A Discipline Divided: Globalization and Parochialism in Information Systems Research

R D Galliers
Bentley College
25 Forest Street, Waltham, Massachusetts 02452, USA
e-mail: rgalliers@bentley.edu

and

Department of Information Systems, London School of Economics
Houghton Street, London WC2A 2AE, UK

&

M Meadows
Warwick Business School, University of Warwick
Coventry CV4 7AL, UK
e-mail: maureen.meadows@wbs.warwick.ac.uk

Abstract

This research note examines an apparent paradox in Information Systems (IS) research. This paradox relates to the parochial nature of much of the published IS research (both in terms of the chosen journal outlet and the literature cited), notwithstanding the global nature of the phenomena being investigated. It does so by reviewing author ‘nationality’ in four leading IS journals over a seven year period (1994-2000), and by reviewing the ‘nationality’ of the literature cited by these authors. Two of the journals are published in the USA and two are published in Europe. Despite apparent recognition of increasing globalization in our field, brought about - in part at least - by information technology (IT), the data provide firm evidence that the IS discipline is marked by a distinct parochialism along national, or at least, regional lines. A reorientation appears to be required if leading IS journals are not to continue to be the unwitting mouthpieces of unwitting researchers, publishing the results of partial, culturally biased research. The findings also have profound implications for published material based on citation analyses and on our understanding of what constitutes the appellation ‘international’ in our discipline.

Key words: Information Systems research; Information Systems journals; globalization; citation analysis; communication and diffusion of research findings.
1. **Introduction**

Considerable attention has in the past been paid to various reviews of research and researchers in the Information Systems (IS) field. For example, for approximately two decades, there have been many studies of aspects of the IS literature: key IS management issues (e.g., Watson *et al.*, 1997); publishing patterns of IS academics (e.g., Jackson & Nath, 1989; Hardgrave & Walstrom, 1997); citation patterns (e.g., Culnan, 1986, 1987; Holsapple, *et al.*, 1994); research productivity (e.g., Im, *et al.*, 1998a,b); institutional profiles (e.g., Vogel & Wetherbe, 1984); journal rankings (e.g., Hamilton & Ives, 1983; Whitman, *et al.*, 1999); journal popularity (e.g., Mylonopoulos & Theoharakis, 2001), and research methods in use (e.g., Mingers, 2001). Such reviews as these are not the sole province of IS, however. Similar studies have been undertaken in related fields such as management (e.g., Baruch, 1999); marketing (e.g., Niemi, 1988; Hult, *et al.*, 1997); finance (e.g., Klemkosky & Tuttle, 1977), and the sociology of science (e.g., Lindsey, 1980).

In conducting such reviews as these, however, relatively less attention has been paid to some of the taken-for-granted assumptions upon which analyses are made and conclusions drawn. For example, there has been relatively little actual debate about which are “the leading journals” in the IS field. After all, or so it is argued, a consensus on such matters will have been reached as a result of “the collective viewpoints of the main stakeholders in IS research” (Im, *et al.*, 1998b: 13). While there are dissidents (e.g., Guimaraes, 1998) who remind the mainstream (sic.) that there are other journals to consider, these “journals … are not well known to the general IS academic community”. Indeed, their inclusion in such reviews would “increase superficiality” and “decrease confidence” in the results (Im, *et al.*, 1998b: 13). Conversely, however, a recent large scale survey (N=979) of the IS academy world wide, undertaken by Mylonopoulos and Theoharakis (2001), highlighted the point that some leading journals in one Region may not enjoy the same visibility elsewhere. For example, the *European Journal of Information Systems* and *Wirtschaftsinformatik*, were ranked third and twelfth respectively by Europeans. Americans ranked the former thirteenth, and the latter hardly rated a mention on the part of respondents from either the Americas or Asian Regions, and remained unranked.

