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# ELECTRONIC JOURNALS IN BUSINESS SCHOOLS: LEGITIMACY, ACCEPTANCE, AND USE

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### Abstract

This research provides insight into perceptions regarding electronic journals: a technological innovation in academia. Acceptance of electronic journals among business school faculty has two hurdles to overcome: technological and, more challenging, garnering legitimacy within the academic community. A survey targeted at business school faculty in the United States was conducted investigating faculty perceptions about the acceptance of electronic journals in their academic discipline. The findings suggest that at the time of publication, electronic publications were seen as less desirable than paper counterparts for tenure and review. However, it appears that electronic counterparts of existing journals would maintain their legitimacy from a promotion and tenure perspective, suggesting that the perceived legitimacy of the journal is the critical hurdle to overcome.

**Keywords:** electronic publishing, legitimacy

### I. INTRODUCTION

The digital revolution is impacting processes and products throughout the economy. The ability to transfer data rapidly to multiple locations, in multiple formats, has provided an unprecedented opportunity for the transmission of information. Print and broadcast media have moved into the electronic medium with increased vigor as evidenced by the alliance between Microsoft and NBC to support both television and web-based outlets. Similarly, many popular news, business, and human interest periodicals (e.g., *The Wall Street Journal*, *Business Week*) are delivering both paper and web-based materials to their respective readership.

Publication by electronic means is a child of the 1990s and we are only beginning to explore and understand its implications for teaching and research. A recent issue of the *Academy of Management Journal* featured a special research forum on teaching effectiveness and one mechanism proposed to add value to the educational process was the use of information technology (Alavi et al. 1997). Similarly, Hitt (1998) noted two forces, globalization and the technological revolution

in information, that will have a sweeping impact on business, business schools, and management education. In the MIS community, the development of a scholarly infrastructure has been suggested (Watson 1994) and developed to a certain extent for individual publications such as MIS Quarterly (Ives 1994a) and for the larger MIS research community through ISWorld Net (Ives 1994b). Given that the creation and dissemination of knowledge is a fundamental aspect of an academic career and printed scholarly journals have been the traditional outlet for disseminating this knowledge, it is important to investigate the role of electronic publishing in today's business school environment.

Our interest is in investigating the influence of electronic publishing on business school faculties' scholarship through the medium of electronic journals. First, we will examine the nature of electronic journals; next, we will discuss the existing literature on the legitimacy; and finally, we will present the results of a survey of business school faculty regarding the current status of electronic publishing.

### **II. ELECTRONIC JOURNALS**

An electronic journal involves the dissemination and archiving of full-text professional articles using digital media (Schauder 1994). This definition excludes abstracts of papers, working paper series published electronically, and individual research papers that might be posted to one's website. Although it may seem unnecessary to exclude the latter items, it is often difficult to obtain a precise statement of electronic journal publishing that does not imply "anything available on the Internet." In addition, there are significant differences between different instantiations of electronic journals. For example, the media used to disseminate the journal material may include the Internet, CD-ROMs, or on-line computer services (Schauder 1994; Sweeney 1997). Another distinction involves the heritage of the journal: is it an "electronic-only" journal versus a journal that has been published in paper form and has evolved to an electronic-only or electronic and paper mode of dissemination. We believe that the publishing history will signi-

ficantly influence the acceptance and rate of acceptance of electronic journals overall. However, the ready acceptance of an existing paper journal that has evolved to an electronic dissemination mode may have little correlation with the acceptance of an electronic-only journal.

Although electronic dissemination of academic material has existed for some time, the advent of the commercial Internet has facilitated the diffusion of the electronic journal as a mechanism for disseminating knowledge. In 1994 there were 74 electronic peer reviewed journals available across all academic disciplines. The last four years have seen a staggering increase in the number and types of electronic journals available. Elsevier, the largest publisher of scholarly journals in the world, has made all 100 of its offerings available electronically and MCB Press is moving forward in a similar fashion. While these increases relate to paper journals that are taking on an electronic format, there are clear signs that electroniconly journals are also increasing in number. Appendix A includes a listing of the electronic-only journals available at the time of the data collection. The recent announcement of the Journal of the Association for Information Systems (JAIS) and Communications of the Association for Information Systems (CAIS) supporting information systems research are indicative of the growing number of electroniconly outlets across disciplines. Estimates of the number of electronic journals suggest that there may be over 3,200 electronic journals available at the beginning of 1999 (Association of Research Libraries 1999; Hitchcock et al. 1998).

Significant advantages must exist to readers, publishers, and libraries for electronic journals to flourish as they have. However, there are a number of disadvantages that create an ambiguous picture of the extent to which electronic journals will diffuse through the academic community.

