An Historical Method for MIS Research: Steps and Assumptions

By: Richard O. Mason
Southern Methodist University
Edwin L. Cox School of Business
Dallas, TX 75275
U.S.A.
rmason@mail.cox.smu.edu

James L. McKenney
Harvard Business School
Soldiers Field
Boston, MA 02163
U.S.A.
jimckenney@hbs.harvard.edu

Duncan G. Copeland
Copeland & Company
Potomac, MD 20854
U.S.A.
copeland@copelandco.com

Abstract

Historical research offers perspectives on phenomena that are unavailable by any other methodological means. They reflect the cultural circumstances and ideological assumptions that underlie phenomena and the role played by key decision makers together with long-term economic, social, and political forces in creating them. Each of these bene-

fits is accompanied by limitations such as, in most cases, a lack of mathematical tractability. The careful application of historical methods can overcome some of these limitations. A seven-step methodology is proposed: begin with focusing questions, specify the domain, gather evidence, critique the evidence, determine patterns, tell the story, and write the transcript.

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ISRL Categories: AD01, AF0401.02, AJ0102, AJ0103, AJ0104, DD0501, DD0502, ID01, ID04

Why Use an Historical Method?

A study of history offers a valuable perspective with which to view our present circumstances. It provides a backdrop from which to determine what is novel in the current situation and which factors serve to distinguish the present situation from any others in the past. History helps one understand the sources of contemporary problems, how they arose and how their characteristics unfolded through time. It also identifies the solutions that worked in the past and those that did not. Perhaps most importantly, history reminds us of the richness of the human experience and of the broad degree of complexity, intricacy, and unpredictability that surrounds any real circumstance. Hence, an understanding of history helps executives avoid their natural human tendency to view their present circumstances in idiiosyncratic, traditional, narrow, or shallow ways because reading history stimulates the imagination and reveals new possibilities. As Neustadt and May put it, “Seeing the past can help one envision the future” (Neustadt and May 1986, p. xv).

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1 Robert Zmud was the accepting senior editor for this paper.
What is the nature of knowledge produced by using an historical method?

In the final analysis, the principle product of historical research is context—an understanding of the organizational, individual, social, political, and economic circumstances in which MIS phenomena occur. In conducting any research project, a researcher must make a trade-off between pursuing “richness in reality” and insuring “tightness of control” (Mason 1988). The physical scientist or mathematical model builder opts for tightness of control; the historical researcher opts for richness of reality because it enhances the understanding of context. Philosophers call the control-oriented approach “nomothetic” because it uses only procedures admitted by the exact sciences and it is used to seek general laws (Hempel 1965). They call those focusing on richness of reality “idiographic” because they stress the unique value of the particular within cultural and human settings (Marcell 1977). Historical research is fundamentally idiographic. Nomothetic research produces results that are, in the limit, intended to be context free or context neutral, although the threat of contextual bias is always present. Idiographic research produces results that describe context as carefully and fully as possible. Used together in a program of research, one approach complements the other due to the differences in the epistemological character of the knowledge produced as a result of using each approach. By combining the results obtained from the use of several methodologies, a scholarly discipline produces a body of knowledge that builds on the qualities of both. Consequently, while historical research results are valuable in their own right, their greatest value to a discipline like MIS may be realized from the synergy they produce with results obtained by using other methods. This is one reason Schumpeter and others have stressed the importance of establishing an historical tradition to round out the intellectual contributions of a discipline.

Research synergy is created because different approaches to research are based on different assumptions. One class of assumptions describes the nature of the being or of the existence of the phenomena under investigation. These are theoretical or ontological assumptions. A second class of assumptions deals with the appropriate method to use in defining and circumscribing the phenomena, that is, whether tightness of control or richness of reality are given more emphasis. Table 1, based on Marcell (1977) and Weick (1984), summarizes the possibilities as expressed in their extreme form.

As seen in the table, historical research generally falls in the IU quadrant. By focusing on uniqueness, it facilitates the use of history as “trail” and it illuminates the role of decision making in shaping events. (These two attributes are discussed further as the first and second items in the next section.)

