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Publish and perish? Bibliometric analysis, journal ranking and the assessment of research quality in tourism

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ABSTRACT

Bibliometric analysis is important in tourism as a result of external evaluation of research quality, interest in impact and prestige factors, and study of the field's development. Although bibliometric analysis can be applied to any type of publication the main focus is on journals. Five approaches to the evaluation of journal quality are identified: stated preference, citation-based, derived, hybrid, and expert panels. Different productivity, impact and hybrid metrics are used to identify rankings of tourism journals from Scopus/SCImago data, compared with a derived RAE ranking, and three expert panel rankings. The different rankings reinforces that bibliometric understanding of scientific impact is a multi-dimensional construct. However, bibliometric analysis does not occur in an institutional and policy vacuum. The institutional context of government and private organization evaluations of research quality increasingly determine which metrics are applied, with subsequent effects on performance evaluation, career development and future direction of tourism studies.

> But don't you see, the idea that you can determine impact in the future from where they publish today is totally absurd. On that basis, God would have an impact factor of zero. I mean, He did his best work a long time ago; it has never been repeated by anyone; and all His ideas were published in a book, not in a peer-reviewed journal! (Petsko, 2008: 107).

1. Introduction

Bibliometrics is "the quantitative study of physical published units, or of bibliographic units, or of the surrogates for either" (Broadus, 1987: 376). Together with informetrics, the study of the quantitative aspects of information; scientometrics, the measurement of information and communication processes, activities and policies in science (Vinkler, 2010); and sociologies of scientific knowledge (Leydesdorff, 2001), bibliometrics has become an increasingly significant issue in tourism studies. There are several reasons for this, including reflection on the growth of tourism studies as an area of knowledge (Cheng, Li, Petrick, & O'Leary, 2010; Coles & Hall, 2006; Hall & Page, 2009; Howey, Savage, Verbeeten, & Hoof, 1999; Hall, Williams, & Lew, 2004; Xiao & Smith, 2006, 2007; Winter, 2009); interest in the contribution of individuals, publishing outlets and institutions to tourism literature (Hall, 2010a; Sheldon, 1990, 1991; Zhao & Ritchie, 2007); and evaluation of research performance (Law & Chon, 2007; Page, 2003).

Bibliometric analysis is not isolated to studies of journal citations and can be applied to any bibliometric unit. For example, the analysis of graduate dissertations in tourism studies has received some attention (Bao, 2002; Hall, 1991; Jafari & Aaser, 1988; Laing & Weiler, 2008; Meyer-Arendt, 2000; Meyer-Arendt & Justice, 2002), although research on books, book chapters and other publications is lacking, reflecting their broader under representation in bibliometric analysis in the social sciences (Hicks, 1999, 2004). Nevertheless, the greatest utilisation of bibliometrics in tourism studies is with respect to the evaluation of journals as well as those that publish in them.

Academic journals are used in three main ways (Cheng et al., 2010; Hall, 2005; Weiner, 2001). First, to produce, disseminate and exchange academic knowledge. Second, to rank research and scholarly work in order to aid the distribution of education and research funds. Third, to inform decisions concerning appointment and promotion as well as identify the relative status of individuals, departments and institutions. Such roles can also be interpreted as reflecting academic efforts in three levels: meta-level (discipline/subject field), meso-level (journal, institution), and micro-level (individual) (Cheng et al., 2010; Hall, 2005). The majority of studies

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that examine the content of tourism journals have focused on the meso- or micro-level, that is, the productivity or performance of individuals and institutions/schools with few studies having approached the issue from a meta-level (Cheng et al., 2010).

Critical to the interest in the bibliometric dimensions of journals is the growth of institutional evaluation of publication quality. This has usually been as part of a broader mechanism to allocate research funds to institutions that is undertaken by national governments, i.e. the British Research Assessment Exercise (RAE) and its successor the Research Excellence Framework (REF), Australian Excellence in Research for Australia (ERA), the New Zealand PBRF (Performance Based Research Fund), or the South African National Research Foundation's Researcher Rating System (Coles, 2009; Page, 2003; Visser, 2009); or by universities and departments with respect to evaluating staff performance and promotion. For example, academic units may decide to only 'count' publications from certain journals in the provision of financial publication incentives or rewards to individual staff or provide such financial incentives on the basis of rankings.

The development of national research quality evaluations and metrics with corresponding affects on financial resources for universities and individuals has clear implications for economic, human resource management and research practice, as well as influencing where scholars publish and therefore the overall development of tourism studies as an academic field (Coles, 2009; Coles et al., 2006; Hall, 2010b; Page, 2003, 2005; Visser, 2009). It is perhaps for these reasons that the undertaking of bibliometric studies to develop rankings of academic leadership, influence, journals and research quality has become one of the most debated issues in tourism as elsewhere in the academy (Hall, 2005; Jamal, Smith, & Watson, 2008; Jogaratnam, Chon, McCleary, Mena, & Yoo, 2005; Jogaratnam, McCleary, Mena, & Yoo, 2005; McKercher, 2005; McKercher, Law, & Lam, 2006; Page, 2005; Ryan, 2005; Pechlaner, Zehrer, & Abfalter, 2002; Pechlaner, Zehrer, Matzler, & Abfalter, 2004). For example, in March 2010 there was a heated debate on the TRINET tourism research network with respect to the release of the 2010 UK Association of Business School journal rankings with Buhalis (2010) stating, "what is becoming evident is the fact that Impacts Factors, Citations and Journals submitted to the RAE2008 are critical variables in the construction of the list". In response Singh (2010) stated, "The divide in the industry as regards journal rankings (and ra[n]kings) is not a summum bonum of the real value of journals in academia: management, as far as Tourism Studies is concerned, is not a criterion of selection here", while Baum (2010) described those journals with a 2 rating as a "bunch of also-rans… Its hardly surprising that authors with anything valuable to say are being forced outside of our family of journals into what we style as 'generic' publications in international business, marketing, HR, sociology, etc. This is where some of the best material on our field is now to be found".

This paper therefore examines the analysis of journals at two levels. First, the institutional context within which rankings and assessment is conducted. Second, the different metrics that may be applied to derive rankings and their results. However, academic interest in metrics is wider than that of the institutions that are usually looking for an efficient means of allocating resources. Therefore, the application of metrics cannot be understood outside of how institutions create the 'rules of the game' that determine what and how rankings are used.

