

Higher education research as tribe, territory and/or community: a co-citation analysis

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Abstract This article builds upon existing research which has been mapping and analysing the field of higher education research, and, in particular, on the analysis of the articles ($n = 406$) in 17 specialist higher education journals published in the English language outside of North America during the year 2000. It extends that analysis by examining the citations ($n = 10,065$) given in the articles, in particular the patterns of co-citation. This enables a clearer identification of the tribes or communities of practice that occupy the territory of higher education research. An attempt is made to identify the key members of these tribes or communities, and to chart the key relationships within and between them.

Keywords Higher education research · Higher education journals · Citation · Co-citation · Communities of practice

Introduction

This article builds upon existing research (Tight 2003, 2004a, b, 2006, 2007) which has been mapping and analysing the field of higher education research. Part of this project examined the articles ($n = 406$) in 17 specialist higher education journals published in the English language outside of North America during the year 2000. The research to date has focused upon the identities and locations of the authors of the articles, the themes or issues being studied, the methods and/or methodologies applied, the levels at which the analyses have been pitched, and the theoretical explicitness of the analyses. This data set has also been compared with a smaller sample of North American higher education journals published in the same year (3 journals, 79 articles—see Tight 2007).

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In addition, the project has been extended to examine the citations ($n = 10,065$) given in the 406 articles originally analysed (Tight 2006). A citation analysis offers answers to the questions (at least for the year 2000 and for the sample of journals analysed) of who cites whom, and which authors and articles or books are most cited overall. In this article, by examining patterns of co-citation (i.e., authors who are cited together), it also enables an exploration of the structure of the tribes or communities of practice that occupy the territory of higher education research. In undertaking this mapping, an attempt will be made to identify the key members of these tribes or communities, to chart the key relationships within them, and to explore the relationships (or lack of them) between them.

The remainder of the article is in four sections. First, some of the theoretical ideas around the linked notions of academic tribes, territories and communities of practice will be discussed. The methodological and analytical approach adopted will then be outlined. Third, the patterns of co-citation will be examined for what they reveal about the frameworks of tribes, territories and communities of practice. Finally, some conclusions will be reached.

Theoretical frameworks

In a classic—and, as will shortly become apparent, much cited—piece of higher education research, Becher (1989) interviewed over 200 academics in 12 disciplines in 18 elite universities in Britain and California. He focused on, amongst other things, the nature of the disciplines, specialisation within them, community life, communications and careers. Applying the work of earlier researchers, he categorised the disciplines chosen in terms of “four basic sets of properties: hard/soft and pure/applied in the cognitive realm; convergent/divergent and urban/rural in the social” (p. 153). He presented a picture of “academic institutions made up of basic organizational units whose constituent faculty members have relatively little mutuality of research interest” (pp. 163–164), but concluded that:

Paradoxically, the more it becomes necessary to recognize the academic scene as disjointed and compartmentalized, the more essential it becomes to turn towards an apprehension of that scene in its entirety. The tribes, after all, share the same ethnicity; the territories they occupy are part of the same land mass. (ibid, p. 171)

Becher later extended this research by examining six professions (1999—for which he adopted a 2-fold technical/non-technical, procedural/processual typology), while his original study has been updated and extended (Becher and Trowler 2001). Others, operating within the same broad framework, have focused on more specific aspects of academic work, showing, for example—and with particular relevance in the context of the present study—how different disciplinary (tribal) discourses impact on academic writing (Hyland 2000).

An alternative, and somewhat more contemporary, means of conceptualising “the linkages between academic cultures (the ‘tribes’) and disciplinary knowledge (their ‘territories’)” (Becher and Trowler 2001, p. xiv) is in terms of communities of practice (Lave and Wenger 1991). The idea of communities of practice has been quite widely applied in the social sciences in recent years, particularly to studies of organisations and professions (e.g., Hendry 1996), and, more recently, in educational research (e.g., Fanghanel 2004; Fuller et al. 2005; Trowler and Knight 2000).