At least three different products result from an MIS historical. First is an account of a significant fragment of the past describing events of importance to the MIS community. The account in and of itself is informative, but it

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<td><strong>Method Assumptions</strong></td>
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<td>A. People and Events Are More Alike</td>
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<td>B. People and Events Are Unique</td>
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<td>N. Nomothetic—selective examination of many subjects.</td>
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<td>I. Idiographic—intensive examination of just a few subjects.</td>
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<td>NA = Statistical Research Yielding Central Tendencies</td>
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<td>NU = Cluster or Factor Analysis, Outlier Examination</td>
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also serves as contextual material for understanding other events. Such an account results from an intense examination of a set of technologically related events that occurred in an organization or among a group of users and it focuses on the uniqueness of those events. This may be called a "case study" in the classic sense of the term because it describes an instance or example of the occurrence of an actual state of affairs. The Bank of America study in this issue is an example of such an account although it does not fall purely within the IU quadrant. At points in the narrative, it draws marginally on ontological assumption A. For example, the researchers limited the events they examined to those associated with the common theme of developing and introducing new computer-based technologies and they compared the results with those obtained by other researchers conducting historical studies. (It may be noted that few, if any, research projects fall exclusively in any given quadrant.)

Second, the resulting historical account may be used subsequently as a "datum" in a broad process on inductive reasoning. Induction may be included as part of the fifth step of the historical method—determine patterns (see the section below)—as well as employed in future studies. In fact, the program of historical research described in "Developing an Historical Tradition in MIS Research" (in this issue) was designed and conducted to facilitate subsequent research activities based on inductive reasoning. Pattern analysis is one of the inductive uses of historical accounts, the result of which may suggest a new or refined conceptual framework. The three key roles—leader, maestro, and supertech—and the cascade model resulted from discovering commonalities found across several different research sites. These patterns were subsequently used to rewrite the original accounts so that they express the phenomena in the language of the conclusions drawn from uncovering these patterns. See, for example, the Bank of America study in this issue or the extended reportings in Waves of Change (McKenney et al. 1995). This tends to move this particular application of the historical research method in the direction of comparative case research as proposed by Yin (1984).

Closely related to pattern analysis is the "history as boomerang" result. The account reveals the possibility of events that may occur in the future. (This is discussed further as the third item in the next section.) Historical accounts may also play a role as a source of datum in other forms of induction: analogical inferences, elimination inferences, inference to find agreement (Mill's method of agreement), inference to find differences (Mill's method of difference), inference to identify possible producer/product relationships, or, in exceptional cases, inferences to establish causal relationships based on having discovered necessary and sufficient conditions (see Gustason 1994).

Third, historical research may serve as the source of new research hypotheses. These hypotheses may evolve out of either of the first two products: the account or inductive inferences drawn in part from it. Or hypotheses may arise from insights gained from examining various accounts. Thus, an IU account may stimulate researchers to pose hypotheses using methods and assumptions that fall more directly in the IA, NA, or NU quadrants. This, too, encourages programs of research designed to increase the density and the robustness of the body of knowledge about MIS. (This possibility is discussed further as the fourth item in the next section.)

How will these products contribute to MIS research?

In a recent critique, four reasons why the field of organization theory would benefit epistemologically from adding historical analysis to its methodological tool kit were provided (Kieser 1994). All four are pertinent to the requirements of MIS as a discipline, as the following interpretations indicate:

1. Both the structures and the behavior of present organizations reflect the culture and the circumstances under which they developed through time. Every organization is unique in this regard. The "little fellow's" bank policies that A.P. Giannini put in place...
at the Bank of Italy in San Francisco in 1904, for example, shaped considerably the ensuing Bank of America's demand for technological solutions and how they adopted them. These innovations, thus, did not occur in a time-immortal vacuum. Rather, they were heavily conditioned by the historical milieu from which they emerged. Contemporary economists refer to this as "path dependence" (Teese 1986). Describing an organization's historical paths serves the function of history as "trail" and helps remind MIS researchers that a deep understanding of present practices and phenomena must be founded on an understanding of the trajectory by which they evolved into the current state (Godfrey 1996).

2. In addition to culture and environmental conditions, the "path" or "trail" of an organization also results from influential decisions that key parties make. Historical analyses teach us to interpret existing organizational structures not as determined by laws but as the result of decisions made in past choice opportunities, some of which were made intentionally and others more implicitly (Kieser 1994, p. 611).