2. Approaches to the evaluation of journal quality: the institutional context

The institutional aspects of research quality are extremely important for the assessment of tourism research. Arguably for the allocation of academic prestige and funds they are the most important in those jurisdictions that have established national research quality reviews (Hall, 2005; Page, 2003, 2005; Visser, 2009). This is because they set the 'rules of the game' within which research is conducted and published. At a macro level national structures and reviews define what constitutes 'good' research by prescribing the means by which it is analysed, who does the analysis, what is included in the analysis, where tourism studies lies as a body of knowledge and what the implications of the analysis will be (Coles, 2009; Coles & Hall, 2006; Coles et al., 2006; Page, 2003; Visser, 2009). These are then responded to by institutions at a meso-level, especially universities and organisational stakeholders in the research review process. As Tewdwr-Jones (2005: 318) commented on the RAE, "Today, so much prestige is now attached to the results of the exercise at a time of fiscal concern, that results produce one of two possibilities: a better than expected performance may result in increased resources allocated to the university; a lower than expected result may just be the justification sought by vice chancellors eager to prune back expenditure and wield the axe". This has a profound affect on the direction that scholarship then takes at both individual and departmental levels. Such a situation is also indicative of the process of economization which refers to the assembly of actions, behaviours, devices, institutions, objects and analytical/practical descriptions which are tentatively and sometime controversially qualified as 'economic' by scholars, lay people and/or market actors (Çalıskan & Callon, 2009). As Callon's (1998) earlier work on the competition between calculative agencies noted

> Imposing the rules of the game, that is to say, the rules used to calculate decisions, by imposing the tools in which these rules are incorporated, is the starting point of relationships of domination which allow certain calculating agencies to decide the location and distribution of surpluses… The extension of a certain form of organized market, an extension which ensures the domination of agents who calculate according to the prevailing rules of that particular market, always corresponds to the imposition of certain calculating tools (Callon, 1998: 46).

Significantly, the neoliberal drive for efficiency and measurement in many government policies (Stein, 2002), has also meant the embrace of metrics that not only define quality in an instrumental manner – i.e. a formal set of journal rankings – but also inherently favour some publication outlets over others – such as journals over books – because of their coverage. In bibliometric terms the limitations of metrics is very clearly recognised in the literature (e.g. Leydesdorff, 2009; Pendlebury, 2009), however in policy terms it is not.

Within the social sciences there are five, often overlapping, approaches to the evaluation of journal quality (or other dimensions of research output quality and performance).

- Stated preference and ranking studies that are usually survey-based (e.g., Pechlaner et al., 2004).
- Citation-based studies (e.g. Jogaratnam, Chon, et al., 2005; Zhao & Ritchie, 2007).
- A derived approach that extrapolates journal rankings from the ratings awarded in research assessments (e.g., Geary, Marriott, & Rowlinson, 2004; Mingers, Watson, & Scaparra, 2009).
- A hybrid approach that uses a statistical and/or other combination of existing ranking lists including those from derived rankings and expert panels.
- 'Expert panels' usually appointed by governments and/or other institutions (i.e. academic societies, universities, departments) to evaluate research performance. Expert panels may also utilise the combination of existing ranking lists in order to

arrive at their own rankings (Kelly, Morris, Rowlinson, & Harvey, 2009a, 2009b).

The last three approaches all have a strong institutional component to them, although institutional demands can act as the driver behind all approaches. There is also often a strong iterative component to assessment of research quality that tends to favour some metrics over time either as a result of policy decisions, i.e. overt selection of metrics, or influence of key stakeholders, i.e. a lead body in an academic field produces a set of rankings that may be implemented by members which, in turn, influence the metric selection decisions of government. These will, in turn, affect both the future results and selections of metrics Therefore, an understanding of the institutional context in which metrics are used may help shed light on the development of particular rankings and their implications for tourism studies. This is done with reference to the UK RAE, the Australian ERA and the role of business school associations.

2.1. The UK RAE

Expert panels are not usually tourism studies specific, with the best examples being the panels that have been established for the review of subject areas within national research evaluations such as the RAE in Britain (Page, 2003). There was no tourism specific panel in the 2008 RAE. Tourism related research outputs and publications were found in submissions to 45 of the 67 units of assessment, each of which had its own sub-panel which was in turn part of a larger panel which covered groupings of units of assessment. Of these the Business and Management Studies sub-panel received approximately 40% of the tourism related publications submitted compared to Sport-Related Studies panel (21%), Art and Design (9%) and Geography and Environmental Studies (8%).

In the 2008 RAE tourism and hospitality was identified as the worst performing 'sector' in estimates of the Business and Management sub-panel assessment of research quality in journals with no journal recognised in the highest mode, although *Annals of Tourism Research* appeared the most highly rated (Mingers et al., 2009). Arguably such results have significant impacts on the broader perception of tourism studies as an area of study and the quality of its research and journals. Nevertheless, of interest to the present paper is how such panels may utilise existing ranking systems. The subject being of sufficient interest to warrant the attention of the British House of Commons Science and Technology Committee:

> 209. …we received evidence to suggest that the measures used in the RAE distorted authors' choice of where to publish. Although RAE panels are supposed to assess the quality of the content of each journal article submitted for assessment, we reported in 2002 that "there is still the suspicion that place of publication was given greater weight than the papers' content" [Second Report of the Science and Technology Committee, Session 2001–02, p.17]. This is certainly how the RAE was perceived to operate by the panel of academics we saw on 21 April. … In both oral and written evidence, [the Higher Education Funding Council for England] denied that journal impact factors formed the basis for an assessment of the quality of articles submitted to the RAE.
>
> 210. Whether or not RAE panels use journal impact factors as an indication of the quality of the articles that they assess, the perception that this is the case causes a bias amongst UK authors towards journals with higher impact factors. This in turn increases the journal's impact factor still further. In this way, regrettably, the RAE indirectly supports a hierarchy of journals, making it difficult for new and little-known journals, including—because they have appeared only recently—some author-pays journals, to compete. … However, the current system, which does not formally take account of impact factors, should already ensure that this is the case. *The perception that the RAE rewards publication in journals with high impact factors is affecting decisions made by authors about where to publish. We urge HEFCE to remind RAE panels that they are obliged to assess the quality of the content of individual articles, not the reputation of the journal in which they are published.* (Emphasis in the original) (Select Committee on Science and Technology, 2004: Sec. 209–210).