### ADVANTAGES AND DISADVANTAGES OF ELECTRONIC JOURNALS

Electronic journals have captured the interest of readers, authors, publishers, and librarians for a number of reasons and many expect electronic publishing to ultimately push aside print publishing (Harnad 1995; Odlyzko 1995). From a reader-

ship standpoint, the ubiquity of the Internet enables easy access to articles around the globe and readers can obtain and print articles when needed. The opportunity to accelerate the review and publication process while expanding accessibility are compelling arguments for increased reliance on electronic publishing. Publishers can produce a specific issue of an electronic journal whenever they want to put information in readers' hands and however frequently they wish. Further, highly specialized topical areas may be able to support a standalone journal where interested authors can publish and readers can gain access at a lower cost than that of a traditional print journal. Finally, as the prices of print journals increase, the number of special interests among readers abounds, and library budgets stagnate or decline, there are more and more incentives for electronic publishing to diffuse throughout the academic environment.

Although the benefits of electronic publishing appear to be significant across constituencies, the movement toward acceptance of electronic journals has been relatively slow compared to their apparent potential (Odlyzko 1995). A number of factors have been identified as inhibitors of electronic journal proliferation, including the availability of computers and computing infrastructures (Woodward et al. 1997), document formatting (Schauder 1994; Woodward et al. 1997), strong preference for having the print version of articles to facilitate reading and annotating (Schauder 1994), increased potential for plagiarism, copyright concerns, and inadequate graphics quality (Butler 1995; Wills 1996).

Some feel that the most significant factor influencing the acceptance of electronic journals as a viable publication outlet is not technical but the legitimacy of this outlet from a promotion, tenure, and reward perspective (Cronin and Overfelt 1995; Ives and Jarvenpaa 1996; Kling and Covi 1995). Kling and Covi (p. 266) report that most academics today perceive electronic publishing to be experimental, that electronic journals "exist in a ghostly netherworld of academic publishing," and are of lower intellectual quality than traditional journals because faculty "sense something insubstantial and transient" in the electronic media. Butler found that

63% of respondents in science and social science disciplines did not perceive an electronic journal publication as "real."

Although electronic scholarship is in its early stages, a number of issues, including many technical and legal ones, have been acknowledged and are being addressed. However, much less attention has been given to how electronic journals in the scholarly publishing process affect the producers and readers of this knowledge as it relates to the traditional, legitimate research dissemination structure. Therefore, the focus of our inquiry is the degree to which electronic journals are perceived as a legitimate mechanism for sharing knowledge.

### **ELECTRONIC SCHOLARSHIP: A QUESTION OF LEGITIMACY?**

Legitimacy has been described as "a generalized perception that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions" (Suchman 1995, p. 574). The process of "becoming legitimate" has been viewed as a social one that mediates the relationship between power and authority and affects the establishment and sustainability of an entity (Berger et al. 1998; Scott 1995). Therefore, the participants in a given process define the social reality that leads to the creation of legitimacy (Della Fave 1980; Zucker 1991). The creation of legitimacy then explicitly ties to the participants' expectations regarding rewards and status within the broader community (Berger et al. 1998).

Why is legitimacy important for an entity? Legitimacy can lead to longevity and persistence on behalf of the entity as members are more likely to supply resources to entities that appear desirable and appropriate (Parsons 1960). Once legitimized, an entity is often able to sustain its legitimacy by the continued, inward flow of resources and often requires little ongoing investment in mobilizing forces to declare the entity's legitimacy (Ashforth and Fried 1988; Suchman 1995). Legitimate entities are perceived as more worthy, predictable, trustworthy, and meaningful while entities that have not demonstrated their legitimacy are vulnerable

to perceptions that they are irrational or unnecessary (Jepperson 1991; Meyer and Rowan 1991).

Academic journals fulfill a variety of roles within a community: building of a collective knowledge base, communicating information, gatekeepers of research quality, and mechanisms for distributing rewards and prestige (Hagstrom 1965; Schaffer 1994). Given the plethora of journals available in most academic disciplines, research faculty typically make publication submission decisions based on the perceived importance and impact of a given journal (Stahl et al. 1988). Although promotion and tenure standards vary across institutions, these standards are typically tied to the quantity and quality of research publications generated in combination with teaching and university/academic field service contribution. Specific to research performance, journals can be grouped hierarchically based on the importance and soundness of the articles that are published stemming from the quality standards embedded within the discipline (Harnad and Hemus 1998).

Therefore, assessing a faculty member's contribution and disseminating rewards (both within the faculty member's institution and broader academic community) is tied to the institutional legitimacy of the journal in which an article is published (Glover 1993; Van Auken et al. 1993). Shreeves (1992, p. 592) states that young faculty in the humanities are urged by their more senior mentors "to produce traditional scholarship for publication in established, high quality journals if they want to be eligible for tenure." Leslie (1994, p. 71) feels that most university promotion and tenure committees "belong to the last generation of scholars not steeped in the computer culture." Some have suggested that promotion and tenure committees, typically consisting of more senior faculty, are neither aware of nor supportive of electronic publications as being of value in attaining merit raises, promotions, and/or tenure (e.g., Cronin and Overfelt 1995). As Collins and Berge (1994, p. 774) state, "the biggest obstacle to [an] electronic journal's credibility is whether tenure committees will accept publication of articles in electronic journals as equivalent publications to those in paper journals."

