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Historical Research

Looking at a string of seemingly random events, the historical researcher develops a rational explanation for their sequence, speculates about possible cause-and-effect relationships among them, and draws inferences about the effects of events on individuals and the society in which they lived.

In and of itself, history consists of nothing more than an ever-flowing stream of events and continuing changes in human life and its institutions—its languages, customs, philosophies, religions, art, architecture, and so on. Historical research tries to make sense of this maelstrom. It considers the currents and countercurrents of present and past events, with the hope of discerning patterns that tie them all together. At its core, **historical research** deals with the *meaning of events*.

Many people have the impression that historical research involves gathering significant facts about a major event—perhaps a war, an economic depression, or the emergence of a new nation—and organizing these facts into a sequence, usually chronological. Such an enterprise may yield a historical narrative. It is not, however, true historical research. The heart of the historical method is, as with any other type of research, not the accumulation of the facts, but rather the *interpretation* of the facts. Interpretation of the data is central in all research. The task of the historical researcher is not merely to describe *what* events happened but to present a *factually supported rationale* to suggest *how* and *why* they may have happened.

Historical research is certainly not the domain of historians alone. On the contrary, it can be found in such disciplines as geography, anthropology, political science, economics, psychology, literature, and linguistics. For example, some social scientists engage in **comparative-historical research**, comparing historical events and processes across two or more societies or cultures, with the goal of identifying similarities, differences, and patterns that might possibly reflect cause-and-effect relationships.

As you will see, historical research is largely a qualitative endeavor, although historical researchers often make use of quantitative data as well.

Data Sources in Historical Research

In Chapter 4 we distinguished between *primary data* and *secondary data*, with the former being closer to the reality, or Truth, that the researcher ultimately wants to uncover. In historical research, this distinction is often referred to in terms of *primary sources* versus *secondary sources*. **Primary sources** are those that appeared first in time—in particular, when or soon after the events in question occurred. These sources take such diverse forms as letters, diaries, newspaper articles, sermons, laws, census reports, immigration records, probate documents, deeds, photographs, paintings, films, buildings, and tools. As an example, Matthew

McKenzie, a doctoral student in history at the University of New Hampshire, studied the impact of the Boston Marine Society on political decision making and scientific advancements in colonial America and in the early decades of the United States. McKenzie made extensive use of the society's minutes and other documents, as he explained in the following excerpt from his dissertation:

[A]s an organization of [sea] captains predicated upon fellowship and mutual aid and with a distinct role within the port [Boston Harbor], the Society went to great lengths to follow proper parliamentary procedures and to act only on decisions taken unanimously. As part of this process, the Society maintained meeting minutes recording the Society's (though not individuals') opinions, resolutions, and approved actions. Consequently, throughout its 250-year history, the society left committee reports, resolutions, and clear statements that reveal its collective will and motivations. These records allow historians to uncover not only what the organization did, but why. (McKenzie, 2003, pp. 2–3)

Another source of primary data, at least for events within the past few decades, can be found in interviews of people who participated in them. This approach is sometimes known as **narrative research** or **oral history**. A good example is Kevin Kearns's *Dublin Tenement Life* (1994), which pulls data from interviews with many residents of inner-city tenement buildings into a vivid description of inner-city Irish life in the early 1900s. We present a brief excerpt from Kearns's description of teenage courting practices to give you a taste of this approach:

[B]y age eighteen or thereabouts "marriage was their highest ambition," claims Peggy Pigott [a former tenement resident whom Kearns interviewed]. It was around this time that young women liked to go "clicking" in pairs. Clicking was an acceptable practice whereby respectable young women would stroll together along fashionable Dublin streets ostensibly window-viewing but in reality hoping to meet decent lads. When May Hanaphy [another interviewee] and one of her pals went clicking back in the 1920s, it was a perfectly proper way to meet a prospective husband:

Oh, clicking then was very popular. See, that's how flirting went on. That's how many a girl got her husband, going out at night time. Oh, you'd go out for that purpose at that time. We'd go clicking along mostly O'Connell Street or maybe down Henry Street, you know, slow walking . . . strolling, and two fellas come along and say 'there's two motts.' (Kearns, 1994, p. 46)

Interview data often give life to historical events. But just as is true in conducting any interview, the researcher must remember that participants' recollections are not always accurate. Only when several people recall events similarly can a researcher have reasonable confidence in what the interviews reveal. More generally, the guidelines for "Conducting a Productive Interview" presented in Chapter 6 are as applicable to historical researchers as to other qualitative researchers.

Historical researchers don't necessarily limit themselves to words, images, and objects; they often use *numbers* as well. For instance, they might draw inferences about people's interests during a particular time period by looking at the numbers of books on various topics that were sold during that period (Marius, 1989). Or they might examine the frequencies with which the Puritans of colonial America named their children after figures in the Bible, chart trends in these frequencies over time, and then speculate about what the trends might mean for religious practices and beliefs (Marius, 1989). In his study of the Boston Marine Society, McKenzie (2003) used early tax rolls to determine the wealth of society members, and he used society records of new members to show the decline in the society's popularity and influence in the early 1800s (see Figures 7.1 and 7.2). In research for his master's thesis in history, Peter Leavenworth (1998) used early real estate deeds to find patterns in land sales in New England during the 1600s, with a focus on land sold by Native Americans to British colonists. At one point in his analysis, Leavenworth plotted the frequency of land sales for each month of the year

FIGURE 7.1

Using tax rolls to determine the wealth of Boston Marine Society members

From *Vocational Science and the Politics of Independence: The Boston Marine Society, 1754-1812* (p. 25) by M. G. McKenzie, 2003, unpublished doctoral dissertation, University of New Hampshire, Durham. Reprinted with permission.

