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# THE LEGACY OF “POWER AND POLITICS” IN DISCIPLINARY DISCOURSE: A CITATION ANALYSIS

*Epistemological and Philosophical Issues in IS*

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## Abstract

*Within Information Systems (IS), as with all other scientific communities, the publication of original research is the primary mode of communication. One characteristic of such communication is the use of references. Yet, scientific communities differ in the ways their members use citations to position their own contribution. In this paper, we examine the following questions: What can we learn about the discursive practices within IS by investigating ways in which the community has drawn upon one of its classics? How can such an analysis inform us as authors, reviewers, and active members of the discipline? To address these questions, we analyze over 300 citations extending over two decades to one of the most widely-cited works in the field – Markus’s “Power, Politics, and MIS Implementation”. We apply a wide range of citation analysis techniques to understand how IS researchers have used the article to support or to frame their contribution. Our analysis reveals the impact of social construction in shaping our discursive practices. This observation has several implications for improving IS research.*

**Keywords:** Citation analysis, disciplinary discourses, power & politics, social construction

## Introduction

“Unhappily, but perhaps not surprisingly, we discovered that the vast majority of these citations are either gratuitous or incomplete and frequently misrepresent what we would have taken as the central point of our contribution. ... We know now that tracing and analyzing the citations to one’s own work can be a humbling and frustrating experience, and we recommend it only to those whose interest in the workings of the discipline is greater than their commitment to an exalted vision of themselves.” (Oliver & Marwell, 2001: 293, 298)

Every scientific discipline, including Information Systems (IS), recognizes and embraces classics that represent intellectual landmarks for the community. In this paper, we highlight researchers’ referencing behaviors within IS and related disciplines associated with such intellectual pieces in order to reveal what these behaviors indicate about the social organization and scholarship within the epistemic culture of IS. In particular, we ask: What can we discover about IS scholars’ intellectual commitments by analyzing referencing patterns around one of the most widely cited pieces of IS research? To address this question, we will focus on the intellectual legacy of “Power, Politics, and MIS Implementation” (Markus, 1983). The article has received several hundred citations during the two decades since its publication, and it has been hailed as exemplary research (Lee, 1989; Walsham, 1993). The piece has also been identified as one of the few scholarly works within the IS field to garner scholarly attention in a wide range of other disciplines (Baskerville & Myers, 2002).

We are curious about how the treatment of this article informs our understanding of discursive practices in the field, and the ways in which disciplines evolve and organize their theoretical contributions. Do citing authors remain true

to the intentions of writers? Does the use of an iconic work change over time? Does resilience as a “classic” stem from connection with a single salient and powerful idea, or flexibility over a wide range of discursive contexts? How the members of a scientific community write and relate to the works of others reveals a lot about the intellectual life of the community. Indeed, discursive practices are central to the development of the epistemic culture that prevails within a discipline (Cronin, 2003; Knorr-Cetina, 1999). In this context, *epistemic culture* refers to “the amalgams of arrangements and mechanisms – bonded through affinity, necessity, and historical coincidence – which, in a given field, make up *how we know what we know*” (Knorr-Cetina, 1999: 1; italics in original).

The primary mechanism by which scholars articulate their contributions is through research articles or books. A central facet of such scientific communication is the use of citations as a means to identify and acknowledge the work of others. Conventional wisdom indicates that scholars cite others’ work to position their own efforts in relation to the existing body of research. Researchers use references to identify frameworks upon which they build, acknowledge intellectual debts, justify their methodological practices, and position their contribution (Bazerman, 1988; Garfield, 1977; Kaplan, 1965). Recent decades have also witnessed the emergence of explanations of citing behavior that emphasize its socially constructed nature (Gilbert, 1977; Latour, 1987; Latour & Woolgar, 1979; Locke & Golden-Biddle, 1997; Small, 1978). We seek to determine what these various perspectives reveal about the IS epistemic community. Through a range of citation analytic techniques, we identify patterns of social construction of our field. In addition, we explore implications for writing, reviewing, and contributing to the body of IS knowledge. Finally, we ask how disciplinary self-reflection can be extended.

In the following section, we provide an overview of perspectives on the use of citations in scientific communication and discuss analytical methods that can be used to explore citations. Section three discusses the main tenets of Markus’s 1983 study and its impact within the IS community. We then outline the analytical methods (Section four) employed and review key findings (Section five). Section six explores the implications of our findings. We conclude by suggesting how our findings could be fruitfully extended in future research.

## **Citation Practices in Scientific Writing**

The disciplined referencing of others’ work distinguishes academic writing from other forms of written communication. The formal practice of citation emerged with the disciplinary structures during the latter half of the 19<sup>th</sup> century (Bazerman, 1988; Leydesdorff, 1998). Citation behavior expanded significantly during the 20<sup>th</sup> century with the introduction of scientometric tools (e.g., the *Science Citation Index*) that quantify measures of scholarly impact based on the number of citations received. Today, to establish any knowledge claims effectively, a scientist is expected to fully acknowledge theoretical and empirical contributions of others to whom his or her work responds, or upon which a study builds.

The use of citations also allows for efficient communication through the genre of research articles. Researchers are not expected to reproduce all the evidence that bears upon intellectual development. Rather, by referencing established research, an academic writer can concisely formulate his or her unique contribution. In addition, citation behavior serves social functions identified in two schools of thought: 1) the normative or conventional view of citations, and 2) the social constructivist perspective (Baldi, 1998; Small, 2004).

### ***The Conventional Approach to the Use of Citations***

The traditional view of citation behavior builds upon the work of Robert Merton (1942; 1957; 1968). Merton (1942) argued that the scientific ethos was marked by imperatives of universalism and communalism. *Universalism* states that scientific truth claims need to be assessed objectively without respect to the personal qualities of their contributors. *Communalism* denotes the idea of common ownership of intellectual goods. Knowledge claims, once submitted, are held in common by members of a scientific community, and scientists must develop alternative mechanisms to defend their rights to intellectual property. Thus, the use of citations is understood as the scientific community’s approach to the recognition of “property rights” (Kaplan, 1965; Ravetz, 1996). Citations form a reward structure in science. Researchers who make significant contributions are rewarded through recognition by their peers and the level of standing it affords.

Within the conventional view, citations are employed for a wide range of purposes. Garfield<sup>1</sup> (1977) recognized several ways in which citations are used, including: 1) paying homage to pioneers, 2) giving credit for related work, 3) substantiating one's knowledge claims, 4) providing background reading, 5) articulating a research methodology, 6) criticizing research, and 7) correcting one's earlier work. These uses provide a mechanism for positioning the author's work with respect to the existing body of knowledge and expanding it. By identifying theoretical frameworks and empirical findings upon which one builds or against which one argues, a scholar signals the "places" where the work is intended to fit (Locke & Golden-Biddle, 1997).

### ***Social Constructivism***

Alternative explanations for citation apply a social constructivist lens. Latour and his colleagues (1987; Latour & Woolgar, 1979) described citation as an academic "rallying of troops" to generate strong impediments to attack by opposing scholars. Researchers attempt to create a defensive front around their work, and in so doing they cite others whose reputations are well-established – even in cases where the cited scholar's work is only tangentially related. This perspective indicates particularism and bias in the selection of cited works, running counter to the assertion of universalism (Merton, 1942).

