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IS JOURNAL QUALITY ASSESSMENT USING THE AUTHOR AFFILIATION INDEX

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ABSTRACT

Research productivity is one means by which academic units attain legitimacy within their institutional milieu and make their case for resources. Journal quality assessment is an important component for assessing faculty research productivity. We introduce the Author Affiliation Index (AAI), a simple method for assessing journal quality, to the IS domain. Essentially, the AAI of a journal is the percentage of academic authors publishing in that journal who are affiliated with a base set of high-quality academic institutions. Besides explaining the AAI, we demonstrate its use with a set of well-known IS journals, discuss its rankings vis-à-vis those resulting from other methods, and provide an example of how the basic AAI approach can be modified by changing the base school set that is used to define journal quality. The AAI has a number of advantages. First, it is a simple, low cost and transparent method for assessing any journal given a base school set. Second, it provides a consistent ranking of journals, particularly of those beyond the top consensus journals where less consistency is achieved with other measures. Third, it enables new journals to be rapidly assessed against more established ones without the lags or costs of other measures. The AAI provides another indicator of journal quality that is different from surveys and citation analyses.

Keywords: author affiliation index, AAI, journal quality, journal rankings, research productivity, journal assessment methodology, institutional theory, isomorphism, resource dependency, tenure, and promotion standards

I. INTRODUCTION

Research productivity is an essential element of promotion, tenure, and annual performance reviews for university faculty in information systems (IS). As a result, all IS faculty have a vested interest in both the criteria and procedures used to evaluate individual research performance. A common metric used to assess individual research productivity is the quantity and quality of published articles, wherein evaluators assess publications by making a judgment about the quality of the journals in which articles appear [Huang and Hsu 2005; Chua et al., 2002].

As testament to the keen interest of IS researchers in assessing journal quality, numerous journal ranking studies have been published, including these six relatively recent works: Whitman et al. 1999; Mylonopoulos and Theoharakis 2001; Walstrom and Hardgrave 2001; Peffers and Tang

2003; Katerattanakul et al. 2003; Lowry et al. 2004. In their commentary, Whitman et al. [1999], surveyed U.S. business school professors of IS as to expectations in the areas of research, teaching, and service. For the U.S. AACSB schools that they surveyed, faculty members' research was found to be the most important factor (as compared to teaching and service) when it came to promotion, tenure, and merit (salary adjustment) decisions.

The significance of research to faculty evaluation places an imperative on assessing the quality of research outlets in the most transparent and consistent manner possible. As noted by Athey and Plotnicki [2000]: "The importance of the decisions as to which journals to include in the tenure and promotion list cannot be overemphasized." However, beyond the so-called "top journals" (e.g., *Information Systems Research* and *MIS Quarterly*, hereafter referred to as *ISR* and *MISQ*, respectively) about which there is general consensus in the IS field, journal rankings have inconsistencies and therefore are problematic [cf., Athey and Plotnicki 2000]. We propose to further advance the discussion of assessing journal quality by offering a straightforward additional metric for assessing IS journal quality besides conducting surveys and citation analyses. Specifically, we introduce the Author Affiliation Index (AAI) to the IS domain. We explain the AAI, demonstrate its use with a set of well-known IS journals, discuss its rankings vis-à-vis those resulting from other methods, and provide an example of how the basic AAI approach can be modified to fit the quality assessment needs of a particular researcher or institution. We conclude by discussing why universities might find the AAI appealing and suggest questions to guide future research.

II. THE AUTHOR AFFILIATION INDEX FOR JUDGING JOURNAL QUALITY

The Author Affiliation Index was first conceived by Harless and Reilly [1998] in an effort to assess the research output of business faculty at Virginia Commonwealth University. Subsequently, Gorman and Kanet [2005] systematically evaluated the effectiveness of the AAI measure of journal quality while rating journals in Operations Management.

The idea behind the AAI is straightforward, born of the need to be objective and practical. As a substitute for measuring output quality, the AAI measures input quality. It assumes that the quality of a journal is defined by the quality of its articles and that article quality is correlated with the quality of the (academic) institution with which the article's authors are affiliated. Thus, once there is agreement on the ranking of academic institutions, journal quality is determinable. The advantages of the AAI are that it is easily and inexpensively calculated; furthermore, it is a transparent and objective measure of quality.

CALCULATING THE AAI

Following the procedure as outlined in Gorman and Kanet [2005], consider an article *i* from journal *x*. Let n(*i*) be the total number of authors for article *i*, whether academic or not. Let A(*i*) be the number of authors for article *i* from a base set of universities judged as high quality. Let B(*i*) be the number of academic authors for article *i* not from the base set but from a defined universe of relevant universities. For any sample set M of journal articles the current AAI rating for journal *x* is:

$$\mathrm{AAI}(x) = \frac{\sum_{i \in M} [\,A(i)/n(i)\,]}{\sum_{i \in M} \{\,[A(i)+B(i)]/n(i)\,\}} \qquad (1)$$

The sample set M, as specified by Gorman and Kanet [2005], is the set of most recent articles, looking backward in time until

$$\sum_{i \in M} [A(i)+B(i)]/n(i) = 50. \qquad (2)$$

Setting M to satisfy (2) assures 50 "author-equivalent" articles as the sample size. Note that A(*i*) + B(*i*) will not equal n(*i*) when one or more authors of an article are not from the defined universe of relevant institutions. Gorman and Kanet [2005] found that a sample of 50 author-equivalent articles was large enough to lead to stable AAI values.

THE IMPORTANCE OF THE BASE SET OF HIGH QUALITY UNIVERSITIES

Identifying a base set of schools that constitutes high quality is a critical first step in establishing a journal's AAI. The base set of schools must represent quality research institutions from a defined universe of relevant institutions. Naturally, the best researchers aspire to publish in those journals where the top faculty publish, and these top researchers "vote" on a journal's quality by publishing their work in these journals.

It is the responsibility of the AAI user to determine the base set of schools as well as the universe of relevant institutions from which this set comes. In essence, journal quality is defined from the perspective of the AAI user via specification of the base set. Thus, this set should be determined by choosing schools which demonstrate strength in areas consistent with one's quality assessment objectives. Different base sets (e.g., leading research across business disciplines, strong IS research, etc.) may be used depending on the attributes of quality that the user wants to measure. Of course, different objectives or quality attributes result in different base sets, which lead to different AAI scores.

The base set used by Harless and Reilly [1998] and Gorman and Kanet [2005] is shown in the rightmost two columns of Table 1 as Top U.S. Business Schools (TUSB). This list was derived from research output from multiple disciplines from the top 60 U.S. business schools.[1] Their list is based on broadly defined "business" research, in a narrowly defined geographic market; thus, their universe of relevant institutions consisted of U.S. schools only. From their perspective, the researchers at the top U.S. business schools set the standard for quality in that market. These schools most directly compete with each other for students, faculty, government grants, etc.; thus, their AAI measure focuses on that specific set of competitors. As a result, the AAI calculation (equation 1) as implemented by Harless and Reilly [1998] and Gorman and Kanet [2005] intentionally excludes non-U.S. and non-university affiliated authors so that the AAI measures the percent of journal *x*'s U.S. academic authors coming from the base set.