Faculty reward systems are tradition bound and slow to change. Butler studied 10 electronic-only journals (none in business disciplines), asking contributors to respond to how others who evaluated their career progress and performance evaluated their publications in electronic journals. Of the respondents, 43% felt that electronic-only journals were evaluated as less important than print journals, 35% did not know, 21% felt print and electronic media were of equal importance, and 1% reported that electronic was better than print. Cronin and Overfelt studied the promotion and tenure guidelines in 168 departments of Computer Science, English, Sociology, and Mathematics within 50 universities and only one university explicitly mentioned electronic publications as a factor to be included in evaluating performance.

Given existing reward structures, electronic-only journals appear to be perceived as more risky and there are doubts that there exists much interest in broadening present faculty reward systems with non-traditional research methods and protocols (Van Auken et al. 1993). As noted by these authors, the "list" of prestigious journals will very likely fail to be amended significantly in the future. Therefore, we pose two research questions regarding the perceived quality assessments between electronic and paper journals:

RQ1a: How do business school faculty evaluate peer-reviewed electronic journals compared with peer-reviewed paper journals?

RQ1b: How do business school faculty currently serving on promotion and tenure committees evaluate peer-reviewed electronic journals compared with peer-reviewed paper journals?

It may be that resistance to electronic journals is a liability of newness. A primary determinant of organizational legitimacy is the entity's age (Baum and Oliver 1991). To develop and sustain its legitimacy, an entity must be able to reproduce itself and the older, more established entities are better conditioned for responding to situations that might exist in the environment (Hannan and Freeman 1984; Ruef and Scott 1998; Singh et al. 1986).

A key motivating factor when deciding on a journal outlet for an article submission is the prestige of the journal. Electronic journals are new and, like new paper journals, there is no existing tradition or history, minimizing the prestige associated with these research outlets (Wills 1996). Cronin and Overfelt estimated that only 70 of the 400 electronic journals existing in 1994 were refereed. Under these conditions, electronic journals may be perceived as less legitimate due to questions about the lack of review process or, if reviewed, about the academic standards of the reviewers. Compared with traditional journals with clear track records about acceptance rates and qualifications of the reviewers, electronic journals would be more risky outlets because the ground rules for evaluating quality are not clear.

The question of established, prestigious journals evolving from print to (or in addition to) an electronic format is still unanswered in an empirical sense. For example, Mowday (1997) predicted that the prestigious *Academy of Management Journal* would be published electronically in the near future. If faculty view journal prestige as the most important characteristic in journal outlet selection and importance to the promotion and tenure process, are equivalent electronic journals viewed in the same fashion? More specifically, there are really three types of journals: those that exist in an electronic format only; those that exist in both a paper and electronic format; and print only journals. Print/electronic journals may vary from their electronic journal counterparts not just in the mode of dissemination, but also in their perceived legitimacy. Print journals that change to electronic-only may be able to derive a perceived legitimacy and, therefore, acceptance in the promotion and tenure process from the legitimacy of the standalone paper journal (Kling and Covi 1995; Shreeves 1992). Therefore:

RQ2a: Will business school faculty perceive electronic journals that evolve from print counterparts as equivalent in quality?

RQ2b: Will business school faculty currently serving on promotion and tenure committees perceive electronic journals that evolve from print counterparts as equivalent in quality?

Are articles disseminated in electronic journals likely to be perceived as "more" legitimate across different functional disciplines? Electronic journals have become an important mechanism for disseminating knowledge in the physical sciences due to the intertwined nature of research across different research teams and the need to disseminate findings quickly throughout the field. Looking at business disciplines, a recent exchange on the ISWorld discussion list (http://www.commerce.uq.edu.au/isworld/) debated the relevancy versus rigor issues related to creating and disseminating knowledge when examining technologies that seem to change radically in less than a year versus enduring, theory-based knowledge that applies across these radical technological changes. The crux of the issue appears to be that the existing "legitimization" structure emphasizes the latter and, therefore, make it difficult to publish the former in a time frame that ensures dissemination of knowledge within a reasonable time. Members of the Information Systems field have been very aggressive in espousing the importance of electronic publishing and in developing viable electronic outlets (e.g., ISWorld, Brint, CAIS/JAIS)<sup>1</sup> (Ives and Jarvenpaa 1996; Watson 1994). Therefore:

RQ3: Is there a difference across functional disciplines related to business school faculty who have adopted or indicate interest in adopting electronic journals?

