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Examining Digital Government Publication Trends
(1999 – 2003)

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Abstract
The purpose of this study was to assess the publishing patterns of digital government (DG) research in top scholarly journals in the fields of public administration (PA), public policy (PP), and management information systems (MIS) within the last five years (See Table 1). DG research was published in nine of the twelve top journals in these fields since 1999. A total of 114 DG articles were identified, representing approximately 4.9 percent of the total number of articles published in these journals between 1999 and 2003. It seems that the top journals have published DG research in limited ways given public and media attention and increased funding opportunities to conduct e-government research.

Methodology

A purposive sample of the top five scholarly journals in public administration, public policy and management information systems was used, for a total of fifteen journals. These fields were selected because they are often recognized as three of the most important potential outlets for interdisciplinary DG research. The journals were selected by consulting several sources. These sources provided a ranking of the top journals in each field (Forrester & Watson 1994, Saunders 2002).

We scanned the table of contents of each journal issue between 1999 and 2003 looking at titles and abstracts; however, we did not systematically examine the body of the articles. Special issues on DG were noted. Our focus was on research articles only and did not include commentaries, professional practice sections, book reviews, notes, lectures or viewpoints.

Table 1. Selected Scholarly Journals		
Public Administration	**Public Policy**	**Management Information Systems**
Administration and Society (A&S)	Journal of Policy Analysis and Management (JPAM)	Communications of the ACM (CACM)
American Review of Public Administration (ARPA)	Journal of Public Policy (JPP)	Information & Management
Journal of Public Administration Research and Theory (JPART)	Policy Sciences (PS)	Information Systems Research (ISR)
Public Administration Review (PAR)	Policy Studies Journal (PSJ)	Journal of Management Information Systems (JMIS)
Public Performance and Management Review (PP&MR)	Policy Studies Review (PSR)*	MIS Quarterly (MISQ)

* This journal as of March 2003 is now called Review of Policy Research.

We counted, as DG articles, those papers that dealt with issues related to DG research and/or incorporated general themes and frameworks associated with this area of scholarship. Our guiding definition of DG research was the application of information or social science methods to investigate the information-related needs, management and policies of government or the information-related characteristics of a democratic society. In our view, DG research can be usefully divided in five components *(See Table 2).* In addition, we counted articles that looked at the impact of DG on traditional legal, public policy or international affairs frameworks.   An iterative process was used among the investigators to determine whether an article counted or not; therefore, the inclusion of articles is based on our combined general understanding of DG research, themes and frameworks.

Table 2. Areas of Digital Government Research	
e-democracy	The use of electronic communications to increase citizen participation in the public decision-making process.
e-services	The electronic delivery of government information, programs, and services often (but not exclusively) over the Internet.
e-commerce	The electronic exchange of money for goods and services such as citizens paying taxes and utility bills, renewing vehicle registrations, and paying for recreation programs, or government buying supplies and auctioning surplus equipment.
e-management	The use of information technology to improve the management of government, from streamlining business processes to maintaining electronic records, to improving the flow and integration of information.
e-policy	The use of information technology for the design and implementation of a regulatory framework that facilitates and promotes the development of a information and knowledge society.

Findings

This section presents preliminary findings according to several categories: (1) overall publishing trends, and (2) publishing trends by discipline and journal.

Overall DG publishing trends*.* A total of 114 DG articles were identified, representing approximately 4.9 percent of the total number of articles published by the twelve journals from 1999 to 2003 (total articles published = 2333). In 1999, a combined total of 437 articles were published by the leading journals and 13 of those were digital government research articles (about 3 percent). Four of the twelve journals were publishing DG research in 1999.

In 2000, the number of journals carrying DG research increased to six, with each
of the six publishing at least one article. The total number of articles published in 2000 was 472 and seven articles were identified as DG research (about 1.5 percent).

By 2001, the number of journals reporting digital government research had doubled since 1999 (to eight) and of 485 articles published that year, 37 of them were DG research (about 7.6 percent). However, in 2001, the *Communications of the ACM* published a special issue with 26 digital government articles.

A total of 521 articles were published in 2002, and 23 (about 4.4 percent) were DG research. The information for 2003 is not complete, however as of October, there were 418 articles published and 34 (about 8 percent) were DG articles. Again, the *Communications of the ACM* published a special issue with 27 digital government articles.

