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The Rise of Information Systems at the Graduate School of Management, UCLA

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Abstract:

Among U.S. business schools, the Graduate School of Management (GSM) at the University of California, Los Angeles, was one of the pioneers in the information systems field. In this paper, I chronicle IS's rise at GSM from its early years (1950s and 1960s) through its formative (1970s) and leadership years (1980s) and identify factors contributing to this rise and success.

Keywords: Information Systems History, Business School History, Academic Programs, Academic Innovation.

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1 Introduction

The information systems (IS) field emerged both in practice and in academia in the 1960s. Its roots were in the field of data processing. The Data Processing Management Association (DPMA), now the Association for Information Technology Professionals (AITP), received its name in 1962. Aiming higher, The Society for Management Information Systems (SMIS), now the Society for Information Management (SIM), was formed for senior executives in 1969. Meanwhile, in academia, the University of Minnesota had put a full graduate program in MIS in place in 1968. MIT's Sloan School had introduced MIS coursework even earlier—in 1965. Other schools were poised to follow.

Among U.S. business schools, the Graduate School of Management (GSM) at UCLA, now the UCLA Anderson School, was one of the pioneers. Its own academic computers & information systems (C&IS) program was established in 1971. Consistently a top 20 or so business school, UCLA's GSM became a major player in developing and institutionalizing academic IS. Not all top schools joined in. For this reason, while most pioneering stories are unique ones, we can no doubt learn from them. Because they represent early departures from established practices, they tell us something about innovation—in this case, academic innovation. In this paper, I recount the UCLA story in its early years. I draw from a variety of sources, which I credit below in the acknowledgements.

How did IS arise and achieve prominence at UCLA? Here, I trace the origins and identify the milestones along the way. I then provide a retrospective interpretation of the factors leading to this rise and success. The story spans four decades (1950s-1980s). Table 1 summarizes the milestones themselves.

2 Historical Sketch

The roots of information systems at UCLA date to the 1950s, while its rise was substantially complete by the 1980s. I sketch the progress next in three parts from the early years (1950s and 1960s) to the formative (1970s) and leadership years (1980s). While the leadership years arguably extended into the 1990s, I do not cover this period.

2.1 Early Years (1950s and 1960s)

UCLA's early involvement in computing was marked by the building of the Standards Western Automatic Computer (SWAC) by the National Bureau of Standards on campus in 1950. Designed by Harry Huskey, it was the fastest computer in the world on its completion. Directed by the Numerical Analysis Research Group, it immediately attracted those interested in computation from around the campus.

In 1951, Clay Sprowls, having completed his PhD at the University of Chicago, joined the then College of Business Administration to teach and develop a program in statistics. He soon discovered SWAC and became fascinated with it. He taught GSM's first computing course in 1953 as a special topics course in statistics and programmed the SWAC to do standard calculations. In 1955, Sprowls chaired a committee recommending to IBM that it establish a large-scale computing center at UCLA with its most advanced equipment. Under a 10-year contract, this became the Western Data Processing Center (WDPC), one of the world's first university centers devoted primarily to business computation and problem solving. Sprowls ultimately became its director.

By 1960, Sprowls was thoroughly engaged in the field that would subsequently emerge as information systems. The next important academic developments, however, would come not from the management science faculty to which he belonged but from GSM's accounting faculty. By the mid-1960s, the accounting program was judged to be in need of a reinvigoration. The faculty sought to rebuild itself around management accounting more than financial accounting. And, under the direction of John Buckley, it seized on information systems as its broader domain of interest and began to hire new faculty accordingly. Ted Mock and Richard Mason, new PhDs from UC Berkeley, were hired in 1968 and, with John McDonough, initiated the first IS course sequence. Mason, a student of West Churchman, quickly assumed leadership roles in the School. Ephraim McLean, with his PhD from MIT, joined one year later and was charged with developing a computer-oriented curriculum. The faculty area as a whole was rebranded as accounting information systems. The stage for the full emergence of IS at GSM was now set.

2.2 Formative Years (1970s)

In the fall of 1970, McLean and Kenneth Siler offered hands-on instruction in interactive programming in the APL language to the entering MBA class. The choice of APL, a powerful computational language, was highly innovative because it was not widely used at the time.