If legitimacy is a socially constructed phenomenon, what is the current state of "social construction" associated with electronic journals? Prior research questions investigated the perspective of promotion and tenure committee members (e.g., opinion leaders). It is also important to assess those faculty that are actively reading and/or submitting articles to electronic journals to determine the legitimacy issues associated with early adopters. Therefore:

RQ4: Do business school faculty who are actively reading or submitting articles to e-journals have different perceptions of electornic journals than faculty who are not interacting with electronic journals?

<sup>&</sup>lt;sup>1</sup>These are two electronic repositories of information supporting faculty and practitioners developed by IS faculty. Sites can be found at <a href="http://www.isworld.org">http://www.isworld.org</a> and <a href="http://www.brint.com">http://www.brint.com</a>.

### III. RESEARCH METHOD

Given our interest in faculty perceptions of electronic journals, we wanted to identify a population of faculty for which publishing in academic journals was considered a significant aspect of their job. Therefore, we focused on the 95 U.S. institutions with an Association of Research Libraries (ARL) membership on the assumption that these institutions represented the universities most likely to encourage scholarly research and publication. Confirming our assumption was the fact that 47 universities in our population were listed among the top 50 in research productivity (Stahl et al. 1988).

Once the institutions had been identified, we used the World of Learning and university websites to create a database list of all business school faculty employed at these institutions. We limited the sample to business school faculty as we believed that it was valuable to examine faculty perceptions within a given university domain (e.g., college or school) to ensure some consistency regarding research expectations while at the same time including different disciplines to enhance generalizability. A random sample stratified by academic institution was then drawn from our database by selecting every fifth name (roughly 10% of the sample), resulting in an overall sample size of 1,364 faculty.

A pre-tested survey<sup>2</sup> (see Appendix B) along with an addressed, postage paid return envelope was sent to each individual in fall 1997. The survey contained questions assessing demographic characteristics, perceptions of promotion and tenure, familiarity with electronic publishing and electronic publishing outlets, perceived advantages and disadvantages of electronic publishing, and the role of electronic publishing in the promotion and tenure process. Respondents were able to complete the questionnaire in less than 10 minutes and their anonymity was guaranteed.

<sup>&</sup>lt;sup>2</sup> An earlier version of this survey was pre-tested by approximately 30 faculty. Their comments influenced additional questions and wording changes. A subset of the initial group then reviewed the revised version of the questionnaire.

Four weeks after our first mailing, we followed with a "reminder" survey form including the postage paid return envelope to those who had not responded. We compared those who had responded to the first wave with those who responded as a result of the reminder. Armstrong and Overton (1977) found that those who respond later are assumed to have responded because of the reminder, therefore resemble nonrespondents, and can serve as a gauge of nonrespondent bias (see also Bryan and Smith 1997; Oppenheim 1966). We found no significant differences in rank, age, academic discipline, gender, tenured or nontenured, nor in the perceptions between those who responded initially and those who responded to the reminder.

A total of 300 completed, usable surveys were returned representing a 22% return rate. Although this response rate was lower than we anticipated, it was within the range of what is considered acceptable (Miller 1991). Twelve surveys were returned with incomplete data and 44 were returned as undeliverable.

Table 1 provides the demographic characteristics of our survey respondents. They were fairly evenly divided across disciplines and appear to be typical of the relative percentage make-up of business school faculties. Findings from the descriptive analysis suggest that less than one-third of the sample have even a general awareness of electronic publishing. Furthermore, approximately 16% of faculty surveyed read articles in electronic journals and only 7% intend to or have sent a submission to an electronic journal. Inconsistent with the surmise by Cronin and Overfelt that more senior faculty would be less aware/supportive of electronic journals, there were no significant differences in electronic journal perceptions across respondents by age or rank.

### IV. FINDINGS AND IMPLICATIONS

Descriptive statistics and analysis of variance were used to examine perceptions regarding electronic publishing and to assess differences between groups. Given the use of random sampling in our data collection process, many of our tests include statistical assessments where the difference in sample size between groups is fairly high.

Table 1. Profile of Survey Respondents (N = 300)

Age	# (%)	Gender	# (%)
Under 30	6 (2%)	Male	255 (85%)
31-35	20 (7%)	Female	45 (15%)
36-40	43 (14%)		
41-45	55 (18%)	Currently hold tenure	
46-50	54 (18%)	Yes	237 (79%)
51-55	65 (22%)	No	63 (21%)
Over 56	56 (19%)	Currently serving on P&T	
		Yes	100( 33%)
Academic area		No	200 (67%)
Accounting	52 (17%)	Currently serving in	
		Administration	
Economics	38 (13%)	Yes	60 (20%)
Finance	34 (11%)	No	240 (80%)
Management	63 (21%)	Faculty rank/position	
Marketing	47 (16%)	Instructor	3 (1%)
MIS	15 (5%)	Assistant Professor	54 (18%)
Production/	15 (5%)	Associate Professor	77 (26%)
Operations			
Other	36 (12%)	Full Professor	137 (46%)
		Department Chair	13 (4%)
		College/School Dean	15 (5%)

The F-test is robust to unequal sample sizes as long as the variances between groups are homogeneous (Lindman 1992). Levene's test was used to assess the homogeneity of variances and there were no significant differences between groups, suggesting that the assumptions for the ANOVA testing have been met. The following sections present results and discuss implications of the findings for each of the six research questions.

