannot get grant funding or the resources to pay for them on their own. The paucity of available funds generates an obstruction to both the author's career, which is conditional on publication and circulation, in addition to the shift of academic publishing to an OA model (Beaubien, Garrison, & Way, 2016).

The increase of online OA has deep consequences for academic publishing, especially the move from subscribers to contributors as the main transactional partners for peer-reviewed journals. OA provides numerous advantages but leads up to predatory publishers, who misuse the author-as-customer pattern to gain returns from author fees while supplying insufficient editorial services related to academic publishing. Predatory journals put in print articles with negligible or no peer review, and frequently conceal their real geographical headquarters while overstressing their scope and editorial competence. Such outlets endeavour to attract contributors by guaranteeing unreasonably idealistic swift editorial decisions while unscrupulously claiming peer review, and trumping up impact factors and inclusion in academic indexing and abstracting services. The uncontrollable rise in predatory OA journals is a threat to naïve contributors and may destabilise the OA model and the authentic dissemination of scientific research (Ward, 2016).

11. What do altmetrics measure? Maybe the broader impact of research on society

Article altmetrics scores do not constitute an in-advance hint of the citation of an article or a convenient counterpart of the journal impact factor (when averaged). The mean journal altmetrics scores can alter swiftly by reasonable amounts, as a distinct hot article may immediately captivate attention (Lazaroiu, 2014a), effortlessly acquiring a score of a few hundred in a week, although in the explosion of lower-scoring articles it is only an evanescent glitch in the mean altmetrics. In the few days in which nearly all of the altmetrics score expands, a hot piece may gain considerable attention from the mainstream media and bloggers. Journalists associated with news outlets may not cite that publication in an article

included in the ISI Web of Science, and the majority of bloggers are not specialised enough in that domain to produce a formal citation of this type. Nearly all tweets to a certain piece may occur from little of the article being inspected, and there is insufficient link between Twitter activity and proportion accomplishment of inspection of a particular piece (Moore, 2016). Scholarly metrics attempt to assess the performances of individuals, articles, and journals. Evaluating attention, altmetrics cannot answer the purpose of the recognition role of scholarship, the latter determining the effectiveness of a research finding, and the accuracy of an article's data and methodology. Open access outlets may operate more effectively at attention metrics as they are available to any individual online. If altmetrics turn out to be a fashionable standard of academic attainment, as a result many authors will write anything required to generate attention to their pieces (Lazaroiu, 2014b), boosting their altmetrics values and surpassing others. The measure may be excessively straightforward to have any legitimate validity or meaning. Clusters of researchers may play against article-level metrics, exaggeratedly improving the social media performance of a separate academic article (Beall, 2015).

Altmetrics can be a reaction to the rising pressure to indicate other kinds of impact and may supply hints of concern from a broader public or some particular publics. The diverse altmetrics can be a sign of distinct degrees of impact. Altmetrics can draw attention to fashionable and provocative research, and draw it out of the exclusive scientific ecosystem to the accessible, online setting and to the interest of the broad audience (Lazaroiu, 2014c), increasing cognisance and reach of research products. Diverse online publics get involved with research outputs in distinct manners bringing about altmetrics as a consequence of their online undertakings. Altmetrics are in some measure produced by scholars as part of their academic communication and somewhat by the audience who consider the research outputs thought-provoking enough to get involved with them and distribute information about them. Some of the interest various research outputs receive online and in social media may not be related to scientific impact of that research (Holmberg, 2016).

12. Discussion

The recent, rapid, changes in the 'ecology' of academic publishing is our opening gambit. We seek to demonstrate that, from small beginnings in the seventeenth century, and the early efforts of Henry Oldenburg, the world of academic publishing has changed dramatically. Arguably, the most dramatic changes have been those associated with the digitisation of content, and the on-line availability of resources; though, even in the context of a 'free' Internet, publishing houses have limited this access to those able to pay. Scholarly communication, thus, may now be regarded as being in the centre of dynamic epistemological and economic changes. That being said, we argue that the digitisation of scholarly content is not a process of replacement, but perhaps one of refinement and growing technical sophistication.

This sophistication occurs in the face of, or perhaps because of, the disruptions wrought by technology. These disruptions may be linked to commercial advance, though, we argue, not necessarily everyone benefits. Indeed, 'end users' of technological replacements of traditional materials, such as books, may be the poorer for the experience, as Mangen, (2016) suggests, thus their experience is disrupted.

Scholars have a role to play too, in relation to disruption; however, this role may be curtailed if they fail to recognise how this technological disruption is so arranged by publishers and universities as to entrench exploitation of their academic labour. A productive scholarly role then is to seek to critique notions of disruption. Typically, the vehicle scholars will have used to convey such critique is the written word. While this has taken many forms over the ages, a significant paradigm shift is evident in the turn to digitised text. This text, we have shown, increasingly takes forms beyond mere words on a page. So profound are these changes, that changes are brought about in the behaviour of both 'producers' and 'consumers' of these texts. It may be suggested that these changes are limiting the scope of critique, which requires more attention than a new generation of 'readers' of text is willing—or able—to offer.