But who is “the general IS academic community” and who are “the main stakeholders” in an age of globalization? While the European and Scandinavian IS communities would recognize — entirely appropriately and expectedly — *The European Journal of Information Systems* and *The Scandinavian Journal of Information Systems* as leading journals, for example, there may be those in other communities who would not recognize them as such. Similarly, there is empirical evidence to show that “leading” IS journals such as *MIS Quarterly* and *IS Research* were insufficiently well known even to be rated by approximately one-third of the German-speaking respondents to a recent survey of the European IS research community (Avergerou, *et al.*, 1999). While some have looked at the question of nationality balance in IS journals (e.g., Suomi, 1993) and related fields (e.g., Baruch,

---

1 In that the journal *Wirtschaftsinformatik* was not listed in the top 50 journals in either Region.
1999), the extent of regionalism as against globalization in IS publications is a relatively under-researched issue.²

In the spirit of recent work by the social theorist Ulrich Beck, this research note argues against such parochialism and for a more global stance to our research and publications. In the age of globalization (the “second modernity”), Beck argues that we should no longer base our analysis on assumptions that may have held true in the “first modernity” where we “live and act in the self-enclosed spaces of national states and their respective national societies” (Beck, 2000; 20). Beck argues that by taking a localized stance, perhaps unwittingly, our actions may well have unintended consequences in the wider, international community. Assumptions that localized thinking or results hold true in different cultures and communities smacks of the kind of scientific imperialism that would appear to be inappropriate in an increasingly global society (Galliers, 1995; 1999). A parallel argument is developed by Gibbons, et al. (1995) in proposing what they term “Mode 2” or trans-disciplinary research, as against the “self-enclosed spaces” of discipline-based “Mode 1” thinking. It is in the less confined “space” of trans-disciplinary research that new lessons will emerge in their view.³

This research note raises a word or two of warning to the IS research community in the context of globalization, or rather, ‘globality’. It does so by analyzing ‘nationality’ of (i) the editorial boards, (ii) the authors of papers, and (iii) the work they cite in four leading IS journals during the period 1994-2000. The remainder of this research note is structured as follows: sections 2 and 3 describe the research method adopted and the data gathering and analysis process. A discussion of the main findings and their implications for the global IS academy are to be found in section 4.

2. Method

Four high profile journals in the IS field were selected, and data were gathered on papers published in those journals over a seven-year period (1994-2000). The key dimensions of the analysis were: nationality of journal, nationality of author, and nationality of journal cited. Nationality in each case is defined below. The four journals chosen were *Information Systems Research* (ISR), *MIS Quarterly* (MISQ), *Information Systems Journal* (ISJ) and *Journal of Strategic Information Systems* (JSIS). ISR and MISQ are consistently rated highly within the North American IS academic community (e.g., Hardgraves & Walstrom, 1997; Im, et al., 1998b; Mylonopoulos & Theoharakis, 2001). Similarly, ISJ and JSIS are highly regarded in Europe and, to a somewhat lesser extent, also in Asia (e.g., Avgerou, et al., 1999; Mylonopoulos & Theoharakis, 2001).

Three hypotheses were tested:
1. Null hypothesis: nationality of journal is independent of nationality of author.

In addition, any perceivable trends in the data were analyzed.

---

² A comparative study of research patterns in American and European Management journals has, however, been undertaken (cf., Collins, et al., 1996)
³ In a similar vein, Mingers (2001) argues for greater pluralism in research methods used in the field of Information Systems.
2.1 Journal ‘nationality’
In order to define the ‘nationality’ of the four journals chosen, the editorial boards were analyzed over the seven-year period in question. Board members were classified as based in Europe, North America or the “Rest of the World” (ROW), according to the institution with which they were affiliated at the time. While it is likely that in these highly mobile times the citizenship of academics will not always accord with the country in which their institution is located, we argue that it is also likely that their views on appropriate methods and leading journals are more likely to mirror their host environment (cf., Whitman, et al., 1995). Hence, we identified the host country of editorial board members’ institutions, identifying the locus of board membership as a surrogate measure for journal ‘nationality’. The make up of the editorial boards would undoubtedly change during the period under study, and the locus of board membership might well change in the light of growing awareness of IS research in other parts of the world. As a result, we looked for increasing internationalism in the Editorial Board membership over the review period.

2.2 Author ‘nationality’
Data were also gathered on the ‘nationality’ of the authors publishing in the four journals during the period 1994-2000. Again, institutional affiliation was taken as a proxy for the actual nationality of the author or authors. Each paper was classified as having authors who were from North America, Europe, and initially, “ROW” or International (the latter indicating a paper with multiple authors from more than one of the previous categories). As relatively few papers fell into the last two categories, however, these were later merged and the data summarized under three headings. This enabled robust results to emerge from the hypothesis testing.