One of the most significant issues for expert panels involved is the actual extent of time that they have to review submissions. RAE panels are required to produce a quality grading for every piece of work submitted. In the 2008 RAE the Business and Management Studies sub-panel received over 12,600 outputs for assessment, from 4250 staff within 90 institutions (RAE, 2009a: 3). Submissions were available to be read by 18 academics in a few weeks (RAE, 2009a), although the RAE itself only requires that 25% of documents be examined in detail. The overview report for the Business and Management sub-panel stated that "virtually all outputs submitted … were read in considerable detail" (RAE, 2009a: 5). In reviewing the ranking of submissions to the sub-panel Mingers et al. (2009) observes, "informally it was suggested that in many cases just the abstract was read but nevertheless it does represent a major exercise in directly assessing the quality of research outputs. However, little is said in the review about precisely how the quality judgements were made, how the grade boundaries were determined, or the extent of consensus or dissensus". These last points are extremely significant for tourism and hospitality research as one of the core issues for any review of research quality will relate to who does the reviewing, their research traditions and understanding of the field. The 2008 Business and Management Studies sub-panel had only one full member with a research publication record in tourism and hospitality although the panel was able to call on external advice. But just as significant is the fact that tourism occupies a disciplinary space that cuts across several units of assessment. Does this therefore mean that tourism studies potentially falls between the gaps?

According to the Business and Management Studies sub-panel (RAE, 2009a: 5), "Some submissions received … contained research output that seemed to sub-panel members to be of little or no relevance to business and management studies and sub-panel members were concerned that some submissions were an over-eclectic mix of outputs. In a very limited number of cases, such left-field outputs were given low grades because of their lack of relevance". Although tourism is not specifically mentioned in this case, tourism studies is clearly an area of research that feeds into a number of different epistemological and methodological approaches, such as post-colonial studies, cultural and heritage studies, and visuality, that are not mainstream business and management theory. Furthermore, the strong qualitative tradition in tourism research, may also not be fully accepted by a Business and Management Panel. Indeed, the panel later reports, with specific reference to hospitality and tourism "some of the outputs submitted … had limited relevance to Business and Management. As in the last RAE, that [sic] research in this field lags behind the development of mainstream management theory. Moreover, as identified in the previous RAE, many outputs were purely conceptual, often based on literature reviews, or what the authors described as 'exploratory studies', which lacked rigour and/or significance" (RAE, 2009a: 8–9). Similarly, in their modelling of the outcome of the RAE2008 Business and Management Studies sub-panel results, Kelly, Morris, and Harvey (2009: 10) stated:

> Some research areas within the field are more established than others and have developed distinctive research agendas and themes. In these areas there is a coherent body of prior literature to build on, tried and tested methodologies and the potential to add incrementally to the established knowledge base. In newer and emergent subject areas this is not the case, which in turn may depress the perceived quality of research outputs. … the more established sub-disciplines such as organization studies, management science, accounting and finance have higher mean journal quality ratings than management development and education, tourism and hospitality and other sector studies.

In contrast, the Sports-Related Studies sub-panel, which received approximately twenty percent of tourism related submissions, noted a broad range of social science research informing tourism studies, and concluded,

> The quality and quantity of research in the area of tourism studies outputs has increased significantly since 2001 following the explicit inclusion of 'tourism studies' in the [Unit of Assessment] descriptor. Environmental and community impacts of tourism formed a dominant theme and some of this research was identified as internationally excellent. Tourism research will be strengthened through greater integrated development of theoretical and empirical work and a progression from single case study-based analyses (RAE, 2009b: 4).

In light of the RAE experience greater research clearly needs to be conducted not only on the differential grading of submissions from the same journal between panels but also as to the theoretical preferences of expert panels. It is clearly conceivable that an output deemed as lacking significance by one panel may be regarded as significant by another. Furthermore, there needs to be more empirical analysis of the extent to which journal ranking lists produced by bodies such as the Association of Business Schools affect the judgements of panel members as well as those making the submissions, especially as there is clearly a belief that it does (Baum, 2010; Buhalis, 2010). Although the RAE Business and Management Studies sub-panel "did not intend to use journal ranking lists in making their judgements" (Mingers et al., 2009: 4) (see also Paul, 2008), Mingers et al. conclude.

> Comparing the grades given by the RAE with those in ABS, on those journals that are in common the overall results are very similar in terms of the average grade awarded… There were a very wide range of journals submitted, many of them not in ABS but many of these non-management journals were given a low rank. It is clear that there was selectivity in the submissions with relatively few ABS 1* journals being submitted. There is also a clear association between the GPA awarded to an institution and the proportion of its submission that was in ABS journals although the direction and nature of the causality is unclear (Mingers et al., 2009: 25).

2.2. The Australian ERA

In the case of the Australian ERA the role of journal rankings and citation counts has been made much more overt (Australian Research Council (ARC), 2009a). According to the ARC (2009a: 6), the ERA "reflects the Government's commitment to a transparent, streamlined approach to the evaluation of the quality of research undertaken in Australia's universities". The objectives of ERA are to:

1. establish an evaluation framework that gives government, industry, business and the wider community assurance of the excellence of research conducted in Australia's higher education institutions;
2. provide a national stocktake of discipline-level areas of research strength and areas where there is opportunity for development in Australia's higher education institutions;
3. identify excellence across the full spectrum of research performance;
4. identify emerging research areas and opportunities for further development; and
5. allow for comparisons of Australia's research nationally and internationally for all discipline areas (ARC, 2009a: 6).

Units of Evaluation are assessed and rated by Research Evaluation Committees "comprising experienced, internationally-recognised experts" (ARC, 2009a: 7) that are grouped by discipline cluster. These evaluations are informed by four broad categories of indicators (ARC, 2009a):

- Research quality (ranked outlets, citation analysis, peer review, and peer-reviewed Australian and international research income).
- Research volume and activity (total research outputs, research income and other research items).
- Research application (research commercialisation income and other applied measures).
- Research recognition (considered on the basis of a range of esteem measures).

ERA evaluations are undertaken across clusters of disciplines on an institutional basis. Tourism is a discipline under the 'Commerce, Management, Tourism and Services' Field of Research which is part of the Social, Behavioural and Economic Sciences discipline cluster (ARC, 2009b). In terms of evaluation of research outputs four kinds of output are recognised as eligible: books (authored research); book chapters in research books; refereed journal articles in scholarly journals; and full paper refereed conference publications. In addition, some 'non-traditional' types of research such as original creative works or curated substantial public exhibitions may also be eligible (ARC, 2009a). In the 2010 iteration of the ERA tourism is not a discipline that solely uses citation analysis, although related fields for some tourism researchers such as environmental science and management are. Instead, research outputs in the tourism discipline are subject to peer review. Disciplines that do use citation analysis journals are indexed via Scopus.