In line with Latour, Gilbert (1977) asserted that referencing is a mechanism of persuasion. Juxtaposing the "referencing as persuasion" perspective against the more commonly held "referencing as property," Gilbert suggested that citations reflect an active selection among a range of possible supporting works. Researchers are quick to recognize that not all citations are of equal persuasive value. Scholars who are widely recognized by an audience have greater persuasive impact than less-renowned researchers, even when a less-acknowledged study is more relevant. This explains citation behaviors in light of a different set of considerations than the traditional account of referencing:

"Hence, authors preparing papers will tend to cite the 'important and correct' papers, may cite 'erroneous' papers in order to challenge them, and will avoid citing the 'trivial' and 'irrelevant' ones. Indeed, respected papers may be cited in order to shine in their reflected glory even if they do not seem closely related to the substantive content of the report." (Gilbert, 1977: 116)

Gilbert (1977) further asserted that, beyond the payment of homage and positioning of one's work, citation is a mechanism to indicate allegiance to a segment of the community. In contested areas, an author cites selected works to pledge support to one camp or another. The effectiveness of such a pledge is reflected through the ways in which the paper is received. Readers within a scientific community will often judge the merit of a piece of research based on the works which it cites (or acknowledges). They tend to attach less credibility to studies that cite works with which they are unfamiliar or ones whose methodology and findings they do not respect.

Another aspect of citation behavior is the use of cited documents as concept symbols or labels (Small, 1978). By attaching a citation to a selected word or phrase, an author makes the cited document stand for the idea with which it is being associated. The consequence of such usage is a significant reversal of the conventional theory. Whereas the traditional view argues that a citation denotes a source, which gives meaning to the statement of the author, the social construction argues that the citation attaches a new meaning *to the cited text* – "Referencing viewed in this way is a labeling process ... In citing a document, an author is creating its meaning" (Small, 1978: 328). Building upon Kuhn (1970), Small (1978) and Gilbert (1977) noted that when a given work is cited repeatedly, the paper becomes an exemplar in a field of research. "Their contents become a part of that which every competent member of the field can be assumed to know" (Gilbert, 1977: 117). Thus, citation of exemplary articles signals competence in a certain topic, regardless of its relevance to the author's work.<sup>2</sup>

Although the normative and social constructivist views of citation behavior have been normally framed as two competing schools (Baldi, 1998; White, 2004b), both forces operate simultaneously in practice and are not mutually exclusive. In a single work, an author may make several references to supporting literature and position his or her "move" in relation to the discourse and at the same time employ references that are gratuitous or less relevant in an effort to defend the article's knowledge claims.

<sup>1</sup> Garfield founded the Institute for Scientific Information (ISI) and introduced the *Science Citation Index* in 1964,

<sup>2</sup> Still a stronger form of creating connection is the lack of any need for reference. For example in physics,  $F = m \cdot a$  does not imply that one has to refer to Newton's *Principia Mathematica*.

### ***Methods of Citation Analysis***

Regardless of the motivations underlying citing practices, a number of citation analysis methods have been developed to determine what citation behaviors reveal about a discipline. Overall, the analysis of citations helps generate a significant amount of information about an author and a discipline. One common method is co-citation analysis, a process of bibliographic coupling that uses the frequency of various works and authors being cited together to map the intellectual landscape of a field (Small, 1973; White & Griffith, 1981). Information and library science has also developed the citation content analysis method that examines the use of specific words during citation. For example, Swales (1990) made a distinction between *integral* and *non-integral* citations. An integral citation is one in which the name of the cited author is used as part of the sentence, whereas the non-integral citation appears completely within parentheses. This distinction is more than stylistic: “The use of one form rather than the other appears to reflect a decision to give greater emphasis to either the reported author or the reported message” (Hyland, 2000: 23). Such analyses show that citation behaviors across academic disciplines vary significantly (Cozzens, 1985), revealing a great deal about the social organization of a field, the modalities of discourse in which it engages, and the disciplinary practices of which the community approves. As Hyland (2000) noted, “Successful academic writing depends on the individual writer’s projection of a shared professional context” (p. 1).

### ***Citation Analysis in IS***

In the IS field, citation analysis techniques have been applied to a range of questions about the discipline. Culnan and Swanson (1986) used citation analyses to investigate the emergence of IS as a distinct field and its referential ties with computer science, management science, and organization science. This study was later replicated by Cheon, et al. (1991), who found evidence of a growing IS identity and some recognition by researchers outside of the field. Similarly, Farhoomand (1987) considered citation patterns in exploring the maturation of the IS discipline from a philosophic perspective. Two recent studies extend the discussion of IS as a possible reference discipline through the use of citation analysis approaches (Grover et al., 2006; Wade et al., 2006). In a distinct vein, multiple researchers have employed citations analysis to investigate IS journal rankings and the assessment of individual publications (Cooper et al., 1993; Lowry et al., 2004; Van Over & Nelson, 1986; Vogel & Wetherbe, 1984). Focusing *within* the boundaries of the IS field, Culnan (1986; 1987) applied co-citation analysis to identify the discipline’s predominant internal discourses. She focused on the degree to which authors were commonly cited, without regard to the specific contents of the works. In a different type of citation study, Barrett and Walsham (2004) analyzed the process by which the authors of a highly cited article used citations to frame the contribution of their research.

In the present analysis, we will focus on a single highly cited work and emphasize how it was followed and adopted as shown by its citations. We pose the questions: What can we learn about the IS field’s disciplinary practices and epistemic culture(s) by considering the citing behaviors around one of its most widely used pieces? How does the treatment of this disciplinary exemplar illuminate the practices of the discipline? In contrast to the earlier applications of citation analysis, we will employ a wide array of citation analysis methods. Each of these analytic techniques reveals different facets of the discursive practices embraced in the IS field.

### **Power, Politics, and MIS Implementation: The Article’s Legacy**

In June 1983, *Communications of the ACM* published a study entitled, “Power, Politics, and MIS Implementation.” Appendix I contains a brief retrospective on the paper by its author, M. Lynne Markus. The main theoretical content, the research methodology and design, and the primary contributions are summarized in Appendix II. Since its initial publication, the article has been reprinted in three edited books (Markus, 1987; Markus, 1994; Markus, 2002), and it has become one of the most widely cited studies in the IS field. A review of the Social Sciences Citation Index (SSCI) reveals that “Power, Politics” has been cited in 290 journal articles or books. In addition, the Google Scholar search engine<sup>3</sup> indicates a total of 431 citations including additional references in conference publications. “Power, Politics” continues to be referenced extensively, as over 120 identified citations (about one-third) had been made since the turn of the millennium. Combining the SSCI and Google Scholar search results, a total of 343 unique journal articles (excluding conference papers) could be identified.

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<sup>3</sup> The Google Scholar Search was last conducted in February 2006.

The evidence of the status that “Power, Politics” enjoys extends beyond its widespread citation. The study has been regarded as “exemplary” research within both the positivist (Lee, 1989) and interpretive (Walsham, 1993) research paradigms. In 2000, the article was the sole focus of a panel discussion entitled “If Markus’ 1983 Classic Study, ‘Power, Politics, and MIS Implementation’, were Being Reviewed Today” at the International Conference of Information Systems (ICIS). During the panel session, the case study was analyzed from positivist, interpretive, and critical perspectives, and its adherence to the contemporary research canon was debated. The consensus reached was that while the methodological rigor within the field has changed since 1983, the fundamental insights of the study remain pertinent (Myers et al., 2000).<sup>4</sup> Therefore, “Power, Politics” is a particularly interesting article for answering our research questions about citation patterns in the IS field.

## Methodology

Below we analyze the ways in which “Power, Politics” has been received and employed via citations. We applied time series analysis, discourse analysis, citation content analysis, and variations of co-citation analysis that focus on other authors cited in the same contexts as the article. We focused on scholarly journals, books, or book chapters to ensure consistency in the degree and quality of peer review to which studied pieces of research were subjected. From 343 research studies identified using SSCI and Google Scholar<sup>5</sup>, we were able to obtain copies of 307 studies, covering approximately 90% of the publications that refer to the article.