Table 1. IS School Set and Top U.S. Business (TUSB) School Set*

IS ∪ TUSB			
IS			
		TUSB	
Non-U.S. (12 schools)	U.S. but not TUSB (22 schools)	IS ∩ TUSB (25 schools)	(35 schools)
University of British Columbia	Bentley College	University of Arizona	Arizona State University
University of Calgary	Boston College	University of California (Berkeley)	Baruch College-City University of New York
HEC Montreal (Ecole des Hautes Etudes Commerciales)	California State University, Long Beach	Boston University	Brown University
City University of Hong Kong	Drexel University	Carnegie Mellon University	University of California at Los Angeles

[1] Details of how the list was constructed and an analysis of the sensitivity to changes in the list are found in Gorman and Kanet [2005].

IS ∪ TUSB			
IS			
		TUSB	
Non-U.S. (12 schools)	U.S. but not TUSB (22 schools)	IS ∩ TUSB (25 schools)	(35 schools)
Hong Kong University of Science & Technology	Emory University	Case Western Reserve University	University of California at San Diego
McGill University	Florida State University	University of Georgia	California Institute of Technology
Nanyang Technological University	Georgia State University	University of Houston	University of Chicago
Queens University	Naval Postgraduate School	Indiana University	University of Cincinnati
Simon Fraser University	Rensselaer Polytechnic Institute	University of Maryland	Columbia University
National University of Singapore	University of Arkansas	Massachusetts Institute of Technology	Cornell University
University of Western Ontario	University of California, Irvine	University of Michigan	Dartmouth College
Yonsei University	University of Central Florida	Michigan State University	Duke University
	University of Colorado at Denver	University of Minnesota	University of Florida
	University of Connecticut	University of North Carolina at Chapel Hill	Georgia Institute of Technology
	University of Hawaii, Manoa	University of Pennsylvania	Harvard University
	University of Kentucky	Pennsylvania State University	University of Illinois at Urbana-Champaign
	University of Nevada	University of Pittsburgh	Iowa State University
	University of Notre Dame	University of South Carolina	University of Iowa
	University of Oklahoma	University of Southern California	Louisiana State University
	University of South Florida	Southern Methodist University	State University of New York at Buffalo
	University of Texas at Dallas	University of Texas at Austin	New York University
	Washington State University	Vanderbilt University	Northwestern University
		University of Virginia	Ohio State University
		Virginia Polytechnic Institute and State University	Princeton University

IS ∪ TUSB			
IS			
		TUSB	
Non-U.S. (12 schools)	U.S. but not TUSB (22 schools)	IS ∩ TUSB (25 schools)	(35 schools)
		University of Washington	Purdue University
			Rice
			University of Rochester
			University of Rutgers-New Brunswick
			University of Rutgers-Newark
			Stanford University
			Syracuse University
			Texas A&M University
			Washington University (St. Louis)
			University of Wisconsin at Madison
			Yale University

*IS schools have more than 1 author-equivalent paper in *ISR* and *MISQ* from 1999-2004. Top U.S. business schools are taken from Harless and Reilly [1998] and Gorman and Kanet [2005].

DEVELOPING AN IS-CENTRIC BASE SET OF HIGH QUALITY UNIVERSITIES

A key strength of the AAI is its ability to rate journals by using alternative school sets as indicators of quality. The Harless/Reilly and Gorman/Kanet base set was selected with the specific objective of defining journal quality based on U.S. business schools across multiple disciplines. Other objectives may lead the AAI user to select a different base set. Among the reasons that faculty in IS at a specific university might choose a different school set is a desire to base journal quality on IS departments they wish to emulate, where their list of such schools differs from that of the top 60 U.S. business schools. To Illustrate, we developed a list of 59 schools that was based on a narrowly defined discipline, IS, but a broadly defined international geographic boundary; thus, the universe included universities worldwide. (See the first three columns of Table 1.) We do not offer this list as a definitive list of top IS schools; instead, we present it as one alternative IS-centric base set of schools to assess IS research that we have found useful at our university.

The approach used to derive our IS-centric base set was similar to the approach used to assess IS research by Trieschmann et al. [2000], whose purpose was to develop a list of the top U.S. business schools. (Other approaches could have been used, such as Lee 2001 or Lending and Wetherbe 1992.) They based their list on an analysis of papers published between 1986 and 1997 in leading research journals from various business disciplines, but our interest was to focus on the IS discipline. For IS they used two journals that they concluded were the consensus leading IS research journals: *ISR* and *MISQ*. Based on the same conclusion, we developed a list of 59 schools that had more than one author-equivalent article published in *ISR* or *MISQ* during the five-year time period from September 1999 through June 2004.[2] In their sensitivity analysis of the size of the base set Gorman and Kanet [2005] found, as expected, that a smaller base set yields uniformly lower AAI scores while generally preserving the relative journal quality rankings. They suggest larger base sets generate more stable results; thus, we used a base set of 59 schools similar in size to their base set of 60 schools in order to far exceed their minimum size of 38. The AAI for the IS-centric base set measures the percent of journal *x*'s academic authors worldwide coming from this base set of 59 schools. Table 2 provides illustrative AAI calculations (equation 1) for a fictitious journal based on these two alternative base sets of top schools.

TABLE 2. AAI Calculations Comparison Based on Fictitious Articles

		TUSB		**IS**	
		Contributions to		Contributions to	
Article	Author Affiliations	Numerator	Denominator	Numerator	Denominator
1	***UC-Berkeley***	1.00	1.00	1.00	1.00
2	***Indiana,*** Utah	0.50	1.00	0.50	1.00
3	***Texas at Austin***, *Western Ontario*	0.50	0.50	1.00	1.00
4	IBM Research, *Bentley*	0.00	0.50	0.50	.50
5	***Arizona***, **Brown**	1.00	1.00	0.50	1.00
6	Ohio, ***Houston***, Athabasca	0.33	0.67	0.33	1.00
7	National Science Foundation	0.00	0.00	0.00	0.00
Total		3.33	4.67	3.83	5.50
AAI			0.71		0.70

Note: Top U.S. business (TUSB) universities (see Table 1) are in **bold**. IS universities (see Table 1) are *italicized*. Calculations based on TUSB universities treat non-university and non-U.S.-university affiliations identically, i.e., as non-contributors. Calculations based on IS universities treat U.S.-university and non-U.S.-university affiliations identically, i.e., as contributors. The total for the denominator is the number of author-equivalent articles that the 7 articles represent. The total for the numerator is the number of author-equivalent articles by authors from the school list used to define journal quality. The AAI based on TUSB schools is the percent of U.S. university-authored articles by authors at TUSB universities. The AAI based on IS schools is the percent of world-wide university-authored articles by authors at IS universities.

[2] An article in *ISR* or *MISQ* that has a single author would count as one author-equivalent article for the author's university (call it University A). Additionally, if a second author from University A were one of two authors on two other articles in these journals, University A would have another author-equivalent article, assuming that the co-authors were not from that same university. Thus, University A would have 2.0 author-equivalent articles. The 59 universities in our list had scores of 1.08 or higher. A score of 2.0 or higher would have resulted in only 29 universities.

III. APPLYING THE AAI TO A SUBSET OF IS JOURNALS

To illustrate how IS research journals might be ranked using the AAI, Table 2 compares the AAI calculation for a set of articles from a fictitious journal which results in a different AAI score based on the two sets of top universities and their associated universes of relevant institutions. The same methodology is applied in both cases, but because of the different top school list and associated universe, we see that some articles are evaluated the same by either list, some are more favorably evaluated by the TUSB list, and some are more favorably evaluated by the TIS list.