As recounted in the Bank of America study, key decisions made by major participants materially shaped the course that information technology would play at the bank and, hence, throughout the banking industry. A researcher's exclusive focus on these decisions, however, may also reflect a bias, as the next point elaborates.

3. "The identification of actual organizational problems and of their appropriate remedies is often not free of ideology" or the researcher's perspective (Kieser 1994, p. 610). Even purely scientific methods suffer this failing. As scientist-philosopher Michael Polanyi points out, all knowledge is ultimately "personal" and is derived from many intuitive or "tacit" assumptions (Polanyi 1958, 1967). By confronting the present and the contemporary concepts "in good currency" (Schon 1971) with similar developments that occurred in the past, MIS researchers can identify and begin to put in perspective some of these assumptions. For example, the Bank of America story shows that many notions of flow charting, systems analysis, reengineering, and even "right sizing" were actually developed and put in use during the late 1950s. This is an instance of using history as a "boomerang," an identifier of patterns which repeat themselves (Godfrey 1996, p. 6). "Those who cannot remember the past are condemned to repeat it" (Santayana 1905–1906).

While history serves as a check on the assumptions being made by researchers who are using other methods in their work, it is not immune to ideological assumptions itself. Sometimes a history serves as a mirror of the researcher's beliefs. [This] reminds us that any evaluation of history, any theory which goes beyond the mere repetition of chronological events, speaks more about our own intellectual, moral, and emotional location than about a "correct" evaluation of historical events. Indeed, even the selection of facts to be included in any chronology proceeds according to some value-laden criteria. The task of the effective [MIS researcher qua historian] becomes one of revealing the mirror through which history is viewed as well as the history itself (Godfrey 1995, p. 7).

As researchers conducting the Bank of America study, we also harbored some a priori assumptions. We were, first, principally interested in circumstances in which innovations in the use of information technology had changed an industry. Second, our interest in technology inevitably led us to follow the sequence of the development of the technology more closely than we examined other phenomena. And, third, our previous training, experience and research in management and executive decision making undoubtedly shaped some of the kinds of interpretations we made. (After
reviewing our work, the reader may add other assumptions.) The main point is that any historical study not only places the finding of other studies in relief, it also reflects back some of the researcher’s assumptions, occasionally unstated, in the process.

4. By confronting theories of [MIS] with historical developments, these theories can be subjected to a more radical test than they have to pass when merely being confronted with data on short-run changes (Kieser 1994, p. 612).

Statistical methods tend to analyze the relationships among a number of variables at a single point in time or, in the case of longitudinal studies, a few variables over an intermediate or extended period of time. Insights gained from historical accounts, such as the Bank of America story, open the door to the ecological and evolutionary types of explanations that are so fundamental to processes of innovation.

There are some more intuitive reasons as well. Another advantage of studying history, beyond these four, is that it sheds light on a society’s resistance to change. Most organizations exhibit a form of “dynamic conservatism” (Schon 1971). Managers and employees are bound together by their past experiences, experiences that were formed over a long period of time and have become deeply rooted in their culture. From this springs a tendency to ward off, frequently with fervor, any innovations that might require that these people realign their lives. MIS histories reveal those situations in which leaders have successfully overcome resistance to change and have prepared their organizations to absorb new technologies and organizational structures. They also illuminate the conditions under which these leaders have failed.

In addition to these easily identifiable benefits of gaining a broader perspective and understanding the processes of change, a study of history serves as a positive check against our natural tendencies toward categorical types of thinking. Every episode has its own story. Thus, constantancy, unconditionality and continuity must be revealed in the context of the vicissitudes of change.

By making the IU assumption, historians undertake the task of looking for order or connection among an array of unique, individual and nonrepeatable events. As a consequence, they rely on contingency theories—theories that identify the differing factors that control the varying outcomes of events (see, for example, Lawrence and Lorsch 1969, 1966). Historians seldom rely on theories based on “universal covering laws,” such as are used regularly in analytical science and are more appropriate for NA type research (Hempel 1965). In the extreme, in fact, some historians argue that no a priori theory is appropriate at all.