Communities of practice have been explained by one of their leading exponents in the following terms:

Communities of practice are the basic building blocks of a social learning system because they are the social “containers” of the competences that make up such a system. By participating in these communities, we define with each other what constitutes competence in a given context: being a reliable doctor, a gifted photographer, a popular student, or an astute poker player... Communities of practice define competence by combining three elements. First, members are bound together by their collectively developed understanding of what their community is about and they hold each other accountable to this sense of *joint enterprise*. To be competent is to understand the enterprise well enough to be able to contribute to it. Second, members build their community through mutual engagement. They interact with one another, establishing norms and relationships of *mutuality* that reflect these interactions. To be competent is to be able to engage with the community and be trusted as a partner in these interactions. Third, communities of practice have produced a *shared repertoire* of communal resources—language, routines, sensibilities, artefacts, tools, stories, styles, etc. To be competent is to have access to this repertoire and be able to use it appropriately. (Wenger 2000, p. 229, original emphasis)

In short, communities of practice are the groups or networks which help guide, regulate and make meaning of our lives, both in work and outside.

How, then, might we distinguish these two frameworks, or should we see these conceptualisations of tribes and territories and of communities of practice, in particular as they apply to the study of higher education, as essentially the same? While recognising that there are strong similarities, which—along with their popularity—is why both frameworks are being used here, I would draw out four main distinctions in approach:

- First, the most obvious distinction is that, while the tribes and territories analogy was developed specifically for the study of higher education, the idea of communities of practice is intentionally more general in its scope.
- Second, while both frameworks examine what binds tribes or communities together, the former appears to give more emphasis to what distinguishes them from each other as well.
- Third, while the communities of practice literature focuses on the role of learning and enculturation in their development, the analysis of tribes seems to give more weight to traditions, issues of power and authority, and to the development of individuals over their whole career.
- Fourth, while one of the key elements of communities of practice is stated as their “norms and relationships of *mutuality*”, the analysis of academic tribes emphasises that they, by contrast, have “relatively little mutuality of research interest”.

One might conclude, therefore, that the tribes and territories analysis has more to contribute, if only because it has been developed and articulated within the field of higher education.

In this article, however, I propose to try and apply both of these analytical frameworks to the consideration of higher education research. For, as the discussion so far suggests, they both have something to offer, while neither could be said to address “the whole truth”. And they are not dichotomous, but share an interest in what draws groups of individuals together in a particular enterprise, in this case higher education research.

So, we may ask, if higher education research is conceived of as a territory (though, I would argue, not necessarily a discipline), what tribe or tribes occupy it? Or, alternatively, and as well, do higher education researchers share a sense of joint enterprise, enjoy norms and relationships of mutuality (in contrast to Becher's conclusion), and have a shared repertoire of communal resources, such as to qualify them for identification as a community of practice?

My conclusion, from an earlier analysis, was that:

higher education research is not a single community of practice but, rather, a series of, somewhat overlapping, communities of practice. We might seek to define these communities in terms of the topics they study, the method/ologies they use, the journals they publish in, their disciplinary backgrounds or some combination of these. (Tight 2004b, p. 409)

Or, to use the alternative metaphor, higher education research, as a developing field of study, could be conceived of as a partially explored territory through which a variety of tribes traverse. Some of these tribes are discipline-based (e.g., economics, psychology, sociology), some are based within education or higher education departments or centres, and some are from academic development or teaching and learning units. However, few tribes or individuals appear to live full-time within the territory. We shall see if the co-citation analysis confirms or modifies these initial conclusions.

Methodology and analysis

In a previous study (Tight 2003), I identified 17 English language higher education journals published outside of North America in the year 2000:

Active Learning in Higher Education
Assessment and Evaluation in Higher Education
European Journal of Education
Higher Education
Higher Education in Europe
Higher Education Management
Higher Education Policy
Higher Education Quarterly
Higher Education Research and Development
Higher Education Review
International Journal for Academic Development
Journal of Geography in Higher Education
Journal of Higher Education Policy and Management
Quality in Higher Education
Studies in Higher Education
Teaching in Higher Education
Tertiary Education and Management

These journals were chosen because they all focused exclusively (with the exception of the occasional article that might have a wider brief) on higher education.