Considering Outliers   Our analysis shows that special issues can increase the number of digital government articles published. This seems to be the case for the *Communications of the ACM (CACM).* If we were to take out the *CACM* from our population, the overall trends in DG research publication changes. For example, in 2001, 485 DG articles were published that year, 37 of them were DG research or 7.6 percent. But, *CACM*'s special issue contributed 26 of those articles and Figure 1 shows the changes in trends when we take out the *CACM*, which is an outlier. If we take out the *CACM* articles, then the number of articles published that year shrinks to 11 and the total shrinks to 334 articles published that year, 11 of them were DG research or 3.2percent.   In 2002, if we take out *CACM* special issue articles totaling 27, our DG article total shrinks to 7 for 2003 or 2.7 percent.
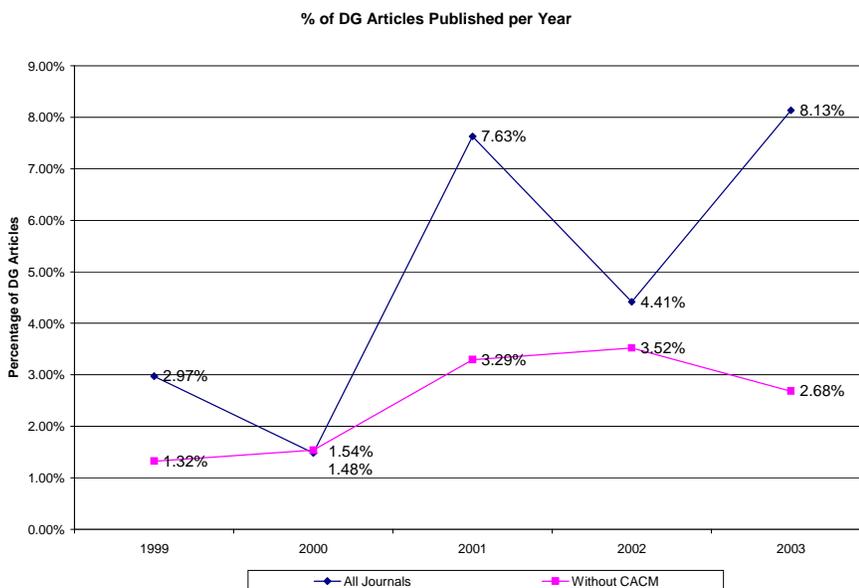
% of DG Articles Published per Year

Figure 1. Summary of Publishing Trends 1999 - 2003

DG publishing trends by discipline and journals. There seems to be a difference in the way that each discipline's top journals treat DG research. For example, by 2001 each of the four major public administration journals carried at least one DG article. The average in public administration was 2.25 articles published a year, and there was an overall increase in DG articles published within the discipline from 1999 – 2002 of 400 percent (from 2 to 10 articles). Therefore, public administration journals have provided a relatively small but increasingly steady publishing outlet for DG research. Over five years, public administration journals have published roughly 26 percent of all DG articles found.

In 1999, none of the public policy journals had published DG research and by 2003, only three of the four had. Of the three journals that did, each only published one article over a three year period (publishing either in 2000, 2001 and 2003). None of the journals published DG articles consecutively, from year to year, throughout 1999 - 2003. Over five years, public policy journals have published 3.5 percent of all DG articles found. Drawing from this statistic, the trend reveals that public policy journals do not readily accommodate DG research or appear to moving in that direction.

Finally, in 1999 two of the four management information systems journals published DG research and by 2003, three of the four had. Of the three that have published DG articles, one journal started in 1999 with two DG articles that year and has since not published anymore. Another journal did not publish DG research until 2001 and has subsequently published one DG article per year.

Consideration of Outliers. Figure 2 shows the trend over a five-year period. Management information systems have published approximately 70 percent of all DG articles found. However, of the 80 published DG research articles by this discipline, 75 of the articles or 94 percent of the total published in the MIS
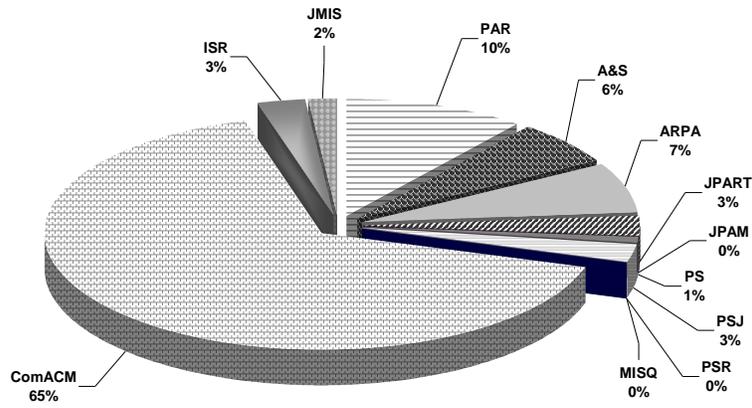
discipline, appeared in the *Communications of the ACM*. In addition, of the 75 articles published by the *CACM,* 53 articles or 71 percent were in two special issues during 2001 and 2003. Therefore the last journal, *Communications of the ACM,* disproportionately represents the level of DG research being published by in MIS discipline.