Finally, historical accounts describe the visions and aspirations that originally motivated leaders and actors. They are based on reports of what actually happened when attempts were made to translate ideas into reality. The insights of Beise and Zifp into the Bank of America’s business and its future, their hopes and dreams and managerial motives, their failures and successes, all these serve as drivers that helped create the changes. There is an important lesson of drama contained in this and other historical accounts: an understanding of history reminds executives of the need for vision, alertness, constant vigilance, responsiveness, and improvisation in action. Perhaps the ancient Greek writer Polybius said it best in his Histories: “History offers the best training for those who are to take part in public affairs.”

The Historical Method Applied to MIS Research

Establishing an historical tradition requires at least a sketch of a method. It needs a way of selecting and carrying out an intensive examination of a unique fragment of the past as required by the IU assumptions. In this section, an approach for using historical methods in MIS research—one based on the methods actually used—is developed and illustrated by
means of the Bank of America study published in this issue. These steps are suggestive toward the development of a more robust MIS historiography.

Begin with focusing questions

Historical studies, as with all research, must begin with a question or a cluster of coordinated questions which serve to focus all subsequent inquiry. Bouchard, in describing field methods, puts it more directly:

The key to good research lies not in choosing the right method, but rather in asking the right question and picking the most powerful method for answering that particular question (1976).

For the Bank of America study, the specific selection of questions from the general ones posed above are: What were the perceived competitive crises that threatened the organization? Why was information technology proposed as a solution? How was the technology identified, selected, infused, and absorbed into the organization? What conditions favored innovation in this organization and not in others? Who played the key executive and technical roles and how were these roles played? How did the subsequent events unfold? What was the result? How was the corporation's role as a social and economic entity changed? Finally, how were business practices and the basis for competition in the firm's industry changed?

Gather evidence

Having fixed the study in time and bounded it with respect to their corporate and industrial context, we began the next step in systematic historical research: the gathering of evidence. Since this research is undertaken by a team of researchers, each of whom has had experience in the field during the periods under investigation, we had an advantage over a solitary researcher coming to a topic for the first time. We have been able to discuss and share ideas about sources, including our own recollections of the events, and, most importantly, to draw on a rather extensive network of acquaintances that each of us enjoyed. These acquaintances have helped enormously in tracking down people and data sources. Despite these advantages, evidence gathering is an arduous and time-consuming task, one that at times is quite frustrating.

As with all systematic research, the first step is to search public sources: articles, books and documents, such as annual reports and trade association studies, that are generally available from libraries and data retrieval sources. These provide background and suggest broad outlines for scenario pattern. Public sources are valuable for establishing an authentic time-line of critical events. The timeline is a key methodological tool. Interviewees frequently do not remember exact dates. A time line is needed to guide discussion and to organize data. Also, in the process of reviewing published sources, investigators build background and begin to pose crisper hypotheses and to ask more precise research questions.

Secondary sources, however valuable though they may be, are generally inadequate by themselves. Most public sources contain managed information specifically selected for public consumption so information obtained from these sources must be scrutinized carefully.
The term "espoused theory" is used to describe the result of this biased selection process (Argyris and Schon 1978). It reflects the theory of action to which speakers give allegiance and use to communicate with others, but not necessarily the values and beliefs that actually governed their actions, that is, their "theory in use." Nevertheless, information contained in public announcements can be extremely useful. Researchers should be warned, however, that these sources often contain gloss and are normally incomplete. Public sources almost always contain content which is too shallow to answer adequately the deeper questions about why and how that are required to generate managerial insights. For example, press reports and journal articles hailing the announcement of Bank of America's ERMA established key dates and identified some of the key personalities involved. They provided us with an espoused view of events but they revealed very little about the real underlying managerial processes involved. Nor did they say anything about the trials and tribulations, false starts, and shenanigans that led up to these announcements. For these we had to go to primary sources.

History is a discipline that requires the gathering and processing of a large number of facts collected from as many primary sources as possible in as comprehensive a way as possible. Primary source material comes in four general forms: (1) written, in the form of official documents, unpublished documents, diaries, memoirs, letters, memos, clippings, and the like; (2) material, in the form of objects, artifacts, and visit of actual sites; (3) traditional, in the form of stories of the past repeated by secondary sources; and (4) eye witness testimony. The first three are appropriate for all types of historical research; the last, of course, only for research done during the lifetime of some of the key participants. All four of these methods for ferreting out the facts were used by our team at Bank of America.