They include one example of a higher education journal with a specific subject focus, the *Journal of Geography in Higher Education*, a well-established journal which predates

most of the subject specific journals established in recent years. Some of the journals selected are associated with particular higher education associations: thus both *Higher Education Quarterly* and *Studies in Higher Education* are linked with the UK-based Society for Research into Higher Education, while *Tertiary Education and Management* is linked to the European Association for Institutional Research. Most have particular specialist interests within higher education research—in academic development, assessment, Europe, learning, management, policy, quality or teaching—indicated fairly accurately in their titles, while one or two aspire to generic status.

Each of these journals might be said, therefore, to have the interests of one or more of the communities of practice or tribes within higher education research as their focus. Taken together, then, they should tell us something about the variety and ranges of these communities and tribes.

The analysis in this article focuses not so much on the characteristics of the 406 articles that were published in those journals during the year 2000, or of their authors (for which, see Tight 2003, 2004a, b, 2007), but on the works referred to, or cited, in the articles. In total, there were 10,065 citations, an average of 24.8 per article.

A database was created of these 10,065 citations, giving details of authors, dates of publication, titles, publishers (for books, reports, etc) and journals (for journal articles, etc). In cases where the same item was cited on more than one occasion, the details given were checked and, if necessary, corrected. Authors' names were standardised, and authors with similar names distinguished. While some errors doubtless remain, particularly in those items cited on only one occasion, these will not have a significant impact upon the results of the analysis.

Citation analysis has been described as:

A quantitative research approach based on the use of citation indexes. Two measures of scientific activity are used: first, the citation rates of authors, documents, and journals; and, second, the number of co-citations, that is, citation links between authors, documents, and journals. (Desmedt and Valcke 2004, p. 447)

Others, coming particularly from an information science background, have extended this work to examine the relationship between citing and the cited work, to carry out content analyses of citation contexts, and to explore the motivations underlying citation (e.g., Hyland 2000; White 2004).

The analysis that follows primarily takes the second approach identified by Desmedt and Valcke. Adopting their first approach, the citation rates of the authors, titles, publishers, journals and items referred to in the database are the subject of another article (Tight 2006). In the next section—using a variation of what has been termed reference network analysis (Hargens 2000)—patterns of co-citation of the most popular authors will be scrutinized for what they suggest about the structure of the higher education research literature.

The idea underlying the exploration of patterns of co-citation is that, when an academic author writes an article on a particular topic, they typically cite other, earlier, authors who have written items relevant to their topic. Where authors are cited in the same article, therefore, some linkage is implied, if only in the mind of the person writing the article. When co-citation happens relatively frequently, however, and involves a series of different authors making the same co-citation, then the grounds for suspecting a close linkage—in terms of sharing similar research or methodological interests—between those co-cited strengthen. In some cases, of course, this linkage is made manifest when those co-cited are actually co-authors of one or more items.

There are, of course, limitations to the methodological and analytical approach adopted. Some of these relate to the sample, which is confined to specialist academic journal articles published outside North America, English language publications and the year 2000. But that is still a substantial sample, and its analysis has been a major undertaking which future work might extend, for example, by looking at different years and assessing trends in citation patterns over time.

Citation analysis itself has also been the subject of criticism, in essence because a quantitative technique is being used to imply judgements of quality. Thus, the most cited authors, titles, journals and publishers may not necessarily be “the best”, with citations inflated through self-citation and cronyism, or deflated through jealousy and ignorance. Works may be cited for negative as well as positive reasons, and all citations may not be equal, with some referenced just in passing while others are discussed in detail. Some of these problems may be controlled for, of course, while, more generally, a critical perspective is adopted towards the results revealed.

Despite these reservations, however, it is contended that the analysis does show much of interest about the patterning of higher education research:

Citation is central to the social context of persuasion as it can provide justification for arguments and demonstrate the novelty of one’s position. By acknowledging a debt of precedent, a writer is also able to display an allegiance to a particular community or orientation, create a rhetorical gap for his or her research, and establish a credible writer ethos. (Hyland 2000, p. 20)

Citations, then, are in part about identifying the community or tribe you belong to, or, perhaps, that you would like to join.