Figure 3 shows the distribution of articles without adding the CACM. The proportion of public administration journals is larger and the management information systems discipline prominence is reduced. Figures 4 and 5 also show a similar change in the patterns of the DG research publications.

Characteristics of Authors. DG articles have been published by authors from 20 different countries and by scholars in a variety of disciplines including public administration, political science, law, business management, computer science, information science, environmental studies, geography, and information studies. Scholars tend to publish in journals most closely associated with their discipline. Additional research is scheduled to be carried out that surveys directly authors working in the area of digital government.
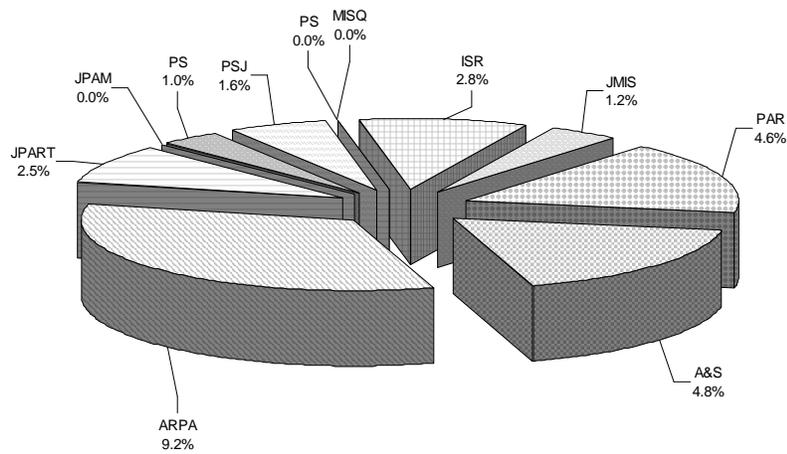
Figure 2: Overall DG Publishing by Journal

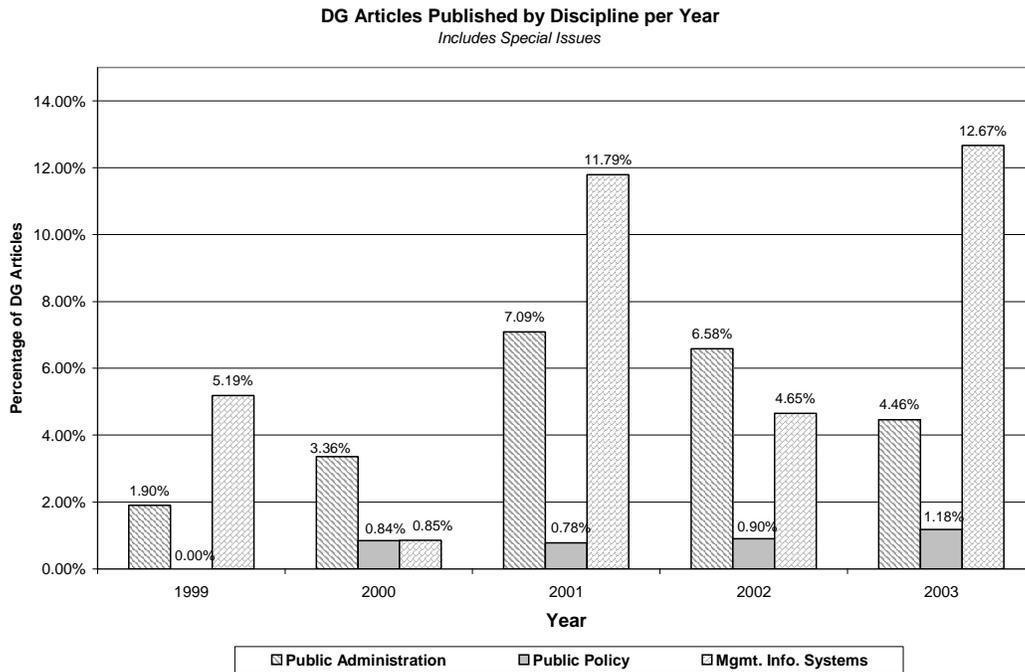**Total Percentage of DG Research Articles Published by Journal 1999 - 2003**