The ARC also produced a list of peer-reviewed journals to be used for the ERA (ARC, 2009c) which have been ranked into the following quality tiers: A* (Approximate top 5%), A (Approximate next 15%), B (next 30%), C (bottom 50%) and 'unranked' (ARC, 2008). According to the ARC (2008: 11), the Australian "Learned Academies and other discipline peak bodies were asked to rank only those journals that are *core* to each discipline" (emphasis in original). Consultation on journal rankings began 12 June 2008 and ended on the 14 August 2008, with 114 submissions being received (Harvey, 2008). As the ARC (2009d: 3) noted with a hint of irony, "ranked journals is a new indicator to research quality metrics, and has created much discussion both in Australia and overseas". According to the ARC (2009d) the ranked journal lists have three functions within the ERA. Firstly, to determine the set of eligible journals for each cluster. Secondly, they allow the ARC to use Field of Research assignments to create Field of Research specific citation benchmarks for disciplines. Thirdly, the ARC uses a journal's ranking to assign journal articles into one of four quality tiers. The ERA approach therefore does not formally recognise that a disjoint may exist between the quality of research in a research output and the reputation of a journal as implied by its ranking except via the process of peer review.

2.3. Business school association rankings

Several national associations of business schools also produce journal rankings. For example, the Australian Business Deans Council (ABDC), a national council comprising Deans, Heads and Directors of Australian University business faculties and schools, has developed its own set of journal rankings. The ranking was first developed in 2008 and a draft revised version was released in early 2010. The list includes approximately 85 tourism and hospitality related journals (Australian Business Deans Council, 2010a). A background document explaining how the rankings were derived became available in June 2010 (Australian Business Deans Council, 2010b). According to the ABDC (2010b: 3): "The list has been developed for the purpose of serving ABDC members. The list does not purport to serve multiple masters, rather it is provided for the benefit of business school deans, departments and their academic staff. While it is inevitable that other parties outside of the ABDC will use the list and it will be subject to external scrutiny, the marginal decisions have been slanted to the interests of the members of the ABDC".

The 2010 ABDC list was developed in a two-stage process. The first stage involved a panel of 17 discipline experts who reviewed the existing ABDC Journal List. According to the ABDC (2010b: 1), "The experts were given latitude to exercise their judgment". Criteria the panel used included:

- Relative standing of the journal in other recognised lists (such as the Association of Business Schools)
-Citation metrics
-International standing of the editorial board
-Quality of peer-review processes
-Track record of publishing influential papers
-Sustained reputation
-Influence of publications in the journal in relation to hiring, tenure and promotion decisions (ABDC, 2010b: 1).

A draft list was released in December 2009 for comment for a two-month period. Almost 1000 items of feedback were received. Journal rating questions were managed under the following process:

-Initial assessment was made by reference to comparable journals in the specific discipline; relying mainly on citation metrics and other reputable journal quality lists. In some cases, the submissions were judged as lacking sufficient evidence to take the case further.
-Where submissions were judged to be reasonable, specific cases were referred to a new group of discipline experts who made a recommendation.
-Where possible, the expert recommendations were compared to an existing disciplinary list from a recognised discipline association for alignment (ABDC, 2010b: 2).

Before final publication the journal list "was referred to a panel of 10 disciplinary experts selected because of their experience and standing to make comparisons across broad disciplinary groups. The final panel of 10 experts were instructed to make a "sanity check". This final review resulted in only a handful of amendments" (ABDC, 2010b: 2).

The UK Association of Business Schools (ABS) produces an academic journal quality guide which gives ranking for journals (Kelly et al., 2009a). "The ABS Academic Journal Quality Guide is a hybrid based partly on peer review, partly on statistical information relating to citation, and partly upon editorial judgements following on from the detailed evaluation of many hundreds of publications over a long period" (ABS, 2010). In compiling the 2009 and 2010 versions of the ABS Guide, a quality rating system was utilised, along with a five stage procedure:

I. The previous guide served as the starting point for the process. The previous guide had been developed from an analysis of publications submitted to the 2001 RAE, along with journal lists from business schools and publisher databases.
II. Extensive feedback on version 2 of the guide was presented to a 14 member review panel. Panel members were given lead responsibility for various sections of the guide, but all members were free to comment and make recommendations relating to the entire guide.
III. The review panel made various general and specific recommendations relating to individual titles.
IV. The various recommendations made by the review panel were investigated by the guide editors in the light of data including published listings, peer assessment, citation impact factors and evaluation of journal processes and content. In distinguishing between rankings at ratings boundaries, the editors had the final say.
V. The final proposed quality grades were again circulated to all panel members for their approval and comment (Kelly et al., 2009b).

The 2009 ABS quality ranking the ABS guide lists the results of other journal ranking schemes including six institutional scores (Warwick, Imperial, Cranfield, Kent, Aston, Durham) and three scores derived from Thompson/ISI 2007 journal citation reports (The five year mean citation impact score; the citation impact factor score for 2007; and the immediacy factor which measures to speed at which references in the journal are taken up and become part of the core literature in the specialism) (Kelly et al., 2009b). The 2010 rankings provide the 2010 and 2009 grades, an analysis of RAE data (Kelly et al., 2009), a world elite count, and journal citation reports standardised by field (impact factor, five year mean, impact factor quartile grade, five year mean quartile grade). The introduction of the ABS guide poses the question 'why does it matter?' The response

> The fates of individual academics and publishers are intimately bound together in this game. As the number of titles has multiplied, the search for distinction and high status by way of citation impact factors and quality rankings has intensified. Authors wish to publish in the "best" journals, such as those in the 4 and 3 categories in the ABS Guide, as publication in these journals confers greater status (and ultimately career) rewards than publication in journals lower down the pecking order. The academic journals market is both hotly contested and highly stratified. The fact is that there are many hundreds of business and management journals, typically those in the 2 and 1 categories in the ABS Guide, that have relatively small audiences, and in which publication yields much lower rewards than the rewards that follow from publication in more highly regarded journals… The fate of the majority of journals may be to languish in the reputational foothills, but a minority, blessed with strong credentials, clever strategies and broad market appeal, will rise quickly though the ranks to become high status, high reputation publications (Kelly et al., 2009b: 10).

While Kelly et al.'s (2009b) observation may hold true in the long term, at least in those countries and institutions that share such a perspective, it clearly raises questions about how tourism studies would be affected by the adoption of a journal ranking approach? Especially as, in the UK for example, only four tourism

related journals were ranked at 3 or above by the ABS in 2009 or 2010 (*Annals of Tourism Research*, *Leisure Sciences*, *Journal of Travel Research*, *Tourism Management*). Moreover, there is ample evidence to suggest that different approaches to assessing the quality of research outputs will have different results (Adler, Ewing, & Taylor, 2008; Baneyx, 2008; Bollen, Van de Sompel, Hagberg, & Chute, 2009; Pendlebury, 2009), and therefore implications for the utilisation of those results in informing institutional and individual decision-making (Jamal et al., 2008; Woodside, 2009). The next section therefore seeks to investigate this issue further by comparing bibliometric and expert panel ratings of tourism journals.