Patterns of citation and co-citation

Citation patterns

Tables 1 and 2 list the most cited authors and items in the database (for a more detailed analysis, see Tight 2006). Table 1 shows that, even in a database drawn from articles published in journals based outside of North America, a North American author, Burton Clark, leads the list as the most cited. Five other North American authors also appear in the table: Schon, Trow, Dill, Argyris and Boyer. This strong North American presence is partly due to the greater, and earlier, development of higher education research there. It also reflects a somewhat contradictory tendency, in that, whilst most American higher education researchers appear to focus exclusively (or almost so—much as, it has to be admitted, most English higher education researchers do) on their own system, some take a more international approach (Tight 2007).

Interestingly, two of the American authors highly cited in the database, Schon and Argyris, who have often co-authored items, are not higher education researchers. They research in what might be termed the “contributory discipline” of organizational behaviour, and have much influenced higher education researchers.

Australian-based authors (at least at the time of the survey, 2000: three have since relocated to the UK, though one has now returned) also feature well in Table 1, led by the second-most cited, Paul Ramsden, and including four others (Biggs, Boud, Prosser, Trigwell). That Australia contributed three of the five most cited authors in the list supports

Table 1 The most cited authors

Rank	Author	Citations	Self-citations	No. publications	No. single authored	No. articles cited in
1	Burton Clark	73	0	16	73	45
2	Paul Ramsden	69	0	17	51	40
3	Tony Becher	47	0	13	35	28
	John Biggs	47	0	17	43	28
5	David Boud	45	0	21	26	26
6	Donald Schon	44	0	7	35	33
7	Ference Marton	42	4	13	9	18
8	Peter Scott	41	0	12	23	34
9	Ron Barnett	40	6	13	38	27
10	Graham Gibbs	39	3	25	29	24
11	David Kember	38	20	21	10	14
12	Guy Neave	37	5	23	25	19
13	Martin Trow	34	0	14	16	30
14	Lee Harvey	31	4	13	8	21
15	Noel Entwistle	29	7	15	12	18
16	Alan Jenkins	28	7	18	20	12
17	Mantz Yorke	26	13	19	20	10
18	Ulrich Teichler	25	7	18	16	15
19	Michael Prosser	24	1	11	2	15
	Keith Trigwell	24	1	10	1	16
21	David Dill	23	7	11	14	15
22	Chris Argyris	22	0	11	12	13
	Ernest Boyer	22	0	5	19	17
	Michael Gibbons	22	0	5	3	20

the view that in higher education research, as in a number of other areas, Australian researchers appear to “punch above their weight”.

Not surprisingly, however, the greatest number of authors featuring in Table 1, though not the best placed, are from the UK, which accounts for nine of the 24 included: Becher, Scott, Barnett, Gibbs, Harvey, Entwistle, Jenkins, Yorke and Gibbons. Three others—Marton, Neave, Teichler—were based elsewhere in Europe, and one (Kember) in Hong Kong.

It might seem surprising, though, that some well known writers on higher education—members of what has been referred to as the “first generation” of researchers in this field, outside of North America—do not appear on this list, or at least not highly enough to feature in Table 1. Thus, Elton, Kogan, McNay and others are absent. While this might be an artefact of the particular sample examined—a study of citations in book chapters could yield different results, as a study of different years certainly would—it may also reflect declining influence.

Two other points about Table 1 are worth noting. The first is that all of those named are men: women authors did not feature so highly in the citation counts. There are at least two kinds of explanation for this pattern. One is that women authors were in a minority

