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What's in a Name? Central Themes in MIS Since the Field's Founding

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Abstract

Effective use of management information systems and related platforms is essential for the success of modern organizations. The need for use and management of the internal and external information in the private, public, and not-for-profit organizations has evolved over the years. The MIS discipline, themes, and related platforms have also evolved. We will briefly review the historical evolution of the MIS themes and discuss why and how these themes emerged and faded.

Keywords: MIS themes, MIS evolution

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1. Introduction

"What's in a name? That which we call a rose by any other name would smell as sweet."
- Shakespeare, *Romeo & Juliet* (1594-96)

The academic discipline of Management Information Systems (MIS) is known by many names, and it is housed in many different parts of the academy. In general, the field is best known as Management Information Systems (MIS), and it is most often found in business schools. Most fix its beginnings at the University of Minnesota, in 1968. Current membership in the Association for Information Systems (AIS) is over 5000 scholars. Estimates of the actual numbers of MIS scholars in the world are difficult to come by, but it is safe to assume there are at least 10,000. The field (and AIS) is truly global. MIS scholars are located in at least 100 countries, all around the world.

The intellectual foundations of the field were established in 2008 by Sidorova and colleagues: 1) IS and individuals; 2) IS and groups; 3) IS and organizations; 4) IS and markets; and 5) systems development. The relative interest in these five research areas has varied over time, with development being the most popular early in our history, and with markets taking the lead in the later periods of Sidorova's analysis. Others outside the field do not know us by the pillars of our intellectual foundation, however. They know us instead by the themes of our work, which reflect both research and practice.[1] As we use the term here, themes do not correspond to eras or epochs. Themes can increase or decline in influence; they can fade and re-emerge later; they can co-exist with other themes. We maintain that dominant themes are reflected in the names we have chosen to be known by as an academic discipline.

When the field began, it was known as MIS. Now, 50 years later, we have added "Analytics" to our name. And in between, there were multiple themes that emerged that had the power and influence to alter the name of the field. They were Decision Support Systems, Information Systems as a Competitive Advantage, and E-Commerce. In the rest of this editorial, we will discuss how themes have influenced the names we have gone by, and those we almost decided to call ourselves.

Why is it important to review these themes and (actual and potential) names? The themes reflect what has been happening in the field, and they summarize succinctly our primary focus at a given point in time. That there have been so many themes in 50 years signals to others that our field is somewhat nebulous and evolutionary in nature. But the themes also signal to our major constituencies – other academic disciplines, industry, recruiters, students, parents, administrators – who we are and what we do. There is no reason to believe the emergence of the analytics theme will be the last one, but just what will follow analytics is difficult if not impossible to discern at this point in time. But to discern and appreciate new themes as they emerge, it is important to understand what has come before and how themes have emerged and faded.

Before we review the five themes we have identified – MIS, DSS, IS as a competitive advantage, e-commerce, and analytics – we need to be clear that we are not proposing another history of the field. There are many excellent histories already (cf. Adam & Fitzgerald, 2000; Hirschheim & Klein, 2012). Nor are we attempting to re-examine the intellectual foundation of the field (Sidorova et al, 2008) or how technology had affected IS curriculum (cf. George & Marett, 2019). Instead, we review, at a high level, how we have identified ourselves as an academic discipline and how that identification has shifted over time.

2. Management Information Systems

Two of the founders of the MIS discipline, Gordon Davis and Gary Dickson, provide excellent histories of the early years of the field's development and the research and scholars that influenced its development (Dickson, 1981; Davis, 1983). According to them, the first degree program in MIS was established at the University of Minnesota in 1968. It was the "Management Information Systems major in the Master's degree program" in Minnesota's school of business, i.e., a business degree in MIS. In 1981, a survey showed that the most popular name for academic programs was MIS, with Information Systems (IS) second (Davis, 1983). Davis himself preferred "information systems" in 1983, so already, just 15 years after the beginning and initial naming of the field, the name was already starting to lose the "M." Davis defined the domain of the field as "the characteristics of the information system, the processes for developing and

[1] We do not use the term "theme" in the same way as Hirschheim & Klein (2012). They restrict the term to focus on research, as in "research themes." Our use of the term is much broader, although research is part of it.

managing the information system, and the body of knowledge that forms the conceptual foundations (1983)." Dickson (1981) defined the domain as "all informational and decision-making activity associated with operating an organization." Note the focus on the organization. Why? Because in 1968, and even into the early 1980s, that's where information systems were located. Note also that while Davis focused on managing the information system, Dickson focused on managing the organization. The MIS theme, then, is tightly coupled with the organization and those who manage it.

3. Decision Support Systems

Sprague (1980, p. 1) defined decision support systems as "an interactive computer-based systems, which help decision makers utilize data and models to solve unstructured problems." The first identified research on DSS was Michael Scott Morton's dissertation (1967) at Harvard. It was followed a few years later by Alter's dissertation (1975) at MIT. Research into systems for supporting managerial decision making continued to grow throughout the 1970s and 1980s. Key publications that promoted and defined DSS include Alter's book (1980) and Sprague's *MIS Quarterly* article (1980). Power provided an excellent history of DSS in the IS field (2004). The DSS perspective continued to grow and was soon applied to groups (DeSanctis & Gallupe, 1987; Nunamaker et al., 1991), executives (Watson, Rainer & Koh, 1991), and organizations themselves (King & Star, 1990).

Note the centrality of the manager/decision maker in the DSS theme. The shift from managing the information system resource to supporting decision makers in organizations is clear. The DSS theme co-existed with the MIS theme for several years, and at one point, the DSS theme became more prominent. In fact, as Dickson (1981) recounted, DSS was suggested by many as a new name for the field: "We have seen that many names have been applied to what we have been addressing as MIS…. There are persons who suggest that one major reason to concentrate on DSS and to throw out MIS is that MIS has failed. The claims are that MIS has not been effective."