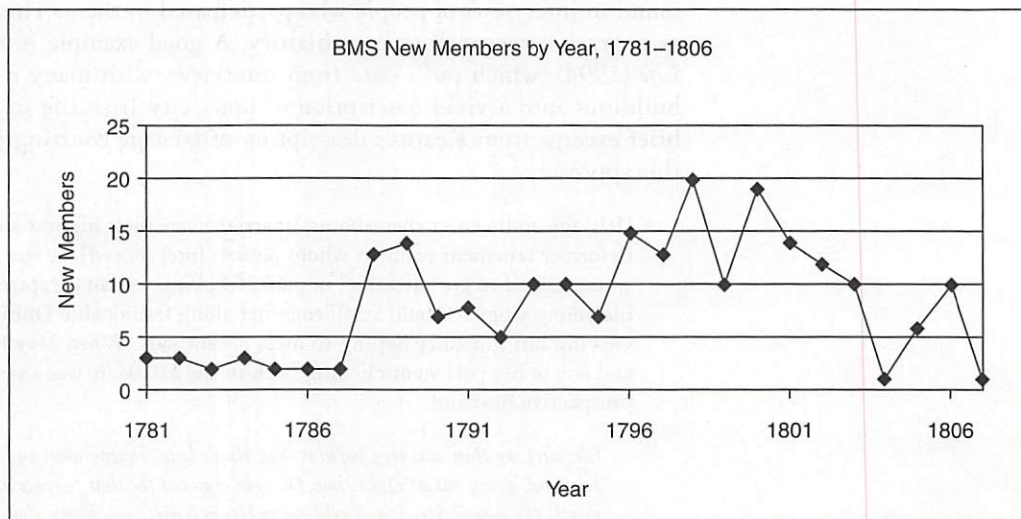
Wealth Bracket	No. in bracket	Assessed Tax in 1771 (£ s)	Proportion of Population
Top 20%	8	£37 12s-£46 13s	11%
2nd	6	£28 6s-£37 12s	8%
3rd	19	£18 18s-£28 4s	26%
4th	19	£9 10s-£18 16s	26%
5th	20	0-£9 8s	28%
Total Population	72		100%

Source: Pruitt, *Massachusetts Tax Evaluation*; and Baker, *Boston Marine Society*, 318-361

FIGURE 7.2

Using new membership data to reveal the decline in the Boston Marine Society's popularity and influence during the early 1800s

From *Vocational Science and the Politics of Independence: The Boston Marine Society, 1754-1812* (p. 198) by M. G. McKenzie, 2003, unpublished doctoral dissertation, University of New Hampshire, Durham. Reprinted with permission.



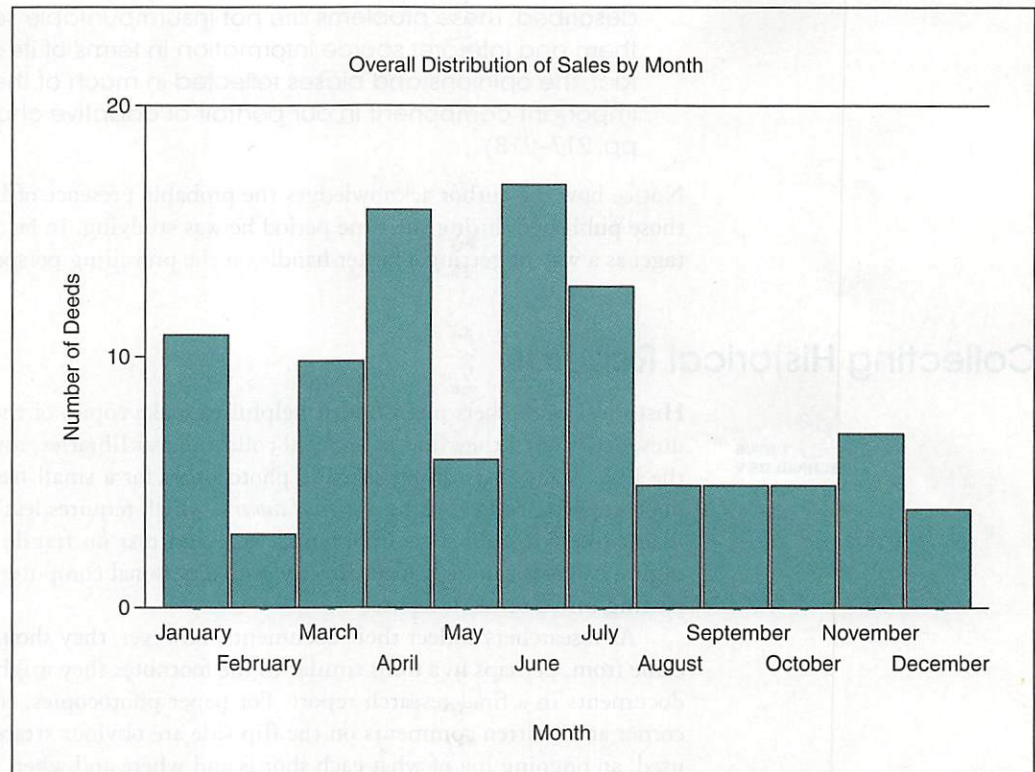
(see Figure 7.3). In the following excerpt from his thesis, he found considerable meaning in the month-to-month frequency data:

One last use of the deed index is to chart times of the year when transactions were more prevalent. . . . [T]he dips in overall Indian deed activity shown in February and May are consistent throughout the century. The February dip was either hunting- or weather-related, while the May dearth may have been either a time of Indian removal to summer habitations, or the period of spring fishing runs, or both. Many early accounts, including missionary John Eliot's, mention large annual spring gatherings of many bands at traditional fishing locations on the Merrimack and Piscataqua Rivers. When distribution is separated by decade, large spikes in land sales increasingly cluster in the spring later in the century. This may point to a growing native need for sustenance from the English marketplace after the hardships of the winter months, especially as their increasing proximity to white society did not raise their standard of living. Both Indian and English land sale patterns, not surprisingly, display a marked decrease at harvest time. (Leavenworth, 1998, pp. 88-89)

FIGURE 7.3

Using early deeds to track patterns in land sales, especially from Native Americans to British colonists, in New England during the 1600s

From *"The Best Title That Indians Can Claim...": Native Agency and Consent in the Transfer of Penacook-Pawtucket Land in the Seventeenth Century* (p. 88) by P.S. Leavenworth, 1998, unpublished master's thesis, University of New Hampshire, Durham. Reprinted with permission.



In the examples just presented, the raw numerical values sufficed for the researchers' purposes. In other instances, however, historical researchers may perform statistical analyses on the numerical data they collect; in such instances, historical research is truly a blend of qualitative and quantitative methodologies. An excellent resource for beginning historical researchers is Haskins and Jeffrey's *Understanding Quantitative History* (1990), which suggests many potentially useful sources of quantitative information and describes a variety of ways to analyze quantitative historical data.

In contrast with primary sources, **secondary sources** are the works of historians who have interpreted and written about primary sources. These include history textbooks, as well as more scholarly books and articles written about a particular event or time period. Secondary sources inevitably reflect the assumptions and biases of the people who wrote them. For this reason, good historical researchers rely on primary sources whenever possible.

Yet virtually *any* verbal report of an event—even a report that historians would consider to be a primary source—is apt to be somewhat distorted in line with a person's assumptions and biases. For example, a newspaper article describing a highly controversial event—perhaps an unprovoked attack that resulted in many human casualties—might very well be slanted in one direction or another, depending on the journalist's political leanings.

As noted in Chapter 4, researchers can probably never determine the ultimate, objective Truth that lies beneath a body of data. The historical researcher keeps this fact in mind, as illustrated in the following excerpt from a geography dissertation that analyzed changes in Jamaican agricultural practices during the early 1800s:

The sources of data are primarily printed documents published during the period of crisis, plus some surviving correspondence. Most important are island newspapers, the annual almanac, books, pamphlets, and government records. As with any historical data, [they] are incomplete in their coverage of contemporary events and may present a biased picture of the times. Some are also suspect as personal interpretations of interested parties participating in the events

described. These problems are not insurmountable so long as we are aware of them and interpret source information in terms of its contemporary context. In fact, the opinions and biases reflected in much of the data [are themselves] an important component in our portrait of adaptive change. (R. K. Ormrod, 1974, pp. 217–218)

Notice how the author acknowledges the probable presence of bias in some of his sources, even those published during the time period he was studying. In fact, he uses that bias to his advantage: as a way of getting a better handle on the prevailing perspectives of the time.

Collecting Historical Records



Historical researchers often find it helpful to make copies of the primary sources (letters, minutes, deeds, etc.) they find in archival collections at libraries, museums, historical societies, and the like. Many institutions provide photocopies for a small fee. An alternative approach is to photocopy the sources using a *digital camera*, which requires less light than photocopying and so is less likely to inflict environmental wear and tear on fragile documents. Photographs from digital cameras can be loaded directly onto a personal computer, allowing for easy cutting-and-pasting into a research report.

As researchers collect their documents, however, they should keep track of where each one came from, perhaps in a form similar to the footnotes they might eventually use to describe the documents in a final research report. For paper photocopies, small Post-it notes attached at a corner and written comments on the flip side are obvious strategies. When a digital camera is used, an ongoing log of what each shot is and where and when it has been taken is essential.

Online Databases for Historical Events



Some historical documents and records can be found only in the archives of various libraries, museums, and historical societies around the world, and you may have to travel a great distance to see them. But many others have been painstakingly captured in electronic form and made available online. For example, many university libraries subscribe to such online databases as the following:

- *Making of America*: Copies of thousands of books and tens of thousands of journal articles published in the 1800s.
- *Accessible Archives*: Copies of several American newspapers and magazines from the 1700s and 1800s.
- *New York Times Article Archive*: Every page of every issue of the *New York Times* since its first issue in 1851.
- *Ancestry Library*: A genealogical database that includes such documents as census records; birth, marriage, and death certificates; and immigration and naturalization records.

In addition, government websites offer many historical documents online. One especially helpful site is that of the U.S. Library of Congress (www.loc.gov), which provides documents related to both American and world history and also gives links to other helpful websites around the world.