Table 3. Selected IS Journal Rankings from Six Studies Since 1999

Journal	**L**	**K**	**PT**	**WH**	**MT**	**W**	**Mean rank**	**Rank of mean**	**TUSB AAI Mean**	**TUSB AAI Rank**	**IS AAI mean**	**IS AAI Rank**
ISR	2	2	2	2	3	4	2.50	2	0.519	1	0.717	1
MISQ	1	1	1	1	1	1	1.00	1	0.451	3	0.678	2
JAIS	12		9		30		17.00	8	0.351	5	0.502	3
JMIS	3		3	4	4	7	4.20	3	0.454	2	0.491	4
DATABASE			8	31	14	17	17.50	9	0.258	9	0.415	5
CAIS			5		18		11.50	5	0.290	8	0.402	6
JSIS	18	22	16	23	20	30	21.50	10	0.399	4	0.298	7
DSS	7	20	7	10	9	13	11.00	4	0.333	7	0.241	8
I&M	9	15	5	17	10	15	11.83	6	0.080	10	0.213	9
EJIS	11	14	4	20	11		12.00	7	0.346	6	0.122	10

Legend:

L = Lowry et al. (2004); K = Katerattanakul et al. (2003); PT = Peffers and Tang (2003); WH = Walstrom and Hardgrave (2001); MT = Mylonopoulos and Theoharakis (2001); W = Whitman, Hendrickson, and Townsend (1999); TUSB = Top U.S. Business School Set; IS = IS School Set

Journal Abbreviations (http://www.isworld.org/csaunders/rankings.htm, 5-September-2005)**:**

CAIS	Communications of the AIS
DATABASE	The DATA BASE for Advances in Information Systems
DSS	Decision Support Systems
EJIS	European Journal of Information Systems
I&M	Information & Management
ISR	Information Systems Research
JAIS	Journal of the AIS
JMIS	Journal of Management Information Systems
JSIS	Journal of Strategic Information Systems
MISQ	MIS Quarterly

We apply the method to IS research journals by selecting a sample of such journals culled from six studies from 1999-2004. It is important to note that any journal could be readily included, but our purpose here is to be illustrative, not exhaustive. We limited the journals to a selected set of

IS research journals ranked in the top 20 of at least two of the six studies. The 10 journals selected include three near the top on mean rank (1.0-4.2) across these studies, four in the middle on mean rank (11.0-12.0), and three near the bottom of this list on mean rank (17.0-21.5). Data were collected starting with the last issue in 2004 and moving back in time until 50 author-equivalent articles had been included.

ASSESSMENT USING THE TUSB BASE SET OF HIGH QUALITY UNIVERSITIES

Our first ranking applies the algorithm using the 60 universities found in the Harless/Reilly and Gorman/Kanet (TUSB of Table 1) base set and assesses the selected IS journals against this set. Table 3 displays the 10 selected journals, their ranking from each of the six aforementioned studies, and AAI results. Empty cells in the table indicate that the designated journal was not ranked in the associated study.

Probably the most remarkable AAI results based on the top U.S. business schools are for the *Journal of Strategic Information Systems* (*JSIS*) and *Information & Management* (*I&M*). Both of these were ranked by each of the six prior studies and in all cases *I&M* received a notably higher ranking. Yet, the AAI for *JSIS* is remarkably higher than for *I&M*, indicating that a greater percentage of *JSIS* authors come from schools in the top 60 U.S. business school set than do *I&M* authors. Overall, the Spearman's rho correlation of the TUSB-based AAI measure to the rank of means of the prior studies is 0.48.

The fact that AAI based rankings differ from survey and citation study results is not surprising, especially given inconsistency across those studies. The inconsistency of prior studies in ranking journals other than the top-ranked journals, (viz., *ISR, MISQ*, and perhaps *Journal of MIS*), is apparent from observation of their results summarized in Table 3. First, not all of the journals are included in all of the studies, making it impossible to achieve real consistency in ranking journals across these studies. Second, ranks for specific journals vary widely across studies, e.g., *JSIS* ranges from 16 to 30, *Decision Support Systems (DSS)* from 7 to 20, *I&M* from 5 to 17 and *European Journal of Information Systems (EJIS)* from 4 to 20. Third, even accounting for missing journals, rankings of the journals beyond the top two or three are not consistent across all studies. The reader may notice that Katerattanakul et al. [2003] rank *EJIS* first among the four remaining ranked journals and *DSS* third, but Lowry et al. [2004] rank them just the opposite, i.e., third and first, respectively. Statistical comparison of Spearman's rho correlation of rank confirms the observation that rankings beyond the top-ranked journals are not consistent across all studies. For the Katerattanakul et al. [2003] and Lowry et al. [2004) ranks, Spearman's rho is 0.77 for the six journals in both studies, but only .20 for the four journals beyond those that are top-ranked.

ASSESSMENT USING AN IS-CENTRIC BASE SET OF HIGH QUALITY UNIVERSITIES

For the journals in Table 3, we calculated the AAI based on the list of IS schools in the first three columns of Table 1. We modified the calculation of equation 1 such that the AAI calculation excludes only non-university affiliated authors so that the index in fact measures the percent of journal *x*'s university authors world-wide coming from the list of IS schools, as illustrated in Table 2. Table 3 shows the results and a comparison with the AAI based on the top 60 U.S. business schools and the six previous studies. The journals are listed in descending order of the AAI based on the IS schools.

Perhaps the most remarkable difference between the prior ranking studies and the AAI based on the IS school set is the ranking for *Journal of the AIS* (*JAIS*), which ranks near the top according to the AAI but near the bottom in prior studies. A plausible explanation for the low survey ranking of *JAIS* could be that this journal is relatively new; its first issue was published in March 2000. Thus, it is possible that its reputation had not been established, particularly for the three survey studies that ranked it. In contrast to the survey method of assessing journal quality, which necessarily lags behind the emergence of a journal's reputation, the AAI method can be used to assess a journal once it has 50 author-equivalent articles. Indeed, this highlights a key advantage of the AAI method: the rapidity with which a new journal's quality can be assessed.

The discrepancy between *JSIS* and *I&M* noted with the top 60 U.S. business schools is not nearly as remarkable with the IS school list. The two journals that have the biggest change in rank between the two school lists are *The DATA BASE for Advances in Information Systems* (*Database*), which rises to a rank of 5 from 9 and *EJIS*, which drops from 6 to 10. This indicates three things: (1) that a greater percentage of *Database* authors come from the IS school list than do *EJIS* authors; (2) that a greater percent of *EJIS* authors come from the top 60 U.S. business school set than do *Database* authors; and (3) that many of these authors are probably in schools that are not at the intersection of both school sets. Overall, the Spearman's rho correlation of IS-centric AAI ranks and the ranks of the mean score of prior studies is 0.47, essentially the same as the rank correlation for the TUSB-based AAI and prior studies.

Observation of the values in Table 3 for the two different AAIs indicates that the base sets yield different results. A statistical measure of these differences is reflected in correlation statistics. The Pearson product-moment coefficient of correlation for the two AAI measures is 0.64. Spearman's rho for the correlation of AAI ranks is 0.66. The overlap in schools between the IS base set and the top U.S. business schools is shown in Table 1. With about 40 percent of the schools in each set being the same, the AAIs should have both similarities and differences, as shown in the results.

