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**University and discipline cluster ranking systems
and the humanities, arts and social sciences**

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What is CHASS?

The Council for the Humanities, Arts and Social Sciences (CHASS)¹ is the national advocacy body for the humanities, arts and social sciences in Australia. Its membership includes the learned academies covering the humanities, arts and social sciences, the professional peak bodies for the deans of humanities, arts and social sciences, including education, and many arts and professional bodies.

The humanities, arts and social sciences are critically important to Australia. They play a key role in the national innovation system and underpin the development of our society, culture and individual identity. Through its policies and programs, the Council promotes values of cultural diversity, national wellbeing, societal inclusiveness, environmental respect and liberal scholarship.

The aims of CHASS are:

- To represent the interests of the sector
- To promote the contribution of the sector to government, industry and the public
- To provide a forum for discussion between the humanities, arts and social sciences sectors in Australia
- To build up the innovative capacity of Australia, through better linkages between this sector, and science, engineering and industry.

¹ <http://www.chass.org.au/>

University and discipline cluster ranking systems and the humanities, arts and social sciences

Abstract

This paper focuses on the exclusion of the humanities, arts and social sciences (HASS) from university and discipline cluster ranking systems and examines some ways in which that exclusion could be addressed. In particular, it traces the development of indicators such as ‘target expanded’ citation analysis and tiering or ranking of outlets, including books and conferences as well as journals. It draws on experience in Australia, especially with the ambitious attempt to construct consensually-derived tiered outlets for numerous disciplines including those in HASS in the context of the introduction of a new Research Quality Framework along the lines of similar exercises in the UK, New Zealand and Hong Kong.

Introduction

The proliferation over recent years of university ranking systems has generated a great deal of controversy, interest and analysis. From the wide-ranging debates about methodology and purpose a number of consistent messages have emerged. First, it is widely acknowledged that all rankings have significant methodological limitations, and that while the top performers are typically recognisable on intuitive and objective grounds, the significance of gradations further down the scale is often weak. Second, that notwithstanding such limitations, rankings are a permanent and growing part of the higher education landscape. Third, the outcomes of rankings are seen to have important consequences for the universities and subject areas involved: they must be taken seriously.

A strongly emerging fourth theme is that disciplinary clusters are becoming recognised as a potential key unit of analysis, with advantages of greater precision and fairness over the gross institutional rankings system. It is in this light that a fifth message is beginning to assume growing importance: the humanities, arts and social

sciences (HASS), with very few exceptions, are poorly covered by existing ranking schemes, or not covered at all. Whether the aim is to identify where the world's or nation's best research is being carried out, respond to the evident necessity of recognising that a good deal of the most important research and challenging education is conducted across the natural-human sciences divide, or to provide prospective students with information to guide their choices, the invisibility of broad areas of academic knowledge which are self-evidently popular – indeed, increasingly so - and the evident bias towards science and medicine must be of concern to all stakeholders interested in higher education as an interdependent *system* of research, education and knowledge transfer.

There are many reasons for this situation. Perhaps the most important is the difficulty in framing objects of analysis and assessing performance where academic knowledge production is not based on standard experimental methods. HASS as well can be more locally-oriented or culturally-specific than the natural and engineering sciences. Forms of scholarly communication and academic output are typically more diverse, ranging from books and journal articles to creative performances or products². These outputs are increasing in quantity and quality as HASS disciplines have been drawn into the research orbit in higher education from their oftentimes origins in polytechnics and colleges of further and vocational education. These factors vary among disciplines and local focus of research certainly does not preclude it being of international relevance. However the productive diversity of both method and output – and the history of focus on the natural sciences as normative research models - is in practice reflected in the very patchy coverage of HASS books and journals by databases used for measuring research output and citations. It is also apparent that patterns of citation behaviour vary among HASS disciplines, and that for various reasons (including the signal importance of books and book chapters) HASS publications tend to generate smaller standard citation volumes than those in the sciences. In the academic fields, except for economics, the most prestigious award, the Nobels, go only to the sciences. As a consequence, efforts to base international

² For a recent brief summary of these factors as they relate to university rankings see Nederhof, A.J. "Bibliometric monitoring of research performance in the Social Sciences and the Humanities: A review" *Scientometrics* Vol. 66, No. 1 (2006) 81-100

comparisons on bibliometrics and awards, such as those of Shanghai Jiao Tong University,³ have to date strongly favoured the natural and biomedical sciences.