3. Bibliometric analysis

3.1. Performance indicators and databases

Despite the development of single metrics by some organizations as part of the evaluation of research quality, there is a general consensus in bibliometrics that research quality cannot be characterised by a single indicator of performance (Bollen et al., 2009; van Raan, 2006). According to Franceschet (2009) two potential dangers of condensing down quality of research to a single metric are, first, a person or research output may be damaged by the use of a simple index in a decision-making process if the index fails to capture important and different aspects of research performance, and, second, individuals may focus on maximizing that particular indicator to the detriment of doing more justifiable work. A number of performance indicators have been developed for the assessment of research quality of researchers and journals. Bollen et al. (2009), for example, utilised 39 scientific impact measures in a study of scholarly impact. However, performance metrics can be broadly classified into three groups.

- *productivity metrics*, which includes metrics such as number of (cited) papers, number of papers per academic year, number of papers per individual author;
- *impact metrics*, which comprises metrics such as total number of citations, number of citations per academic year, number of citations per individual author/journal, and usage log data (i.e. usage impact factors that consists of average usage rates for the articles published in a journal);
- *hybrid metrics*, which includes metrics such as average number of citations per paper as well as the *h* index (Hirsch, 2005) and its variants: the *m* quotient (Hirsch, 2005), the *g* index (Egghe, 2006), and the individual *h* index (Batista, Campiteli, & Konouchi, 2006). These indicators aim to capture both productivity and impact in a single figure (Franceschet, 2009; McKercher, 2008).

The use of metrics in tourism studies is further complicated by the availability of appropriate databases. Three databases are now primarily used: ISI Web of Science databases owned by Thomson Reuters which includes the Science Citation Index Expanded (over 6650 journals in March 2010), the Social Sciences Citation Index (over 1950 journals), and the Arts & Humanities Citation Index (1160 journals); Scopus, owned by Elsevier which has over 16,500 peer-reviewed journals (including more than 1200 open-access journals in its database as of March 2010); and the Internet-based Google Scholar. The CABI Leisure, Recreation and Tourism abstract database can also be used for productivity metrics. Historically, the ISI databases have been the prime source of bibliometric data. Tourism has been substantially disadvantaged by the very small pool of journals included in ISI which affects the citation counts not only of those journals that are included but even more so of those which are not. Although the number of tourism journals is increasing. The launch of the Scopus database in 2004 provides an alternative to ISI because of its significantly wider journal coverage, including broader coverage of tourism journals. Nevertheless, Scopus and ISI are overlapping and complementary (Meho & Yang, 2007, 2008). Criteria for inclusion in both databases are not externally transparent but, according to Leydesdorff (2009: 1329), 'this seems legitimate because of the commercial interests at stake for journal publishing houses'.

Google Scholar was also launched in 2004 although, as of June 2010, is still presented as a Beta site, implying that it remains in development. Google Scholar is based on web crawling through the Internet for scientific and scholarly literature and has a much wider coverage than either Scopus or ISI. This has been very significant for tourism research given the historic lack of coverage of tourism journals in ISI databases. In addition, Google Scholar provides information on citations of books, chapters and other scholarly related material, plus it is also free to use. Google uses PageRank as an algorithm for sorting pages when displaying the search results. PageRank is derived from the Influence Weights that were originally proposed as an indicator of journal status (Garfield, 1979). Like Scopus and ISI criteria for inclusion in Google Scholar are not externally transparent yet it has established itself as an important datebase for bibliometric studies in tourism (Hall, 2006; Jamal et al., 2008; Law & van der Veen, 2008; McKercher, 2008).

3.2. SCImago Journal Rank (SJR) indicator

A significant addition to the study of bibliometrics and journal ranking is the SCImago Journal Rank (SJR) indicator developed by the Scimago research group of the Universities of Granada, Extremadura and Carlos III in Spain. The SJR indicator is an open-access resource (using Scopus) (http://www.scimagojr.com/journalrank.php) that attributes different weight to citations depending on the 'prestige' of the citing journal without the influence of journal self-citations and is estimated with the application of the PageRank algorithm in the network of journals. The SJR can be considered as an equivalent in the Scopus domain to the Journal Impact Factor in the ISI domain (Falagas, Kouranos, Arencibia-Jorge, & Karageorgopoulos, 2008). Following comparisons between SJR and the Web of Science journal impact factor Falagas et al. (2008: 2623) concluded that the 'SJR indicator poses as a serious alternative to the well-established journal [impact factor], mainly due to its open-access nature, larger source database, and assessment of the quality of citations' with Leydesdorff (2009) making similar positive comparisons. In January 2010 Elsevier announced that it was including SJR in Scopus as a user resource, along with SNIP (Source Normalized Impact per Paper), which measures the contextual citation impact by weighting citations based on the total number of citations in a given subject field.

SJR does provide a specific category for tourism, leisure and hospitality management. For 2008, the last full year available at the time this research was conducted, 36 journals were included in this category. However, eight journals (*Cities*, *Applied Geography*, *Simulation and Gaming*, *International Journal of Retail and Distribution Management*, *International Journal of Sustainable Development*, *Museum Management and Curatorship*, *Space and Culture* and *Rural Society*) that are included by SCImago in the category are not usually included in the set of tourism and hospitality journals as defined by institutional assessment exercises (ARC, 2009c; Kelly et al., 2009a) or relevant literature (e.g. McKercher, 2008), although they do have a number of tourism related articles within them. Nevertheless, a search through the SCImago database identified 40 tourism related journals making SJR a potentially powerful means of bibliometric analysis for tourism and hospitality. A

Table 1
Key dimensions of journals in tourism, hospitality and cognate areas contained in the Scopus® database using the SCImago Journal Rank (SJR) indicator (2008).