The analysis was driven by the following questions:

- What are the different ways in which “Power, Politics” – especially its content and contributions – has been recognized and used by researchers? In other words, what patterns of discourse can be discerned?
- What do different uses of “Power, Politics” tell us about the structure of the IS community? What other citations frequently follow the article, and how accurate are the relevant references?
- Does the treatment and interpretation of “Power, Politics” remain constant over time?
- Do citing authors remain true to the message and intent of “Power, Politics”?
- What is the degree of adoption by researchers in multiple scholarly disciplines? Are there differences in the ways in which “Power, Politics” has been employed by researchers in distinct disciplines?

For each citing article, we identified, reviewed, and coded how the authors used the study in the context of their argument. We documented multiple features about the citing articles beyond standard bibliographic data (e.g., authorship, title, year of publication). Additional analytical categories employed include the following:

- *Discourse* – The topics or themes with which the article is associated when it is cited. The connection between the citing article and a given discourse is a one-to-many relationship – i.e., an author could use “Power, Politics” by connecting it to multiple topics in his or her article. An initial coding scheme was developed collaboratively by the first and second authors, based on our joint understanding of the concepts with which the article has been commonly associated. The final list of themes outlined below subsequently emerged during the coding of the citing works in accordance with the principle of theoretical saturation (Eisenhardt, 1989; Glaser & Strauss, 1967). When each manuscript was reviewed, we assessed the distinct discourses/themes employed by the author in connection to Markus’ article. When we encountered a theme or topic not previously encountered, a new discourse or theme type was listed. This process continued until the citation uses of all articles in the sample corresponded to at least one discourse that had been identified. All primary coding within discursive themes were completed by the first author of the present study, and were subsequently agreed upon by the entire research team. Measures of interrater reliability could not be obtained for this phase of the analysis. The discourses or themes documented include the following:

<sup>4</sup> Panel discussions can be found at <http://www.people.vcu.edu/~aslee/ICIS2000/ICIS2000-Panel-Markus1983.htm>

<sup>5</sup> Because it is still in a beta version, Google Scholar was used as the *secondary* mechanism for identifying relevant publications. This system was employed to ensure the thoroughness of the review. However, it is worth noting that several relevant documents were identified using Google Scholar which had not been reflected in the SSCI results.

- Interactionist theory
- Information systems implementation
- Organizational Change
- Power and politics
- Research methodology
- User involvement
- User resistance

In addition to the distinct discourses employed, we took notes throughout the review process to document the author's use of "Power, Politics". In cases where a use was identified which appeared to be inconsistent with, or contradictory to, the actual findings of the original article, these were identified as "Questionable Uses"; each questionable use was recorded with a quotation and the nature of inappropriate use.

- *Discipline* – Markus's article has been identified as a work applied in areas outside of IS (Baskerville & Myers, 2002). To record such uses, we documented the academic discipline or field of study in which the article had been published. In most cases, we made this determination by the title and the mission of the journal in which the article was published. In cases where the journal is associated with more than one academic discipline (e.g. *Academy of Management Journal*), the primary field of study was determined either by the departmental section (e.g. management science) or the disciplinary affiliation of the article's lead author.
- *Role of Use* – White (2004a) described the wide array of typologies of citation forms in use and concluded that "citation classification schemes are *all* idiosyncratic and hard to code" (p. 100). Bearing this in mind, we endeavored to classify and code citations only in terms of the role that Markus's article plays within the larger argument. In short, we wanted to examine the relevance of the citation to the main thrust of the author's work. Three categories were used to capture this information:
  - Central – "Power, Politics" was central to the author's argument in that the author seeks to establish additional support, counterattack, or reject some arguments made in Markus' article.
  - Peripheral – "Power, Politics" was referenced repeatedly and used to support a concept associated with the primary thesis of the author(s), but the content of "Power, Politics" is not a main focus of the author's argument.
  - Perfunctory (see, for example, e.g., Latour, 1987) – "Power, Politics" was referenced haphazardly in relation to one or more concepts that did not play any significant role in the author's main argument.
- *Type of Citation* – The use of integral or non-integral references to "Power, Politics" by citing authors. As noted above, an *integral* citation is one in which the name of the cited author is used as part of the sentence. *Non-integral* citations appear completely within parentheses or numbered references.
- *Number of References* – A count of the frequency with which "Power, Politics" was referenced in the studied piece. In cases where an exact count was not possible (e.g., an extended discussion of the details from Markus's case study), the number of references can be interpreted to reflect unique introductions of concepts directly from *Power, Politics*.
- *Co-Citation Analysis* – The frequency with which "Power, Politics" is cited in conjunction with other journal articles. The analysis also includes the frequency with which the article was co-cited with other authors, without regard to the specific studies cited. To complete the co-citation analysis, the SSCI and Google Scholar engines were employed to identify all references from the citing works (i.e., all references from the articles which had cited the Markus 1983 study). Accordingly, a database of over 18,000 individual citations was developed to support the analysis.

## Findings

### *What are the ways in which "Power, Politics" has been used by researchers? What patterns of discourse can be discerned?*

We identified seven discourses, or topic areas, in which researchers have used "Power, Politics". Each discourse was first considered independently. Subsequently we reviewed the patterns of association between discourses (i.e., the degree to which distinct discourses tended to be employed simultaneously by an author). Approximately half (52.8%) of the works used "Power, Politics" in association with the topic of **Power and Politics**. The next most commonly used concepts were **User Resistance** and **IS Implementation**, with 26.1% and 21.2% of articles, respectively. Finally, **Research Methodology** (9.4%), **Organizational Change** (8.1%), **Interactionist Theory** (7.2%), and **User Involvement** (6.5%) were periodically mobilized. A review of the dynamics of discourses provides some additional insights. We note that "Power, Politics" has been increasingly used in discourses associated with **Research Methodology** and **Organizational Change** (since approximately 1995), while its deployment in other discourses has remained relatively constant.

When considering how the discourses have been used in combination, the centrality of the **Power and Politics** discourse becomes more apparent. Nearly half (47.5%) of all the articles that employ the **User Resistance** discourse do so in combination with a discussion of **Power and Politics**. This is not surprising as there is conceptual affinity between the two areas. Similarly, a majority of the articles adopting the **IS Implementation** (56.9%), **Organizational Change** (56.0%), and **Interactionist Theory** (63.6%) discourses also associate with the **Power and Politics** concept. Only the **Research Methodology** and **User Involvement** discourses show little overlap.

**Table 1. Summary of Discourses Employed and Cross-Discourse Usage**

Discourse Employed	Total		Power & Politics		User resistance		IS Implem.		Research Methodology		Organ. Change		Interactionist Theory		User Involvement	
	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
Power & Politics	162	52.8%	-	-	38	47.5%	37	56.9%	6	20.7%	14	56.0%	14	63.6%	2	10.0%
User Resistance	80	26.1%	38	23.5%	-	-	16	24.6%	4	13.8%	10	40.0%	8	36.4%	0	0.0%
IS Implementation	65	21.2%	37	22.8%	16	20.0%	-	-	2	6.9%	6	24.0%	6	27.3%	1	5.0%
Research Methodology	29	9.4%	6	3.7%	4	5.0%	2	3.1%	-	-	0	0.0%	0	0.0%	0	0.0%
Organizational Change	25	8.1%	14	8.6%	10	12.5%	6	9.2%	0	0.0%	-	-	2	9.1%	0	0.0%
Interactionist Theory	22	7.2%	14	8.6%	8	10.0%	6	9.2%	0	0.0%	2	8.0%	-	-	0	0.0%
User Involvement	20	6.5%	2	1.2%	0	0.0%	1	1.5%	0	0.0%	0	0.0%	0	0.0%	-	-

One of the most consistent findings is that a vast majority of citations are *perfunctory*. That is, the piece is typically referenced in association with one or more concepts, but "Power, Politics" does not play a significant role in articulating the author's own contribution. More than three quarters (78.8%) of the articles cited "Power, Politics" in a perfunctory way. An additional 14% made repeated references, using "Power, Politics" to support a single component of the author's primary argument. Finally, only a small number of articles (13, or 4.2%) employed "Power, Politics" as a central component, or illustration, of their research. The heavy reliance on perfunctory citations is also echoed in another finding: more than half (62.2%) of the works cited "Power, Politics" only once, and a vast majority (87.9%) cited the article three or fewer times.