Even within national systems, the diversity and fluidity of HASS structures, methodologies and outputs has made the task of ranking based on research performance difficult. The Melbourne Institute⁴ has attempted discipline-based rankings which included some HASS areas, but acknowledged that it had omitted many others, such as the newer humanities, creative arts and social sciences other than economics, as well as cross-disciplinary studies. This, its principals readily concede, makes their work skew toward the traditional bases of research and neglect the emerging and popular fields of HASS endeavour.⁵

Many rankings schemes draw on survey data as well as bibliometric information. Surveys can cover academic peers, senior university officials, students, alumni or employers. For the purpose of assessing research reputation, access to appropriate academic peers is clearly necessary, but is problematic for cross-disciplinary fields, newly emerging areas of study, and locally-focused research.

Biases in favour of the sciences and of some very few established disciplines within HASS are also introduced with the use of public research funding data, as used by the Melbourne Institute exercise, the Canadian rankings in Maclean's magazine and the UK league tables drawn up by the Times Higher Education Supplement. Humanities and social sciences are frequently overlooked in national research and innovation funding systems, due to historic and systemic biases against the kinds of innovation which HASS disciplines typically contribute to, such as services innovation.

These problems do not mean that the quality of HASS research is not assessable in principle, or that it is not possible to make judgements about where the best research in particular areas may be located. However they have made it difficult for such assessments to be made reliably, simply and regularly, which are in practice key requirements for most international ranking schemes.

³ <http://ed.sjtu.edu.cn/en/>

⁴ <http://www.melbourneinstitute.com/>

⁵ Dorothy Illing, 'Local unis leading world' *The Australian Higher Education Supplement* 29 November 2006, p. 25.

Addressing the HASS issue

That said, it is becoming increasingly clear that rankings exercises need to attempt to address this major lacuna in their coverage. This paper will outline some ways that this might be attempted, concentrating on examples from the Australian experience which are germane - in particular, the current attempts to incorporate a form of metrics ('tiered outlets') applicable across potentially all disciplines. The purpose is to work incrementally toward a situation where it is possible for those many organisations and groups who conduct rankings to begin to consider including more HASS disciplines in their work. CHASS has made a number of contributions to this process and this paper will draw on those inputs.⁶

It is useful to acknowledge that the kinds of large-scale research assessment exercises which have been conducted in the UK, New Zealand and Hong Kong and planned to start in Australia in 2008 have been, and will be, carried out across all disciplines, and that explicit or implicit rankings have emerged strongly from such exercises. Most organisations which currently conduct rankings surveys neither have the resources to match such publicly-funded, discrete and comprehensive exercises nor focus solely on national data. Instead, they rely on robust national data to generate their international comparisons. For this reason, it is important for rankers to take full account of what data and methods are adduced in these exercises to supplement the standard measures and metrics. A focus on deriving what comparative dimensions are possible from these exercises would be a good starting point, for they all employ an array of measures of esteem, performance, visibility and the testimony of expert peers that are ideal 'triangulations' if ranking is to gain general acceptance as meeting standards of scholarly rigour.

To acknowledge the problems with metrics-based methods for HASS is to assert equally that peer assessment methods – reasonably well accepted as an indicator by many rankers – are no more difficult or less reliable for HASS as for the rest of the discipline array. Indeed, an analysis conducted by the Australian Research Council of

⁶ See, for example, 'Measures of Quality and Impact of Publicly Funded Research in Humanities, Arts and Social Sciences', CHASS Occasional Paper 2, 2005, <http://www.chass.org.au/op2.pdf>.

research in the Humanities and Creative Arts discipline grouping in 2004⁷ used a peer assessment process of international and domestic research leaders to arrive at qualitatively rich findings with good correlation with quantitative methods.