IV. DISCUSSION AND CONCLUSION

As demonstrated previously, the AAI is relatively simple and inexpensive to develop compared to survey and citation analysis studies. Besides expense, surveys and citation analysis have other limitations [Chua et al. 2002]. Regarding surveys, for example, those conducting a survey heavily influence journal ratings since respondents are less likely to write in and rate a journal not already listed in a survey and the journals of niche communities of IS researchers are less likely to be rated highly. The AAI provides a different measure of quality and in some ways is better, e.g., it can be used to fill gaps for journals not rated, and it is not subject to the variance in respondent familiarity with journals. It can be calculated at any time for any journal. It can be adapted to evaluate journal quality based on different criteria through specification of a different base high-quality university set. The two examples we have provided illustrate how different school lists could affect the AAI of a given journal. Thus, agreement on a school set as well as its universe of relevant institutions as the basis for defining journal quality is important for faculty at a specific university since this is a key input to calculation of the AAI. Chua et al. [2002] suggest that a university's target journal list should be customized to reflect the university's current strengths and future objectives. Customizing the school list to reflect strengths and objectives related to specific communities of interest would be consistent with this suggestion.

One of the dangers in customizing the base set of high quality universities is opportunistic selection, i.e., carefully choosing schools to influence a particular journal's ranking. As noted in the development of the IS-centric base set, Gorman and Kanet [2005] recommend using a larger, more inclusive top school list. The more stable results achieved with larger sets reduce the ability to manipulate AAI scores through opportunistic selection.

Our basic purpose was to contribute to the continuing discussion of the assessment of journals for the purpose of making promotion and tenure decisions. We believe that the process of ranking journals is fraught with potential biases and that our introduction of the AAI into the IS domain contributes to making the process more objective.

At the 2006 *International Conference on Information Systems*, a panel discussion revolved around the concern that not enough leading outlets exist for IS research, a state of affairs documented by Dennis, Valacich and their colleagues [cf. Dennis et al. 2006; Valacich et al. 2006]. With this concern in mind, we suggest that the AAI has a number of important advantages that may facilitate the identification of leading journal candidates as well as reduce the subjectivity of journal quality assessment. First, the AAI is a transparent method for assessing any journal. By simply gathering the necessary input data, one can assess any journal. Second, it provides a consistent ranking of journals, particularly of those beyond the top consensus journals. Third, it enables new journals to be rapidly assessed against more established ones. These characteristics are important given the lack of consensus on top journals beyond *MISQ* and *ISR*.

By doing these three things, the AAI method eases the comparison of the productivity of a broad range of researchers and research traditions, or to employ a colloquialism, it allows the user to “compare apples and oranges” effectively. Let us say, for example, that there is an IS group with a particularly strong orientation toward one area of the IS field and that it publishes usually in one set of journals (such as e-commerce). With a desire to become a more diverse group in terms of research, the group attempts to hire faculty with an orientation toward another area of the IS field (such as computer-supported collaboration). Because the evaluation system at this example university has only had to account for journals in which e-commerce research may regularly be found, the department has a limited basis upon which to compare the prospective hire’s research with that of its own group. Or alternatively, the author could be on the leading edge of important new research, one for which new journals have emerged, which necessitates assessing these new journals against older, more established ones. The AAI method offers one means by which both of these scenarios could be addressed in a transparent, readily understandable manner.

What makes the AAI suited to these situations is that it is more a methodology or an algorithm than a definitive list of journals. While deciding precisely how the algorithm should be used – particularly, what schools should be chosen for the base set – is left to a given department or academic unit, at the least, these choices would be made *a priori*, i.e., before applying the algorithm. The results would be especially useful for tenure-track faculty who are seeking guidance as to what sort of publishing will provide them with the best opportunity to achieve tenure and promotion.

As we have discussed, the AAI method is also flexible, capable of being adapted to different goals, such as assessing an IS program against other IS programs world wide, or against other units within a given school of business, or across a given geographic region. A wide range of options is available; yet once the base set of schools and its associated universe of relevant institutions are agreed upon, consistent AAI scores are generated.

The adoption of the AAI to assess journal quality and, subsequently, research productivity is consistent with institutional theory that suggests that organizations in a specific field tend to become more homogenous, i.e., to exhibit isomorphism [DiMaggio and Powell 1983]. One implication of this perspective is that the greater the ambiguity of the definition of “success” (such as research productivity), the greater the extent to which organizations will model themselves after those perceived as successful (such as the base set of schools) [DiMaggio and Powell 1983]. Organizations often adopt procedures and technologies (such as calculation of the AAI) to gain legitimacy within their environment [Clapper and Prasad 1993; Scott 1991] and thereby obtain resources [Pfeffer and Salancik 1978]. The importance of our field’s legitimacy in comparison with others has been noted in two recent articles in leading IS journals [Dennis et al. 2006; Valacich et al. 2006].

Whether adoption of the AAI has the potential to help the IS discipline attain greater legitimacy in its environment is an interesting question for future research. It should help a given IS group compare its output to relevant others, such as other disciplines or IS groups in other universities, but further work is needed to suggest its effect at the broader level of the field. A potential question is suggested by the authors of the two recent articles mentioned previously [Dennis et al. 2006; Valacich et al. 2006], who recommend increasing the number of leading IS journals. Specifically, the question that could be explored is whether use of the AAI shows that the research productivity of IS faculty would be elevated relative to other fields under differing assumptions about the base school set and the number of leading journals.

Users of the AAI should recognize that it does not directly take into account differences across journals that affect the quality of papers authors choose to submit and journals choose to publish. For example, the AAI does not directly measure differences across journals regarding reputation, mission, review policy, or quality of peer reviews. It directly measures the percent of a journal's academic authors affiliated with a base set of high quality universities in a defined universe of universities. It indirectly measures article quality and the differences across journals that lead to the publication of high quality articles. The following causal chain is assumed. More of the best researchers tend to be affiliated with the top quality universities because those universities act to attract such faculty. These faculty "vote" on a journal's quality by submitting their best work to the journals that have the reputation of being the highest quality journals. Faculty at top quality universities seek to publish most in the top journals as these journals tend to have the most favorable impact on tenure and promotion. The highest quality journals have policies and procedures that lead them to publish the best work. While acceptance or rejection decisions are made without regard to author affiliation, the causal chain described here generally results in high quality journals having the highest percentage of articles published by authors affiliated with the top quality universities. Thus, AAI scores reflect differences across journals that influence their quality.

An interesting research question is what the impact on the AAI is when papers are rejected at *MISQ* and *ISR* and sent to other journals, particularly given the limited number of leading IS journals. A further question is whether the impact of rejection at the top journals in other disciplines with higher publication opportunities is similar. A related question for future research is whether the limited number of consensus top journals in IS leads researchers at top schools to send many of their papers to lower quality journals for publication and does that artificially raise these journals' AAI scores. While this may be the case, it is the relative AAI scores that are of interest more than the absolute scores; the relative level of quality assessment could be preserved, even if the gap is narrowed.

Although it would be ideal to assess the quality of an article based on its content (e.g., through an evaluation of how the article impacts the field or related fields in terms of research and practice), developing a direct metric of article quality is beyond the scope of this work. Indeed, it may be impossible to achieve or at least more expensive, as we have noted with surveys and citation analyses. We have asserted that an indirect measure of article quality obtained through calculating the AAI of the journal in which the article is published provides another useful indicator of quality.

Clearly any effort to suggest a programmatic aid for assessing journal quality will have some areas of potential contention. For one, applying it as we have here begs the question: “Is there a consensus on *MISQ* and *ISR* as the top journals in IS?” In our case we have answered this question in the affirmative. Various studies of journal quality lend support to this conclusion (see Table 3). Thus, we defined the base set of high quality IS schools as those most productive in these two journals. Others may choose to use a different approach to generate a base set that is acceptable to them.