Such sources open up many possibilities for researchers who might otherwise be restricted by location, disabilities, or other challenges. In addition, simple word processing functions (e.g., *copy* and *paste*) are invaluable time savers. As you locate relevant quotations, references, and so forth that you want to keep for future reference, you can highlight and copy desired sections and then paste them into your own database. If you do such copying and pasting, however, you must take appropriate precautions to avoid copyright infringement. Furthermore, remember that you must *not* use the words and ideas of others without proper citation.

PRACTICAL APPLICATION Handling Historical Data Systematically

In historical research, most of the data collected will be recorded in terms of hundreds, perhaps thousands, of notes. It is imperative that the researcher have some means of gathering and controlling the data in order to reap the greatest return from the innumerable hours spent in archives, document rooms, and libraries.

It is easy to read and take notes, but for many novice researchers, it is difficult to organize those notes into a format that facilitates interpretation. Historical data collection demands a systematic plan, not only for collecting data but also for retrieving and analyzing them. Before beginning historical research, therefore, you should have a specific plan for the acquisition, organization, storage, and retrieval of your data. Here we suggest two approaches you might take: a paper-and-pencil approach and a computerized approach.

A paper-and-pencil approach. If you have only limited computer skills, you might initially be tempted to make paper-and-pencil notes about the data collected. Such an approach is workable if your project is small and involves only a small amount of data. If you take a paper-and-pencil approach, you may want to modify the format presented in Figure 3.2 of Chapter 3 to fit the nature of historical data. For instance, your form might include such categories as “type of document,” “date,” “author(s),” “location,” and so on.

Yet keep in mind the multidimensional nature of historical data. Any single historical artifact may lie simultaneously in the provinces of time, space, personality, and specific subject matter. Take, for example, a note you might make when studying Edgar Allan Poe’s poem “Annabel Lee.” Poe wrote the poem in 1849 while living in a small cottage in the Fordham section of the Bronx in what is now New York City. As a researcher, you might wish to look at the note within the contexts of (a) Poe’s life in Fordham; (b) Poe’s poetry written in 1849; (c) poems that Poe wrote about his wife, Virginia Clemm; and (d) all information collected about the poem “Annabel Lee.”

If your research project involved a historical analysis of Poe’s poetry, you would no doubt also want to look at each of his other poems from multiple angles. How, then, could you organize all of your paper-and-pencil notes? One strategy would be to make multiple copies, perhaps three or four, depending on your ultimate analysis of the data. For instance, you might want to organize the poems by (a) chronological order, (b) geographical location, (c) historical figures, and (d) specific subtopics within your overall research topic. Such an approach would obviously be both time- and space-consuming, and your photocopying expenses would quickly mount up. Furthermore, you would want to have backup-up copies of all the data you have collected. A more efficient alternative, then, is to use a computer to record and organize your data.



A computerized approach to collecting and organizing your data. Technology facilitates data collection in several ways. We begin with the note-taking process. Instead of using note-taking forms, take a cassette recorder to the library or archives or wherever else the data may be available. Dictate the data (notes) instead of transcribing them. Better still, take a laptop computer and either type or dictate your notes directly into it. (As noted in Chapter 6, some hardware and software lets you turn a laptop into a tape recorder.) When you return home, enter your notes into a database or word processing file.

From here on, the management of your data is limited only by the capabilities of your software. Word processing programs let you search through your documents for recurring words or phrases; you can then copy and paste these into another document. Many database software programs sort, alphabetize, create tables and summaries, and arrange data in an ascending or descending order by date and event. To get a sense of the various data management features your software package offers, browse through its paper or electronic manual. (You can typically find the electronic manual in a “Help” or similarly labeled pull-down menu at the top of your computer screen.) Alternatively, you might experiment with the many options in the software’s pull-down menus and think creatively about how each feature might help you manage a large data set.

Evaluating and Interpreting Historical Data

After researchers have located historical data relevant to a research problem, they must decide what is fact and what is fiction. In other words, they must determine the *validity* of their data.

The data of historical research are subject to two types of evaluation. First, a researcher must judge whether a document or artifact is authentic. Second, if the item is indeed authentic, he or she must decide what it means. In these two situations, the researcher is reviewing the data to determine their **external evidence** and **internal evidence**, respectively. You may also see these concepts referred to as *external criticism* and *internal criticism*.

External Evidence

External evidence is primarily concerned with the question, Is the article genuine? Counterfeits and frauds are not uncommon, nor is their acceptance by the naive scholar and researcher unusual.

External evidence for the validity of a document is of paramount importance for the credibility of the research. Establishing authenticity of documents may in some cases involve carbon dating, handwriting analysis, identification of the type of ink and paper used, vocabulary usage and writing style, and other approaches. This aspect of historical methodology is a study in itself, and we cannot discuss it at length in a text as brief as this one.

Internal Evidence

Quite apart from the question of genuineness is the equally important question, What does it mean? When considering a manuscript or a statement, the researcher asks such questions as, What was the author trying to say? To what individuals or events do certain phrases refer? What interpretations can be extracted from the words?

Take a well-known utterance. The time is November 19, 1863. Abraham Lincoln is speaking at the dedication of a national cemetery in Gettysburg, Pennsylvania. In that brief but famous address, the president said, “But, in a larger sense, we cannot dedicate—we cannot consecrate—we cannot hallow this ground. The brave men, living and dead, who struggled here, have consecrated it, far above our poor power to add or detract.”

