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Following the Impact Factor: Utilitarianism or Academic Compliance?

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The fact that there are unintended consequences of the impact factor (IF) on individual and institutional behaviour in institutions has been well recognised over the years. The extent that careers and publications can be shaped by the compliance to journal metrics and rankings is outlined in the associated paper by Perdue, and is also reflected in our observations drawn from our own personal experience of attending interviews, promotion panels and from our participation in assessments of academic publishing. That this has become a subject to debate is welcome in the wider field. However, decisions with respect to the use and abuse of metrics do not occur in a vacuum. The use of the IF, along with other metrics, needs to be understood within the institutional context within which individual academics find themselves as well as identifying how they have been acculturated into the contemporary academic system (Coles, 2009; Coles, Hall & Duval, 2006; Hall, 2005, 2010, 2011; Hall & Page, 2009; Page, 2005; Visser, 2009). Issues which remain poorly discussed in the context of academic publishing in tourism. As Gibson and Klocker (2004) suggest, such research is now complicit within its own subject. Nevertheless, it is an industrial actor-network that requires greater analysis, debate and transparency.

The IF is only one of a number of metrics that are used within bibliometrics to assess certain characteristics of citation of articles (Bollen, Van de Sompel, Hagberg & Chute, 2009; Franceschet, 2009, 2010; Pendlebury, 2009; Amara & Landry, 2012). Over time the use of IF and much of citation analysis in general has shifted from being a tool to assess the sociology of scholarship and knowledge (broadly defined) and track ideas (Garfield, 1979), to a short-hand de facto means of accounting for the quality of publications and, by default, their authors (Hall, 2011). This was not one of the originally intended purposes of the tool and, even though there are warnings as to its inappropriate use (e.g. Pendlebury, 2009) and its deficiencies (e.g. Vanclay, 2012), this remains a major selling point and utilisation of the metric, especially at a time when universities and governments are seeking to rationalise budget processes and focus on 'excellence'; publishers are seeking to maintain or increase journal subscriptions and financial returns; and academics outside of STEM (Science, Technology, Engineering and Mathematics) subjects are increasingly having to defend their jobs and the relevance of their research.

The growth in the significance attached to the IF cannot be isolated from the rapid expansion and commercialisation of academic publishing (see Willinsky & Wolfson, 2001; Oppenheim, 2004; Steele, 2006) and the consequent development of research assessment exercises at the governmental and institutional level in different countries as policy-makers seek to target funding towards 'quality' research outcomes (Hall, 2011). Such processes are mutually re-enforcing and reflect the way in which policy makers and university administrators confuse accounting and accountability. The

present audit culture and systems of academic surveillance and control of government and, in some cases, institutional associations such as the UK Association of Business Schools (ABS) and the Australian Business Deans Council (ABDC), combines the neoliberal economic imperatives of competition and academic entrepreneurship with the technologies of public management and publishing. The development of journal quality lists by institutional associations such as the ABS or the ABDC also serve to reinforce the disciplinary power of such organisations at the expense of more traditional academic associations as well as interdisciplinary research that is then excluded from the range of rated or acceptable journals for particular “business” fields. Within the increasingly dominant higher education competitiveness discourse of academic capitalism and the entrepreneurial university (Hall, 2010), the credibility of academic publishing and performance and perhaps the discourse itself is embedded in “a particular industrial actor-network of academic knowledge production, circulation and reception” (Gibson & Klocker, 2004: 425). An implication of this, according to Hall (2011: 26), is that “The more a narrow range of bibliometric tools are used as an ‘efficient’ measure of research quality tool the greater will be the influence of that particular actor network and its discourse”. Such is the case with IF. If journals, publishers, institutions and policy makers promote the IF at the expense of other potential metrics or approaches it must assume significance, if it is promoted as only one of the wide range of means of assessing scientific impact then its significance would be considerably less.

Therefore, as journal and publication metrics can have a significant impact on careers and reputations as part of research assessment and funding regimes that increasingly focus on where one publishes rather than what one publishes (Coles, 2009; Hall, 2011, 2013), the way in which the IF is shaped is of considerable significance. The IF is embedded within several, often overlapping, approaches to the evaluation of the ‘quality’ of research output (Hall, 2011):

- Stated preference and ranking studies that are usually survey based.
- Citation-based studies, e.g. Web of Science (WoS); Scopus; Google Scholar (GS).
- A derived approach that extrapolates journal rankings from the ratings awarded in research assessments.
- A hybrid approach that uses a statistical and/or other combination of existing ranking lists including those from derived rankings and expert panels, e.g. UK ABS and ABDC journal quality guides and ratings.
- ‘Expert panels’ usually appointed by governments and/or other institutions (i.e. academic societies, universities) to evaluate research performance, e.g. UK Research Excellence Framework, New Zealand Performance Based Research Framework.