Table 1. Milestones in the Rise of IS at GSM UCLA 1950s-1980s

Year	Milestone	Notes
1953	Clay Sprowls teaches first computing course at GSM	Used SWAC computer
1956	Establishment of Western Data Processing Center (WDPC) at UCLA	In cooperation with IBM
1968	Accounting area hires new faculty and introduces new courses in information systems	Richard Mason joins GSM
1968	Establishment of accounting information systems research program	Directed by Ted Mock
1969	Eph McLean joins faculty to develop computing coursework	
1970	Introduction of interactive computing to MBA program	Used APL
1971	Establishment of computers & information systems (C&IS) academic area	Clay Sprowls joins area
1971	Lew Leebug receives school's first IS PhD	Clay Sprowls chairs committee
1973	Establishment of computers & information systems research program	Directed by Eph McLean
1974	Ben Lientz joins faculty, as does Burt Swanson as a visitor	Richard Mason takes leave to direct NSF program
1978	Establishment of computers & information systems associates program	Lew Leebug serves as first chair
1979	Inauguration of computers & information systems colloquium series	Coordinated by Burt Swanson
1979	First (International) Conference on the Entity Relationship Approach held at GSM	Peter Chen chaired program
1980	First offering of managing the information resource (MIR) in executive education	Offered in collaboration with Nolan, Norton & Associates
1980	Planning meeting for the first (International) Conference on Information Systems (ICIS) held at UCLA	Convened by Eph McLean, Gary Dickson, and Marty Bariff
1981	IBM chair in information systems established	Martin Greenberger appointed to chair in 1982
1984	First annual UCLA computing survey of North American business schools	Directed by Jason Frand
1985	School awarded US\$2mil IBM grant in management of information systems	13 schools received this grant
1985	Lynne Markus joins faculty	
1987	Office of editor-in-chief of new IS journal founded by TIMS established at GSM	<i>Information Systems Research (ISR)</i> debuts in 1990
1987	Eph McLean departs faculty	Accepts chaired position at Georgia State University

In 1971, McLean acted to formally label the new computer-oriented curriculum as computers and information systems (C&IS) courses, and a small group of faculty came together to teach it as a distinct area in the school. A small overlap with what became accounting and information systems (A&IS) remained. Such overlaps in the one-department school were not then uncommon. Importantly, Clay Sprowls moved from management science to join the new C&IS faculty. Under Sprowls' direction, Lew Leebug, on leave from IBM, received what is recognized as the first IS doctorate from GSM that same year.

In 1973, the C&IS research program was established under a new Information Systems Study Center, which also included the A&IS research program. In 1974, Bennet Lientz, then at USC, was hired as a new C&IS faculty member. Richard Mason took leave to direct a National Science Foundation program and Burt Swanson came to GSM as a visitor and ultimately remained. Student demand for the C&IS courses was by then very strong.

In 1978, McLean and Leeburg, who had returned to IBM, acted to found the C&IS associates program, a group of leading practitioners committed to supporting IS research and instruction at GSM. Leeburg chaired the new group under McLean's direction. Initial members were Carter, Hawley, Hale Stores; Ernst & Ernst; Hunt-Wesson Foods; IBM; Security Pacific National Bank; and Xerox Computing Services. The associates program would prove to be one of the strongest components of IS at GSM over many years that provided an important direct link to the practitioner community.

In January, 1979, the C&IS colloquium series, coordinated by Burt Swanson, was inaugurated. Barry Boehm, Director of Software Research and Technology for the TRW systems group, spoke on "software productivity and cost estimation". The colloquium series would also have a long life at GSM by bringing many speakers to the school on a wide range of IS topics and attracting a diverse audience from on and off the UCLA campus.

Also in 1979, the first (International) Conference on the Entity Relationship Approach, chaired by new faculty member Peter Chen, was held at GSM. The conference was the first of many and continues to be held annually at locations around the world.

2.3 Leadership Years (1980s)

Now well established at GSM, the C&IS group played an important leadership role among its peers in the 1980s. Most notably, on May 16-17, 1980, GSM hosted the historic planning meeting for the first (International) Conference on Information Systems held later that year from December 8-10 in Philadelphia. The meeting was convened by Eph McLean, Gary Dickson (University of Minnesota), and Marty Bariff (Case Western Reserve University) and brought leading IS academics together for the first time. C&IS faculty then played important roles in early ICIS meetings, McLean as conference Co-Chair in 1981 and Chair in 1986, Swanson as Program Chair in 1983 and Doctoral Consortium Chair in 1989, and Leeburg as Vice Chair in 1986 and later as Secretary/Treasurer from 1987 to 1993.

In January, 1980, the C&IS group also launched its first Executive Education offering of Managing the Information Resource (MIR) in collaboration with Nolan, Norton, Inc. Eph McLean and Richard Nolan directed the week-long program, which proved popular and was the first of many offered over subsequent years to senior IS executives from around the world.

GSM's leadership in IS was also recognized through further institutional support. In 1981, the IBM Corporation established a Chair in Information Systems at GSM, to which Martin Greenberger was subsequently appointed. In 1985, GSM became one of 13 schools awarded a US\$2M grant from IBM in the management of information systems, which furthered research and instruction throughout the school. Also with IBM support, Jason Frand, GSM's Director of Computing Services, undertook the first annual computing survey of North American business schools in 1984.