The study was based on a substantial bibliometric analysis contained in an ARC commissioned report on citations to Australian journal publications, benchmarking Australian performance against world performance.⁸ The findings included that ‘the “citations per publication” rate for Australian humanities is above the “world” average, and that publications from ARC-funded research have very high citation impact and appear in very high-impact journals. The report includes the humanities amongst the strongest disciplines for ARC-funded research, along with chemical sciences, engineering and technology, and agricultural, veterinary and environmental sciences. ... for the HCA as a whole, it was possible to say that the impact as measured by ISI citations was higher than the world average, and that the published research by the researchers which the ARC process selects and supports had a disproportionately high impact, both in terms of the Australian average impact, and the world average’.⁹

While this indicates *prima facie* the strength of the humanities disciplines in the country, it hardly begins to tell a complete story. There is inadequate coverage by ISI citation methodology of the breadth of HCA research, and therefore there is great difficulty comparing different HCA disciplinary areas. For example, only a small proportion of Australian research in law, the arts or architecture are captured in the ISI Indexes. The ‘new’ humanities like cultural studies and media and communications are even less likely to be represented because of the recency of establishment of their key journals, many of which started as non-refereed ‘tendency’ forums for carving out new territory. And, of course, so-called ‘regionally specific’ research, in this case Australian history or literature studies, tends to be less well represented in ISI journals. (Consider this in relation to the European Reference Index for the Humanities, to be discussed later.)

⁷ ‘Review of research in the Humanities and Creative Arts discipline grouping’, Australian Research Council 2004, unpublished ms.

⁸ Linda Butler, The Australian National University’s Research Evaluation and Policy Project, *ARC-supported research: the impact of journal publication output 1996-2000*

http://www.arc.gov.au/pdf/arc_supported_research.pdf

⁹ ‘Review of research in the Humanities and Creative Arts discipline grouping’, pp. 61-2.

On the other hand, the humanities embraces some disciplines which are well established, nay venerable, and are thoroughly international in their content and methods and field research. Philosophy and archaeology are examples; ISI-indexed journals cover these fields better. Claims for these disciplines having strong international impact are well supported by citation analysis.

The ARC's 'Review of Research in the Humanities and Creative Arts discipline grouping' conducted two surveys of leading national and international researchers designed primarily to elicit judgments of the strength of Australian research undertaken in HCA fields. The correlations found between such qualitative indicators and the ISI metrics were naturally limited, however. The responses in philosophy, cultural studies and media and communications, and Asian studies were in strong agreement with each other about the quality and profile of Australian research. While these qualitative inputs found correlation with the quantitative in the case of an established and structurally internationalised discipline like philosophy, the other two are regionally specific and/or emergent sub-fields poorly covered in ISI.

Notwithstanding that this 2004 study was a one-off, requiring substantial customisation and structured to generate national disciplinary strengths rather than institutional rankings, it does demonstrate that globally benchmarked findings highly relevant to rankings exercises in the humanities are possible.

New approaches to HASS metrics

But the most immediate current challenge is to develop a suite of metrics suitable for HASS. This will become more realistic as Thomson ISI responds to growing calls for more inclusiveness in its coverage of HASS journals. But it is also the case that some advance is be made already by interrogating Thomson ISI at a deeper-than-usual level to reveal more than just Thomson-journal-to-Thomson-journal citation. This so-called 'target expanded' citation analysis has been developed recently by leading bibliometricians.¹⁰

¹⁰ Henk F. Moed, *Citation Analysis In Research Evaluation*, Kluwer Academic Publishers Group, 2005. See also the work of the Leiden group on this matter, as outlined, for example, in Thed van

As is well known, most disciplines in HASS receive very limited coverage of output in Thomson ISI for two reasons: much of their output appears in other media, such as books, book chapters, and non-ISI journals; and, ISI's coverage of the disciplines' journals is not as comprehensive, particularly for Australian research, as it is in the experimental sciences. However, leading Australian bibliometrician Linda Butler has shown that is possible, though time-consuming because of the only semi automated nature of the process, to construct metrics based on Thomson ISI which capture ISI journal citations to not only ISI journals but also articles in other journals, books, book chapters, conference proceedings and other publications (see Figure 1, taken from 'RQF Pilot Study Project – History and Political Science: Methodology for Citation Analysis'). This was trialled by Butler in a CHASS Bibliometrics Project piloted with the Political Science and History disciplines in Australian universities in late 2006 and received general though cautious assent from leaders in those disciplines as an advance worth pursuing.¹¹