Journal title[a]	SCImago journal rank	*H* index	Published documents in year (2008)	Published documents in the 3 previous years	Total number of references	Citations in 2008 received by journal's documents published during the 3 previous years	Citable documents published during the 3 previous years.	Average citation per document in a 2 year period.	Average citation per document in a 4 year period	Cited documents (05–07)	Average amount of references per document	% International collaboration
Tourism Management	0.046	33	103	325	5663	693	323	1.79	2.26	72.92%	54.98	22.33%
Leisure Sciences	0.046	22	30	95	1460	87	86	0.75	1.22	45.26%	48.67	13.33%
Annals of Tourism Research	0.043	41	50	185	3135	368	175	1.72	2.29	69.19%	62.70	28.00%
Journal of Sustainable Tourism	0.043	16	33	116	1742	160	107	1.34	1.57	58.62%	52.79	39.39%
Journal of Leisure Research	0.042	25	28	88	1881	113	86	0.82	1.53	97.73%	67.18	32.14%
Journal of Travel Research	0.039	28	44	136	2661	200	129	1.16	1.92	64.71%	60.48	36.36%
Journal of Ecotourism	0.037	7	16	41	781	46	39	1.16	1.10	56.1%	48.81	6.25%
Tourism in Marine Environments	0.036	4	6	38	250	20	35	0.57	0.57	21.05%	41.67	33.33%
International Journal of Hospitality Management	0.035	17	70	162	3143	142	148	0.86	1.06	53.09%	44.90	20.00%
Leisure Studies	0.034	17	30	81	1258	66	74	0.77	1.02	45.68%	41.93	7.69%*
Cornell Hospitality Quarterly	0.034	18	49	126	826	66	92	0.56	0.75	73.02%	16.86	16.33%
Tourism Economics	0.033	16	57	113	1.707	76	109	0.53	1.04	43.36%	29.95	19.30%
Tourism Geographies	0.032	12	25	68	1.329	56	62	0.71	1.02	51.47%	53.16	32.00%
Current Issues in Tourism	0.032	12	31	85	1.876	78	75	1.10	0.94	55.29%	60.52	32.26%
Tourist Studies	0.032	4	19	40	719	26	38	0.47	0.78	42.5%	37.84	15.79%
International Journal of Contemporary Hospitality Management	0.032	7	59	155	1822	116	155	0.60	0.75	42.58%	30.88	10.17%
International Journal of Heritage Studies	0.031	8	37	106	971	43	96	0.28	0.40	31.3%	26.24	2.56%*
Journal of Convention and Event Tourism	0.030	2	13	29	348	8	28	0.29	0.29	20.69%	26.77	23.08%
Event Management	0.030	3	4	42	240	14	41	0.34	0.34	26.19%	60.00	25.00%
Asia Pacific Journal of Tourism Research	0.029	3	27	86	966	26	85	0.27	0.37	24.42%	35.78	33.33%
Journal of Travel and Tourism Marketing	0.029	3	50	111	2.269	36	109	0.30	0.33	24.32%	45.38	26.00%
Journal of Hospitality and Leisure Marketing	0.029	2	17*	70	671*	15	61	0.18	0.25	21.43%	39.47*	11.76%*
Journal of Food Service Business Research/ Journal of Restaurant & Food Service Marketing	0.029	2	29	82	905	12	73	0.16	0.16	10.98%	31.21	24.14%
Loisir et Societe	0.028	8	4	72	143	4	67	0.02	0.07	5.56%	35.75	4.55%*
Tourism	0.028	4	24	92	892	13	85	0.13	0.18	11.96%	37.17	4.17%
Anatolia	0.028	3	34	80	883	6	79	0.10	0.07	5.0%	25.97	32.25%
International Journal of Hospitality and Tourism Administration	0.028	2	21	49	892	5	46	0.11	0.11	8.16%	42.48	52.38%
Journal of Human Resources in Hospitality and Tourism	0.028	1	18*	31	632*	2	31	0.06	0.06	6.45%	35.11*	5.56%*
Journal of Quality Assurance in Hospitality and Tourism	0.028	1	8	44	344	4	44	0.08	0.09	9.09%	43.00	12.50%
Tourism, Culture and Communication	0.027	1	17	27	690	2	27	0.07	0.07	7.41%	40.59	29.41%
Journal of Teaching in Travel and Tourism	0.027	2	8	65	156	6	61	0.10	0.10	7.69%	19.50	0.00%
Hotel and Motel Management	0.027	1	207	766	–	3	165	0.05	0.02	0.39%	–	0.97%
Restaurant Business	0.027	1	63	250	–	3	164	0.02	0.02	1.2%	–	–
International Journal of Tourism Research	0.000	1	46	–	2209	–	–	–	–	–	48.02	15.22%

Table 1 (*continued*)

Journal title[a]	SCImago journal rank	*H* index	Published documents in year (2008)	Published documents in the 3 previous years	Total number of references	Citations in 2008 received by journal's documents published during the 3 previous years	Citable documents published during the 3 previous years.	Average citation per document in a 2 year period.	Average citation per document in a 4 year period	Cited documents (05–07)	Average amount of references per document	% International collaboration
Journal of Hospitality, Leisure, Sports and Tourism Education	0.000	1	20	–	716	–	–	–	–	–	35.80	15.00%
Scandinavian Journal of Hospitality and Tourism	0.000	2	21	–	1000	–	–	–	–	–	47.62	19.05%

Notes: * Most recent year available.
Source: SCImago (2010).
[a] Journal of Hospitality and Tourism Research, Journal of Retail and Leisure Property, Journal of Vacation Marketing and Tourism and Hospitality Research were added to SJR from 2009 on so therefore there are no values for them for 2008.

valuable mix of metrics is available with which to evaluate journal quality including

- SCImago journal rank, the citation PageRank of a journal calculated on the basis of Scopus citation data divided by the number of articles published by the journal in the citation period, i.e. an average per-article journal PageRank;
- Journal citation *h* index, i.e. the *h* number of articles in a journal that received at least *h* citations in the Scopus database;
- Published documents in a given annual period;
- Published documents in the three previous years;
- Total number of references for evaluation period;
- Citations received by journal's documents published during the three previous years;
- The total and citable documents published by a journal during the three previous years. Citable documents include articles, reviews, and conference papers;
- Average citation per document in a two year period which is computed using the same formula as the ISI Journal Impact Factor (JIF);
- Average citation per document in two, three and four year periods;
- The percentage of a journal's items in a three years window, that have been cited at least once during the following year as well as those uncited;
- Evolution of the number of total cites per document and external cites per document (i.e. journal self-citations removed) received by a journal's published documents during the three previous years.
- Average amount of references per document; and
- The percentage of international collaboration (proportion of author affiliations that include more than one country address)

Table 1 provides an overview of some of the key dimensions of journals in tourism and hospitality available using SJR for the year 2008 with different metrics being amalgamated from journal rankings via subject category along with metrics available at the journal level. According to Franceschet (2010) the status of a journal is commonly determined by two factors: popularity and prestige. With the former counting citations and the latter recursively weighting them with the prestige of the citing journals. The SJR provides opportunities to examine both dimensions of journal status. In addition, several metrics can be tracked over time. Unfortunately, gaps in annual coverage of journals in Scopus will affect the capacity to utilise SJR metrics for some time periods. Nevertheless, SJR does present significant opportunities to compare the relative merits of different metrics and their use in research quality evaluations.