Table 2 The most cited items

Rank	Citations	Item	Author(s)	Date
1	48	Higher Education in the Learning Society	Dearing Report	1997
2	23	Learning to Teach in Higher Education	Paul Ramsden	1992
	23	The Higher Education System	Burton Clark	1983
4	20	Academic Tribes and Territories	Tony Becher	1989
5	18	The New Production of Knowledge	Michael Gibbons, Camille Limoges Helga Nowotny, Simon Schwartzman, Peter Scott and Martin Trow	1994
6	16	Educating the Reflective Practitioner	Donald Schon	1987
	16	Scholarship Reconsidered	Ernest Boyer	1990
8	15	Learning for Life	West Report	1998
9	14	Creating Entrepreneurial Universities	Burton Clark	1998
	14	The Reflective Practitioner	Donald Schon	1983
11	12	Teaching for Quality Learning at University	John Biggs	1999
12	11	Transforming Higher Education	Lee Harvey and Peter Knight	1996
13	10	Academic Capitalism	Sheila Slaughter and Larry Leslie	1997
	10	Understanding Learning and Teaching	Michael Prosser and Keith Trigwell	1999

amongst higher education researchers before 2000: a position that is changing. The “first generation” were almost all men, and could reasonably, therefore, be referred to as “founding fathers”. The other explanation would stress the historically marginalised experience of women in higher education—as students, academics and researchers—and find no surprise in the replication of this in higher education research (see, for example, Bagilhole 2002; Brooks and Mackinnon 2001; Howie and Tauchert 2002).

The second point is the variation in the degree of self-citation amongst the authors identified (Hyland 2001). Thus, while just under half, 11, of the 24 named, including the leading six, did not cite themselves—chiefly, one suspects, because they had no articles published in the journals examined during 2000—in two cases self-citation accounts for half or more of the total citations recorded.

Table 2 shows the 14 most cited items in the database, indeed the only items which were cited on 10 or more occasions. Far and away the most cited item was a UK national report, the Dearing Report, which was referred to in 48, or 11.8%, of the articles in the database. While the list contains another report (the West Report from Australia), all of the other items are books: no journal articles were cited this often. Two of the most cited authors—Clark and Schon—each have two books in this list, while Ramsden and Becher also feature high up. The placing of other authors—Scott, Harvey, Trow, Prosser, Trigwell, Gibbons—in Table 1 can be seen to be at least partly due to frequently cited co-authored books.

Co-citation patterns

We will turn now to focus on the patterns of co-citation of authors in the database: that is, the frequency with which “key” authors are cited in the same articles, and the pairings or groupings of these authors that appear most commonly. To keep the analysis manageable, I have restricted it to the 16 most cited authors identified in Table 1: Clark, Ramsden, Becher, Biggs, Boud, Schon, Marton, Scott, Barnett, Gibbs, Kember, Neave, Trow, Harvey, Entwistle and Jenkins. Between them, these authors account for 684 citations (6.8% of the total sample, inflated a little by co-authorship amongst those identified).

These 16 most cited authors were referenced in 173 articles, or 42.6% of the total sample (so the majority of the articles did not cite any of them). In total, 65 of these articles cited only one of the 16 “key” authors. Thus, there were nine such articles that cited “only” Ramsden, eight for Clark, seven for Becher, six for Scott, Schon and Harvey, four for Gibbs, Neave and Jenkins, three for Boud and Barnett, two for Biggs, one for Kember, Trow and Entwistle, and none in the case of Marton. While these frequencies reflect, to some degree, the overall citation patterns, they also begin to suggest something about the relatedness or otherwise of the authors concerned.

The analysis which follows focuses on the remaining 108 articles (26.6% of the sample), in which various patterns of co-citation may be discerned. Thus, there were 47 articles which cited two of the authors, 27 which cited three, 17 four, 8 five, 4 six, 2 seven, 2 eight and 1 which managed to cite 11 of the 16.

Table 3 details the number of times each possible pairing of authors was referred to in the 108 articles. Only 14 of the 120 cells in the table are empty, showing that all of the authors identified may be found referred to in association with most of the others. Indeed, five of them—Ramsden, Becher, Boud, Schon and Barnett—may be found co-cited in the sample articles with each of the other 15 authors.