### PAPER VERSUS ELECTRONIC JOURNAL COMPARISON

RQ1a, 1b, 2a, and 2b were evaluated together. RQ1 asks for perceptions on electronic journals in general and RQ2 makes a more specific query regarding the electronic version of an existing, high quality print journal. The results suggest that the business faculty respondents did not perceive the electronic journals to be of as high quality as their paper counterparts. The scores on individual evaluations of electronic

Table 2. RQ1a, 2b, 2a, 2b: Perceptions of Electronic Journals Compared to Paper Journals (N = 300)

Response	electronic very unfavorable	<b>←</b>	electronic of somewhat lesser quality		electronic of somewhat better quality	<b>—</b>	electroni c very favorabl e	Paired Sample T-test
How would you evaluate a publication in an electronic peer-reviewed journal compared to a paper peer-reviewed journal?	53 (18%)	54 (18%)	76 (25%)	85 (28%)	1 (.5%)	3 (1%)	3 (1%)	11.77***
How would you evaluate a publication in a top quality journal that had gone electronic?	13 (4%)	14 (5%)	14 (5%)	200 (67)	200 (67)	5 (2%)	9 (3%)	
Responses from those currently serving on promotion/tenure committee evaluation of a publication in an electronic peer-reviewed journal compared to a paper peer-reviewed journal?	18 (20%)	14 (16%)	19 (21%)	37 (41%)	0	1 (1%)	1 (1%)	6.344***
Responses from those serving on promotion/tenure committee evaluation of a publication in a top quality journal that had gone electronic?	6 (6%)	3 (3%)	13 (14%)	69 (72%)	2 (2%)	1 (1%)	1 (1%)	

<sup>\*\*\*</sup> sig < .001

Table 3. RQ3: Discipline Differences in Perceptions of Electronic Journals (Sample Size Next to Discipline Name) (Means with Standard Deviation in Parentheses)

	Acct (52)	Econ (38)	Finance (34)	Mgmt (53)	Mktg (47)	MIS (15)	POM (15)	F-test
Awareness of electronic publishing	3.75 (1.58)	3.48 (1.39)	4.12 (1.87)	3.13 (1.35)	3.36 (1.47)	4.33 (1.63)	3.67 (1.23)	2.58**
Read electronic journals	2.77 (1.70)	2.55 (1.37)	3.24 (2.00)	2.13 (1.37)	2.19 (1.26)	3.47 (1.64)	2.20 (1.32)	2.77**
Pursued an electronic outlet	2.29 (1.68)	1.79 (1.09)	1.85 (1.23)	1.65 (1.07)	1.74 (1.29)	2.33 (1.34)	1.27 (.59)	3.04**

Significance \*\* < .01

Table 4. RQ4: Differences in Individual Perceptions of Electronic Journals Between Business Faculty Who Have More/Less Involvement Regarding Electronic Journals

Evaluation of Electronic Journals	High Awareness (n = 87)	Others (n = 213)	F- test	High Reading (n = 50)	Others (n = 250)	F-test	High Submission (n = 34)	Others (n = 277)	F-test
Personal evaluation of electronic journal	2.99 (1.35)	2.73 (1.18)	2.49	3.15 (1.29)	2.68 (1.19)	8.84***	3.43 (1.41)	2.75 (1.21)	6.50**
Perception of promotion and tenure committee evaluation of electronic journal	2.79 (1.28)	2.50 (1.23)	3.06+	3.93 (1.21)	3.23 (1.09)	22.78***	3.27 (1.12)	3.41 (1.18)	.63
Disadvantage—may not be refereed	3.60 (2.08)	3.16 (2.10)	2.56	3.75 (2.18)	3.09 (2.05)	5.91**	3.04 (2.16)	3.31 (2.10)	.33

Significance: + < .10 \* < .05 \*\* < .01 \*\*\* < .001

cally published journals and promotion and tenure committee perceptions were typically neutral to negative in relation to existing paper based versions of journals, although on every question the mode was neutral. The responses change significantly when the question is posed as evaluating an established, well-respected print journal evolving to an electronic format on both individual evaluations (F = 11.77, p = <.001) and for current members of promotion and tenure committees (F = 6.34, p = <.001). This may suggest the acknowledged importance of the perceived quality of the outlet, rather than a significant change in the means for producing and disseminating knowledge (see Table 2).