What did Lincoln mean by “the brave men, living and dead”? Did he mean only the brave men of the Union forces? (We must remember that he was dedicating a Union cemetery.) Did he mean the brave Confederate men as well? Or did he mean brave men, indiscriminately, with no thought of North or South but merely of courage and valor? To a researcher studying the life of Abraham Lincoln, it is important to determine what Lincoln specifically meant by his words or, alternatively, whether he was intentionally being ambiguous.

The matter of internal evidence applies not only to articles from the distant past but to more contemporary documents as well. What does the decision of a court mean? What do the words of the decision convey about the intent and will of the court? The question comes up frequently in legal interpretation. In such instances, the primary question is, *What do the words mean?* This is the sole concern of internal evidence.

Considerable historical meaning can be found in graphic documents as well as verbal ones. For example, in his dissertation about the Boston Marine Society, McKenzie analyzed nautical charts of New England coastline created during the society’s era. He noticed that one early mapmaker, DesBarres—whose nautical charts were typically rendered in painstaking detail—had a glaring omission in a map of the Bar Harbor area of Maine. McKenzie interpreted the omission in light of political concerns of the time:

In at least one case, DesBarres consciously changed the shape of the coastline to suit imperial [British] needs, thus pitting local needs against imperial desires. In his chart of the coast of Maine from Frenchman Bay to Mosquito Harbor, DesBarres

failed to indicate Northeast Harbor, the best harbor in the region, or anything that might resemble a harbor along the southern coast of Mount Desert island. . . . DesBarres' omission was almost certainly intentional, as the rest of the island's features, including its topography, coves, and hazardous rocks, were laid out in DesBarres' characteristic detail, and in more detail than the rest of land areas on the chart. DesBarres most likely left this strategically important harbor out of consideration for military reasons. In this case, imperial concerns outweighed the need for accurate local charts for free commerce. (McKenzie, 2003, p. 79)

When interpreting historical data, the researcher must inevitably impose certain assumptions on them. For instance, when looking at the laws that a democratic government created during a particular era, the researcher may assume that the laws reflected the *needs and beliefs of the majority of voting citizens* (Marius, 1989). Or, more generally, when tracking the course of events in a particular society, a researcher may assume that the events reflected *economic or social progress* (Breisach, 1994). And many historical researchers from Western countries are apt to interpret events from a Western cultural perspective: Practices consistent with Western norms and values are seen as being in some way "better" than other practices (Myrdal, 1973).

A good historical researcher will identify, explicitly and concretely, the assumptions that guide his or her interpretation of historical data. As an example, we look once again at the previously excerpted geography dissertation, this time focusing on the researcher's interpretation of events during a crisis in Jamaican sugar planting practices during the early 19th century:

Our interpretation [of the data] will depend upon two primary assumptions: (1) an adaptation imperative existed which demanded that the island society respond to the events threatening its pattern of livelihood, and (2) most of the behaviors involved in the response, bounded by the constraints inherent in the functioning cultural ecosystem, were goal directed. These assumptions lead us to expect an orderly response to crisis rather than a random one and lead us to seek a behavior system which sought to relieve the stresses on the society. Although such a behavior system would function in a probabilistic manner rather than as a closely determined one, we should nevertheless be able to construct an orderly framework of interpretation around our data. (R. K. Ormrod, 1974, p. 227)

Psychological or Conceptual Historical Research

Thus far, we have discussed conventional historical research—the study of significant events and the individuals who played important roles in them. But this chapter would not be complete without a brief discussion of another type of historical research—namely, that concerned with the origin, development, and influence of ideas and concepts. Ideas and concepts can influence the course of history just as surely as events and people do.

As an example, the idea of *democracy* was born in Greece; its development has run parallel to the events of the Greco-Roman world, the Middle Ages, and modern times. Over the years the idea evolved into such concepts as *representative government* and *political campaign*. The initial concept of democracy that began in ancient Athens is, perhaps, found in its purest form today in the New England town meeting.

Consider other key ideas that have guided the course of civilization: capitalism, socialism, rationalism, individualism, communism, postmodernism. Each of them has its own developmental history, which is just as "real" as the history of Western civilization, the United States, or your hometown. Search any comprehensive paper or electronic encyclopedia for some of the principal ideas of civilization just listed, and you may well find discussions of how these ideas have evolved over time.

Look, too, at Arnold Toynbee's monumental *A Study of History* (1939–1961). Here, you will find not the traditional approach to history—the description and interpretation of

events—so much as the dynamic ideas that have powered the histories of nations and civilizations and that have been instrumental in bringing about cataclysmic changes in those histories.

Searching for Roots

In Chapter 4 we mentioned the research of John Livingston Lowes, which is presented in *The Road to Xanadu* (1927, 1955). Lowes's book is remarkable because it is, in a sense, research in reverse. In it, Lowes searches for “the genesis of two of the most remarkable poems in English, ‘The Rime of the Ancient Mariner’ and ‘Kubla Khan’” (Lowes, 1927, p. 3).