The language of Open Access (OA), with terms such as 'green and 'gold', is only latterly influencing the active vocabulary of scholars. Indeed, some are stoically positioned to resist taking on this emergent

lexicon. OA raises issues around scholarly effort, academic quality and who profits by academic labour. Yet, we suggest, OA creates several opportunities for innovation. One of these is to encourage collective projects, thus to minimise the cost to individuals of Gold OA. Yet, this may fly in the face of the individualistic performativity underpinning many national research performance assessment audit tools.

The notion of OA may trace its roots to Enlightenment notions of liberal freedom of thought and belief, which prized critical reflection on freely, or cheaply, available printed texts. In this regard, the Internet has introduced the notion that 'everyone is an author', and has, through social media, supported democratic movements, such as the 'Arab Spring'. Yet (and in part, for these reasons) states under threat have sought to control the Internet (or at least popular access to it).

In another sense, OA, despite its appropriation by the publishing houses to further enrich themselves at the expense of scholarly labour, does represent a valiant effort to regain the IP rights of scholars to their own work. These rights have a long history in Western law-making. Yet, much as some may dislike this fact, we have argued that IP is meaningless without a publication avenue—hence, scholars need journals and publishers as much as publishers need scholars to produce the (quality) copy that will command a readership. A potential challenge to IP exists, however, in the very possibility suggested earlier to circumvent to considerable cost of Gold OA—namely, collaborative work. How does one gauge, estimate, or apportion IP to a collective?

Working collectively, previously pointed out, is also at odds with working in an ecology that prioritises individualised, performative research, encouraged by audit exercises such as New Zealand's Performance Based Research Fund (see PBRF). Furthermore, scholars are neither operating in, nor are they addressing, an equitable publishing ecology. They are, however, operating in a fluid, and potentially, exciting new landscape, one in which the traditional Western audience is changing, and in which 'non-traditional' scholars are coming to play a role as both readers and contributors. This evolving and emergent ecology is one in which collectives of scholars, authors and editors have potentially significant roles to play in establishing an equitable landscape.

One dimension of that landscape is the concept of peer review, a process that may seem arcane to a layperson, yet which plays a significant role in the life of scholars. At some level, it may be argued that without blind peer review, the enterprise of academic publishing may be in danger. It is this, long-established process that ensures creditable knowledge is transferred and communicated through scholarly publishing. That said, as we have argued throughout, the world of academic, scholarly publishing is in the grip of change, particularly prompted by digital initiatives. Some of these, it may be suggested, could provide an alternative way to think about peer review, which seems to be a process not fit-for-purpose in an era of fast communication.

Nevertheless, the conventional system of double-blind peer review continues to act as some protection against the unsavoury, opportunistic journals whose Author Processing Charges (APC) are balanced by their offer of fast turnaround review times. In a 'publish or perish' climate, inexperienced researchers and scholars are tempted by these promises, yet they may find their work falling into disreputable journals, with minimal review processes in place. We argue this predatory behaviour challenges the positive potential of an OA environment, and will simply add fuel to those scholars who eschew OA as 'vanity publishing'.

Publishing in this, the second decade of the twenty-first century, is indeed a 'brave new world' for many academics, who cut their teeth by hand mailing hard copy articles to editors on far-flung shores. Now, the activity of scholars on Twitter and Facebook can have a strong, immediate influence on how their articles are perceived in the digital realm. This influence is measured by altmetrics, a measure not of traditional citation-related impact, but of the way and extent to which scholars' work is encouraging others to 'talk' about their research. We argue that, in this 'brave new world', scholars do need to emerge from their elitist ecosystems of the past, and engage fully and openly, with the larger world.

12.1. Open review process

12.1.1. A review of 'towards a philosophy of academic publishing'

Thank you for the opportunity to review this manuscript. The article provides a comprehensive, wide-ranging discussion of academic publishing. The authors bring philosophical, historical, and political perspectives to bear on questions relating to the production and circulation of knowledge. They pay attention to the roles played by large commercial publishing houses in this process, pointing to both strengths and limitations of currently dominant approaches to the publication of academic work.

The article is innovative and important, in both its content and the process through which it has been produced. The formation of an editorial/authorial collective as the basis for generating the ideas in the article and building its content rubs against the tendency to view academic work in primarily individualistic and competitive terms. This is, it might be said, a quiet act of subversion, with the principles of collegiality and cooperation driving the writing process, rather than individual academic advancement.