The C&IS group was also augmented by new junior faculty, with Lynne Markus joining in 1985 and Mark Silver arriving in 1987. Together, they advanced the research profile of the group and also worked to make the C&IS MBA core course more appealing to students and, with Cynthia Beath, eventually published their instructional model in the *MIS Quarterly*.

The year 1987 also marked the appointment of Burt Swanson to serve as founding Editor-in-Chief of a new IS journal established by The Institute of Management Sciences (TIMS), now INFORMS, with its office at GSM. In consultation with its Advisory Board, the journal was named *Information Systems Research* (ISR) and would, after a substantial start-up period, make its first appearance in 1990. Neil Ramiller, an IS doctoral student, served as Managing Editor under Swanson. Housing ISR at GSM was a substantial accomplishment.

Finally, 1987 was also a year of loss for the C&IS group when Eph McLean departed to take a chaired professorship at Georgia State University. He would go on to provide the same institutional leadership at GSU as he had at UCLA.

The C&IS academic area also became the information systems area in 1987 when accounting, having reverted to an area focused substantially on financial accounting, dropped the reference to IS in its own name.

3 Retrospective

With the benefit of hindsight, what were the important factors contributing to the rise of IS at GSM? I identify seven.

First, UCLA had a long history of institutional leadership in computing that dated back to the early 1950s. Clay Sprowls' involvement with computing on campus provided a crucial link for the business school in particular.

Second, GSM was engaged in significant academic innovation as the late 1960s turned to the early 1970s. It developed a pioneering MBA program with a core curriculum that included cross-disciplinary systems studies. GSM was also a one-department school with fluid boundaries between traditional academic areas. These were fertile grounds for doing new and adventuresome things.

Third, GSM had a knack for recruiting bright young faculty with leadership and entrepreneurial skills in addition to research and teaching promise. One group of these, in accounting, acted first to innovate with information systems in mind, opening the door for a few to then push through and establish their own independent C&IS area.

Fourth, the initiative to establish information systems at GSM received strong support from the practitioner and business community. IBM in particular provided historic institutional support over many years. This community support did not come automatically. Eph McLean and Lew Leeburg played important roles in nurturing it.

Fifth, once the C&IS curriculum was put in place, there was strong student demand for course offerings. MIS career nights attracted many participants. The IS doctoral program also received heavy applications from highly qualified students. It prospered accordingly.

Sixth, the C&IS faculty achieved early success in establishing its research credibility by publishing in leading journals. Richard Mason's paper "A Program for Research in Management Information Systems", co-authored with Ian Mitroff and published in *Management Science* in 1973 achieved prominence in the emergent IS field in particular.

Seventh, once the C&IS program established a foothold at GSM, UCLA's reputation no doubt helped it to further success in attracting top faculty and students. Interestingly, while not all leading schools innovate because their reputations after all rest heavily on their histories and present positions not what they envision for the future, those few that do innovate do so with a marked institutional advantage in attracting faculty and students. GSM and IS at UCLA clearly benefitted from this even as other schools benefitted from following GSM's and other's leadership.

Still, it was not easy to establish IS leadership at UCLA's GSM. The student-faculty population was set by formula and growth in one area was at the expense of another. The rise of IS at GSM as described here was in the end a credit to the individual faculty who made it happen.

4 Afterward

While IS at UCLA Anderson continued to be a leading program well into the 1990s, faculty attrition and other school developments eventually came to undermine its position. By 2000, only three senior IS faculty members remained. With the retirement of the last of these (Swanson in 2013), the IS academic area and its curriculum were discontinued. Today, only the information systems research program (directed by Swanson under a limited recall arrangement) and the UCLA information systems associates program survive. Happily, the ISA (now under the direction of the UCLA Office of Information Technology) has recently been successfully rejuvenated (see <https://isassociates.org>). The story of the academic decline and fall of IS at UCLA Anderson remains to be written.

Acknowledgments

I dedicate this short history to all the IS faculty at GSM with whom I had the pleasure of working during my own years there (1974 to the present). In preparing the paper, I had access to a variety of documents and sources, which I list below as references. Channel, a newsletter of the IS group published 1974-85, was particularly rich as a source. Individually, Eph McLean, Richard Mason, and Lew Leeburg, whose careers at UCLA began before mine, were especially helpful in enabling me to piece together the important early years in which IS at GSM came together. Clay Sprowls' personal history was also invaluable and is a reminder of how deep the roots of IS at UCLA went; namely, to the early days of electronic computing itself.

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