This type of research, which is the counterpart of a genealogical search of one's family origins, begins with such questions as, Where did it come from? and How did it all begin? This is precisely the type of research that astronomers and astrophysicists conduct to try to account for the creation of the universe. One does not have to design a research project on such a cosmic scale to engage in the same kind of detective work that reels backward in search of answers instead of forward, as is usually done.

The process of beginning with a phenomenon and going backward in time to identify possible causal factors is sometimes called *ex post facto research*. We consider *ex post facto* within a different context—how people's backgrounds may potentially affect their current characteristics and behaviors—in Chapter 9.

PRACTICAL APPLICATION Historical Research Writing

Written accounts of historical research vary widely, depending on the researcher and his or her writing style. Research reports dealing with historical research need not be dull, and in fact those historians whose works often appear on best-seller lists infuse their descriptions of history with many colorful events and interesting personalities.

GUIDELINES Writing the Historical Research Report

Many of the suggestions we offer about writing in Chapters 1 and 5 apply to historical research as well as to any other type of research. In addition, Marius (1989) has offered several useful *rules for argument* that you should keep in mind when, in particular, you are writing about a historical research study.

1. *State your own argument early in the game.* Remember, you are not only presenting the data but you are also *interpreting* it. You should be up-front about your interpretation and not keep your readers guessing.

2. *Provide examples to support any assertion you make.* You make a more convincing case when you give examples of data that lend credence to your position.

3. *Give the fairest possible treatment of any perspectives different from your own.* You may very well be presenting an interpretation that differs from those of other scholars. Describe competing interpretations and provide evidence that supports them, as well as evidence that casts doubt on them.

4. *Point out the weaknesses of your own argument.* Better to shoot holes in your own case than to have others do it for you. You portray yourself as a credible researcher when you appear to be objective—rather than blindly one-sided—in your analysis and interpretation of your data.

With regard to this fourth guideline, we should remind you that your research project, while answering your initial research question, may also yield new, unanswered questions. You can turn any inconsistent findings that you uncover into “unresolved issues” or “suggestions for future research.”

A Sample Dissertation

We now return to Matthew McKenzie's dissertation on the Boston Marine Society, which McKenzie completed for his doctoral degree in history at the University of New Hampshire (McKenzie, 2003). We have already shown brief snippets of the dissertation to illustrate certain aspects of historical research, but we now present a larger chunk with a running commentary. You will see that, overall, the dissertation has a different feel to it than the proposal and dissertation excerpts that appear in previous chapters. Unlike those earlier excerpts, this dissertation is written as a *narrative*, with historical events and interpretations seamlessly interwoven throughout the discussion. McKenzie spent an extra year overhauling major sections of his dissertation, and his efforts show clearly in the quality of his writing. Notice, too, how he used footnotes to identify his sources, reflecting the *Chicago* style that historians typically use in their research reports (more about various styles in Chapter 12).

Dissertation ANALYSIS

4

INTRODUCTION

In the spring of 1755, Captain Hector McNeill was in command of a merchant vessel in a small flotilla conveying an army up the Bay of Fundy. The fleet had left Boston a few days before with the task of safely delivering 2,000 New England soldiers to fight against their French imperial rivals at Fort Beaussejour. As the fleet sailed along the current-swept, rocky shores, [Colonel] Robert Monckton worried about the fate of his army. Back in Boston, there had been almost no charts for him to consult, and even fewer descriptions of the currents and tides that made this region so dangerous. Moreover, his and his army's fate rested in the hands of a few Boston merchant skippers, like Captain McNeill, none of whom likely knew the latest and best techniques in navigation.

Despite his fears, however, and the dangerous shoals and hazardous headlands, the fleet proceeded safely. When Monckton approached McNeill about their progress, curious as to how a colonial trading skipper could successfully undertake such a hazardous job, McNeill showed him information which no British commander in North America or London knew existed. Trading along the coast, McNeill had collected five years of nautical observations, including (presumably) tides, currents, coastal descriptions, and manuscript drawings. From these observations, McNeill had drawn a chart covering the coast from Cape Cod to Cape St. Mary's including the Bay of Fundy. McNeill's chart impressed the British commander. And shortly after the Boston skipper safely delivered his regiments, Monckton dislodged the French from Beaussejour.¹

McNeill was not alone in his interest in marine cartography in New England. In 1760, he joined a group of master mariners in Boston, called the Boston Marine Society (BMS), which had also been systematically collecting navigational observations since 1754. Both McNeill and the Marine Society understood that local navigational knowledge carried commercial, political, and imperial opportunities. Consequently, when the organization united senior captains for mutual aid, they also recognized that

Comments

In Chapter 6, we suggested that you always state your research problem at the very beginning of your research proposal. In a research report, however, researchers often begin with a few paragraphs of background information that provides a context for the research problem. A common strategy in historical writing is to begin with a story—a real-life drama of sorts—that draws readers in and motivates them to continue reading.

Here we get a glimpse of what will be one major thrust of the dissertation: describing and tracking the nature of early nautical charts, whose use and promotion were partly attributable to efforts of the Boston Marine Society.

Notice the use of footnotes to identify the sources for certain statements. The author is using the style required by the Journal of American History (available online on the journal's Website at www.journalofamericanhistory.org). Footnotes are also consistent with the Chicago Manual of Style (2010), which historians typically follow.