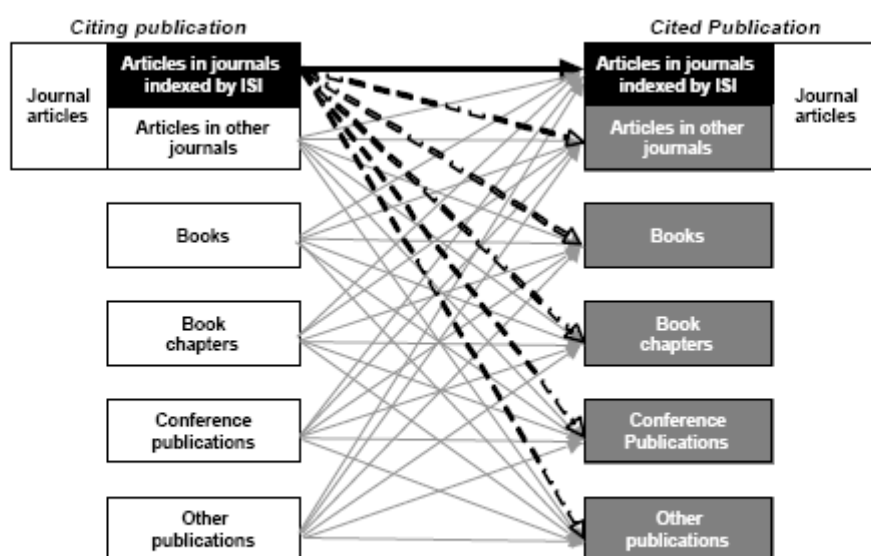


Figure 1: ISI coverage of publications and citations

Leeuwen, 'The application of bibliometric analyses in the evaluation of social science research. Who benefits from it, and why it is still feasible', *Scientometrics*, Vol. 66, No. 1 (2006), 133–154.

¹¹ 'CHASS Bibliometrics Project: Political Science and History Panels', http://www.chass.org.au/papers/bibliometrics/CHASS_Report.pdf and Linda Butler, 'RQF Pilot Study Project – History and Political Science: Methodology for Citation Analysis', http://www.chass.org.au/papers/bibliometrics/CHASS_Methodology.pdf

But the more practical avenue of advance, which has the advantage of not separating out exclusively the HASS sector – although it is certainly designed to address its issues - is tiering or ranking of outlets, including books and conferences as well as journals. It would seem imperative for HASS to develop a workable and reasonably global system of tiering or ranking. Each discipline field or cluster would need to develop and reach workable consensus on the means of structuring tiers of ‘outlets’.

This approach is attracting significant interest in some jurisdictions, including from the Higher Education Fund for England (HEFCE) and the Arts and Humanities Research Board in the UK. The European Reference Index for the Humanities (ERIH), developed by the European Science Foundation,¹² has gone further than most in detailing tiered journals in several humanities disciplines in a European context (see Annex 1). Tiering of conferences and journals has been trialled in Australia for economics¹³ and for information and communications.¹⁴ These trials proceeded a more general process which canvassed the university sector’s acceptance of quantitative indicators across the board.¹⁵ These trials were conducted by Butler’s Research Evaluation and Policy Project (REPP). These trials had to be specially funded, which underlines that we are still far from a time when such measures are embedded in the system. However, for ICT, the process - which started in 2005 – now has an agreed preliminary tiering of conferences, which can be reviewed at <http://www.core.edu.au/>. This underlines both that the process can run with alacrity, and that HASS are not the only disciplinary clusters that find standard bibliometric indicators problematic: they pose major problems for engineering and information and communications - which rely so much on conference publications.