**What do different uses of “Power, Politics” tell us about the structure of the IS community?**

The co-citation analysis revealed a significant concentration of linkages between the article and other works within the socio-technical IS literature. Specifically, the studies noted in Table 2 were the five most widely co-cited pieces with “Power, Politics”. However, co-citation patterns with respect to specific studies varied significantly depending on the discourses employed. The articles most frequently co-cited with *Power, Politics* were different when the primary discourse was **Power & Politics, User Resistance, Research Methodology, or User Involvement** (Table 3). These findings indicate that co-citation trends offer signals to emerging conceptual groupings within a discipline, but that these groupings are closely tied to the reformulation of discourses as actively constructed by researchers.

**Table 2. Studies Most Co-Cited with *Power, Politics***

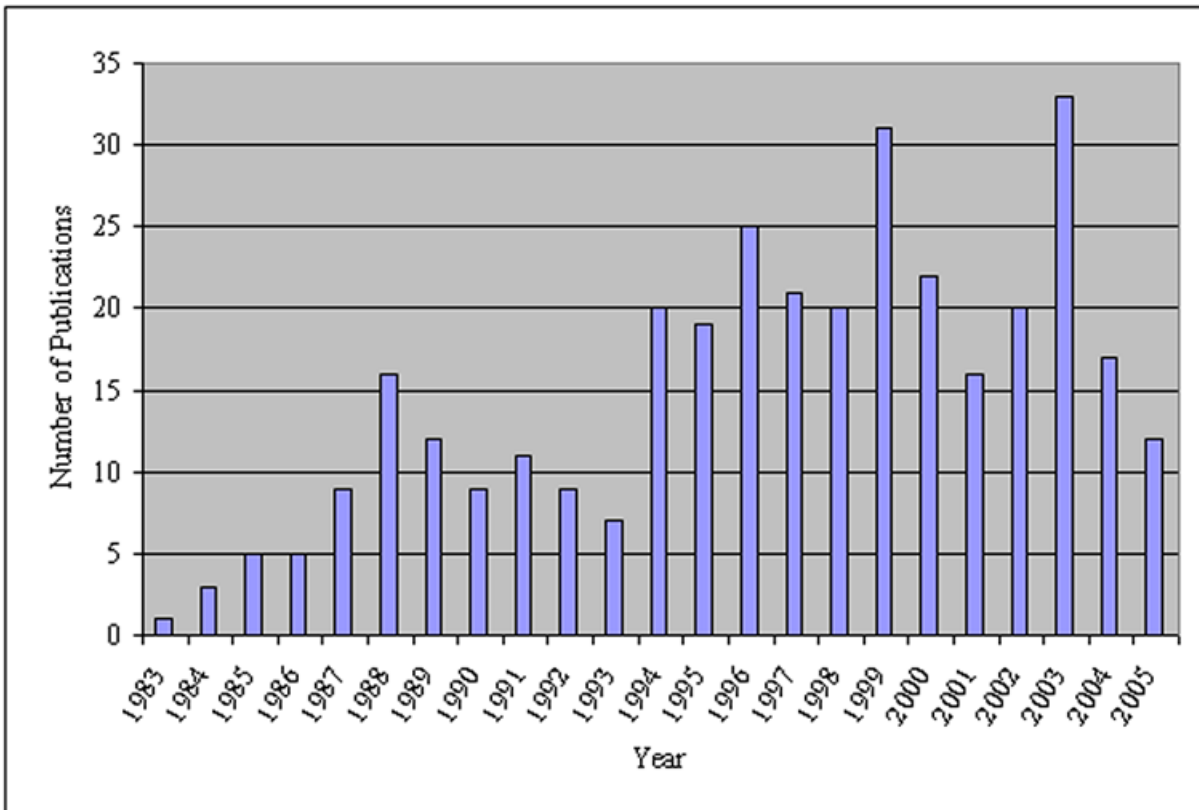
Article	Co-Citations
Keen, P.G.W. (1981). Information systems and organizational change. <i>Communications of the ACM</i> , 24(1), 24-33.	75
Ives, B. and Olson, M.H. (1984). User Involvement and MIS Success: A Review of Research. <i>Management Science</i> , 30(5), 586-603.	58
Kling, R. (1980). Social Analysis of Computing: Theoretical Perspectives in Recent Empirical Research. <i>ACM Computing Surveys</i> , 12(1), 61-110.	50
Ginzberg, M.J. (1981). Early Diagnosis of MIS Implementation Failure: Promising Results and Unanswered Questions. <i>Management Science</i> , 27(4), 459-478.	39
Kling, R., and Iacono, S. (1984). The control of information systems developments after implementation. <i>Communications of the ACM</i> , 27(12), 1218-1226.	38

**Table 3. Most Frequently Co-cited Studies by Discourse**

<i>Power &amp; Politics</i>	<i>User Resistance</i>	<i>IS Implementation</i>	<i>Research Methodology</i>
Keen (1981)	Keen (1981)	Keen (1981)	Benbasat, et al. (1987)
Kling (1980)	Ives et al. (1983)	Kling (1980)	Eisenhardt (1989)
Franz & Robey (1984)	Ives & Olson (1984)	Ginzberg (1981)	Walsham (1993)
Kling & Iacono (1984)	Kling (1980)	Lucas (1975)	Orlikowski & Baroudi (1991)
Ives & Olson (1984)	Bostrom & Heinen (1977)	Kling & Iacono (1984)	Lee (1989)

### ***Does the treatment of "Power, Politics" remain constant or has its use changed?***

For each citation characteristic considered (e.g., discourse, types of citation), we analyzed its change over time. When considered just in terms of received citations, the temporal analysis shows that "Power, Politics" experienced an initial "boom" period of significant citation after its original publication (c.f. Figure 1). This initial staging of citations peaked around 1988 (i.e., five years after its release), after which a brief decline could be observed. By taking into account the normal research and publication cycle of 3 to 5 years (i.e., the time it takes to get a paper from the start of research into a final publication), the initial peak of citations corresponds to the wave of original research that was influenced by, and fully recognized, the contribution of "Power, Politics".



**Figure 1. Temporal Distribution of Citations**

Interestingly, after a short decline, citations increased in the mid-1990s. References to "Power, Politics" have remained strong since then, averaging over 21 citations per year since 1994 and with no year having fewer than 12 citations. We suspect that this second wave of citation behaviors can be partly attributed to Lee's article (1989), which presented "Power, Politics" as an exemplary application of a scientific methodology for case study research. If that is the case, then the new citations again follow a five-year lag in the impact of a published piece that promoted the work. Other dynamics observed in the temporal distribution of the "Power, Politics" citation pattern are less apparent (e.g. the spikes of citation in 1994 and 2003).

### ***Do citing authors remain true to the message and intent of "Power, Politics"?***

Our analysis of questionable uses by citing authors reveals an interesting temporal pattern. As noted, questionable uses represent occasions where the way in which "Power, Politics" is cited contradicted with the article's claims. When such questionable uses are mapped against the year of publication, we observed that misuses have increased significantly in recent years. The majority of articles in which a questionable use was identified occurred between 1995 and 2005. It appears that detailed attention to the original content of "Power, Politics" wanes the farther we

get from the original publication, and the text takes on a life of its own. This finding offers strong support for the “concept label” characterization of citations, and how they become more pervasive over time with widely recognized scholarly pieces.