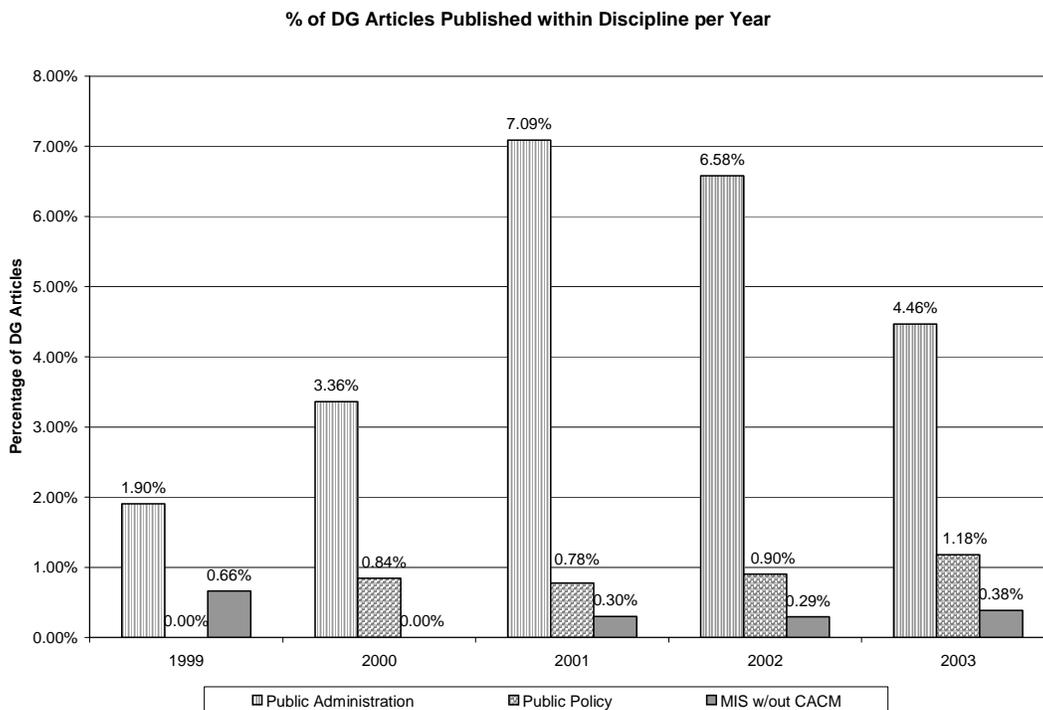

Figure 3: Overall DG Publishing by Journal

Overall DG Publishing by Journal (without CACM)

Figure 4: Publishing Trends by Discipline and Year

DG Articles Published by Discipline per Year
Includes Special Issues

Figure 5: Publishing Trends by Discipline and Year w/out CACM

% of DG Articles Published within Discipline per Year

Conclusions

Within DG research there are both academic and practitioner orientations. DG research, as with other disciplinary fields, has the goal of enhancing the knowledge about its subject matter and promoting a healthy discussion among members of its academic community. However, DG research, as a practical agenda, is also looking to impact the reality of government agencies. As reported in this study, digital government research has been represented in the top main journals, however its representation varies across journals and disciplines. Public Administration journals are consistently having at least two articles a year, but Public Policy and MIS journals are idiosyncratic. Public policy as a discipline and some MIS journals do not appear to be readily available to DG researchers wanting to publish in those outlets.

The top journals in each of the disciplines have had different DG publishing patterns over the last five years. Based on our analysis, it is difficult to decipher whether the level of DG research is representative of the attention other cognate subdisciplines (such as public management, organizational theory and behavior, or human resources management) receive in mainstream journals. The extent to which an emerging field, like DG, is able to compete for exposure in top journals and with other well-established research areas needs more investigation. Therefore, these findings can be used in follow on studies to further explore this issue.

Emerging academic fields have used different publication strategies to gain visibility, legitimacy, and influence within the research community. At least three different publication alternatives can be identified: publication of individual articles in existing journals, organizing special issues or symposia in existing journals, and creation of dedicated journals with the specific objective of publishing research within the new academic field. This study seems to demonstrate that special issues are a viable way to gain prominence and also visibility in journals and in the field itself. A follow up study to these findings investigates the feasibility of these publishing strategies by surveying the opinions and experiences of digital government scholars. For more information on that, visit the following link at http://www.ctg.albany.edu/projects/journal. Many things influence the course of digital government research. This study aims to take a snapshot in time, across a five-year period to create base line data to follow the development of the field.

References

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