Table 3 Patterns of co-citation between the 16 most cited authors

	Cl	Ram	Bec	Big	Bou	Sch	Mar	Sc	Bar	Gib	Kem	Nea	Tro	Har	Ent	Jen
Clark																
Ramsden	5															
Becher	14	5														
Biggs	3	16	3													
Boud	2	8	3	7												
Schon	7	8	5	6	10											
Marton	–	10	2	8	3	6										
Scott	12	3	6	1	3	5	–									
Barnett	8	6	6	3	8	8	4	6								
Gibbs	4	11	5	9	7	9	5	–	4							
Kember	–	4	1	6	4	5	6	–	1	5						
Neave	11	1	4	–	1	1	1	5	2	1	–					
Trow	14	1	7	–	1	4	1	19	9	1	1	6				
Harvey	5	5	4	2	4	4	1	5	5	2	2	3	5			
Entwistle	1	11	3	7	6	2	10	1	3	5	4	1	–	2		
Jenkins	3	4	3	2	1	3	–	1	3	5	–	–	–	–	1	

However, it is also clear that the frequency of such associations varies considerably. The most commonly occurring pairing, Scott and Trow (19 examples) is largely due to their being two co-authors of one of the most cited items, *The New Production of Knowledge* (cf. Table 2). This explanation also underlies, to some extent, a number of the other popular pairings: Marton and Ramsden (10 instances), Entwistle and Ramsden (11), and Entwistle and Marton (10), these three authors having written together as a trio. Co-authorship is, of course, the clearest evidence of common research interest.

Yet, most of the other popular pairings in Table 3 are not, or are only marginally, due to co-authorship, but rely on the shared relevance of their separate research and publications to what the authors of the articles in question were writing about. Thus Biggs and Ramsden were referred to in the same article on 16 occasions, Becher and Clark on 14, Clark and Trow on 14, Clark and Scott on 12, Clark and Neave on 11, Gibbs and Ramsden on 11, and Boud and Schon on 10.

Interestingly, the two most cited authors do not appear to have much in the way of “shared relevance”. Thus, though Clark achieved 73 citations and Ramsden 69, they are only cited together in a mere 5 articles. This suggests, even to the non-expert, that they have been pursuing largely separate research and writing interests within the field of higher education.

Taking these associations, and lack of associations, into account, we can map clusters of relationships to suggest something of the underlying structure of higher education research. Figure 1 is one attempt to do this, summarising diagrammatically all co-citations that occurred on eight or more occasions.

Not surprisingly, Clark and Ramsden appear as the centre of the two main clusters indicated on the left and right of the figure. Clark is shown in close association with Scott, Trow (these two themselves strongly associated), Becher and Neave, and, to a lesser extent, with Barnett (who is also closely associated with Trow). In the second cluster, Ramsden appears in close association with Biggs, Marton, Entwistle (all three of whom are strongly associated with each other) and Gibbs. Interestingly, three members of this cluster—Biggs, Marton and Entwistle—appear as leading members of a learning style cluster in a recent analysis of the educational psychology literature (Desmedt and Valcke 2004, p. 451), indicating how fields of practice and research overlap.

Boud sits slightly apart from the two main clusters identified in Fig. 1 (as, in another way, does Barnett). He appears associated with both Barnett and Ramsden, but with a closer association with Schon (with whom Barnett and Ramsden are also associated—as is

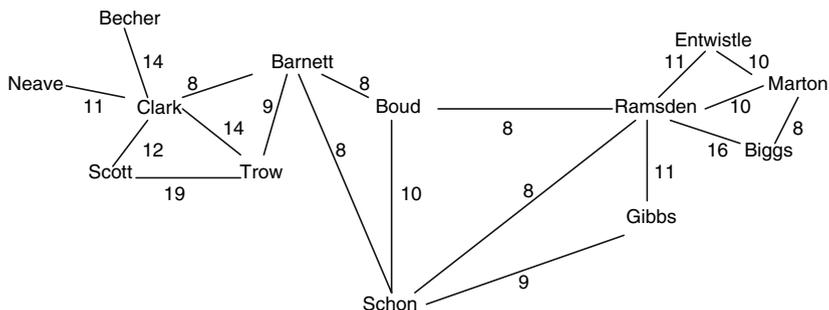


Fig. 1 A possible structuring of the higher education research community/tribe

Gibbs). Schon, as the only non-higher education researcher present, has been placed on the lower margin of the figure.