¹ Hector McNeill to Lord Colville, January 17, 1763, Boston Marine Society Papers (Massachusetts Historical Society, Boston, Mass.).

they stood in an important position between London imperial agents in North America and the coastline that interested them. Furthermore, they were actively collecting data as every member returned to Boston—a feature that they would try to barter for greater influence in Boston and within the [British] Empire.

Historians are fortunate in the Marine Society's meticulous record keeping and parliamentary procedure. Two key issues help modern researchers see the society's collective will and motivation. First, as membership was limited to captains alone, the Society was self-conscious that they spoke as an elite body in Boston's maritime community. Second, as an organization of captains predicated upon fellowship and mutual aid and with a distinct role within the port, the Society went to great lengths to follow proper parliamentary procedures and to act only on decisions taken unanimously. As part of this process, the Society maintained meeting minutes recording the Society's (though not individuals') opinions, resolutions, and approved actions. Consequently, throughout its 250-year history, the society left committee reports, resolutions, and clear statements that reveal its collective will and motivations. These records allow historians to uncover not only what the organization did, but why.

This is not the first study of the Boston Marine Society. Earlier studies of the Marine Society have cataloged in some detail the work the Marine Society undertook during its long history. Nathaniel Spooner stitched together a rough narrative in his 1879 *Gleanings of the Boston Marine Society* (Boston, 1879, 1999). In 1982, William A. Baker's *A History of the Boston Marine Society* (Boston, 1982) integrated the Marine Society's history more closely with changes in Boston politics and economics and assembled systematic information on the society's more than 3,000 members. Both of these works greatly aided the project that follows. Yet neither delved into the society's influence upon the history of American science, [and] with the exception of Baker's study of the Society during the American Revolution, neither Baker nor Spooner were interested in examining how the society operated as an active agent in Boston's historical development.

This study seeks to examine the society within the context of the history of American science. Academic centers and learned societies have been the focus for most considerations of American science because of their prominence in the nineteenth and twentieth centuries. The Marine Society's scientific interests indicate, however, that colonial groups could and did develop their own scientific agenda that they pursued through methods adapted from common vocational practices. In doing so, the Marine Society's navigational work draws important parallels to the history of colonial science in other areas during the late eighteenth century. In the simplest form, I argue that colonial Boston shipmasters were not dependent upon learned societies for their navigational research needs. Rather, they adapted their mutual aid society and developed methodologies to collect navigational observations, analyze them for reliability and accuracy, and in a few cases, publish their findings for the benefit of the community. Furthermore, given the close ties between seafaring, economic growth and political influence in a mercantile economy, the Marine Society's work in navigational research granted them social and political influence in Boston. With this added influence—power would be too strong a term for it—the Marine Society tried to stabilize post-Revolutionary Boston politics, and to legitimate their efforts to become one of the

Notice the smooth flow of the narrative from one event to another. In our experience, narrative writing is more challenging than traditional "scientific" report writing. However, when well executed (as is the case here), narrative reports are also more engaging than scientific reports tend to be.

Here we see the context in which the discussion of the society's minutes (excerpted earlier in the chapter) appeared.

Here the author explains how his own research extends the boundaries of what is known and believed about the Boston Marine Society's role in American history.

Here the author also explains how his research represents a divergence from the traditional approach to the history of science: Rather than studying the effects of traditional academic groups (universities and academic organizations), he is studying the impact of a less academic, yet definitely influential, group.

The author makes his central hypothesis clear at this point: He believes that early shipmasters relied on one another rather than on traditional scientific investigations to get the information they needed to travel safely along the northern Atlantic coastline.

town's new elites. Ultimately, the Marine Society lost its political influence as changes in navigational research, shifts in Boston and national politics, and new market centers for scientific information combined to weaken the society's position in both the political and navigational research world.

The Marine Society gives us a glimpse of the rise and fall of what I call "vocational science." In many previous studies discussed below, science and research were considered as a purely intellectual—"academic"—exercise, centered in learned academies, universities, and laboratories. I argue, to the contrary, that those who used navigation to carry their vessels safely into port, and expanded navigational knowledge, pursued science just as much as those who approached navigation from theoretical understandings of geodesy, mathematical astronomy, and spherical trigonometry. Whether using complex mathematical models to develop an absolute understanding of coastal features, or using piloting techniques, rule of thumb guidelines, simple instruments, and best-as-possible guess-work, both vocational and academic researchers formed part of a larger process by which the knowledge of New England's coast expanded.

The idea of vocational science also highlights an important mechanism by which specific groups used science to shore up their economic, social and political positions within their local area. While most prior work on American science has shown how the pursuit of scientific knowledge translated into improved cultural and social reputation, most have seen these efforts as a neutral desire to expand humanity's understanding of the world. Yet in this case, engagement in scientific research carried immediate economic, political and social benefits that were anything but neutral. As Joyce Chaplin has shown, colonial Carolina low-country planters sent botanical specimens to the Royal Society and the Royal Society of Arts in exchange for agricultural innovations. These innovations—seeds, water control mechanisms, and processing machinery—helped them secure political control over Carolina politics during the Early Republic and helped create the land-owning elite of the Ante-bellum south.² James McClellan argues that while French planters in Saint Domingue did not embrace science as openly as their Carolina counterparts, science did serve the mercantilist interests of the state, and helped perpetuate slavery in the French Caribbean.³ Finally, John Lauritz Larson has shown that experimental engineering designs for locks, dams, and internal waterways promised America's post-Revolutionary elite a means to promote private improvement schemes with public funds and in the face of public opposition.⁴ In all these situations, science—whether tied to European centers or not—worked to bolster a specific group's local political and economic positions. Not pursued solely for knowledge in its own right, science expanded knowledge of the natural world, yet at the same time advanced specific interests.