2.3 ‘Nationality’ of journals cited
The journal articles cited in each article published in the four journals during the period 1994-2000 were also analysed. Each reference was classified according to the “nationality” of the journal in which it was published, as European, North American, “ROW” or International. As 910 different publications were cited, it was not possible to conduct a detailed analysis of the make-up of the editorial board of each one. Instead, data were gathered on the country of publication of each journal, and the country where the editor was based, and a decision made on this basis. The International category allows for publications with different editions in different parts of the world.

2.4 Analysis
Three Chi Squared tests were undertaken to test the independence of the three key concepts (nationality of journal, nationality of author, and nationality of journal cited). In addition, given the growing interest in IS and globalization (e.g., Walsham, 2001) and the increasing awareness of IS academics regarding the work of their colleagues from other Regions, it might be expected that there would be less evidence of

---

4 Note that books, and any items other than journal articles, were excluded from the analysis.
5 For example, with the advent of the Association for Information Systems and its three Regional Conferences: AMCIS, ECIS and PACIS.
parochialism as we moved toward the new millennium. Thus, any trends in the data over the seven year period (1994-2000) were also analyzed.

3. Results

As can be seen from Table 1, ISR and MISQ were classified as North American journals given the highly skewed representation of US institutions on their editorial boards. ISJ and JSIS were taken as examples of IS journals based outside North America, given ISJ’s predominantly European representation and JSIS’s more balanced, ‘international’ editorship.

Table 1: ‘Nationality’ of Editorial Board Members

<table>
<thead>
<tr>
<th>Journal</th>
<th>European</th>
<th>North American</th>
<th>ROW</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISR</td>
<td>4-5</td>
<td>30-35</td>
<td>1-5</td>
</tr>
<tr>
<td>MISQ</td>
<td>3-9</td>
<td>21-33</td>
<td>2-9</td>
</tr>
<tr>
<td>ISJ</td>
<td>24-31</td>
<td>8-17</td>
<td>4-8</td>
</tr>
<tr>
<td>JSIS</td>
<td>18-23</td>
<td>15-18</td>
<td>9-13</td>
</tr>
</tbody>
</table>

As is evident from even the most cursory look at the data summarized in Table 2, it is clear that the ‘North American’ journals studied (ISR and MISQ) publish primarily the work of North American authors, with very few European authors represented. Conversely, the two ‘non-North American’ journals (ISJ and JSIS) publish primarily the work of European authors, albeit to a lesser extent.

Table 2: ‘Nationality’ of authors

<table>
<thead>
<tr>
<th>Journal</th>
<th>European authors only</th>
<th>North American authors only</th>
<th>‘Other’ authors 5</th>
<th>Total articles</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISR</td>
<td>2 ( 2%)</td>
<td>59 (74%)</td>
<td>19 (24%)</td>
<td>80 (100%)</td>
</tr>
<tr>
<td>MISQ</td>
<td>4 ( 5%)</td>
<td>69 (83%)</td>
<td>10 (12%)</td>
<td>83 (100%)</td>
</tr>
<tr>
<td>ISJ</td>
<td>31 (49%)</td>
<td>13 (21%)</td>
<td>19 (30%)</td>
<td>63 (100%)</td>
</tr>
<tr>
<td>JSIS</td>
<td>30 (51%)</td>
<td>13 (22%)</td>
<td>16 (27%)</td>
<td>59 (100%)</td>
</tr>
</tbody>
</table>

We see a very similar pattern emerging with respect to citation patterns, as can be seen from Table 3. Approximately four in five journals cited in the two North American journals studied cited work that has appeared in ‘North American’ journals. The bias toward North American research is also seen in the two ‘European’ journals studied, albeit less so – with two in three ‘North American’ journals cited. The percentage of ‘North American’ citations in MISQ and ISR varies in the range 72-84% each year during the period under investigation. The percentage of ‘North American’ citations for the two ‘European’ journals varies in the range 62-72%. Once again, there is no evidence of a trend during the period 1994-2000.