The RQF in Australia: operationalising new approaches

¹² <http://www.esf.org/research-areas/humanities/activities/research-infrastructures.html>

¹³ Claire Donovan and Linda Butler, ‘Testing Quantitative Indicators of the Quality and Impact of Research in the Social Sciences: A Pilot Study in Economics’, Research Evaluation and Policy Project, ANU, 2005, http://repp.anu.edu.au/papers/20050912_econ_workingpaper.pdf

¹⁴ ‘The Initial Process for an Australian Ranking of ICT Conferences’, <http://www.core.edu.au/>

¹⁵ ‘Workshop on Quantitative measures of Research Performance’, http://repp.anu.edu.au/papers/200505workshop_outcomes.pdf

The introduction of a Research Quality Framework (RQF), along the lines of similar exercises in the UK, New Zealand and Hong Kong, has focused the development in Australia of appropriate metrics for all disciplines that are not sufficiently, or completely inadequately, covered by standard metrics. The new approach is that of ‘tiered outlets’, which include book and journal publishers, and conferences (see Annex 2). It is not exclusively focused on HASS disciplines (engineering, ICT and mathematics are disciplines which are not well served by standard metrics) and this could be seen as an advantage in the early stages of the development of such metrics, as it will not lead to the possible ghettoisation of HASS, to ‘work-arounds’ or ‘second-best’ methodologies for ‘problematic’ discipline groups.

It is instructive to compare the approach of the European Reference Index for the Humanities and the Australian Department of Education, Science and Training Bibliometrics advice (compare Annex 1 and 2). ERIH is at pains not to allow their tiering to be seen as a pure quality ranking. It carefully distinguishes between the appropriate provenance of each of the three categories of journal publication, and introduces – for the first time, it claims – a category C which ‘represents the real European added value of ERIH. Unlike the journals in the two other categories, “C” journals listed in ERIH fully reflect the linguistic and cultural diversity of Humanities research production in Europe. For many of them, ERIH offers the first opportunity to gain wide visibility also within less specialised research communities.’

On the other hand, the Australian approach to tiered outlets is just as carefully to emphasise *quality* of the output appearing in the outlets rather than the *importance* of the outlet to the discipline. It also definitively sees the tiering as hierarchical: ‘The distribution of the tiers is expected to vary slightly across disciplines, however, they will approximate: Tier A* (top 5%), Tier A (next 15%), Tier B (next 30%) and Tier C (bottom 50%)’.

The task and timetable set for the public officials and the university system to implement the RQF is truly formidable. The process of securing consensus amongst several dozen disciplines for their tiered outlets, including, it should be emphasised, book publishers and conferences as well as journal publishers, is essentially of about six months duration, to the end of this year. Whether the RQF is conducted in 2008

according to the government's current schedule remains moot. However, regardless of whether this particular 'framework' is delayed or implemented in a different form, the work to construct a system of modified quality metrics which is normatively inclusive of HASS appears set to continue.

Conclusion

A robust system of tiered journals, book publishers, and conferences, when included with other measures of esteem, performance, visibility and the testimony of expert peers, would begin to take us toward a more HASS-inclusive and therefore more sustainable and acceptable ranking system for the global university system. This paper has reflected on the glaring lacuna of HASS-exclusion in most ranking systems as they currently are constituted, and explored some of the current approaches to addressing this lacuna. The implementation of these approaches must start at a national level, while being supported to achieve international comparability and relevance.

Annex 1

European Reference Index for the Humanities (ERIH)

Frequently asked questions

<http://www.esf.org/research-areas/humanities/activities/research-infrastructures/faq-sheet.html>

Why create the ERIH?

The most important stimulus for creating ERIH was the concern of funding agencies and research communities regarding the low visibility of European Humanities research. It was found that this was partly due to the lack of suitable tools to show the range of high-quality publishing activity of European researchers. Many of the available databases were - and still are - limited in coverage and tend to be centred on Anglo-American publication (as is the case with the ISI databases AHCI and SSCI).

What is included in ERIH?

ERIH includes good, peer-reviewed research journals in 15 broad disciplines of the Humanities. The establishment of new panels for emerging areas of Humanities scholarship (e.g. media studies, ethics) is under consideration.

Why are monographs not included in ERIH?

Monographs are an important publication medium in Humanities research. The intention is to include them in the next stage of the project.

ERIH is being constructed in a step by step manner, starting with peer-reviewed research journals, then moving on to the more challenging task of including monographs (mainly series of monographs, conference proceedings, edited volumes, etc.).