4. Information Systems as a Competitive Advantage

As the DSS theme expanded, the field discovered information systems that in and of themselves helped organizations become more competitive. Scholars in the 1980s became well acquainted with SABRE, American Airlines' reservation system, and American Hospital Supply's ASAP, a procurement system, among others. The use of information systems as "competitive weapons" was heavily promoted by scholars at Harvard Business School (c.f. Cash & Konsynski, 1985; McFarlan, 1984; Porter & Millar, 1985), and the topic became very popular. In fact, Millar (of the Porter & Millar article in *HBR*) was one of the keynote speakers at the International Conference on Information Systems in 1986. As the focus on the topic grew, it became another theme for the field (Ives & Learmonth, 1984; Johnston & Carrico, 1988; Lederer & Mendelow, 1988). Initial research on how to build information systems that affected a company's bottom line was followed by research on whether such systems could lend sustained advantage. And as the 1990s began, along with the commercialization of the Internet, the competitive advantage theme faded. Note the progression of themes from MIS to DSS to competitive advantage swung from a focus on the organization to managers and then back to the organization.

5. E-Commerce

The commercialization of the Internet resulted in many new research directions for information systems scholars (Hirschheim & Klein, 2012). In keeping with the original organizational focus of the field, the major theme that emerged was electronic commerce, or e-commerce. E-commerce has a strong organizational connotation, but the term also grew to cover not just business-to-consumer exchange but also business-to-business and consumer-to-consumer exchanges. Although a change in perspective had been happening for some time, it was becoming clear that information systems research was no longer limited to organizations. Computers were pervasive and no longer required an organizational context for study. This view expanded greatly with the introduction of the Apple iPhone in 2007 and iPad in 2012. In essence, anything with a processor became fair game for information systems scholars to study. Still, being based primarily in business schools, the theme of e-commerce dominated, even though it was shorthand for a much larger universe of information systems and their investigation. Although the e-commerce theme never translated into a new name for the field, several universities established e-commerce research centers and e-commerce majors. Many of these still exist (cf. https://libguides.rutgers.edu/c.php?g=336740&p=2267125). After the Internet bust in 2001, academic interest in e-commerce, and in information systems, faded. From then until the beginnings of the Great Recession, the academic field of information systems struggled to find a new theme. We wandered in the wilderness, waiting and looking for the next theme to emerge.

6. Analytics

The next theme to emerge was analytics. Growing out of the study of business intelligence and data science, and coming to be known as "Big Data" in the popular press, the study of analytics in the information systems field was firmly established by 2007, with the creation of multiple degree programs. By 2018, there were over 400 analytics degree programs in 230 business schools worldwide (Hassan, 2019). Hassan (2019) provides an extensive history of the study of analytics in the information systems field. Unlike the DSS theme, which almost became the name of the field, the analytics theme has been incorporated into the names of the academic departments associated with the study of information systems. Department names like "Information Systems and Business Analytics" have become commonplace. And note how the theme has swung back to the early days of the field, to a focus on the organization and its managers.

7. Conclusion

In this brief, non-comprehensive overview of the themes that have dominated the field of academic information systems over the past 50 years, we have seen that the themes, and their focus, have shifted over time, and the themes have affected the names we have (or have almost) given to our discipline. The original name, Management Information Systems, was instrumental in defining the field, and the name is still with us (although largely missing "Management.") The initial focus was on the management of the information systems resource, expanded to include a focus on managing the organization with information systems. The Decision Support Systems theme, which almost became the name of the field, focused on supporting managers. The IS as a Competitive Advantage theme shifted back to the organization, while the E-Commerce theme expanded the field of information systems to include all things Internet and just about anything with a processor. The latest theme, Analytics, brings us back to a focus on the organization and its managers.

As we said at the beginning, knowing about past themes helps us prepare for the next one(s) to come. As Dickson presciently said 40 years ago: "Although new terms will come along that may be substituted for MIS as the umbrella term for the area, one must keep in mind that virtually all proponents are speaking of similar concepts (Dickson, 1981)." We don't know what the next theme will be, but we know for sure that there will be a new one.

How does this understanding of themes apply to scholars of information systems in the Midwest? Scholars located in the midwestern US are part of the larger global community of IS scholars. What affects the field as a whole affects us as well. In fact, the next theme may emerge from the Midwest, just as the field itself emerged from a midwestern state, Minnesota, over 50 years ago. The themes that define us drive how our many constituencies see us and what they expect of us. This is as true in the Midwest as it is anywhere in our global IS community.

During 2022, both Gordan Davis and Gary Dickson passed away, on May 6 and on October 31, respectively. They, along with Tom Hoffman, are widely considered the founders of the academic field of information systems. All of us in the discipline owe them a great deal. Our sincere condolences to their families and colleagues.

8. Overview of the Contents of this Issue

This issue of the journal includes two traditional research articles.

Toni Taipalus in his important article looks at the systematic mapping study in the information systems area. The author suggests that although systematic mapping should not be the only research method for a researcher but should be one of the important early methods in a researcher's career. Pros and cons of systematic mapping is presented in the article.

In this timely article, John Muraski suggests that to fill the gap between available IT related jobs and the existing shortages of IT related talent, MIS departments should initiate and promote an "IS Career Day." The idea is to engage potential college students with IT professionals to learn about careers in IT. Quantitative and qualitative data is collected for this study to evaluate students' interest in such events.

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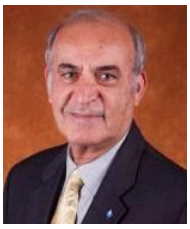

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