### FUNCTIONAL DISCIPLINE DIFFERENCES ASSOCIATED WITH ELECTRONIC JOURNALS

ANOVA was used to assess differences in electronic publishing involvement between academic business disciplines and the results are reported in Table 3. The findings suggest that there are significant differences across disciplines in the awareness and availability of electronic journals, reading of electronic publications, and intent to publish in electronic outlets. Scheffe tests were used to determine the significant differences. With respect to the reading of articles in electronic journals, faculty in Finance and MIS are significantly more likely to read articles than their colleagues in Marketing, Management, and Production and Operations Management. Additionally, faculty in Accounting are more likely to read electronic journal articles than those in Management (F = 2.77, p = .006). Finally, the Scheffe tests indicate that Accounting and MIS are most likely to pursue electronic outlets and POM the least likely (F = 3.04, p = .003).

### Differences in Electronic Journals Perceptions Between Involved/Less Involved Faculty

The fourth research question addresses those respondents who were more aware of electronic publishing. Three levels of awareness (defined here as involve-

ment) were evident among the respondents:  $^3$  awareness (87 respondents); action or reading electronic journals (50 respondents); and actual submission or intent to submit (34 respondents). Table 4 summarizes the significant differences among the high involvement respondents on key dimensions. Results from the analysis of variance indicate that faculty who have a high awareness of electronic journals (F = 3.06, P = .08) and read electronic journals (F = 22.78, P = <.001) are more likely to believe that their promotion and tenure committees perceive these journals highly. Faculty who read electronic journals (F = 8.84, P = .003) and have/intend to submit articles to electronic journals (P = 6.50, P = .01) evaluate electronic journals more highly than those who are less involved. Awareness appears to influence both the individual perceptions of electronic publishing and extends the perception to the institutional level of the promotion and tenure committee. Finally, faculty who read electronic journals were significantly less likely to perceive problems with the refereeing of electronic journals (P = 5.91, P = .02).

### V. CONCLUSIONS AND IMPLICATIONS

This research provides insight into the importance of creating and sustaining legitimacy to achieve electronic journal acceptance. Contrary to some (e.g., Harnad 1995), we see no immediate threat for electronic-only journals to push aside traditional print formats. There is the liability of newness inherent in any innovation. Faculty perceptions, and the perceptions of those currently serving on promotion and tenure committees, suggest the early view of electronic publishing (electronic-only) is at best neutral and in many cases negative as compared with existing paper-based outlets. However, faculty also indicate that perceptions of articles printed in electronic versions of paper journals are equivalent in value from a promotion and tenure perspective to their paper counterparts.

<sup>&</sup>lt;sup>3</sup> Respondents were categorized as high in awareness, reading, have/intend to submit if they responded with a 5, 6, or 7 (sometimes through frequently) in their response to these questions.

This equivalence between electronic versions of paper and paper-only journals is not, in and of itself, surprising. However, it does suggest that the quality of the outlet is perhaps the key driver for many faculty and the medium is less important in ascribing legitimacy to a journal. To this end, disciplines interested in bringing new electronic-only journals on line should attend to factors that can enhance the legitimacy of the journal.

If age is a significant determinant in gaining legitimacy, what does this mean for "new" electronic journals? Past research suggests that new endeavors must invest a substantial amount of energy and effort into creating objectivity and exteriority (Aldrich and Fiol 1994). More specifically, the entity must create new allegiant constituencies and at the same time convince existing legitimate entities to lend support (Ashforth and Gibbs 1990).

There are three different strategies that can be used to develop legitimacy (Suchman 1995): conforming, audience seeking, and manipulating. First, an entity can conform to the desires and wishes of an existing audience. This strategy demonstrates support for the existing culture and structure and tends not to challenge established entities (Meyer and Rowan 1991). This creates a rather significant challenge in gaining acceptance given the replication of existing capabilities with entities that already exist. One method for overcoming this challenge is to emphasize and trade on the reputation of key stakeholders in the new entity. Therefore, a new entity using a conformation strategy would need to have strong support from key researchers in the field who can attest to the entity's commitment to upholding existing norms and values (Bernstein 1992). For example, creating an editorial board that is made up of visible researchers in the field can help give the journal an early boost in legitimacy. Editors may wish to solicit articles from leading researchers in the field to validate the legitimacy of the outlet for substantive research. However, as noted in our prior discussion, time is a major factor in successfully achieving perceived legitimacy within an academic discipline. Therefore, as with any new journal in any dissemination format, high and consistent quality standards throughout the review process are necessary.