Securing copies of original documents (or just obtaining permission and opportunity to review them) requires finding the individuals who have the files and convincing them that you should have access. This alone can be a difficult and time consuming task. During the Bank of America study, we were fortunate enough to gain access to several SRI files, available bank files, some employees' personal files, and Al Zipp's—the Bank's prime mover for technology during the period—personal records and documents. (During our studies, we have discovered that very few data processing departments keep complete archival records and few user groups do either.)

Visiting actual sites, comparing organizational charts, handling pieces of circuitry, studying systems diagrams, examining schematics, reviewing office and operations layouts, and pouring over photographs provide contextual insights and are sources of additional clues. Photos of the original ERMA and copies of the remarkable flow charts of early banking process added to our understanding at the bank.

One of the problems historians encounter when using traditional methods is the same that anthropologists face: it is difficult to find and qualify reliable informants. Many people have stories to tell. But some of their stories, unfortunately, are dubious or tangential. Stories of great organizational barriers overcome by the informant or of corporate in-fighting and jockeying for position, for example, may be useful for determining organizational tension and how it was described to others. These accounts, however, must remain suspect until they are corroborated by other sources.

One obvious advantage that students of MIS history enjoy is that many of the pioneers who applied information technology in organizations are still alive. They are sources of eye witness rather than hearsay evidence. Obtaining interviews with these participants, however, requires considerable skill and diligence. First, researchers must identify the relevant parties, determine whether they are alive, and then locate them. (In our studies, we discovered that several key figures had recently died and that many had retired and moved to new locations. These informants had to be
Critique the evidence

The accumulated evidence must now be critiqued and evaluated. Some will be false, some contradictory, much irrelevant, and most of it will be incomplete. In our studies, for example, several dates of events were in conflict among our sources, the timing of hardware upgrades varied, some volume figures differed, recollections of members in attendance at meetings did not match, and cost figures diverged. By way of illustration, a frequently repeated story is that of American Airlines CEO C. R. Smith met IBM salesman Blair Smith on an airline flight between New York and Los Angeles in 1953 and that this was the beginning of the relationship between the two firms that culminated in the SABRE system. Recently, we encountered a retired IBM executive who said that, according to his recollection, the story was a popular myth but never really happened. We put him in contact with one of his contemporaries who claimed that it did in fact occur. After an animated discussion, each called several other of their acquaintances for confirmation. Finally, they located Thomas Watson, Jr., on vacation, who reported that his recollection was that the meeting did indeed take place substantially as the story described. Since this is the consensus view, we are currently accepting the story as valid pending further developments.

Given questionable or untested evidence, several analytical processes can be called into play. These include applying basic logic, determining the credibility of the sources, counting the number of times the same observation is repeated, and assessing the overall coherence of the entire collection of evidence. By means of these processes, an effort is made to determine the internal consistency of the evidence and the degree to which it agrees with evidence accumulated from external and other sources. One advantage of conducting studies with living participants is that they can be contacted subsequently by letter, phone, or in person to clarify items in dispute. As the above example illustrates, we have used all of these methods several times. There is an important guideline to follow, however, during this data

traced and tracked down by means of our net-work and by relying on other "detective" ploys.)

Once the informants are located, interviewing skills become important. Often these people are quite proud of their prior accomplishments and flattered to be asked to recall them. But they frequently want to tell an interviewer just their version of the whole story rather than focus on the primary areas of the research. Also, their recall may be imperfect, even if it is unbiased. Seldom, in addition, will they, without some prompting, fill in all of the missing information the researchers have to get. This can be overcome effectively, however, if the researchers are well versed in the topic, understand the technology, know the industry and have a well-defined timeline to work from. Consequently, interviewers must always balance their need for getting an unprompted, open-ended story with an equally compelling research need to get answers to specific questions. Usually this must all be accomplished within the span of only a few hours.