Latour (1987) noted that some references to a given work are included simply as a matter of practice by authors. An author references some seminal works in all of his or her own articles just to signal a close association with a select segment of the community. However, our analysis of the citations indicates that this is not a predominant force behind the total number of citations received. A total of 11 authors cited “Power, Politics” in five or more published works, while 91.4% of all authors<sup>6</sup> cited “Power, Politics” in two or fewer articles. This suggests that the frequent symbolic use of “Power, Politics” by a group of authors is not a significant driver of its widespread citation.

***What is the degree of adoption by researchers in multiple scholarly disciplines? Are there differences in the ways in which “Power, Politics” has been employed in distinct disciplines?***

One motivation to analyze citing behaviors was the assertion that “Power, Politics” represents a piece of IS scholarship that has been embraced by other academic areas (Baskerville & Myers, 2002). Our current analysis suggests that claims about the impact of “Power, Politics” on other disciplines have been overstated. Of the articles analyzed, 84% were cited within the field of IS, with no other discipline representing as much as 5% of all citations. Although one or two citations were found in publications dedicated to a variety of fields, the only other disciplines with a significant number of citations are **General Management** (13 citing articles, 4.2% of articles analyzed), **Healthcare & Medical Informatics** (eight articles), and **Organizational Behavior** (five articles). It is worthwhile to note that in all disciplines other than IS, there was very little referencing to the work prior to the mid-1990s.

In the disciplines that have employed “Power, Politics”, some variations in its use were identified. While **Power and Politics** remains a key discourse in all areas, **Organizational Change** plays a more significant role in **Healthcare/Medical Informatics** and **Organizational Behavior** than it does within the IS community. These two disciplines also pay greater attention to **User Resistance** than the **Power and Politics** discourse. By contrast, the discursive patterns observed in **General Management** directly mirror those observed in IS. Thus, the usefulness of “Power, Politics” to other disciplines derives from its malleability to address multiple research questions in different fields.

## **Discussion**

### ***Citations as Concept Symbols Revisited***

Several findings from this study suggest that a social constructivist mode of citation behavior is visible within the IS field. In particular, our study supports the argument that authors treat cited documents as concept labels (Small, 1978). Thus, for IS scholars, “Markus, 1983” has become shorthand for the presence of power and political forces within organizations – especially in combination with user resistance and related challenges to IS implementation. In addition, “Power, Politics” has been used *separately* as a concept label for the case study research methodology, organizational change efforts, or the relevance of user involvement. The vast preponderance of perfunctory references indicates that the use of the article rarely represents an essential role within the researcher’s argument. Rather, it is generally used to support or motivate a single statement, or research question.

The labeling role of citations presents a number of challenges. Foremost among these is that isolated statements are insufficient to appropriately reflect the intent and contribution of the original work. The result is that the author loses control of the work’s symbolic and empirical representation. Through continued re-interpretation, other researchers reconstitute the significance of the study in ways that is at odds with the intent of the original author. As Small (1978) notes:

“A difficulty with this view is that it allows the cited document very little role in determining its fate. ... The document could originally have been written to convey ideas other than the one it has come to symbolize. In other words, the process of becoming public property has transformed the document into something the author may not have intended” (p. 338).

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<sup>6</sup> There are 463 unique authors represented in the studies analyzed

Not surprisingly, our study suggests that such an effect is exacerbated over time. The frequency of questionable references to the study became more common as time elapsed.

One dilemma is that this apparent "misuse" is overlooked by the research community provided that the application of the article is in line with interpretations that have become acceptable within the discipline. In the case of "Power, Politics", discourses around user involvement or user resistance provide excellent examples. As noted, the article has repeatedly been used to support the idea of user involvement or participation. However, in the original discussion, Markus was careful to note that involvement is beneficial *only under certain circumstances*. When users believe that their involvement will have some impact on the outcomes, then participation may be a vital mechanism for avoiding resistance. However, in situations where significant changes have been determined beforehand by key authorities within the organization, user participation may result in greater user resistance, as users react against "a tactic that is meant to make them feel as though they have some say in the matter, when they obviously do not" (Markus, 1983, p. 441). This essential qualification has been entirely lost when the article is cited as unconditional support for the efficacy of user involvement.

Similarly, "Power, Politics"'s initial views on user resistance were often altered or diminished. Authors repeatedly reference the study to support the assertion that user resistance is an inherently negative condition encountered by systems developers. Yet, in the study itself, Markus took great care to note that resistance should not necessarily be understood as a negative phenomenon: "Resistance can also be functional for organizations, by preventing the installation of systems whose use might have on-going negative consequences" (p. 433). The nuances of such detailed analyses are not maintained when the article is cited only in contexts where the negative aspects of user resistance are acknowledged.

Woolgar and Cooper (1999) offer us another approach to the ways in an "iconic exemplar" can take on a life of its own. Specifically they argue that exemplary studies take on the status of a classic not because of the specific characteristic of the work itself, but rather through the uses to which the work can be applied: "such stories do not become exemplary simply as a result of their referential adequacy, or indeed of any inherent property. Their status is the upshot of their usage rather than the result of their internal qualities" (p. 438). Thus, a disciplinary classic may function as a kind of "urban legend," the truth or falsity of which is less relevant than the functional value it offers to members of the epistemic community by making available a set of arguments and expectations.

### ***Conscripting a Classic***

In addition to using the study as a concept label, the current study supports the characterization of citation behaviors as intellectual enlistment – raising forces in defense of one's position (Latour, 1987). Among the majority of the studies (73.3%) that cited the article in a non-integral manner, roughly two-thirds (62.5%) of the citations were included as part of block references (i.e., in references where the article was cited in combination with other researchers). Moravcsik and Murugesan (1975) referred to these situations as *redundant* citations, and they noted that "from a strictly scientific point of view, reference to one single paper would be sufficient, and the multiple reference is made mainly to 'keep everybody happy' in the game of priority hunting" (p.90). Another way to interpret such redundant citations is as a mechanism for enrolling support. Although a reference to a single source may be sufficient to illustrate that the issue of power and politics has been addressed within the IS field, a reference to four or five sources creates a more substantial barrier against those who might desire to challenge the author's claim to having made a thorough review of the literature. With current citation software, such extensive and non-discriminating use has become relatively effortless.

The widespread use of perfunctory and redundant citations can also be interpreted as an effort to signal the author's professional competence in the IS field. Within the community, it has become a standard expectation that certain moves in the discourse can be supported only with specific widely acknowledged texts. Thus, if one wishes to allude to power dynamics during systems implementation, "Markus 1983" is simply expected by the informed reader, perhaps along with "Keen 1981" and "Kling 1980". A failure to include these references, regardless of their relevance to the position adopted by the author, signals shallow knowledge of the discipline and its established canon.

The prevalence of perfunctory references in the studied articles also raises questions about the ways IS researchers build upon others' research. We encountered few citing authors who presented a perspective that argued against the model espoused in "Power, Politics".. Among the few cases where such counterarguments were raised, the juxtaposition relied upon a questionable or cursory interpretation of "Power, Politics"'s initial assertions. Thus,

despite a large number of citations, researchers have rarely critically questioned the validity or the specificity of the interactionist model that forms the core of the argument in “Power, Politics”.. Indeed, even among those who support the original contention, few seek to extend or refine the model in a substantive way.<sup>7</sup> As Barrett and Walsham (2004) observed in their analysis of another widely cited IS case study, “Kkey theoretical and conceptual contributions that were central to the case study were rarely drawn on or incorporated by later texts. Rather, multiple audiences took up the softer, and simpler, conceptual contributions” (p. 293). This observation applies equally to “Power, Politics”.