Another way that an electronic-only journal could garner legitimacy is to publish a paper version of the journal. While this appears to be contradictory to the vision and

operational strengths of electronic-only journals, some electronic journals are taking this route The logic behind this contradiction is that it may enhance the perceived legitimacy and, correspondingly, article submissions, the lifeblood of any journal (Kiernan 1999).

Another method often used when implementing a conformation strategy is to embed new structures and practices into existing legitimate institutions. In some ways, the academic community is beginning to see these new structures in the form of electronic processes underlying the article submission and peer review process at journals like MIS Quarterly, Information Systems Research, Academy of Management Journal, and Academy of Management Review and the ability to access journals on-line and download when needed such as any INFORMS Journal (Management Science, Marketing Science, Organization Science) and Communications of the ACM.

Other strategies for creating legitimacy emphasize finding the "right" audience and manipulating existing perceptions of legitimacy (Suchman 1995). For example, instead of conforming to the existing structure, an organization can seek legitimacy by finding an environment that will grant it legitimacy in its existing state. Therefore, the new entity must identify and attract constituents who value the processes or dimensions that the new entity is able to provide (Ashforth and Gibbs 1990). Research investigating the influence of management journals supports this notion (Johnson and Podsakoff 1994). There were very few changes in journal influence (e.g., legitimacy) over a 10 year period, except where new areas were growing in prominence, e.g., strategic management and the rise of *Strategic Management Journal*.

We see these last two strategies as a particularly relevant issue in the Information Systems field. Many business schools are encouraging tighter research linkages between academia and practice. Methods for reinforcing the importance of this linkage include the methods for disseminating research grants and placing corporate executives on faculty evaluation reviews. It would seem that the struggle to demonstrate the practical relevance of our research is confounded by both existing structures of legitimization and the slow turnaround time in our traditional journals. It is possible that as practical relevance continues its quest for the legitimacy granted to "high rigor" journals, publishers of electronic journals can seek out these "high practical relevance"

audiences for knowledge dissemination while at the same time facilitating change in the legitimization process.

The results illustrating difference in awareness and adoption across functional discipline may also support this notion of legitimacy and the different paths that could be taken to gain legitimacy. Faculty in MIS and Finance demonstrate the greatest awareness and reading of electronic journals. This may reflect a need to access "as current as possible" information to inform research and teaching given the speed at which technology is changing in these fields. Alternatively, these faculty may be more aware of and more frequently read electronic journals due to the perceived legitimacy inherent in these digital journals.

Finally, the champions of the legitimization process for electronic journals may well be those faculty who are actively reading articles in these journals. Results from the analysis indicate that these faculty evaluate electronic journals more positively and believe that their promotion and tenure committees would evaluate these journals more positively. In addition, these faculty have fewer quality concerns associated with these journals as the active readers of electronic journals recognize that there is a peer review process for determining what articles are published in the majority of existing electronic journals.

This paper has some limitations given the newness of the phenomenon. The sample population was specific to the business school milieu. The very small number of respondents who indicated that they have actually submitted a publication to an electronic journal outlet limited our ability to perform rigorous analyses. This level of acceptance may also be lower than reported given that intention was mentioned rather than actual submission.

Future research examining electronic journals should elaborate on this issue of legitimacy. Although we feel these avenues of inquiry are critical to better understand this phenomenon, different research methods may be necessary in order to delve into these issues given the current state of relatively slow evolution to electronic journals in the business disciplines. Specific issue to address include:

- When an existing print journal does evolve to electronic-only, does it maintain the institutional legitimacy it had in the academic community? To date, we are not aware of any journals that have evolved from printonly to electronic-only. Many exist with dual offerings and the data from this study suggest that this dual format does not influence perceptions of legitimacy. How will this evolution continue?
- Examining "new" electronic journals for the strategies used to garner institutional legitimacy (e.g., conforming, audience seeking, or manipulating). What strategies are working in what fields? Why?

These are important issues for new journals as well as for new instantiations of existing journals.

### VI. ACKNOWLEDGMENTS

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<sup>&</sup>lt;sup>4</sup>Editor's Note: The following reference list contains hyperlinks to World Wide Web pages. Readers with the ability to access the Web directly or are reading the paper on the Web can gain direct access to these linked references. Readers are warned, however, that

<sup>1.</sup> these links existed as of the date of publication but are not guaranteed to be working thereafter.