Why are some yearbooks included and others not?

Regardless of the title of the serial, a yearbook is included if it follows the same rules as scientific journals, i.e. if it is good quality as defined for the research journals; if the submission of papers is open to all researchers; if the manuscripts go through a peer review process; etc.

Who is responsible for compiling the lists?

ERIH has been produced by European scholars for the benefit of European scholarship. 15 Expert Panels, one for each [discipline in ERIH](#), have analysed and assessed journal lists initially provided by the participating ESF Member Organisations.

Feedback from a consultation of national funding agencies, academies, subject associations etc. in 2006, involving also a wide range of European scholars through their subject associations, specialised research centres and universities, provided further input for the Panels.

Who is responsible for the process used in compiling ERIH?

Overall responsibility for the project lies with the [ESF Standing Committee for the Humanities](#). The SCH currently consists of representatives for ESF Member Organisations from 30 European countries. Many SCH members are chairs of research councils and researchers themselves.

ERIH also reports to the governance structure of the EC-financed ERA-NET project [HERA](#) (“Humanities in the European Research Area”).

Responsibility for operational decisions concerning ERIH lies with a small Steering Committee appointed by the SCH.

How are the lists compiled?

The raw material, i.e. proposals for journals, for the “initial lists” was provided by the participating ESF Member Organisations, who for their part had either consulted scholars through national consultation exercises, or relied on existing national reference tools.

Following decision on the 15 disciplinary domains by the ERIH Steering Committee, 15 Expert Panels were set up to define the [scope](#) of their remit and to analyse and assess the journal lists according to the [guidelines](#) (PDF 79.3 KB) approved by the [Steering Committee](#).

Draft lists were produced in late autumn 2006. The lists were then subjected to wide consultation involving ESF Member Organisations, European level and some national subject associations and specialist research centres. Having assessed the feedback, the Panels produced their “initial lists” in the autumn of 2006, which were subsequently validated by the SCH and HERA Network Board.

The Steering Committee has advised the Panels on issues relating to harmonisation of the lists.

Why are the lists called “initial lists”?

The term “initial list” has been chosen to indicate that this is the first stage in the establishment of such categorised lists of good research journals for the Humanities. It is expected that further rounds of feedback and structured stakeholder involvement will lead to further fine tuning of the lists.

For that purpose the ERIH team has set up a [feedback procedure](#) to enable researchers and publishers to provide input to be taken in consideration at the first update (in 2008).

How often are the lists updated?

The first update will take place within a year of the publication of the lists, i.e. in 2008. After that updates are expected to take place every 4 years.

Does the categorisation A, B and C reflect differences in quality?

The distinction between the categories A, B and C is not primarily qualitative; rather, the categorisation is determined by a combination of characteristics related to scope and audience (see the [guidelines](#) (PDF 79.3 KB) for definition).

Journals have different profiles, and their scope of audience and field vary. Papers in journals with wide international prestige are not automatically of higher quality than papers in journals which are known and read only in a very specialised field.

Similarly, a paper published in the native language in a journal which has only local importance can lead to a strong impact for a certain type of research.

The Expert Panels emphasise that high quality research appears in journals throughout all three categories.

Do the C journals make up some kind of residual category?

No.

All the journals that are included in ERIH are by definition good scientific journals. As such, “C” journals are therefore defined by their scope, audience and, sometimes, authorship. They are important venues of publication, for example, for research of great importance for specific language communities.

The “C” category represents the real European added value of ERIH. Unlike the journals in the two other categories, “C” journals listed in ERIH fully reflect the linguistic and cultural diversity of Humanities research production in Europe. For many of them, ERIH offers the first opportunity to gain wide visibility also within less specialised research communities.

Do all the journals belonging to the A category publish only in English?

No.

The diversity of languages used in Humanities research is important, in terms of both authors and readers. The key for inclusion in the “A” category is not the language used, but the range of readership.

In ERIH, any “forum” language for a research field can be international, although English remains the most prominent one.

Why is a categorisation needed? Why not use impact factors?