3.3. Journal rank comparisons

Table 2 provides a comparison of different rankings based on metrics used for SJR with journal rankings provided by expert panels. The impact factors of the four tourism related journals that are available on Web of Science at the time of writing (ISI Web of Knowledge, 2010) and the results of a derived set of journal rankings from the 2008 UK RAE Business and Management Panel (Mingers et al., 2009) are also given for reasons of comparison. The table includes all journals that are listed by SJR as well as all those that are included in the journal ranking list of the Association of Business Schools (Kelly et al., 2009a; ABS, 2010). The top 20 journals by rank for each Scopus/SJR metric is provided. Scopus/SJR metrics used include the SJR, *h* index, the average citation per document in a two and four year period (as noted in 3.2 the two year period is computed using the same formula as ISI JIF), and the percentage of

Table 2
Rankings of journals in tourism, hospitality and cognate areas: comparison between Scimago/scopus and expert panels.

Journal Title	Rankings derived from Scopus® via SCImago (2008)					ISI	Derived	Expert Panels			
	SCImago journal rank	H index	Cited documents (% of journal items over 2005–07, that have been cited at least once during the following year)	Average citation per document in a 4 year period	Average citation per document in a 2 year period. Computed using the same formula as ISI journal impact factor (figure in bracket)	Journal Impact Factor (2008)	UK RAE Business & Management Panel (2008) 0 to 4 (4 high)	UK ABS (2009) 1 to 4 (4 high)	UK ABS (2010) 1 to 4 (4 high)	ABDC (2010) C to A* (A* high)	Australian ERA rank (2009) C to A* (A* high)
Tourism Management	=1	2	3	2	1 (1.79)	1.274	2	3	4	A*	A*
Leisure Sciences	=1	5	12	6	10 (0.75)	0.776	–	3	–	A	A
Annals of Tourism Research	3	1	4	1	2 (1.72)	1.104	3	4	4	A*	A*
J. Sustainable Tourism	4	=9	6	4	3 (1.34)	–	1	1	1	A	A
J. Leisure Research	5	4	1	5	8 (0.82)	0.700	–	2	–	A	A
J. Travel Research	6	3	5	3	=4 (1.16)	–	2	3	3	A*	A*
J. Ecotourism	7	=15	7	7	=4 (1.16)	–	–	–	–	C	B
Tourism in Marine Environments	8	=17	–	16	13 (0.57)	–	–	–	–	C	C
International J. Hospitality Management	9	=7	9	8	7 (0.86)	–	1	2	2	A	A
Leisure Studies	=10	=7	11	=10	9 (0.77)	–	1	2	2	B	B
Cornell Hospitality Quarterly	=10	6	2	=14	14 (0.56)	–	–	2	1	B	A
Tourism Economics	12	=9	13	9	15 (0.53)	–	1	2	2	A	B
Tourism Geographies	=13	=11	10	=10	11 (0.71)	–	1	2	2	B	B
Current Issues in Tourism	=13	=11	8	12	6 (1.10)	–	1	2	2	B	B
Tourist Studies	=13	=17	15	13	16 (0.47)	–	–	2	2	C	B
International J. Contemporary Hospitality Management	=13	=15	14	=14	12 (0.60)	–	1	2	2	B	B
International J. Heritage Studies	17	=13	16	17	20 (0.28)	–	1	1	1	C	A
J. Convention and Event Tourism	=18	–	–	–	19 (0.29)	–	–	–	–	C	C
Event Management	=18	=20	17	19	17 (0.34)	–	–	–	1	B	B
Asia Pacific Journal of Tourism Research	=20	=20	18	18	–	–	–	–	–	B	B
J. Travel and Tourism Marketing	=20	=20	19	20	18 (0.30)	–	–	1	1	A	A
J. Hospitality and Leisure Marketing	=20	–	20	–	–	–	–	–	–	A	–
J. Food Service Business Research/ J. of Restaurant & Foodservice Marketing	=20	–	–	–	–	–	–	–	–	C	C
Loisir et Societe	–	=13	–	–	–	–	–	–	–	B	B
Tourism	–	=17	–	–	–	–	–	–	–	C	C
Anatolia	–	=20	–	–	–	–	–	–	–	C	C
International J. of Tourism Research	–	–	–	–	–	–	1	2	2	A	C
J. Hospitality and Tourism Research	–	–	–	–	–	–	–	2	2	A	A
J. Tourism Studies	–	–	–	–	–	–	–	2	–	A	A
Tourism Analysis	–	–	–	–	–	–	1	2	2	A	A
Tourism and Hospitality: Planning and Development	–	–	–	–	–	–	2	2	2	B	B
J. Hospitality, Leisure, Sports & Tourism Education	–	–	–	–	–	–	–	1	1	C	C
J. Vacation Marketing	–	–	–	–	–	–	1	1	1	B	B
Managing Leisure	–	–	–	–	–	–	1	1	1	B	B
Tourism Recreation Research	–	–	–	–	–	–	–	–	1	B	B
J. Hospitality & Tourism Management	–	–	–	–	–	–	–	–	1	B	C
Facilities	–	–	–	–	–	–	–	–	1	–	A

Sources: Association of Business Schools (2010); Australian Business Deans Council (2010a); Australian Research Council (2009b); ISI Web of Knowledge (2010); Kelly et al. (2009a); Mingers et al. (2009); SCImago (2010).

a journal's items published in 2005–2007, that have been cited at least once in the following year. This last factor reflects the use of the level of non-citation of articles as a measure of journal quality (Weale, Bailey, & Lear, 2004). The expert panel journal rankings that are provided for comparison are those of the Association of Business Schools for 2009 and 2010 (Kelly et al., 2009a; ABS, 2010), the Australian Business Deans Council (2010), and the Australian ERA rankings (Australian Research Council, 2009c).

Table 2 indicates significant similarities and differences between ranking metrics and methods. It is interesting to note that even the two expert panels constituted in Australia demonstrate reasonable divergence on the same set of journals, while possible regional differences are suggested by the relatively higher ranking of tourism journals by the Australian Business Deans Council than their UK counterpart. For example, there is a significant divergence of the rankings for *Journal of Sustainable Tourism* which is rated an A in Australia and a 1 in the UK. The derived rankings from the 2008 RAE provided by Mingers et al. (2009) will possibly give British tourism scholars in business schools relatively little heart as to the recognition of the quality of their work by their peers, plus also possibly reinforcing a perception that the research published by the 'new universities' is not given sufficient attention by panel members from business schools in pre-1992 universities (Lange, 2010).