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## APPENDIX A LIST OF PURELY ELECTRONIC JOURNALS IN BUSINESS RELATED FIELDS PRIOR TO DECEMBER 1997

### **Accounting**

Journal of Accounting and Economics

### **Economics**

Far Eastern Economic Review Journal of Econometrics NBER Working Papers

### **Finance**

Journal of Financial and Strategic Decisions

### Management

Electronic Journal of Radical Organisation Theory Journal of Modern Business Synthesis

### **Marketing/Hospitality Business**

Journal of the International Academy of Hospitality Research (JIAHR) Journal of Product Innovation Management Planning & Markets

### MIS

Journal of Computer-Mediated Communication (JCMC) MISQ Discovery

### **Production/Operations**

Interactive Transactions of OR/MS Journal of World Systems Research

### APPENDIX B ELECTRONIC SCHOLARSHIP SURVEY

### **General Information**

Please com	plete the following g	eneral inform	ation. This w	ill be used only ii	n the aggrega	te.
Gender:	male	female				
Age:	under 30	31-3	35	36-40	41-4	15
	46-50	51-5	<u> </u>	over 56		
Manage	rea (please check o ement Marke please specify)	eting	MIS	Production/Op	erations	nance _ _
Do you curr	ently hold tenure? _	yes	no			
Faculty rank	d/position:	Instructor	Assistan	t Prof _	Assoc F	Prof
	<del></del>	Full Prof	Departm	ent Chair _	College	e/School Dean
Regarding	Promotion, Tenure	e, and Merit F	Review			
Please ansi	wer the following que	estions regard	ding your role	in promotion, ter	nure and men	it review.
Are you cur	rently serving on a F	romotion/Ter	nure Committe	ee?yes	sno	
Are your correcommend	urrently in an admi lations regarding pro	nistrative pos omotion and to	sition (Dean, enure?	chair, etc.) whe	ere you evalu	ate and make
Have you e	ver served on a Pro	motion/Tenure	e Committee?	yesyes	sno	
If so, how m	nany years have you	served on a	Promotion/Te	nure Committee	?	
Electronic	Publishing					
Electronic p	wer the following q publishing involves t his can include Intern	he use of dig	gital dissemina	ation or an exte		
How knowle	edgeable are you ab	out the currer	nt opportunitie	s in electronic pu	ublishing?	
1	2	3	4	5	6	7
not at all aware		somewhat aware		fairly aware		very aware

### **Electronic Publishing Outlets**

Please answer the following questions regarding your own publication and use of electronic publications. How often have you published journal articles in the last five years? 2 3 7 1 6 never rarely sometimes frequently How often have you considered electronic publishing outlets? 2 3 7 1 5 6 never rarely sometimes frequently How often do you read articles published electronically? 2 3 7 1 5 6 never rarely sometimes frequently How many journals in your discipline are available in electronic format? (Please circle) 0 1 2 3 5 Don't know Advantages and Disadvantages of Electronic Publishing

Please answer the following questions regarding the advantages and disadvantages of electronic publishing. Rank each list separately with 1 as the lowest and 6 as the highest or most important.

(1	Advantages Rank 1 least to 6 greatest advantage)	(Ra	Disadvantages ank 1 least to 6 greatest disadvantage)
	speed of publication		of lesser quality
	24 hours a day access		may not be refereed
	quick response to ideas of reviewers		copyright concerns
	quick response to ideas of others		plagiarism
	paperless		lack of technical training for submissions
	broader distribution possible		format less user friendly

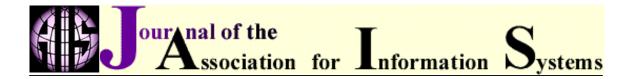
### Electronic Scholarship and the Tenure, Promotion, and Merit Review Process

Please answer the following questions regarding electronic publication and the tenure, promotion, and merit review process.

How important is pu at your institution?	blication i	n peer-reviewed jou	ırnals	in the tenure, promotion a	nd n	nerit reward process
1	2	3	4	5	6	7
not important		of some importance		important		very important
How would you eva reviewed journal?	luate a pu	blication in an elec	tronic	peer-reviewed journal co	mpa	red to a paper peer-
1	2	3	4	5	6	7
electronic very unfavorable		onic of somewhat esser quality		electronic of somewhat better quality		electronic very favorable
How would a Promo reviewed journal co				itution evaluate a publicat journal?	ion ii	n an electronic peer-
1	2	3	4	5	6	7
electronic very unfavorable		onic of somewhat esser quality		electronic of somewhat better quality		electronic very favorable
				was published electronic following questions?	ally a	and the peer review
How often would yo	u read or	refer to the electron	nic ve	rsion of this journal?		
1	2	3	4	5	6	7
less often than paper version				amount version		more often than paper version
How would you eva	luate a pu	ıblication in this jou	rnal co	ompared to a paper peer-	revie	ewed journal?
1	2	3	4	5	6	7
electronic very unfavorable		onic of somewhat esser quality		electronic of somewhat better quality		electronic very favorable
How would a Proncompared to a paper			your	institution evaluate a pu	ublic	ation in this journal
1	2	3	4	5	6	7
electronic very unfavorable		onic of somewhat esser quality		electronic of somewhat better quality		electronic very favorable
The sulverse		Diagon waterway was				

Thank you for your help. Please return your completed survey in the enclosed postage-paid envelope.

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