The eclectic mix of themes addressed in the article adds to its richness and distinctiveness, and reflects the varied backgrounds and interests of the contributing authors. The approach taken here does, however, carry some risks, one of which is the danger of losing a certain coherence in the interplay of ideas across the multiple sections. In my view, the article could benefit from a stronger, clearer line of argument that links the different sections together.

More extensive engagement with policy, at a national and international level, might also improve the article. This dimension of the discussion is evident in a number of sections but more could be said to show how regimes of knowledge production and publication are mediated, constrained and enabled by policy developments.

A closely related point might also be made about the politics of research in contemporary universities and other institutions. In particular, the emergence of systems of performance-based research funding, with the UK leading the way and other countries following suit, warrants further consideration. New Zealand's Performance-Based Research Fund (PBRF) has arguably had a substantial impact on how, why and for whom research is undertaken. A number of the sections in the article make brief reference to pressures on academics to publish, and developments such as the PBRF help to explain what those pressures are and how they are experienced by researchers, individually and collectively. The PBRF has reconfigured the way researchers think about themselves and their work, contributed to the ongoing commodification of knowledge, and altered the language used to discuss research related activities. Research is now largely conceived in terms of 'outputs' and 'performance' (rather than, say, the cultivation of strong research cultures). What counts is that which can be measured. Parts of the article hint at the effects of such regimes on academic publishing, but more explicit and detailed analysis of one or two specific examples would be helpful.

As a final note, I should say that I would prefer not to be named as an author of the article. These comments are provided in the spirit of collegiality, with no expectations beyond those usually associated with the process of peer review. I hope the feedback might be helpful in developing the final version of the article.

Peter Roberts
University of Canterbury
16 September 2016

12.1.2. A review of 'towards a philosophy of academic publishing'

The idea of a number of authors collaborating to produce an extended article on the philosophy of publishing is innovative as it is risky. There is no question that it is an unusual way of producing a scholarly piece of work. In reading the piece, it struck me that in some ways it was remarkably uniform, with each section seamlessly moving into the next. There is a unity of theme, which as stated at the outset, reflects a journal publishing ecosystem. While the aptness of the metaphor remains to be explored, the idea of an 'Editors and Reviewers Collective', mirroring in the humanities a scientific team working together on a project is successfully realised in this article.

On a closer inspection, however, very diverse voices can be discerned, as well as ways of considering the issues associated with academic publishing. Despite this, it is not a bricolage, where by this we mean it is not simply a collection of oddments taken from a variety of sources and put together haphazardly. The existence of different voices articulating ideas about the problematic of academic publication does not in this case lead to a potpourri of disjointed statements. Of course, in the Derridean sense of bricolage, the ideas contained in the article are derived from the culture and tradition of academic publishing in which the authors are immersed, but the different voices bring other perspectives to bear on these to create new connections and provide a means to discern a path ahead for academic publishing.

This does not necessarily involve the abandonment of old concepts and the creation of entirely new ones. The article is not revolutionary in that sense, but it aims to disrupt existing patterns of thought and structures. What it provides, through turning its attention to the variegated facets of academic thinking, writing and publishing, is a quite powerful statement of not only its present status but also provides sufficient analysis to offer an outline for a possible future. Enough is suggested in the various sections of the article that what is meant by publication, by peer review, by open access, by impact factors, and so on, is not fixed, but contestable. What is challenged is the existing paradigm for academic publication in the humanities. In a somewhat understated way, what is proposed is a renegotiation of the whole academic enterprise and the meaning that is attached to academic publication, as well as its purpose.

For academic institutions, academic publication in high quality journals is a vehicle for improving the ranking and standing of the institution; for an academic, it is the means by which research grants are obtained and promotion secured. Unfortunately, as the article shows us, the measures for determining quality are themselves unstable and, it can be added, the idea of knowledge production itself is chimerical, perhaps a point that could have been made more strongly. The article looks back as well as forward, surveying both the history and genesis of the academic journal and mapping out what the next developments are likely to be. History, as Croce observed, is only history when it is something of importance to us, but he also remarks that it is written from a certain point of view. He adds that it is neither mechanistic nor deterministic. We cannot, therefore be entirely sure, on the basis of past history, what the future will bring, but we can try to shape it nevertheless. What is written in the article displays a passionate concern for the future direction of academic publication and it is not afraid to propose some ways in which it can be reconceptualised and its control returned to the academic authors and reviewers who produce the articles and books.

Jānis (John) T. Ozoliņš
September 2016

Notes

1. See the Editors' Collective at http://www.editorscollective.org.nz/.
2. See Elsevier's https://www.publishingcampus.elsevier.com/pages/69/Colleges/College-of-Skills-Training/Peer-review.html. See also Taylor & Francis' site http://journalauthors.tandf.co.uk/review/peer.asp as another example.
3. http://mcpress.media-commons.org/plannedobsolescence/one/the-history-of-peer-review/.

Disclosure statement

No potential conflict of interest was reported by the authors.

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