What does such an observation indicate about the cumulative nature of IS research? When a study is published, it is normally presented with the expectation that it will represent a seed for further research – to be adapted, extended, or challenged by others. Despite widespread acceptance and extensive readership over two decades, “Power, Politics” does not appear to have received this type of treatment. As researchers, we must ask ourselves why this is the case. What makes some topics or areas challenging for building upon and generating cumulative traditions? If we compare “Power, Politics” with research contributions based on field surveys or experimental designs and formulating concrete and relatively simple explanations for observed phenomena, such as TAM (Davis, 1989; Davis et al., 1989; Venkatesh et al., 2003) or media richness theory (Daft & Lengel, 1986), we see a stark contrast. Why does the IS community embrace and generate a cumulative research stream for one type of research model and eschew it for another?

The frequency of *obligatory references* raises questions about the practices of writing and reviewing within the IS field. What is the mechanism by which so many superfluous citations get included in papers? Are they generated because the author seeks to anticipate the expectations of the community, or are such expectations communicated and reinforced to the writer through the suggestions of reviewers? From the viewpoint of a research community, the use of citations that have limited bearing on specific research questions would seem undesirable, or at least unfruitful. Is the onus on reviewers to ensure that suggested additions to the literature reflect an appropriate match between the focus of the study and the content of the suggested readings? Is reviewing a political game to make sure that authors include citations to reviewers’ work? Do authors have sufficient autonomy to push back when they perceive a mismatch between their research questions and reviewers’ recommendations for citations?

### ***Disciplinary Boundary Spanning***

When citing authors enlist “Power, Politics” along with others, the “tour of duty” is still served primarily in the IS field. On this point, our findings contradict recent claims in the IS community (Baskerville & Myers, 2002). Baskerville and Myers (2002) noted that “Power, Politics” has been cited in a wide array of other academic disciplines:

“The citation pattern for Markus’ article reveals that it has been cited in such diverse disciplines as communication (Lewis 2000), education (Telem 1997), human resources (Fincham 1994), manufacturing (Guimaraes et al. 1995), medical informatics (Kaplan 1997), organizational behavior (Singh and Ginzberg 1996), organizational change management (Kaarst-Brown 1999), sociology (Rachel and Woolgar 1995), and urban planning (Budic and Godschalk 1994).” (Baskerville & Myers 2002, p. 6)

This observation led Baskerville and Myers to assert that IS can now be seen as a reference discipline for other fields. Although Baskerville and Myers are correct in noting the range of fields in which the work has been acknowledged, our results indicate that ad hoc sampling without careful citation and content analysis will overstate the degree to which the article has been embraced. Nearly 90% of all the works citing “Power, Politics” are still drawn from the IS discipline itself. In addition, citations in other fields tend to be in areas that blur the line with accepted IS research topics (e.g., medical informatics, management of IT, technology engineering). Only four of the articles outside of IS cited the article in a way that was more than perfunctory, and none of these used it as a central element of the work. Perhaps more disconcerting, 29 percent of the citing works from other disciplines employed a questionable usage of “Power, Politics”..

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<sup>7</sup> A notable exception to this observation is a very recent study which builds upon Markus’ structure in presenting a multi-level model of resistance phenomena: Lapointe, L. & Rivard, S. 2005. A Multilevel Model of Resistance to Information Technology Implementation. *MIS Quarterly*, 29(3): 461-491.

While there is evidence of limited extra-disciplinary use to date, our findings suggest that the impact of "Power, Politics" on other fields is increasing. Of the works outside the IS discipline that cited "Power, Politics", 80% were published since 1994, during the second phase of significant citation. Having achieved exemplary status within the IS discipline, the study may be gradually gaining greater "symbolic" acknowledgment among researchers in other fields. Another reason could be that scholars in other fields are becoming attentive to IS topics, including IS implementation or resistance due to the pervasive nature of IT in human enterprise.

### ***Malleability of Citing Behaviors***

The popularity of "Power, Politics" must lead one to consider the sources of its persistent appeal, since it has received so few (less than 5%) significant citations or analyses that focus on the central tenets of the argument. If the basis for its success is not what the article actually "said," its success must be sought somewhere else. We argue that it lies in the range of discourses to which the article can be embedded and where it can be applied. Although several of the discourses we identified have significant overlaps, the study has still been employed in discernibly different ways to support discussions about Power and Politics, User Resistance, User Involvement, and the case study Research Methodology, to name a few. In some sense it has high "referential/interpretive flexibility," and it offers a discursively versatile resource for IS researchers – especially since it obtained its symbolic concept status. This high versatility is illustrated by the fact the study has been held up as an exemplary piece of research in both the positivistic (Lee, 1989) and interpretive (Walsham, 1993) research communities—a status that challenges the claims of another iconic study by Burrell and Morgan (1979). During the ICIS panel in 2000, the article was considered again from positivist, interpretive, and critical perspectives. While the applicability of the study across all these traditions presents some challenges the idea of paradigmatic incommensurability (Burrell & Morgan, 1979; Kuhn, 1970), it certainly illustrates the degree to which "Power, Politics" has been conscripted to make claims within a variety of research positions.

While the concept of interpretive flexibility is challenging to an idealized understanding of the ways in which researchers build upon the work of others, such malleability may play an essential role in reapplying the lessons of a given work. Ravetz (1996) has argued that pure research findings frequently undergo a process of *smoothing*, in which "facts" become standardized as some of the complexity associated with problematic particulars or unresolved ambiguities are reduced in their application to a new context. For Ravetz, this smoothing is essential if a finding is going to live on through application to different environments. Such a perspective not only highlights some of the benefits of interpretive flexibility, but it provides one explanation for the loss of argumentative nuance encountered in the application of the "Power, Politics" work.

### **Conclusion**

The treatment of "Power, Politics" over two decades since its publication offers several insights regarding the ways in which IS researchers employ intellectual resources at hand. In this regard, constructivist dynamics play a significant role, and the use of citations as concept labels presents distinct challenges to our research practice: Are we faithful to the intent and content of other's work? Does the IS discipline support a true and active dialogue around concrete research questions and about phenomena of interest? Or are we just ships passing in the night, using selected referential spotlights to see the shape and direction of other vessels? In what sense does the research community truly enforce mechanisms that will build up a cumulative body of knowledge? Do our editorial policies and peer review practices engender an appropriate way of using citations?

The current study presents a focal point for reflecting upon these questions. We believe that additional research can provide a broader empirical base for further analysis and discussion of the epistemic cultures and discursive practices that prevail within the IS field. Undoubtedly, the citation patterns observed for "Power, Politics" differ dramatically from those for other works within the IS community (e.g., TAM by Davis et al., 1989), or adaptive structuration theory by DeSanctis and Poole (1994)). Similar analyses of other classics in our discipline could provide a more informed basis for comparing research traditions and for building a more comprehensive description of our discursive practices.