Drawing on multiple sources of evidence is important for two principle reasons. First, it allows the study to address a wider range of historical, attitudinal, and observational issues (Bloch 1953, p. 67). Second, as will be covered more thoroughly under "Critique the evidence" below, by providing different measures of the same phenomenon, it permits cross-examination and the development of converging lines of inquiry through triangulation, thereby increasing the construct validity of the study (Jick 1979, p. 608).

These evidence gathering activities establish a record of past events in their actual order of occurrence—a chronology—and their place of occurrence in space—a geolocator. This record serves two purposes: it provides the raw factual data for historical interpretation and it develops the researchers’ intuition and tacit understanding of the phenomena under study. Both are crucial for the next steps.
evaluation phase: throughout this critique the facts themselves—and not an a priori theory—must dominate the final judgment. When this stage of the research is complete, the facts will have been verified and distilled and hopefully used to impose some meaningful order on the original material.

**Determine patterns**

History, however, is more than a mere chronology and body of facts. The assemblage of admissible and ordered facts must now be interpreted and its meaning comprehended. The value added by historians is to interpret the facts, explain them, and infer "the interlogic of events" from them. Carr, in his classic *What is History*, explains:

> The study of history is a study of causes. The historian . . . continuously asks the question: Why?; and, so long as he hopes for an answer, he cannot rest (1961, p. 113).

The process begins with "the selection and marshaling of facts" and the turning of them into "historical facts" (pp. 134-135). "Accidents" must be distinguished from consequential "historical facts" but with an open mind, since "any fact may, so to speak, be promoted to the status of historical fact once its relevance and significance is discerned" (p. 135).

At this stage, the research turns from mainly empirical to inductive and becomes more philosophical and theoretical. The task is to explain what happened and how and why it happened. The final outcome of an historical study, consequently, is an account: a comprehensive story, a complete episode that has a beginning, a middle and an end. As the account unfolds, it illuminates the events, forces, and personalities that brought about the circumstances detailed by the facts. It also identifies the immutable forces that remained unchanged throughout the transformations and were sources of the continuities observed.

Several conceptual tools are used to facilitate an understanding of historical patterns of continuity and change. Three are used frequently.

**Conceptual Frameworks**

One useful tool is the building of a conceptual framework that helps to organize facts and formulate broad plot lines. A conceptual framework helps to concentrate the researchers' attention on key factors and on the purposes and effects to be explained. It supplies a language for description of the facts that is precise yet flexible enough to adapt to new data as they are uncovered (Bloch 1953, p. 135). In the context of the framework, management decisions are treated as both the products and agents of historical processes and not, for the most part, as the actions of a single "great man" nor as the result of beliefs held in isolation (Carr 1961, p. 67). At best, a leader, to use Hegel's term, "actualizes" his or her cultural and historical age. The concepts of dominant design, leader, maestro, supertech, and cascade, for example, were applied to our historical study at the Bank of America.

**Causal Chain and Producer/Product Analysis**

A framework is also required to make effective use of a second tool of historical research: causal chains—the sequence of events that produced the effects, results, or consequences observed. Analysis of collected data relies on iterative "explanation building" to identify and evaluate causal patterns (Yin 1984, p. 100). Cause-and-effect relationships, are, of course, established precariously and with great caution in nonexperimental situations because an induction can never be proven in any formal logical system (Simon 1985, p. 479). Nevertheless, establishing such relationships is the "essence" of historical interpretation (Carr 1961, p. 135) and a "common law of the mind" (Bloch 1953, p. 191). Consequently, a reasoned, if judicious, effort should be made.

The results of the inquiry should be organized into the timeline as part of the causal analysis and used to determine the forces that generated the observed effects. Although this article is not the place for a full blown treatment of historical causation, a few comments are in order.
Technically speaking, a cause "C" is a necessary and sufficient condition for an observed effect "E." This means that a deterministic relationship exists, entailing that E always follows whenever C occurs. Historical inquiry can seldom satisfy this extremely rigorous test. In fact, many historians agree with Trotsky's criticism that "cause in history reflects itself through a natural selection of accidents" (Tuchman 1982, p. 22).