He posits a second hypothesis as well: The society's significant involvement in the local economy gave it considerable influence in early Boston.

The author introduces a new concept—vocational science—to describe the phenomenon he uncovers in his research.

The author contrasts his own viewpoint with more traditional views.

The author argues convincingly that, contrary to the popular perception of scientists as individuals who are more concerned about the general quest for knowledge than about their personal needs, these "vocational scientists" often had fairly self-serving motives at the root of their endeavors. He draws analogies to advancements in other locations and other times, where people may have been equally self-promoting. In doing so, he situates his research within a larger body of research literature that has preceded his own work.

²Joyce Chaplin, *An Anxious Pursuit: Agricultural Innovation and Modernity in the Lower South, 1730-1815* (Chapel Hill, 1993), 131-142.

³James E. McClellan III, *Colonialism and Science: Saint Domingue in the Old Regime* (Baltimore, 1993), 9, 289-292.

⁴John Lauritz Larson, *Internal Improvement: National Public Works and the Promise of Popular Government in the Early United States* (Chapel Hill, 2001), 1-37.

Readers will find the terms “science,” “navigational knowledge,” and “research” used quite liberally and perhaps over-interchangeably in the pages that follow. This is intentional. The structured and distinct practices that we associate with science today had yet to develop in the second half of the eighteenth century. The lines between “amateur,” “practitioner,” and “interested gentleman” were blurry to say the least. As others have shown, to impose such categories on inquiries into the natural world and the inquirers themselves clouds more than clarifies. Only after science underwent dramatic changes in the early nineteenth century would science have such clear structures.⁵

[The report continues with a discussion of earlier researchers’ explanations of the interplay among science, politics, and social dynamics in colonial American and the early decades following the American Revolution.]

⁵See McClellan, *Colonialism and Science*, 7; and Roy MacLeod, “On visiting the Moving Metropolis: Reflections on the Architecture of Imperial Science,” in *Scientific Aspects of European Expansion*, ed. William K. Storey (Hampshire, 1996), 24-27.

NOTE: Excerpt is from *Vocational Science and the Politics of Independence: The Boston Marine Society, 1754–1812* (pp. 1–6), by M. G. McKenzie, 2003, unpublished doctoral dissertation, University of New Hampshire, Durham. Reprinted with permission.

Here the author anticipates and addresses a potential source of confusion for his readers. In particular, he provides a reasonable rationale for why he will use several terms interchangeably.

We have said enough about the historical method for the purposes of the beginning researcher. Beginning with the next chapter, we turn to an entirely different approach to the discovery of knowledge. Whereas Chapters 6 and 7 have dealt with qualitative methodologies, Chapters 8 and 9 explore quantitative research, and Chapter 10 explains how qualitative and quantitative approaches might be combined in *mixed-methods* studies.

For Further Reading

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Now go to MyEducationLab at www.myeducationlab.com to take assessments to evaluate your mastery of chapter concepts. Assignments and Activities exercises and Building Skills in Reading Research exercises are also available to help you master concepts and skills. Feedback for many of these exercises is provided so that you can see why your answers are correct or incorrect.

In this report we discuss two types of quantitative study that fall under the broad heading of surveys: *cross-sectional* and *longitudinal*. The general category of research design involves either describing the characteristics of an observed phenomenon or exploring possible relationships among two or more phenomena. In every case, descriptive research examines a situation *as is*. It does not involve changing or modifying the situation under investigation, nor is it intended to derive causal relationships between variables.

As you proceed through the chapter, you will find several exercises—sampling, making observations, interviewing—that you encounter previously in the discussion of qualitative research. In fact, it is often true that you might think, “On the contrary, such strategies take on a very different form when we want them to yield quantitative data.”

In the next few pages, we describe observation studies, experimental research, developmental research, and survey research, all of which yield quantitative information that can be summarized through statistical analysis. We devote a significant portion of the chapter to survey research because this approach is used quite frequently in such diverse disciplines as business, government, public health, sociology, and education.

In the qualitative studies described in Chapter 6, observations are usually recorded in words, often perhaps with behaviors or videotapes that capture the words or ways in which people or other animals go about and interact. From there, the researcher examines a transcript for patterns of behavior or other phenomena of interest. In contrast, quantitative research involves recording observations in a way that allows for statistical analysis. In quantitative research, however, the observation study is quite different. Perhaps most importantly, an observation study does not necessarily involve members of the animal kingdom. Certainly it might involve behaviors of these animals, but it might instead be aimed at studying plant species, nonliving entities (e.g., rock formations, soil samples), or dynamic physical phenomena (e.g., weather patterns, black holes).

In addition, a quantitative observation study tends to have a particular, preidentified focus. While human beings are the focus in many studies, the focus is typically on a certain aspect of behavior. Furthermore, the behavior is quantified in some way. In some situations, each occurrence of the behavior is viewed as a discrete, identifiable response. In other situations, the behavior is rated for accuracy, intensity, duration, or some other dimension. But regardless of approach, the researcher strives to be as objective as possible in assessing the behavior.