## References

- Baldi, S. "Normative versus Social Constructivist Processes in the Allocation of Citations: A Network-Analytic Model," *American Sociological Review* (63:6), December 1998, pp 829-846.
- Barrett, M., and Walsham, G. "Making contributions from interpretive case studies: Examining processes of construction and use," in: *Information Systems Research: Relevant Theory and Informed Practice*, B. Kaplan, D.P. Truex III., D. Wastell, A.T. Wood-Harper and J.I. DeGross (eds.), Kluwer Academic Publishers, Boston, MA, 2004.
- Baskerville, R.L., and Myers, M.D. "Information systems as a reference discipline," *MIS Quarterly* (26:1), Mar 2002, pp 1-14.
- Bazerman, C. *Shaping written knowledge: The genre and activity of the experimental article in science* University of Wisconsin Press, Madison, WI, 1988.
- Burrell, G., and Morgan, G. *Sociological Paradigms and Organizational Analysis* Heinemann, London, 1979.
- Cheon, M.J., Choong, C.L., and Grover, V. "Research in MIS - Points of Work and Reference: A Replication and Extension of the Culnan and Swanson Study," *Data Base* (23:2), Spring 1991, pp 21-29.
- Cooper, R.B., Blair, D., and Pao, M. "Communicating MIS Research: A Citation Study of Journal Influence," *Information Processing & Management* (29:1), January-February 1993, pp 113-127.
- Cozzens, S.E. "Comparing the Sciences: Citation Context Analysis of Papers from Neuropharmacology and the Sociology of Science," *Social Studies of Science* (15:1), February 1985, pp 127-153.
- Cronin, B. Scholarly Communication and Epistemic Cultures. Keynote Address, *Scholarly Tribes and Tribulations: How Tradition and Technology Are Driving Disciplinary Change*. Association of Research Libraries, Washington, DC, October 17, 2003.
- Culnan, M.J. "The Intellectual Development of Management Information Systems, 1972-1982: A Co-Citation Analysis," *Management Science* (32:2), February 1986, pp 156-172.
- Culnan, M.J. "Mapping the Intellectual Structure of MIS, 1980-1985: A Co-Citation Analysis," *MIS Quarterly* (11:3), September 1987, pp 341-353.
- Culnan, M.J., and Swanson, E.B. "Research in Management Information Systems, 1980-1984: Points of Work and Reference," *MIS Quarterly* (10:3), September 1986, pp 289-302.
- Daft, R.L., and Lengel, R.H. "Organizational Information Requirements, Media Richness, and Structural Design," *Management Science* (32:5), May 1986, pp 554-571.
- Davis, F.D. "Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology," *MIS Quarterly* (13:3), September 1989, pp 319-340.
- Davis, F.D., Bagozzi, R.P., and Warshaw, P.R. "User Acceptance of Computer Technology: A Comparison of Two Theoretical Models," *Management Science* (35:8), August, 1989, pp 982-1003.
- DeSanctis, G., and Poole, M.S. "Capturing the Complexity in Advanced Technology Use: Adaptive Structuration Theory," *Organization Science* (5:2), May 1994, pp 121-147.
- Eisenhardt, K.M. "Building theories from case study research," *Academy of Management Review* (14:4), October 1989, pp 532-550.
- Farhoomand, A.F. "Scientific Progress of Management Information Systems," *Data Base* (18:4), Summer 1987, pp 48-56.
- Garfield, E. "Can citation indexing be automated?," in: *Essays of an information scientist*, ISI Press, Philadelphia, PA, 1977, pp. 84-90.
- Gilbert, G.N. "Referencing as Persuasion," *Social Studies of Science* (7:1), February 1977, pp 113-122.
- Glaser, B.G., and Strauss, A.L. *The discovery of grounded theory: Strategies of qualitative research* Wiedenfeld and Nicholson, London, 1967.

- Grover, V., Ayyagari, R., Gokhale, R., Lim, J., and Coffey, J. "A Citation Analysis of the Evolution and State of Information Systems within a Constellation of Reference Disciplines," *Journal of the Association for Information Systems* (7:5), May 2006.
- Hyland, K. *Disciplinary Discourses: Social Interactions in Academic Writing* Pearson Education, Harlow, England, 2000.
- Kaplan, N. "The Norms of Citation Behavior: Prolegomena to the footnote," *American Documentation* (16:3) 1965, pp 179-184.
- Knorr-Cetina, K. *Epistemic Cultures: How the Sciences Make Knowledge*. Harvard University Press, Cambridge, MA, 1999.
- Kraemer, K.L., and King, J.L. "Social Analysis in MIS: The Irvine School, 1970-90," Twenty-Third Annual Hawaii International Conference on System Sciences, Kailua-Kona, HI, 1990, pp. 582-590.
- Kuhn, T.S. *The Structure of Scientific Revolutions* The University of Chicago Press, Chicago, IL, 1970.
- Latour, B. *Science in Action* Harvard University Press, Cambridge, MA, 1987.
- Latour, B., and Woolgar, S. *Laboratory life: the social construction of scientific facts* Sage Publications, Beverly Hills, CA, 1979.
- Lee, A.S. "A Scientific Methodology for MIS Case Studies," *MIS Quarterly* (13:1), Mar 1989, pp 33-50.
- Leydesdorff, L. "Theories of Citation?," *Scientometrics* (43:1) 1998, pp 5-25.
- Locke, K., and Golden-Biddle, K. "Constructing Opportunities for Contribution: Structuring Intertextual Coherence and "Problematizing" in Organizational Studies," *Academy of Management Journal* (40:5) 1997, pp 1023-1062.
- Lowry, P.B., Romans, D., and Curtis, A. "Global Journal Prestige and Supporting Disciplines: A Scientometric Study of Information Systems Journals," *Journal of the Association for Information Systems* (5:2), February 2004, pp 29-77.
- Markus, M.L. "Implementation Politics: Top Management Support and User Involvement," *Systems, Objectives, Solutions* (1:4) 1981, pp 203-215.
- Markus, M.L. "Power, Politics, and MIS Implementation," *Communications of the ACM* (26:6), June 1983, pp 430-444.
- Markus, M.L. *Systems in Organizations: Bugs and Features* Pitman Publishing, Marshfield, MA, 1984.
- Markus, M.L. "Power, Politics, and MIS Implementation," in: *Readings in Human Computer Interaction: A Multidisciplinary Approach*, R.M. Baecker and W.A.S. Buxton (eds.), Morgan Kaufmann Publishers, Los Altos, CA, 1987.
- Markus, M.L. "Power, Politics, and MIS Implementation," in: *Strategic Information Management: Challenges and Strategies in Managing Information Systems*, R.D. Galliers and B.S.H. Baker (eds.), Butterworth Heinemann, Oxford, UK, 1994.
- Markus, M.L. "Power, Politics, and MIS Implementation," in: *Qualitative Research in Information Systems: A Reader*, M.D. Myers and D. Avison (eds.), Sage Publications, London, UK, 2002.
- Markus, M.L., and Pfeffer, J. "Power and the Design and Implementation of Accounting and Control Systems," *Accounting, Organizations, and Society* (8:2/3) 1983, pp 205-218.
- Markus, M.L., and Robey, D. "Information Technology and Organizational Change: Causal Structure in Theory and Research," *Management Science* (34:5) 1988, pp 583-598.
- Merton, R.K. "Science and technology in a democratic order," *Journal of Legal and Political Sociology* (1) 1942, pp 115-126.
- Merton, R.K. "Priorities in Scientific Discovery: A Chapter in the Sociology of Science," *American Sociological Review* (22:6), December 1957, pp 635-659.
- Merton, R.K. "The Matthew Effect in Science," *Science* (159:3810), January 1968, pp 56-63.