Three of the 16 “key” authors identified—Kember, Harvey and Jenkins—do not appear in the figure, as, within their relatively lower number of citations, they were not so strongly associated with any of the others. If the analysis was pursued to include lower levels of association, however, Kember and Jenkins would appear on the edges of the Ramsden cluster, and Harvey on the edge of the Clark cluster (but with strong links to the Ramsden cluster as well).

What Fig. 1 suggests to me is that, within the somewhat porous territory of higher education research, there are two major clusters or groups of researchers and research activity. These groups might equally be termed tribes or communities of practice. One of the groups has Clark as a key member, and might be, given his research interests, labelled organisation/structure: interest here is primarily directed to the national, system and international levels of operation. The second group has Ramsden as a key member, and might be labelled teaching/learning: interest here focuses on the course and institutional levels.

These clusters most likely have, to use the terminology of communities of practice (Wenger 2000), their own senses of joint enterprise, norms and relationships of mutuality, and shared repertoires of communal resources. While a more detailed, and probably qualitative, analysis would be needed to fill out and confirm this, the evidence of co-authorship and, in at least one instance, a prior supervisor/student relationship, would support such an interpretation.

The analysis of journal citations also suggested that different groups of higher education researchers had their own key journals (resources) to read and publish in (Tight 2006). Thus, the Clark cluster can be seen to publish and be cited more frequently in the *European Journal of Education*, *Higher Education* and *Higher Education Policy*, three journals with comparative interests in system policy. Similarly, the Ramsden cluster appear more at home in *Assessment and Evaluation in Higher Education*, *Quality in Higher Education*, *Studies in Higher Education* and *Teaching in Higher Education*, four journals with particular interests in course design and evaluation.

These two clusters would also appear from the present analysis to have relatively little to do with each other. Indeed, though only additional data collection and analysis would show this [though Desmedt and Vlacke’s (2004) work is indicative], it may well be the case that these clusters have more to do with other researchers outwith the field of higher education than they do with other higher education researchers. Both of these points could be construed as normal tribal or sub-disciplinary behaviour (Becher 1989). Additional data collection and analysis could also usefully address issues of power and authority within these clusters of researchers, and the development of intellectual networks over time (Collins 1998).

This analysis is, of course, a simplification, as the clustering process inevitably leads to, or starts from, a dichotomy. Yet Fig. 1 does begin to suggest potential sub-divisions within these two clusters, and also indicates the presence of somewhat anomalous figures—Barnett and Boud—who may be key members of other, though perhaps less well populated tribes or communities.

Further evidence for this interpretation is provided by an earlier analysis of the 406 articles, and of 284 books in print on higher education in the year 2000 (Tight 2003). That analysis argued for an 8-fold categorisation of key themes or issues in higher education research: teaching and learning (more narrowly defined than in the labelling used for the

Ramsden cluster here), course design, the student experience, quality, system policy, institutional management, academic work and knowledge.

If we relate that earlier analysis to the present one, then the Clark cluster could be seen as covering the last five of the key themes or issues identified—quality, system policy, institutional management, academic work and knowledge. The Ramsden cluster would encompass the first three themes—teaching and learning, course design, the student experience.

The somewhat anomalous positions of Barnett and Boud in Fig. 1 might then be explained in terms of Barnett being a key figure in a smaller “knowledge” cluster, with Boud similarly placed in a “course design” cluster. Harvey would, of course, be a key member of a “quality” cluster. Clearly, some of the eight key themes or issues identified lack key authors/researchers as dominant as Clark and Ramsden appear to be. A more extensive citation analysis, covering the same sample of journals over a number of years, would be necessary to build up a more detailed picture.

Tribes and territories or communities of practice?

The co-citation analysis presented in this article both confirms and extends the findings of earlier, related, analyses (Tight 2003, 2004a, b, 2006, 2007). It is, as already indicated, both subject to limitations and in need of further extension. In particular, we must be careful not to interpret patterns of citation and co-citation as literally telling the whole story about the structure of the field of higher education research, but they are, at the very least, indicative. And where these patterns are confirmed, at least partially—as they have been here—by other analyses, we can begin to be more confident about their veracity.