In bibliometric terms Table 2 does indicate that the SCImago/Scopus metrics and associated rankings provides a strong alternative to ISI Web of Science as a measure of journal impact and prestige. It is likely that this will only become enhanced as a result of Scopus being used as the database for the Australian ERA review of research quality. In the Australian case it will also be interesting to note whether the use of Scopus metrics will also influence the ranking of journals by the Australian Business Deans and ERA in the longer term given that there appears to be some significant differences between the rankings derived from Scopus metrics and expert panel rankings. There is also the possibility that differences between databases in terms of the number of tourism studies journals and therefore potential higher cross-referencing will also affect citation counts and impacts and therefore rankings. However, it also emphasises that different metrics give different results and although there is a degree of concordance between them there are also significant differences. Such a perspective reinforces the bibliometric understanding that scientific impact is a multi-dimensional construct (Bollen et al., 2009). In particular, distinctions needs to be made between measures that provide a 'rapid' vs 'delayed' view of scientific impact and the difference between 'popularity' and 'prestige'. With respect to the latter, Bollen et al. (2009) emphasised the importance of four general clusters of impact measures: (1) usage measures, (2) a group of distinctive yet dispersed measures expressing per document citation popularity, (3) measures based on total citation rates and distributions, and (4) a set of citation social network measures. Although, perhaps ironically, their research suggests that in the longer term measures of scientific 'impact' may well be better served by neither the JIF or the SJR as they highlight the value of usage measures instead.

4. Conclusions

This paper has examined some of the bibliometric issues associated with the assessment of research quality in tourism and with journal ranking in particular. It has highlighted an increase in the range of metrics available beyond that of JIF and has noted the role of metrics based on Scopus and SCImago that will be of growing importance for tourism studies given their journal coverage and use in research quality assessments. However, it has also identified the growing importance of journal ranking exercises by expert panels. These panels also use journal metrics to inform their rankings, although there are different degrees of transparency in their decision-making.

The growth in the use of journal ranks as an indicator of research quality should not be understood as being isolated solely to the Australian and British examples that have been the focus of this paper. Because of the globalisation of research and scholarship there is increased policy learning between countries with respect to research assessment, especially given that such institutional exercises owe their 'existence and continuation to a political determination to legitimise the spending of a diminishing pool of public expenditure' (Tewdwr-Jones, 2005: 319). Even if various countries do not adopt the Australian or UK models they are often influenced by them for benchmarking purposes and/or to illustrate their research competitiveness. This is certainly the case in New Zealand, for example, where the New Zealand business deans have adopted the Australian ABDC list even though the New Zealand research quality review is more similar to the UK approach than the Australian. Furthermore, the development of global rankings for universities also acts as a driver for the adoption of quality metrics related to journal impact.

The setting of the rules of the game of research quality and its interpretation is very much a political act that favours some interests and values over others. As noted in section two this is part of the process of economization of research quality and knowledge production. Historically, the use of journal metrics as an indicator of quality has favoured the medical and natural sciences over humanities and the social sciences because of the inclusion of a far larger proportion of the total number of potential journals in these categories. Even with the expansion of journal coverage in the social sciences and humanities this situation has not changed dramatically with consequent implications for resource allocation by government, and therefore universities. But arguably there are more subtle implications for metric and review panel selection and that is in relation to the identification of what constitutes appropriate relevant research topics and methods, i.e. if the work is not regarded as relevant by the panel of the field in which it is categorised then it will earn a lower quality grade (as per the UK RAE described in 2.1). In such a situation tourism studies is potentially doubly-damned. Not only is the nature of what constitutes relevant tourism scholarship being increasingly affected by external factors but also if you do publish, and are even read, you may still perish because you have not published in the 'right' journals or with the 'right' publishers. This means that relevance is not defined by the problems research tries to deal with but by the outlet in which it is published (and by how large the external grant was that paid for it).

The response to this situation by many departments, individuals and journals is to try and play the 'game' better. There are several ways in which this occurs both covertly and overtly. At the journal level some journals encourage self-citation either through the direct encouragement by editors to contributors to cite from the journal or, more subtly, by encouraging reviewers and authors to ensure that appropriate articles from the journal have been cited within a submitted paper. At the publisher level when examining electronic versions of journal articles there is encouragement to reference or cite related papers from the same publisher via the use of electronic links and automated listing of citations and suggestions of similar papers. This last point reflects the schizophrenic nature of journal publishing under the set of institutional arrangements that now exist, because although the listing of citations and suggestions is a useful bibliometric and bibliographic tool the provision of suggested reading pathways clearly favours the references of one publisher over another. All this occurring at the same time that some of the commercial publishers of journals and rankings are also looking to promote their sets of bibliometric tools

and rankings as an 'efficient' means of benchmarking national and institutional research 'productivity' and 'competitiveness.'

As MacDonald and Kam (2007, 2009) have argued, emphasising ranking as a metric leads to a situation where a paper in a highly ranked journal is much more important as a unit of measurement than as a contribution to knowledge. This can lead to substantial gamesmanship to publishing in "quality" journals and a circularity whereby "quality" journals are defined in terms that are themselves defined in terms of "quality" journals. Similarly, Paul (2008: 325) an RAE panel member commented, 'for research quality – any measurement requires a definition that will then lead to measurement that meets the definition – but this is not adequate for a universal measure of research quality which needs to be independent of the definition if it to be meaningful'. Further going on to note that 'journal papers published in the top ranking journals have a quality that is not consistent] with the expectation 'that quality papers are published in 'A' grade journals and vice versa' (Paul, 2008: 328). Adler and Harzing (2009: 72) go so far as to suggest that current ranking systems 'are dysfunctional and potentially cause more harm than good' noting that ranking systems may not reward scholarship that address critical questions that matter most to contemporary society.

At a more theoretical level there also needs to greater recognition that benchmarking of academic and institutional research competitiveness via bibliometric exercises are inherently a component of the circuits of cultural capital that are fundamental to neoliberal thinking. Within the increasingly dominant higher education competitiveness discourse of academic capitalism and the entrepreneurial university, 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) (see also Hall, 2007, 2010b). 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.

So what is to be done? MacDonald and Kam (2007) suggests that gamesmanship will remain common until the rewards for publishing attach to the content of papers, to *what* is published rather than *where* it is published. This will require utilisation of a far wider range of approaches and metrics available than institutional lists of journal rankings. This means changing the rules of the game, something which the individual and collective representatives of tourism studies have not been very good at doing (assuming they have wanted too of course). The greatest challenge to tourism scholars may be to stop playing the game altogether. But perhaps more realistically, if more research is conducted on the applications of bibliometrics to tourism studies, as well as the decision-making of institutions, review panels, editors, publishers and professional and representative associations, then at least the use of metrics should become far more transparent and less open to misuse and abuse.

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