A related question that could be raised about the choice of our base set derived from schools publishing in the top journals is whether we are using circular reasoning. Are schools considered top IS-schools because they publish in the top IS journals, or are journals considered top IS journals because those publishing articles in them are the top IS researchers and, therefore, from the top IS schools? Our position is that there is consensus about the top journals and that the best articles by the top researchers are published in those journals, giving us a solid foundation for identifying the base set of schools we wanted to use. Further, we seek not to identify causality, but rather, to develop a simple, straightforward measure of quality based on correlation of top schools, researchers, and journals. The AAI captures that correlation.

To what extent do collaborative, interdisciplinary, or extra-disciplinary articles affect the AAI? As equations 1 and 2 show, the AAI is adjusted to accommodate articles authored by researchers across institutions. For the AAI based on our base set of IS schools, we did not attempt to adjust it for authors outside IS. For the AAI based on the top U.S. business schools, we also did not attempt to adjust it for authors outside schools of business. An author of an article affiliated with a university in the base school set was counted (see A(*i*) in equations 1 and 2) without attempting to determine the author's discipline. We do not know how much this counting of articles by interdisciplinary or extra-disciplinary authors inflates the AAI of journals; however, since the same procedure was applied to all journals, the relative ranking of journals should be largely unaffected unless some journals are less likely to publish such articles. Similarly, when counting the number of author-equivalent articles from a university published in *MISQ* and *ISR* to determine our base set of IS schools, we did not attempt to determine whether an author was from the school's IS program or some other discipline. Thus, the data on the resulting number of author-equivalent articles for a specific school do not indicate whether the researchers are predominantly from the IS program or some other disciplines. As noted previously, though, the resulting base set of IS schools was an acceptable set of high quality IS programs for us.

Additional questions could be raised. For example, what happens if an author at a school in the base set were published in a journal and later that author moved to another school not in the base set and published another article in that journal? The journal's AAI would be increased by the first paper and decreased by the second even though the author is the same. Over time, authors may move,[3] the consensus about top journals may change, and the base school set may change. We believe the latter two items and the AAI of a given journal will change relatively slowly. In a variety of tests, Gorman and Kanet [2005] found that the AAI was relatively stable for 50 author-equivalent articles; special-case exceptions such as the one described are not enough to significantly alter the AAI score. However, estimating the relative impact of author mobility on the AAI could be the focus of future research. In any event, users need to understand how the AAI works, recognize that the world changes, and adapt as they deem appropriate. Whatever base set is developed and however it is developed by a specific user, the user needs to be satisfied that the base set defines a relevant high quality set of institutions. Once satisfied, the affiliation of authors relative to the base set at the time articles are published serves as the basis for calculating a journal's AAI at any point in time.

If the AAI were widely adopted, users should be aware that some elite institutions (i.e., universities used in many other universities' base sets) could attempt to use the AAI to establish a set of prestigious journals that reinforce their claims of elite status. Similarly, journal editors could attempt to enhance their journal ranking by inviting or accepting a majority of articles from authors at those elite institutions. Similar critiques could be raised about editors who might encourage citations to articles in specific journals, or surveys that include authors and editors of journals. Users of the AAI may wish to consider additional sources of data to assess such issues if they raise serious concerns.

In conclusion, we believe that using the AAI as described here has merit. It provides another indicator of journal quality that is different from surveys and citation analyses. Just as adopters of survey results and citation analysis should not adopt and apply them blindly, adopters of the AAI should be aware that it assesses journal quality based on the quality of the schools of the authors publishing in the journal relative to the base set of schools rather than the characteristics of the articles published. Nevertheless, it provides a transparent, consistent method by which journal quality can be assessed, once the base school set and its associated universe of relevant institutions are agreed upon. Although using the AAI will not necessarily eliminate the differences among evaluators that affect reaching agreement on the criteria for assessing research productivity, we believe that evaluators at a number of universities may find that it augments their current methods and contributes to the determination of a consensus rating of journal quality.

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[3] This possibility was especially relevant during the late 1990s and early 2000s, given the high level of faculty "churn" as programs expanded and opportunities to move were widely available. More recently, the amount of turnover has reduced, although changing demographics as noted by Freeman, Jarvenpaa, and Wheeler [2000] may bring this concern to the forefront again.

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LETTERS TO THE EDITOR

Letter to the Editor from G.F. Templeton, B.R. Lewis and X. Luo

FROM: Gary F. Templeton
Mississippi State University

Bruce R. Lewis
Wake Forest University

Xin Luo
Virginia State University

AUTHOR AFFILIATION INDEX: RESPONSE TO FERRATT ET AL.

ABSTRACT

Ferratt, Gorman, Kanet and Salisbury present a new way to rank journals based on the degree to which authors affiliated with high-ranking institutions publish in those journals. We respond to their work by offering another perspective on ranking journals in the IS field. By using institutional journal lists, we present rankings that portray the way IS journal standing is actually applied to inform academic decisions involving faculty and administrative evaluation.

Keywords: Journal rankings

I. INTRODUCTION

Ferratt, Gorman, Kanet and Salisbury [2007] offer a new way to rank journals by offering the Author Affiliation Index (AAI). Their AAI measure addresses an important omission in prior conceptualizations of journal quality, such as opinion surveys and citation counts. They score journals based on the percentage of articles published by authors affiliated with high-quality institutions. In doing so, Ferratt, et al., demonstrate a new and logical approach that many research communities will find useful.

We also have a new and different way to rank journals in MIS. This letter presents a study we conducted that uses institutional journal lists as the basis for scoring journals. First, we assert that journals and journal assessment studies are important artifacts in IS and other disciplines. Second, we demonstrate a practice-based approach to journal ranking that is unique in the IS field. Third, we present findings of our analysis and compare them to those of four other ranking studies, including Ferratt, et al. [2007]. Finally, we conclude that there are a wide range of options for journal ranking and that practice-based measures should be considered for inclusion in a balanced scorecard of journal assessment when making academic decisions.

II. JOURNAL IMPORTANTANCE

Academic peer-reviewed journals are important to the advancement of a global academic community - research findings contained in journals are instrumental in forming the identity of a discipline [Lowry, Romans and Curtis, 2004]. Journals provide significant academic influences, such as shaping and directing discourse, disseminating knowledge, establishing paradigms, and testing theories [Kuhn, 1962]. Studies that rank journals are important for faculty, institutions, and scholarly communities. They are instrumental in the establishment of faculty and institutional reputations. For faculty, journal publications represent the culmination of prolonged and intense study experiences and are the media for disseminating findings to the public. Institutions use journal publications to determine organizational productivity and to evaluate faculty performance. Scholarly communities use journal publications as formal representations of accepted knowledge and to identify experts in the field.

Rainer and Miller [2005, p. 92] noted the significance of journals and concluded that "the importance of journals in a discipline naturally leads to the question of relative journal quality." Chua, et al. [2002, p. 189] added that "a high quality publication is clearly more valuable to the IS research discipline than a low quality one." Given the importance of relative journal value, it is important for research communities to arrive at acceptable approaches to distinguish between high and low quality publications. Studies that rank journals are an empirical means to determine the relative value of publications in the field. Benefits of IS journal ranking studies include: 1) serving as guides that research community members can use to find and publish leading research, 2) providing research-based information that encourages journal improvement, 3) informing the budget allocation decisions made by institutional libraries, and 4) supporting the evaluation of faculty and institutional output [Lowry et al., 2004]. Consequently, studies presenting rankings of IS journals have been published every two to three years since the 1980s [Hamilton and Ives, 1983; Mylonopoulos and Theoharakis, 2001; Walstrom and Hardgrave, 1995].