In many fields of science research, the prestige and weight of a journal is determined by calculating its impact factor based on citations. This bibliometric tool is restricted to fully-blown databases, such as the one provide by ISI Thomson. In these databases, European Humanities scholarship is not adequately represented – “impact factors” therefore tend to distort any measurement of multilingual, European Humanities scholarship.

There is also strong methodological criticism about such a mechanistic approach, as it reflects the volume and the range of different fields of science rather than the quality of the papers themselves. Furthermore, data and impact factors for emerging fields are difficult to capture through such methodologies. In the Humanities, such a procedure would result in omitting journals covering small fields.

The peer review procedure used in compiling the ERIH lists, was considered, certainly in the early stages, to better reflect the prestige of a journal. It is also the norm for other forms of scientific interactions.

How can the lists of journals be used?

The ERIH does not encourage using the lists as a basis for calculations in order to assess individual candidates for positions or applicants for research grants. Rather, they may provide a useful tool for aggregate bench-marking of national research systems, for example in order to determine the international standing of the research activity carried out in a given field in a particular country. For individual scholars, the lists will be a useful reference tool when considering where to submit research articles.

What are the future plans for ERIH?

Some fields of Humanities research have not yet been covered (such as media studies and ethics). Consideration will be given to this issue. Edited volumes and monographs continue to be major publication channels in the Humanities, and the intention is to include them in the next stage of the project. ERIH aims to be the platform for the construction of a research information system for European Humanities research. It will provide a research infrastructure for the mapping and better dissemination of European, journal-based research in the Humanities. By the same token, ERIH lists can be useful as a basis for VLE systems (Virtual Learning Environment).

Annex 2

Department of Education, Science and Training

Research Quality Framework

<http://www.dest.gov.au/NR/rdonlyres/7A7F4AE6-95E5-49EB-8E80-07F924D347D1/17956/FAQBibliometrics_9August2007.pdf>

Frequently Asked Questions

Bibliometrics

How will metrics be used in the RQF assessment process?

The Development Advisory Group recommended a basket of quantitative measures that can be made available to Assessment Panels to assist the expert review process where appropriate. In particular, *citation data*, *research income data* and *tiered ranking of discipline-specific research outputs* will form a basket of measures to assist Assessment Panels in making their judgements to aid in the *holistic* assessment of total research activity.

Will metrics be used to derive a quantitative score?

The metrics will not be combined or weighted in any formulaic way to obtain a single quantitative rating.

What are the bibliometrics measures to be used by the Assessment Panels?

For each Evidence Portfolio the Assessment Panels may receive the following quantitative measures to inform the assessment process:

ranked research outlets analysis; *and*

citation data analysis.

It is anticipated all Panels will use ranked research outlets. Citation data is not appropriate for all disciplines and will only be used when a significant proportion of the output of the discipline is in journals indexed by the data supplier. The *Panel Specific Requirements* outline the metrics to be considered for each discipline.

What is the difference between Research Outlets and Research Outputs?

A research 'outlet' refers to the avenues in which an output appears, such as journal name, conference, book publisher, theatre, art gallery, etc. A research 'output' refers

to the individual journal articles, conference publications, book chapters, artistic performances, films, etc. that are contained in a Research Group's *'body of work'*.

What part of the Evidence Portfolio will be used to derive the metrics?

The specific output types considered important for the discipline which may be used to derive research output rankings will be listed in the *Panel-Specific Requirements*. These may cover journals, book publishers, conferences, performing arts venues, etc. All outputs listed in the *'body of work'* that appear in these outlets will then be included in the analysis for this metric. This includes the *'four best research outputs'* if they are in the appropriate outlet.

Citation analysis will be performed on all Journals Articles listed in the *'body of work'* that are indexed by the data supplier. This includes the *'four best research outputs'* if they are Journal Articles. For most disciplines using citation analysis, only Journal Articles will be used, however, some disciplines may include citations to books, book chapters, and articles in journals not indexed by the data supplier in their analysis (see *Panel Specific Requirements*).

Who is responsible for compiling the bibliometric measures?

The ranked research outlet analysis and the citation data analysis will be assembled centrally by DEST and provided directly to the Assessment Panels. The Assessment Panels will only consider the DEST compiled bibliometric measures. The benchmark data that is central to the citation analysis will be obtained from the data provider.