Without such exercises, and the credence given them by governments, institutions and some academics, the IF would have a much reduced impact on the selection of publication outlets. This includes not only journals, but arguably also books and book chapters.

An interesting development is the process implicit in the REF 2014 Unit of Assessment 26 in the UK (covering Sport, Tourism, Leisure and Hospitality), was their decision to read all submissions and to not use citation data, IFs or journal ranking lists (HEFC, 2015). Indeed, just because you publish in a top or low tier journal does not always necessarily create a definite measure of quality, impact or intellectual rigour equivalent to the IF standing. This is because of the nuances of the refereeing process, differing

standards of referees and community standards within a subject area may mean that journals may publish papers that exceed or are of lower quality than others recognise. Ultimately quality is in the eye of the evaluator and persons rating the piece of work given the subjectivity of reviewing and this in itself is subject to intellectual bias, i.e. simple categorisations in qualitative and quantitative research, or attitudes towards “exploratory research” (Research Assessment Exercise, 2009), as well as the disciplinary background when working in interdisciplinary fields like Tourism. Therefore, any committees or organisations relying simply upon IFs as a measure of quality may be well advised to actually solicit views of appropriate experts to read the material they have had submitted for review rather than simple lists based on IFs as the work may be of a higher or lower standard than is implied in the IF. In addition, in the Tourism field, the higher rated IF Journals are both those of longevity and in most cases (though exceptions exist as the paper by Chris Ryan in this collection of papers imply) are the more generic wide ranging as opposed to very niche journals. For that reason they tend to have a wider reach in the field than much more specialist and targeted Journals. However, it should also be noted that long lived tourism journals that have either been published outside of Europe or in languages other than English have also been historically disadvantaged in the application of quality metrics (Hall, 2013).

Yet we should not lose sight that the primary role of journals, along with other modes of publication, is to provide a platform for the production, dissemination and exchange academic knowledge including new research findings. Their use to rank research and scholarly work in order to aid the distribution of education and research funds or inform decisions concerning appointment and promotion is a secondary, but significant, dimension of the industrial actor-network of academic knowledge (Hall, 2005; Lee, Law & Ladkin, 2014; Weiner, 2001). This includes not only how they are promoted to the members of the actor-network but also how the owners of the bibliographic databases who provide impact metrics have also developed businesses that provide international assessments and benchmarking reports to governments on the basis of such metrics. Publishing in periodicals and other publications that are included in the bibliographic databases have also become used as a metric in university rankings. The discourse of competitiveness that surrounds the announcement of IF, journal rankings and university rankings therefore further reinforces the centrality of the IF in the metricisation of higher education and the power of both the measure and its owner. However, not only is it only one of a number of possible measures of impact but it is also applied to a very specific population of the total universe of academic and scholarly communication.

Differences in the assessment of publications is a reflection of different methods, approaches and the size and nature of the defined population. For example, the ABS and ABDC assessments are derived from expert panels that determine the population of ‘business’ related tourism journals that are assessed. In addition to expert judgement their ratings are also referenced to pre-existing ratings and journal impact scores. In contrast bibliographic databases (WoS, Scopus) and GS have a much broader publication population from which they draw. Google does not publish the size of GS's database, Orduña-Malea, Ayllón, Martín-Martín and Delgado López-Cózar (2014) estimated that it contained approximately 160 million documents as of May 2014. In contrast in 2014 WoS has about 57 million records, Scopus 53 million records and Microsoft Academic search sits between the two and is broadly of a similar size (Orduña-Malea et al. 2014). However, there are substantial differences in distribution of document types between WoS, Scopus and GS. For example, the percentages of documents by type, collected in WoS for the period 1900 to 2014, indicates that “Journal document type” (composed by

articles, meeting abstracts, editorial material and letters) represents 75% of all documents, Proceedings 21%, and “Book and Book chapters” only 1% (Orduña-Malea et al. 2014) (although this was not the case in predecessor bibliometric assessments such as the social science citation index prior to automated citation counts). This situation demonstrates a clear bias against disciplines or even scholars that use scholarly communication other than the “Journal article” format. Moreover, humanities and social sciences serials are substantially underrepresented in WoS and Scopus anyway in comparison to medicine and other STEM subjects. Further, if other publishing formats are not acknowledged in scholarly metrics then it is likely that their acceptability in research quality assessments will also be affected (Hicks, 1999, 2004). For example, books receive far greater recognition in GS as opposed to WoS and Scopus (Kousha, Thelwall & Rezaie, 2011; Orduña-Malea et al., 2014).