III. A PRACTICE-BASED APPROACH

In the long tradition of IS journal rankings, the method reported herein is the first to utilize data on the way journals are officially graded in academic institutions. The primary significance of this research derives from its practical foundation, which captures the relative standings of IS journals as they are *actually used* in academic assessments.

DATA

The data used to rank journals in this study were collected from the graded journal lists of schools that offer doctoral programs in Information Systems. Van Fleet, et al. [2000] noted that "a list provides an explicit measure of how a department values research outlets" [p. 340]. As such, institutional lists reflect the state of journal standing in academic practice. Since faculty at research schools are strongly encouraged to publish as an integral part of their program's mission, it follows that they would be familiar with the journals in the field. Further, larger departments, such as those at research schools, are more likely to utilize journal lists [Van Fleet et al., 2000]. Based on these reasons, we issued a request for graded journal lists from the institutions on the listing of 'Doctoral Programs in Information Sciences' at the ISWorld web site. A total of 157 schools were solicited and 81 (52%) responded. Of these responses, 44 reported that they do not use internally-generated lists for evaluation purposes (five of these noted that they used externally generated lists). Thirty-five of the responses submitted their active journal lists; two respondents declined to release their list because they were prohibited from doing so by institutional policy. The schools that provided their lists represented an international sample, although they were predominantly from the U.S. Based on these responses, we estimate that approximately 54% of the target population (institutions listed as IS doctoral granting schools at ISWorld) do <u>not</u> have formal, internally developed journal lists. Conversely, we estimate that approximately 46% from the ISWorld listing make use of journal lists. Thus, our sample of 35 school lists represents approximately 49% of the schools on the ISWorld listing with IS doctoral programs that do make use of formal journal lists. We are confident that, with a sample of almost 50% of the doctoral-granting schools that employ lists, our findings are representative and generalizable, as noted by Van Fleet, et al. [2000], who received a similar sample size in a study of management journals based on school lists.

SCORING

Since the number of graded categories in use differed among the schools in our sample, a mean percentile score was computed for each journal at each school, based on its assignment in the school's graded categories. These scores were based on the number of categories at the school, the total number of journals in that school's categories, and the category placement of the given journal. The mean percentile scores were averaged across the schools in our sample to arrive at a composite score for each individual journal. In addition, we recorded the percent of schools listing each journal in any of their graded categories and the percent of schools listing the journal in their highest category. These category-based scores estimate how the journals are actually valued in practice.

SAMPLE

One methodological dilemma in arriving at journal rankings, especially in multidisciplinary fields such as IS, is the question of what journals to include in the sample. Peffers and Tang [2003] argue that IS journals may be categorized as either 'pure' (mainstream-IS) or 'allied' (related-field) journals. Further, they argue that journals should be segregated by type when ranking IS journals. They empirically produced what we believe to be a compelling list of IS-only research journals in their study. Accordingly, we followed their lead by employing a journal basket that included only the journals enumerated in Table 3 (IS Research Journals) of their article. In total, our study encompassed 77 Peffers and Tang [2003] IS journals listed by at least one of the schools in our sample.

III. FINDINGS

Based on the aforementioned average mean percentile scoring, the final IS journal rankings are reported in Table 1, arranged from highest to lowest. Also included in Table 1 is the percentage that each journal was listed by the schools in our sample and the percentage of schools that listed the journal in their top category. Although our journal basket incorporated 77 IS research journals, only the top 25 journals (that were categorized by at least a fifth of the schools in our sample) are presented in Table 1. The ranks shown in Table 1 estimate the relative standing of IS journals as they are used in academic practice.

COMPARISON OF FINDINGS

As noted, this study is one in a long stream of IS journal rankings. Consequently, it is instructive to compare the results of this study with other recent studies in the stream. For the 25 ranked journals from our study, Table 2 presents the rank scores from ours as well as four recently published studies. Each approach was based on uniquely different data sources. Ferratt, et al. [2007] produced a ranked list based on the percentage of publishing authors affiliated with a basket of high-quality academic institutions. The ranked list produced by Rainer and Miller [2005] was a result of calculating a weighted mean of rankings from nine individual studies published from 1991 to 2003 (Note: seven of these studies were based on opinion surveys and two on citation scores). The Barnes [2005] rankings were derived from citation impact scores, and Peffers and Tang [2003] used the opinion survey method.

Table 1: Journal Rankings from School Lists

Rank	Journal	Average Mean Percentile Score	Percent of Schools Listing in Any Category	Percent of Schools Listing in the Top Category
1	*MIS Quarterly*	80.9	100.00%	100.0%
2	*Information Systems Research*	78.4	97.14%	97.1%
3	*Journal of Management Information Systems*	71.2	97.14%	77.1%
4	*Decision Support Systems*	41.3	77.14%	11.43%
5	*Information & Management*	40.2	82.86%	14.29%
6	*European Journal of Information Systems*	36.4	71.43%	8.57%
7	*Journal of Strategic Information Systems*	28.2	62.86%	5.71%
8	*DATA BASE*	28.1	60.00%	5.71%
9	*Journal of the AIS*	28.0	51.43%	8.57%
10	*ACM Transactions on Information Systems*	27.2	37.14%	20.00%
11	*Information & Organization*	25.1	42.86%	17.14%
12	*Information Systems Journal*	25.0	51.43%	5.71%
13	*Information Systems*	23.4	37.14%	14.29%
14	*International Journal of Ecommerce*	22.0	42.86%	5.71%
15	*International Journal of Human Computer Studies*	17.8	37.14%	2.86%
16	*The Information Society*	16.8	37.14%	5.71%
17	*Journal of Information Technology*	16.3	40.00%	5.71%
18	*Organizational Computing & Ecommerce*	14.6	37.14%	2.86%
19	*Journal of the ACM*	14.0	22.86%	8.57%
20	*Journal of Database Management*	13.5	25.71%	2.86%
21	*Information Technology and People*	13.0	34.29%	5.71%
22	*Communications of AIS*	12.7	34.29%	0.00%
23	*Journal of Organizational & End User Computing*	10.6	34.29%	0.00%
24	*Journal of Computer Information Systems*	10.5	25.71%	0.00%
25	*Information Resources Management Journal*	10.4	31.43%	0.00%

Table 2: Rankings Comparisons

Journal	**Institutional Lists**	**AAI**	**RM**	**B**	**PT**
MIS Quarterly	1	2	1	2	1
Information Systems Research	2	1	3	5	2
Journal of Management Information Systems	3	4	4	20	3
Decision Support Systems	4	8	5	12	7
Information & Management	5	9	7	4	5
European Journal of Information Systems	6	10	8	9	4
Journal of Strategic Information Systems	7	7	13	16	16
DATA BASE	8	5	17	17	8
Journal of the AIS	9	3			9
ACM Transactions on Information Systems	10		6		39
Information & Organization	11				28
Information Systems Journal	12		18	18	10
Information Systems	13				21
International Journal of Ecommerce	14			13	12
International Journal of Human Computer Studies	15		16	14	42
The Information Society	16			15	49
Journal of Information Technology	17				40
Organizational Computing & Ecommerce	18			21	34
Journal of the ACM	19		11	6	17
Journal of Database Management	20				14
Information Technology and People	21				15
Communications of AIS	22	6	10		6
Journal of Organizational & End User Computing	23				22
Journal of Computer Information Systems	24			23	13
Information Resources Management Journal	25		32		11

Legend: AAI = Author Affiliation Index [Ferratt et al., 2007]; B = Barnes [2005]; PT = Peffers and Tang [2003]; RM = Rainer and Miller [2005]

While comparing the results of these studies is a non-scientific task (there are differing journal sample sizes and too many missing data points), we can make some general inferences. First, there appears to be general agreement between the five ranking perspectives shown. Among the top ten journals resulting from our analysis, nine also exist in Ferratt et al. [2007], seven overlap with Rainer and Miller [2005] and eight overlap with Peffers and Tang [2003].