Historians frequently, however, are able to accumulate enough evidence to establish that an occurrence of C was a necessary, although not sufficient, condition for the subsequent occurrence of E. Philosophers often refer to this second relationship as a "producer/product" relationship. Some thinkers even extend the notion to include estimates of the probability of production in cases in which E does not always follow C, but does with some frequency (Ackoff 1962; Churchman 1971; Singer 1959). A producer/product framework may be used to show how a host of necessary conditions (i.e., producers) worked together, collectively and interactively, to form a sufficient condition to produce the results observed. Generally speaking, for example, the introduction of IT or of a new MIS system is just one factor, among many, that produced the business performance observed and, thus, it is not a unique cause. Many other forces were at work simultaneously to produce the effects. (In the next section, some of the other factors that may serve to coproduce effects will be identified.) The Bank of America study generally treats causation formally as a producer/product relationship. For literary purposes, however, the phenomena is often referred to as "cause" and "effect."

A second important aspect of historical causation is that every cause is itself an effect generated by some previous cause. Causes, consequently, create momentum and form causal chains or, in the language of economists, "path dependencies" (Dosi et al. 1990). Causal analysis, consequently, unfolds along a timeline in precedence chains. For this reason, historical investigations must begin far enough back in time to determine the role that distant causes played in generating the current observed effects. Journalists, by way of contrast, normally concentrate on the immediate causes of an event. Some researchers' work encompass perhaps a few years. Our studies, however, embrace several decades. Several of our studies go back to a time prior to the general introduction of computer-based technology. This provides an anchoring point from which to begin our inquiry and allows us to trace the longer range accumulative effects of distant causes as they created the present situation.

There are three ways in which conceptual frameworks and causal chain analyses are developed. One, is to state them a priori—indisputably from the phenomena to be explained—and apply them deductively as explanatory frames to the historical observations. This rather positivistic approach is the most "scientific" but may be the least insightful. A second way is to draw on "ideal types" to serve as backdrops organizing and interpreting the historical data. The third tool, and frequently the most productive one, is to cultivate an attitude of empathy.

Establish Empathy

Achieving empathy with the protagonists in the study requires that the researchers imagine themselves in the real actors' environment and put themselves in their minds and, as if were, "in their shoes." Developing a credible account requires this depth of psychological understanding. Historians attempt to see the events as they might have appeared to those who actually experienced them. Schumpeter expressed this need for empathy well. Indeed, Schumpeter viewed economics as an historical discipline and, in explaining his position, he drew sharp distinctions between a physicist's concern for measuring a phenomenon, such as the effect of gravity on a falling stone (a NA predisposition) and an economist's concern for explaining economic events:

"The historical observer must understand his subject of research in a sense in which he cannot and need not understand the falling stone. For this purpose he must create types which, though not necessarily pure like eco-
economic man, are abstractions in that they possess only essential and lack non-essential properties: they are logical ideals. And we try to get at an understanding of what such a type does, feels, says, by asking not what his actions, feelings, utterances mean to us, the observers, but what they mean to the type under research or, to put the same thing into different words, we try to unearth the meanings that the types intend to attach to themselves and their behavior (1954, p. 819).

This kind of immanent interpretation, informed by empathy, is necessary in order to understand the real meaning of the events. It is the product of asking such common sense questions as: "What was this person thinking at this time?" "What could he or she have known at the time?" "What pressures was he or she under?" "What were his or her motives and aspirations?" Or, in summary, following Senator Howard Baker's Watergate inquiry style "What did he or she know and when did they know it?"

When these processes of evidence gathering, empathy, and causal chain analysis are completed, the results are then brought together to form a narrative.

Tell the story—the account

The penultimate step in an historical study is to tell the story. Ideally the account is presented in an interesting, as well as factual, way. Writing the narrative is, in large measure, an artistic undertaking. No matter how attractive the ideas are, however, and how eloquently they can be woven together to explain the facts, an historical narrative must, of course, be presented in a manner that maintains the integrity and consistency of the evidence.

Write the transcript

A transcript is literally something reduced to writing but for an historian it has a broader meaning as well: it is the placing of the historian's written words in the schema of those which were written before. Every historical account takes its place among an extended network of others, all of which relate to human beings' sense of the past and to the manifold relationships between living generations and their predecessors. Historians generally feel obliged to show how their work fits into this greater tradition. This places it in a context that helps future research proceed. There are several traditions to which the Bank of America study is related including the work of Chandler, of Schumpeter, and of Abernathy and Utterback, and a line of strategic use of IS studies. Some of the linkages were discussed in "Developing an Historical Tradition in MIS Research" (in this issue).