But what does this analysis suggest about the usefulness of the two related analytical frameworks adopted—tribes and territories, and communities of practice—for contributing to an understanding of the field of higher education research?

At one level, their applicability seems self-evident. Using the tribes and territories framework, we can indeed see higher education research as “a partially explored territory through which a variety of tribes traverse”. Alternatively, taking communities of practice as our structure, we may present higher education research as “a series of, somewhat overlapping, communities of practice”. Further, we can tentatively assign labels to the different tribes or communities identified, and begin to say something [using Wenger’s (2000) terminology] about their norms and relationships of *mutuality* and their *shared repertoire* of communal resources.

To put more flesh on these emerging pictures, and offer an improved framework for understanding the development and patterning of higher education research, more and different kinds of analysis are needed. In addition to the strategies already suggested, this would involve a qualitative component, using interviews with some of the key authors identified, as well as other practitioners, to better map the relationships within and between tribes, and to articulate their sense of *joint enterprise*.

References

- Bagilhole, B. (2002). Challenging equal opportunities: Changing and adapting male hegemony in academia. *British Journal of Sociology of Education*, 23(1), 19–33.
- Becher, T. (1989). *Academic tribes and territories: Intellectual enquiry and the cultures of disciplines*. Milton Keynes: Open University Press.

- Becher, T. (1999). *Professional practices: Commitment and capability in a changing environment*. New Brunswick, NJ: Transaction Publishers.
- Becher, T., & Trowler, P. (2001). *Academic tribes and territories: Intellectual enquiry and the culture of disciplines* (2nd ed.). Buckingham: Open University Press.
- Brooks, A., & Mackinnon, A. (Eds.) (2001). *Gender and the restructured university*. Buckingham: Open University Press.
- Collins, R. (1998). *The sociology of philosophies: A global theory of intellectual change*. Cambridge, MA: Belknap Press.
- Desmedt, E., & Valcke, M. (2004). Mapping the learning styles 'Jungle': An overview of the literature based on citation analysis. *Educational Psychology, 24*(4), 445–464.
- Fanghanel, J. (2004). Capturing dissonance in university academic training environments. *Studies in Higher Education, 29*(5), 575–590.
- Fuller, A., Hodkinson, H., Hodkinson, P., & Unwin, L. (2005). Learning as peripheral participation in communities of practice: A reassessment of key concepts in workplace learning. *British Educational Research Journal, 31*(1), 49–68.
- Hargens, L. (2000). Using the literature: Reference networks, reference contexts and the social structure of scholarship. *American Sociological Review, 65*, 846–865.
- Hendry, C. (1996). Understanding and creating whole organizational change through learning theory. *Human Relations, 49*, 621–641.
- Howie, G., & Tauchert, A. (Eds.) (2002). *Gender, teaching and research in higher education: Challenges for the 21st century*. Aldershot: Ashgate.
- Hyland, K. (2000). *Disciplinary discourses: Social interactions in academic writing*. Harlow: Longman.
- Hyland, K. (2001). Humble servants of the discipline?: Self-mention in research articles. *English for Specific Purposes, 20*, 207–226.
- Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. Cambridge: Cambridge University Press.
- Tight, M. (2003). *Researching higher education*. Maidenhead: Open University Press.
- Tight, M. (2004a). *The RoutledgeFalmer reader in higher education*. London: RoutledgeFalmer.
- Tight, M. (2004b). Research into higher education: An a-theoretical community of practice? *Higher Education Research and Development, 23*(4), 395–411.
- Tight, M. (2006). Higher education research: A citation analysis. *Higher Education Review, 38*(2), 42–59.
- Tight, M. (2007). Bridging the divide: A comparative analysis of articles in higher education journals published inside and outside North America. *Higher Education, 53*(2), 235–253.
- Trowler, P., & Knight, P. (2000). Coming to know in higher education: Theorising faculty entry to new work contexts. *Higher Education Research and Development, 19*(1), 27–42.
- Wenger, E. (2000). Communities of practice and social learning systems. *Organization, 7*(2), 225–246.
- White, H. (2004). Citation analysis and discourse analysis revisited. *Applied Linguistics, 25*(1), 89–116.