Significant disparities between the studies also exist. Among top ten journals, Barnes [2005] overlapped least with the other studies (four with our analysis). Most notably, he ranks *JMIS* 20th, which deviates substantially from the other studies. Other anomalies are the premium that AAI [Ferratt et al., 2007] gives to *JAIS,* and our analysis discounts *CAIS* relative to the other studies. Clearly *JMIS* is more highly valued in practice than citation scores would indicate. This observation is reinforced by the recent calls for *JMIS* to be universally recognized as an ‘A’ journal [Dennis, Valacich, Fuller and Schneider, 2006; Kozar, Larson and Straub, 2006]. These comparisons show that alternatives for ranking journals are diverse, and the one presented in this letter offers a unique perspective.

IV. CONCLUSIONS

We believe that the IS discipline is on the verge of leading a ‘scientometric revolution’. For too long, scientometrics has been mired in ‘normal science‘ [Kuhn, 1962], with limited measures and scoring perspectives for assessing journal quality. Based on informal conversations, we understand that at this time, at least a half-dozen journal ranking articles are currently under review among IS journals. Further, practical solutions such as the AAI offer a wide range of hypothetical options for evaluating journals, articles, and subsequently, faculty and institutions involved in IS research. We believe that research such as ours and that by Ferratt, et al., will prove to be useful contributions as IS and other research communities move toward the development of a more ‘balanced scorecard’ of measures for journal assessment.

The approach undertaken in this study resulted in a new perspective on ranking IS research publication outlets. By employing a sample of journal lists actually used in the field, the rankings reported herein provide a practice-driven representation of IS journal stature and uniquely reflect the guidelines that govern the publishing activities of faculty in the IS discipline.

Nonetheless, some caveats are worthy of note. First, inclusion in our study was dependent upon whether or not the journal was categorized by any member of our institution sample. Even though our journal basket contained 77 journals, many worthy IS journals were not incorporated in the study. Second, our sample included only schools that offered doctoral programs. Albeit internally-generated journal lists are more prevalent at research schools, inclusion of a representative sample of journal lists from non-doctoral schools should fittingly broaden the scope of the data. Lastly, while we had a large sample of the schools with official journal lists, it should be noted that only about half of IS doctoral granting schools actually utilize lists.

While conducting this research, we encountered a methodological anomaly that should be addressed in subsequent research, as this and other recent studies have done [Peffers and Tang, 2003; Rainer and Miller, 2005]. The makeup of the journal basket in a given study can hinder the ability to make comprehensive comparisons between studies. Given the ongoing expansion of the number of IS journals in existence, the need to arrive at an acceptable definition for the 'IS journal basket' is emerging. It is our judgment that the journal basket in all assessments of IS journal quality should include only ‘pure’ IS journals. Further, we suggest that the Peffers and Tang [2003] definition should become the norm in the IS journal ranking stream. This kind of definitional standardization will greatly enhance the prospects for longitudinal assessments of relative IS journal quality. Indeed, the IS discipline has matured to the point that it is now appropriate to focus on the broad set of IS-centric journals in investigating relative journal standing.

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ASSESSING JOURNAL QUALITY ASSESSMENT: AAI AND JOURNAL QUALITY LISTS

I. INTRODUCTION

Research contribution is an extremely important component of faculty activity. Evaluation of this vital activity often leads to potentially life-altering decisions. Faculty are granted or denied tenure, promoted or not, and awarded salary increases that may be low, average, or high. All of these decisions are significantly influenced by how their universities evaluate their research productivity in terms of both quantity and quality. Quantity is easy to measure; quality is decidedly less so.

Evaluation of a colleague's case for promotion, tenure, and salary increases is a challenge. For example, how should specialized research or a novel research stream be evaluated? Particularly challenging is the specification of a just and adequate evaluation system. A leading scholar noted at a previous ICIS conference that the promotion and tenure process is wrapped in a "thin veneer of rationality." The evaluation effort is time-consuming, taking time from activities for which individuals are more directly rewarded (e.g., one's own research). It is often uncomfortable, largely because of flawed or limited metrics, e.g., counts of published articles in journals whose quality ratings are highly subjective.

The challenge becomes even more complex once a promotion and tenure (P&T) case leaves a given department. The evaluation of the department P&T committee is now reviewed by individuals on college and university P&T committees with no vested interest in and, perhaps, limited understanding of, the candidate's research. The challenge of evaluating information systems (IS) researchers is exacerbated by the limited number of widely acknowledged premier journals, currently *MIS Quarterly* (*MISQ*) and *Information Systems Research* (*ISR*), a state of affairs well-documented by earlier research [Dennis, Valacich, Fuller and Schneider, 2006; Valacich, Fuller, Schneider and Dennis, 2006].

As Templeton, Lewis, and Luo [2007] rightly imply, one way universities address the challenge of evaluating research productivity is to require departments to develop and maintain journal quality lists. In general, such lists are time consuming and difficult to develop. The discussions that lead to the documented lists can be subjective and politically charged. Faculty may have limited knowledge of a potentially wide range of quality outlets. Lists may be infrequently updated because of the labor involved and, as a result, they can become outdated. Such lists, nevertheless, preserve a given department's journal ranking effort in a formal document, which communicates to faculty members outside a given discipline the relative quality of various journals. Further, creating a list requires that senior faculty decide *a priori* the relative quality of journals. This should limit personality or favoritism as influences on promotion, tenure, and merit decisions. An important value of these lists to junior faculty is that they provide consistent guidance on target research outlets.

The article by Templeton and his colleagues offers a plausible metric for establishing journal quality based on a survey of journal quality lists. Our AAI article [Ferratt, Gorman, Kanet, and Salisbury, 2007] offers another. Establishing valid, reliable metrics for journal quality is an essential part of establishing a journal quality list and, thus, vital in assessing research productivity. Our purpose here is to discuss these two approaches within the broader context of the question that we pose below.

II. WHAT SHOULD GO INTO CREATING A JOURNAL QUALITY LIST?

One approach to answering the question is to use a multicriteria decision making (MCDM) model, with a range of inputs. We offer the following inputs for the sake of discussion:

- University Mission (e.g., depending upon the university's mission, journals other than the consensus premier journals may be highly rated)
- Assessed Article or Journal Impact
  - Article citations (e.g., see Social Sciences Citation Index (SSCI))
  - Published citation analyses
  - Impact Factor (e.g., see ISI from SSCI)
- Professional Opinion
  - The given university's previous departmental list (for purposes of updating)
  - Published opinion surveys
  - Other schools' journal quality lists [cf. Templeton et al., 2007]
- Quality and Accountability of Editorial Process (stated by the journal and often summarized in Cabell, 2002)
  - Review Policy (e.g., double-blind, etc.)
  - Rejection rate (higher implies higher quality)
  - Editor and editorial board characteristics (e.g., university affiliation, reputation of researchers)
  - Accountability to a professional group (e.g., AIS, SIM, INFORMS) in setting the journal's editor in chief and editorial board (we tend to believe that journals accountable to the field should be privileged in terms of quality assessment)
  - Years in existence
- Contributors
  - AAI, using schools considered exemplars (e.g., see the IS list we developed in our earlier article)

At the University of Dayton, we have been involved in carefully constructing and regularly revisiting two journal lists, one for Management Information Systems (MIS) and one for Decision Sciences and Operations Management. In developing our lists, we considered many of the factors above, including the AAI and other schools' lists, although not as extensively as the Templeton, et al., survey. A fundamental question is how much weight to put on each of the factors listed above.