- Moravcsik, M.J., and Murugesan, P. "Some Results on the Function and Quality of Citations," *Social Studies of Science* (5:1), February 1975, pp 86-92.
- Myers, M.D., Pare, G., Urquhart, C., and Markus, M.L. "Three Perspectives: If Markus' 1983 classic study, 'Power, Politics, and MIS Implementation,' were being reviewed today," *Proceedings of the Twenty First International Conference on Information Systems*) 2000.
- Oliver, P.E., and Marwell, G. "Whatever Happened to Critical Mass Theory? A Retrospective and Assessment," *Sociological Theory* (19:3), November 2001, pp 292-311.
- Ravetz, J.R. *Scientific knowledge and its social problems* Transaction Publishers, New Brunswick, NJ, 1996.
- Small, H.G. "Co-citation in scientific literature—a new measure of the relationship between two documents," *Journal of the American Society for Information Science* (24) 1973, pp 265-269.
- Small, H.G. "Cited Documents as Concept Symbols," *Social Studies of Science* (8:3), August 1978, pp 327-340.
- Small, H.G. "On the shoulders of Robert Merton: Towards a normative theory of citation," *Scientometrics* (60:1) 2004, pp 71-79.
- Swales, J. *Genre analysis: English in academic and research settings* Cambridge University Press, Cambridge, England, 1990.
- Van Over, L.D., and Nelson, R.R. "Research in Management Information Systems, 1980-1985: A Profile of Leading Journals, Articles, and Authors," Proceedings of the Decision Science Institute, Honolulu, HI, 1986.
- Venkatesh, V., Morris, M.G., Davis, G.B., and Davis, F.D. "User Acceptance of Information Technology: Toward a Unified View," *MIS Quarterly* (27:3), September, 2003, pp 425-478.
- Vogel, D.R., and Wetherbe, J.C. "MIS Research: A Profile of Leading Journals and Universities," *Data Base* (16:1), Fall 1984, pp 3-14.
- Wade, M., Biehl, M., and Kim, H. "Information Systems is Not a Reference Discipline," *Journal of the Association for Information Systems* (7:5), May 2006.
- Walsham, G. *Interpreting Information Systems in Organizations* Wiley, New York, 1993.
- White, H. "Citation analysis and discourse analysis revisited," *Applied Linguistics* (25:1) 2004a, pp 89-116.
- White, H. "Reward, persuasion, and the Sokal Hoax: A study in citation identities," *Scientometrics* (60:1) 2004b, pp 93-120.
- White, H., and Griffith, B.C. "Author Cocitation: A Literature Measure of Intellectual Structure," *Journal of the American Society for Information Science* (32:163-172) 1981.
- Woolgar, S. & Cooper, G. Do Artefacts Have Ambivalence? Moses' Bridges, Winner's Bridges and Other Urban Legends in S&TS. *Social Studies of Science* (29:3), June 1999, pp 433-449.

## Appendix I: A Retrospective on "Power, Politics"

By M. Lynne Markus

April 2006

"Power, Politics" is one of two papers based directly on my dissertation research as a student of organizational behavior at Case Western Reserved University (CWRU) from 1974 to 1979. The research addressed political issues in the design and implementation of what we now call enterprise systems but that were then called transaction processing systems. "Power, Politics" described one of two cases I studied for my dissertation; the other case, an embedded units design, was published (Markus, 1981) in a short-lived journal edited by Hank Lucas. Both cases and additional material from subsequent research were included in a monograph (Markus, 1984) that has long been out of print.

Intellectually, "Power, Politics" was primarily influenced by three people, Rob Kling, Jeffrey Pfeffer, and Dan Robey. I met Rob Kling at an ACM Conference on Computers and Society in 1978, when I was just starting my dissertation research. Rob wanted to promote empirical research on the social issues and impacts of information technology, so he generously offered to help me. He invited me to visit him at Irvine, where I first met his colleagues and students, who later made me an honorary member of "the Irvine School" (Kraemer & King, 1990). Rob also visited me at CWRU, consulted with me frequently by telephone (this was before widespread use of email), and invited me to submit a paper to *Communications of the ACM*, where he was a departmental editor.

Having much admired Jeff Pfeffer's *Power in Organizations*, I telephoned to tell him how much I liked his book. Although his response "Which one?" took me aback, it didn't stop me from asking him to participate on a panel I was organizing for the National Computer Conference (NCC) in New York, at Rob's invitation. Jeff declined, but I met him later when he accepted my invitation to give a talk at MIT, and we subsequently co-wrote a paper on the politics of accounting systems for a conference at UCLA (Markus & Pfeffer, 1983).

I had also called Dan Robey to discuss his work. I first met Dan in person at the Academy of Management Conference in 1978 (where I also met my now colleague, Mary Culnan, like me, a Ph.D. student at that time). Dan agreed to participate on my NCC panel, as did Margi Olson (now my Dean), who was introduced to me by Hank Lucas. Dan and I co-authored several papers, including the also well-cited (and much rewritten) (Markus & Robey, 1988).

Writing "Power, Politics" was a long and painful process, and the paper would never be what it is if it were not for Rob Kling. I did not know how to write an academic journal article then (I'm still learning), and the version I first submitted to him was just a case write-up—with no theory, no methods, nothing. The paper didn't even mention the case outcomes until the very end; I think I was trying to write a mystery novel with the element of suspense. Rob explained that I needed a theoretical framework, but despite the literature I had reviewed for my dissertation, I didn't really know where to start. I took a stab at it, Rob sent it back, and it proceeded that way through many iterations, with some telephone coaching at points along the way. It was Rob, for example, who suggested that I might use Graham Allison's strategy (*Essence of Decision*, 1971) of analyzing my case separately in light of the three different explanations that I eventually crafted for the paper.

I don't know how many versions it was (the number 12 comes to mind), but I got far more chances to get it right than the review process usually allows today. Those who worked with Rob know that he was constantly revising and refining his work, and he expected others to do likewise. This was not the unmixed blessing that it may sound. When the proofs finally came in for me to review, I was so sick to death of the paper that I asked my personal assistant (I was working with Arthur D. Little in San Francisco at the time) to do the proofing. Today, when I occasionally re-read the paper, it surprises me—did I really write that?

## Appendix II: Overview of “Power, Politics, and MIS Implementation”

The article explores competing explanations for why organizational members resist technological change associated with IS implementation. In addition to reviewing commonly accepted explanations that served as “rules of thumb” for developers, Markus introduced the idea that resistance reflects interactions between new technology and the political dynamics of an organization. Her analysis highlighted gaps in traditional explanatory frameworks and emphasized the importance of recognizing an organization’s social and political context in shaping the resistance. The paper reports on a case study of the design, implementation, and use of an accounting information system (i.e., FIS) within a large manufacturing firm. The study employed in-depth interviews and company documentation and tells the history of system development and implementation from the project’s initiation in 1972 through piloting in 1975 and subsequent rollout. The article delineates several key stakeholders within the organization, and the author distinguished between the corporate accounting unit responsible for reporting of corporate finances and the divisional accounting groups in charge of transaction monitoring and planning within each manufacturing division. The FIS system was initiated by corporate accounting, but it required input on the part of the divisional accounting units. The system’s implementation was strongly advocated by corporate accounting, whereas divisional accountants expressed dissatisfaction with the system throughout the period and represented the role of resisting users.

Markus’s argument explained user resistance through three rival theoretical models. She identified key elements of each model and discussed the assumptions about information systems, organizational contexts, and resistance these theories embody. The first approach the author described as the “people-determined” theory of resistance. This model suggests that user resistance results from factors that are characteristic of individuals and groups for whom the system is intended, including natural human resistance to change or resistance based on cognitive inclinations. The second theoretical lens conceives resistance as a response to the properties of the information system. This model was dubbed the “system-determined” theory, and it was articulated in terms of flawed technical design or user-unfriendly systems. In contrast to these two widely-accepted models, Markus posited a third approach to resistance. This perspective, called interaction theory, maintains that resistance is not caused solely by people-determined or system-determined factors. Rather, the *interaction* between personal and technical characteristics is the critical determinant of resistance. The author noted that interaction theories have multiple variants, and as such draw upon several theorists in information systems and organizational studies. The particular approach that Markus adopted in her study was what she labeled the *political variant* where “resistance is explained as a product of the interaction of system design features with the intra-organizational distribution of power, defined either objectively, in terms of horizontal or vertical power dimensions, or subjectively, in terms of symbolism” (p. 432).