5 A combination of ROW and ‘international’ authors, as defined in section 2.2.
Table 3: ‘Nationality’ of journal cited

<table>
<thead>
<tr>
<th>Journal</th>
<th>European</th>
<th>North American</th>
<th>‘Other’</th>
<th>Total citations</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISR</td>
<td>15%</td>
<td>78%</td>
<td>7%</td>
<td>100%</td>
</tr>
<tr>
<td>MISQ</td>
<td>14%</td>
<td>80%</td>
<td>6%</td>
<td>100%</td>
</tr>
<tr>
<td>ISJ</td>
<td>29%</td>
<td>66%</td>
<td>6%</td>
<td>100%</td>
</tr>
<tr>
<td>JSIS</td>
<td>25%</td>
<td>68%</td>
<td>7%</td>
<td>100%</td>
</tr>
</tbody>
</table>

As indicated in section 2.4, three Chi Squared tests were undertaken to test the independence of the three key concepts (nationality of journal, nationality of author, and nationality of journal cited). The results are as follows and are unequivocal.

**Test One**
Null hypothesis: nationality of journal is independent of nationality of author.
Chi Square calculated 151.1
Significance level 0.000 (to 3 decimal places)
Result Reject the null hypothesis

In analyzing the link between nationality of author and nationality of journal further we note that the proportion of papers in MISQ and ISR written solely by North American authors varies in the range 60-70% over the seven years analysed. The same proportion in ISJ and JSIS varies from 20 to 30%. The proportion of papers in ISJ and JSIS written solely by European authors varies in the range 40 to 50%. Conversely, the proportion of papers written solely by Europeans in MISQ and ISR never exceeds 5%. There is no evidence of a trend over the period.

**Test Two**
Null hypothesis: nationality of journal cited is independent of nationality of author.
Chi Square calculated 90.7
Significance level 0.000 (to 3 decimal places)
Result Reject the null hypothesis

In analyzing the data with respect to nationality of author and nationality of journal cited, it is clear that all nationalities of authors are more likely to cite papers that have appeared in North American journals. Having said that, European authors tend to cite a greater proportion of the European literature. Again, however, there is no evidence of a trend over the seven years analyzed.

**Test Three**
Null hypothesis: nationality of journal cited is independent of nationality of journal.
Chi Square calculated 293.0
Significance level 0.000 (to 3 decimal places)
Result Reject the null hypothesis

We investigated the link between nationality of journal and nationality of journal cited further. The proportion of citations of North American journals in ISJ and JSIS varies in the range 62 to 72% over the seven years analysed, while the proportion of citations of North American journals in MISQ and ISR varies in the range 72 to 84%. Thus,
there is a preponderance of North American literature being cited, although, indicated, this is greater in North American journals. We also tested the data to see whether the situation has been improving during the seven year period up to 2000. There is no evidence of any such trend.

In each case, then, we conclude that there is indeed a relationship between the three key concepts analyzed. In other words, despite our pretensions as a global academy, there is a strong tendency towards parochialism on our part. First, we tend to publish in our ‘home’ journals rather than further afield. Second, we tend to cite literature from our own Region at the expense of a more global outlook. Third, on this evidence at least, our highly respected journals would find it hard to claim that they are in any sense international. Rather, there is apparently something of a ‘closed circle’ in evidence.

4. Discussion
The data presented as a result of this study provide a clear indication of the parochialism that exists in, for example, the literature we draw on to inform our research efforts, and in our publication patterns. Despite the growing internationalization of the Information Systems discipline itself, and despite our growing awareness of the global effects and consequences of Information and Communication Technologies, we remained curiously wedded to home grown attitudes and perspectives. Indeed, the data presented here reflect little in the way of trends away from such conservatism and parochialism in recent years. There are clear dangers present as a result.

First, the development of the discipline itself could well be retarded by our failure to appreciate the work of colleagues elsewhere in the world. If we accept the 'Mode 2' and ‘globality’ arguments of Gibbons, et al. (1995) and Beck (2000), then there would be less likelihood of new knowledge being created by remaining in our “self-enclosed spaces”. Second, and this is again related to Beck’s (2000) analysis, journal editors may well be the unwitting mouthpieces of unwitting researchers, publishing the results of partial, culturally-biased accounts. There appears, therefore, to be a requirement for the Information Systems academy to make a concerted effort to seek out relevant research undertaken in other Regions. Even when doing so, there is also a requirement to be considerably more reflexive and less assured when interpreting data that are situated, not only in terms of location, but also interpretation.

References


Acknowledgements
We are grateful to Edgar Whitley for his comments on the work of Ulrich Beck, and to Saleema Daud and Gilbert Zvobgo for their assistance with data entry.