In this context it is quite challenging for new and emerging scholars, and even more senior academics whose job security, research funds and career prospects are being determined by the IF and the businesses, publishers and institutions that directly and indirectly promote it. Editors of WoS listed journals are in an advantageous position. Editorial self-citation may boost citation counts (e.g. Xiao, Jafari, Cloke, & Tribe, 2013). However, concerns are rightly expressed about how citation counts might be influenced or, at worse, deliberately manipulated by journals, often through direct encouragement to self-cite and/or citation stacking (Van Noordern, 2013), and academics who may not only self-cite but also develop citation networks (where if you cite my paper I’ll cite yours). In cases where WoS identifies anomalous citation patterns that result in a significant distortion of the IF, so that the rank does not accurately reflect the journal’s citation performance in the literature, then the journal title may be suppressed and monitored (for further information see http://admin-apps.webofknowledge.com/JCR/static_html/notices/notices.htm#editorial_informatio).

There are active campaigns and declarations with respect to the misuse of the IF. Perhaps the most notable, the San Francisco Declaration on Research Assessment (DORA), notes

The Journal Impact Factor is frequently used as the primary parameter with which to compare the scientific output of individuals and institutions. The Journal Impact Factor, as calculated by Thomson Reuters, was originally created as a tool to help librarians identify journals to purchase, not as a measure of the scientific quality of research in an article. With that in mind, it is critical to understand that the Journal Impact Factor has a number of well-documented deficiencies as a tool for research assessment (DORA, 2012).

Yet despite the deficiencies the IF and its ongoing misuse by some stakeholders in the industrial actor-network of academic knowledge, it is likely that it will continue to be used and abused in the foreseeable future (Caplan, 2014). Under neoliberal notions of competitiveness, as well as a desire for supposed objective metrics, policy makers will continue to utilise the IF in particular for the purpose of rankings and the provision of research funds. Under conditions of reduced funding in real terms for research, especially in the social sciences the IF is a powerful short hand for perceived impact, but perceptions are often divorced from reality.

Khabsa and Giles (2014) estimated the number of circulating documents written in English in the academic Web as 114 million, of which GS has around 99.8 million. To just

focus on periodicals with supposed high impact factors does a disservice to the richness and value of different modes of scholarly communication. For many academics to focus on the IF is an exercise in utility as it is hard to publish in other ways if your institution either does not reward you if you do or, even worse, actually discriminates against you. Many authors are therefore trapped between utility maximisation and the stupidity of an academic knowledge system which has increasingly forgotten that while it is valuable to measure, not everything that is valuable can be measured. To make substantial changes to this situation would require not only active opposition and cultural jamming by academics and researchers but also increased honesty and transparency by editors, journals, publishers and the institutions involved in research assessment and ranking exercises. The extent to which changes will occur remain to be seen as substantial communities of interest and prestige wish to see the status quo retained as the massive proliferation in online publishing globally has seen a greater focus on publishing in Journals and on publisher platforms that carry prestige by promoting metrics such as the IF.

Perhaps an interesting note to finish on is the challenge which open access (OA) may pose in the future to these established communities and the IF, as several paradoxes seem to exist: On the one hand you have the support for OA publishing from some parts of government - especially the science and technology led departments seeking to demonstrate availability of knowledge created by public sector organisations by speeding up the access to scientific knowledge which had become log-jammed in many high profile subscription-based journals (Some publishers have addressed this by placing articles in volumes as soon as accepted but access is still by subscription or paid for OA ('Gold Open Access') or via Institutional Repositories ('Green Open Access') (see Bjork et al., 2014). This debate in the UK centred on the 2012 Finch Report (Working Group on Expanding Access to Published Research Findings 2012) and the UK government decision in 2014 to implement OA, especially through the Higher Education Funding Council and the Research Councils in the UK. Similar moves to expand access exist in other countries building on the 2003 *Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities* (<http://openaccess.mpg.de/Berlin-Declaration>) to change the way knowledge is made more available so to remove the notion of insiders who have access and outsiders who do not. Nevertheless, OA publishing faces challenges in some cases with respect to the cost, the legitimacy of OA review procedures in the case of new commercial publishing houses, and a consequent perception that in some cases that papers may not be of comparable quality to non OA publications though many established publishers have taken steps to introduce equivalent peer review processes. However, Jump (2015) highlighted an ongoing debate about the value of pre-publication peer review and its significance in relation to quality and issues around new styles of academic publishing that OA is now stimulating in the academy..

However, running contrary to pressures to make research more open and accessible are demands for quality assessments of research as well as benchmarking of performance of both universities and national research and innovation which includes significant use of peer review and metrics which are valued by government departments to demonstrate their return on investment (especially impact more generally). Ironically this may have actually strengthened the hand of those journals that already have a strong IF and are included in WoS and Scopus as these currently act as a de facto measure of quality within the wider context of OA.

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