The research steps outlined above have been presented in a linear sequence. Seldom, if ever, are they executed strictly in this way. Normally, these activities overlap. Knowledge gained and questions raised at one step forces historians back to earlier phases of the research. In the light of new discoveries or insights, they must often pose new or refined research questions, collect additional factual data, make further checks of validity, or reinterpret the findings obtained thus far. The writing of history is always an active and dynamic process.

Conclusion: A Point of View

Conducting historical research offers a rewarding opportunity for MIS researchers but it is more than that. We believe that MIS researchers, as a body of scholars, have an obligation to provide contemporary leaders with insights into the social and economic implications of this increasingly pervasive technology. This responsibility derives from the fact that during the last decade of the twentieth century information has become a fundamental source of power. The possession of power begets responsibility. In earlier eras, the control of material things or of money was crucial. Starting with the pioneering work of Chester Barnard (1938), however, executives and management theorists have come to appreciate the vital role played by information in commanding and controlling organizations. As
Citicorp’s retired CEO, Walter Wriston, commented:

The very concept of society’s capital base is in the process of changing once again. The skills of the hunter, which gave way to those of the farmer and the miner, are now moving toward those who master information (1967, pp. 1–2).

And, further,

If it turns out, as I believe it will, that information about money is becoming almost as important as money itself... those who can supply that information better, cheaper, quicker, and most accurately will be the winners in tomorrow’s world (Johnson 1990, p. 157).

Histories of the use of information technology in business will provide modern day leaders with new insights into the managerial and economic processes at work in this new era and how to employ them effectively and responsibly.

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About the Authors

James L. McKenney is Professor of Business Administration Emeritus, Harvard University, Graduate School of Business Administration. Professor McKenney received his B.S. in mechanical engineering from Purdue University in January 1952, his M.S. in industrial engineering from Purdue later that same year, and his Ph.D. in business administration from UCLA in 1960. He came to Harvard Business School in 1960 and introduced the first computer-based Business Game Simulation in 1961. He has taught in the MBA, the DBA and all the executive programs. His doctoral seminars have ranged from production management to foundations of the management of IT in organizations. For several years he taught a fall seminar on the foundations of computer-based information systems. He has taught in the doctoral program since joining the HBS faculty.

McKenney's research interests focus on managing the implementation and growth of intelligent terminal communication systems, knowledge-based systems. He is presently conducting a multiyear study on the impact of information technology in the grocery industry. To date he has finished five cases on the grocery chain of supermarkets, distributors, and producers and will continue studying the implementation of ECR in the industry. His professional interests focus on concluding two research papers on management of IT as a competitive means.

Richard O. Mason is Carr P. Collins Professor of Management Information Sciences at the Edwin L. Cox School of Business at Southern Methodist University where he teaches information systems and business ethics. Formerly a vice president and council member of The
Institute of Management Sciences and a department editor for Management Science, he began his career in the computer industry with the Burroughs Corporation in 1956 after graduating from Oregon State University. While at Burroughs, he helped found an OR study group in Portland, Oregon, centered around a B-205 installation at Pacific Power and Light. Ernest Koenigsberg gave one of his early lectures on inventory theory to the group. During the mid 1950s, he studied operations research under C. West Churchman at the University of California, Berkeley. He has taught at UCLA, USC, and the University of Arizona. In 1992, he was elected as a foreign member of the Russian Academy of Natural Sciences in the Information and Cybernetics section. He is a co-author of Waves of Change (1995), Framebreak (1994), Challenging Strategic Planning Assumptions (1981), Strategic Management and Business Policy (1982), Measurement for Management Decision (1981), and Ethics of Information Management (1985).

Duncan G. Copeland is president of Copeland & Company, a Washington-based international consultancy providing information counsel to management. His research focuses on information-based competition, specifically the alignment of business strategy with information systems strategy. In addition to academic articles on the topic, he co-authored Waves of Change: Business Evolution through Information Technology (with J. L. McKenney and R. O. Mason, Harvard Business School Press, 1995). He holds a doctorate from the Harvard Business School and an MBA from the University of Western Ontario.