DISCUSSION OF THE USE OF THE AAI AND SURVEYS OF JOURNAL LISTS

Our solution to the problem of determining journal quality is to apply the AAI and other criteria, as suggested in the set of inputs above. The AAI represents the percentage of a journal's academic authors affiliated with a specified set of high quality universities; thus, it provides a clear standard by which journal quality may be assessed. Of all the inputs, the Decision Sciences and Operations Management faculty found the AAI to be the easiest, most consistent, objective and transparent criterion for evaluating journal quality and gave it considerable weight in their analysis. The AAI served as the basis for initially ranking journals. Other inputs above were used to adjust rankings up or down. At the time that the MIS faculty last updated their list, they were not as familiar with the AAI as the Decision Sciences and Operations Management faculty. The MIS faculty used its previous list as the primary input and made adjustments based on the other inputs, including the AAI. Our experience in developing both lists included use of journal lists from other schools.

Of course, we value and respect the opinions of our peers, and the official lists of other schools do have face validity. However, journal lists are fraught with potential concerns. Naturally, broad-based and familiar journals receive broader coverage and likely receive higher marks than those that are unfamiliar. This artifact is reflected in Templeton, et al. [2007].. They report that 77 IS journals were considered by at least one school of the set of 35 which provided lists. Of the 13th through 25th ranked journals (still in the top 1/3 of all journals considered), only approximately one-third of the schools listed them. Furthermore, we note that Templeton and his colleagues report less than one-half of the schools they surveyed use internally generated journal lists, perhaps in some part due to the difficulty of creating and maintaining them as we noted above.

Our experience also raised questions about how to combine other schools' lists in a meaningful way. Templeton, et al., [2007] suggest using the "mean percentile score." It would be helpful if they would explain more fully their methodology for combining dissimilar lists via "mean percentile score." Most lists have a large number of equally ranked journals (e.g., Leading, High Quality; A, B, C). How were different rankings scored? How was the abundance of ties addressed? We would be curious to know, as well, whether statistical differences in rankings can be discerned given this method [cf. Gorman and Kanet, 2006, for an example of Duncan Groupings based on AAI scores]. Finally, how were missing data handled; is an omission from a list an assessment of low quality? In our lists, for example, omission does not necessarily mean that the journal is low quality. Our lists are relatively short but allow for additional journals to be readily evaluated, using AAI and other inputs.

The criteria and process used to create a journal list at a given university are not necessarily clear to those outside that university. In choosing schools whose lists we wanted to review, we asked colleagues at schools whose opinions we respected and who we believed shared our perspectives on journal quality. It would be helpful to know the names or demographics of the respondents to the Templeton et al. [2007] survey, including which ones did and did not have lists.

We find the effort by Templeton and his colleagues noteworthy; however, we also view other schools' lists as another form of survey of peer opinion. One may reasonably question whether or not a school's journal list is substantially different from faculty response to a survey. For example, is it likely that a school's list will not be as complete as a list resulting from a solicitation of faculty to participate in a survey? Potentially yes, if a school's list does not include specialized research journals that selected faculty may rate highly. This artifact would be reflected by lack of agreement among various schools on journals ranked. Templeton, et al., [2007] report relatively low levels of agreement across schools on all but the top two to three journals, similar to faculty surveys.

The lack of coordination among universities as to when journal lists are generated may also increase the variance in journal ranking studies that use school journal lists. Unless lists are generated by every school at the same time, the nature of the journals could be different when one school creates its list than when another generates its list, similar to differences occurring in surveys of faculty over time. To address this concern with respect to the Templeton, et al., [2007] study, we believe it would be useful for the authors to provide the distribution of the age of the lists collected.

We believe that the concerns described above are reflected in journal ranking articles that demonstrate fairly consistent findings with respect to *MISQ* and *ISR*, but which also feature dramatic reductions in cross-study correlations beyond the top two journals. In general, surveys of departmental journal lists have all the features (both good and bad) of opinion surveys which have been well documented elsewhere. The unaccounted for sources of variance we identify would make it extremely difficult to mesh such dissimilar lists into a coherent whole. Given these concerns, we are dubious of the notion that using journal lists derived from a survey of research universities will help clarify the quality of journals in a significant way. Hence, our approach at UD was to use these lists as a soft external validation of our lists, not as a heavily weighted input to our quality ratings.

III. ISSUES OF JOURNAL DIVERSITY AND PREMIER STATUS

Dennis, et al., [2006] and Valacich, et al., [2006] have clearly delineated an important issue that our field faces: of the many high-quality IS journals, only two are uniformly viewed as premier, which leads to an insufficient supply of IS outlets that are widely acknowledged as having premier status. The diversity of research in our field is a great strength, but it also has made it difficult for faculty to reach clear agreement on premier journals beyond the top two. This diversity has led to diffused recognition of strength among journals beyond *MISQ* and *ISR*; the field has clearly not reached consensus on other journals that should emerge with premier status.

A starting point for achieving this consensus would be to restrict the list of journals considered to be Information Systems journals, as suggested by Templeton, et al. [2007], who offer this suggestion to facilitate longitudinal assessments of relative journal quality. However, simply selecting one list for everyone and standardizing on it to limit the range of choices raises concerns of its own. For example, the history of diversity in the field indicates that agreement on this list will be nearly impossible to achieve; furthermore, such restriction is not necessarily consistent with the breadth of research fields in IS.

Another suggestion to address the problem of limited premier MIS outlets has been advanced by Dennis, et al., [2006] and Kozar, Larson, and Straub [2006], who have identified *Journal of the AIS* and *Journal of Management Information Systems* as potential journals for ascension to premier status. We believe that it is important for researchers in our field to express their opinions as to which journals should be seen as premier. Such opinions rightly carry weight and add value to the ongoing discourse on this topic. However, the linkage between a consensus among a number of researchers that a given journal is premier and it being uniformly accepted as premier (both by the MIS field and our non-MIS colleagues who will also evaluate our P&T portfolios) will not be direct. There are many inputs (including the opinion of leading researchers) that will drive researchers to publish in one journal or another. Hence, the need remains for a consistent and objective metric to identify when a given journal has reached premier status. The AAI is such a metric.

IV. CONCLUSIONS

We believe the AAI helps overcome some of the deficiencies inherent in developing and maintaining schools' journal quality lists by providing a low cost, easy, transparent, objective and flexible methodology for obtaining journal quality metrics that may be used as direct inputs to the journal list creation process. Certainly, a collection of school lists provides insight but is not a comparable methodology. It seems, rather, to be a variation of the survey method.

AAI requires no preordained agreement on a restrictive subset of IS journals. Rather, journals can be assessed and ranked on an as-needed basis. As the profession evolves, departmental interests change, or multidisciplinary research grows, AAI can be used to understand the overall quality of any set of journals of interest.

We see value in canvassing schools' opinions on journal quality. It provides a shortcut to generating an individual list. Surveys may provide interesting information from peer schools and the profession as a whole. However, we would like to overcome some of the deficiencies in the journal quality assessment and journal list generation processes; we recommend the AAI as an effective methodology for advancing this agenda.

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