Research Outlet Analysis

What is Research Outlet Analysis?

Research outlets will be classified into four tiers against which output counts will be presented to the Assessment Panels. The distribution of the tiers is expected to vary slightly across disciplines, however, they will approximate: Tier A* (top 5%), Tier A (next 15%), Tier B (next 30%) and Tier C (bottom 50%).

Outlets are to be *ranked according to the quality* of the outputs appearing in them, *not their importance* to the discipline.

Will panels use a single list of ranked outlets?

No – there will not be a single list per panel. Outlet ranking takes place at the discipline level.

How are the ranked outlet lists developed and agreed?

The outlet rankings are developed and agreed by relevant discipline bodies, not DEST. This work is being supported by the Research, Evaluation and Policy Project Team at The Australian National University, the National Academies Forum, and discipline peak bodies.

Should my discipline rank research outlets from outside the discipline? (e.g. psychology journals for economics discipline).

No – disciplines should only rank research outlets that naturally sit within a discipline. Outlets outside the discipline will be ranked by the appropriate discipline group who are in the best position to make a comparative assessment of the quality of those outlets.

Can different disciplines use the same outlet ranking list?

This is possible, and will depend upon general agreement between the relevant disciplines. However, for those disciplines using citation analysis, it is preferable for the journal ranking lists to remain separate as these may be used to determine citation benchmarks against which performance will be judged.

How do I participate in agreeing the ranked outlets?

All discipline groups undertaking a ranking exercise will consult widely with the sector once they have developed a draft ranking. It is better for you to wait until comment is sought on this draft ranking as comments will be sought through a response template. The template will be provided to help discipline groups collate and analyse responses. DEST will publish a list of the discipline specific groups responsible for consulting and agreeing the outlet rankings once the draft rankings have been developed.

Is research outlet ranking just the journal impact factor?

The ranked journal outlets are *not necessarily* derived from the journal impact factor, but could be with general agreement of the discipline. While some disciplines may choose to use the journal impact factors, others will not. You should check with your discipline facilitator regarding the ranking methodology used for your discipline.

How will multi-disciplinary research outlets be handled?

Each discipline will be able to include true multidisciplinary journals such as *Science* and *Nature* in their discipline specific ranking process. As outlets are to be *ranked according to the quality* of the outputs appearing in them, *not their importance* to the discipline, it is anticipated that outlets will usually have the same ranking for all disciplines that list them.

What if some of my research outputs are not listed by my principal discipline?

Where research outlets are not ranked by your home discipline, DEST will use the outlet ranking of the principal discipline to perform the analysis.

Citation Analysis

What are the principal components of citation analysis?

Citation analysis provides two analyses for the Assessment Panels to consider:

Citations per publication; *and*

Centile distribution of the research groups outputs.

Citations Per Publication

DEST will analyse the relevant journal articles (or equivalent) from the '*body of work*' for each Research Group, obtaining *total publication* and *citation counts*, and calculate a *citation per publication* rate for each Group. DEST will provide this data in summary form to the Assessment Panels, together with relevant *world* and *Australian benchmark data* for the disciplines they cover.

Centile Distribution of the Research Group's Outputs

DEST will analyse the relevant journal articles from the '*body of work*' for each Research Group and obtain a distribution of all articles across centile bands. This will show the number and proportion of each Research Group's Research Outputs in the '*body of work*' that are judged to be among the top 1%, 10%, 20% and 50% most highly cited publications for its discipline in any given year.

The benchmark data on which this analysis is based will be obtained from the citation data supplier.

Will all citation analysis be used for all disciplines?

Citation analysis is not appropriate for all disciplines. It will primarily be used where the majority of output for a discipline appears in journals indexed by the data supplier. Those disciplines using citation analysis are detailed in the *Panel-Specific Requirements*.

When will the citation data supplier be announced?

DEST will announce the citation data supplier in early September 2007.

How do I find out what the benchmarks are for my discipline?

Benchmarks (citation per publication averages, and centile threshold levels) will be calculated on the basis of journal sets. These will be publicly available on the DEST website once complete.