

## Historical Map Research

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THE FIELD OF HISTORICAL map research is as varied as most other human endeavors. Since the fine points of a definition will vary with almost each practitioner, perhaps we should start by defining each of the three items. The reader will by now have become aware of maps as a distinct format. Again, definitions vary, but for our purposes, a *map* is "a symbolic graphic representation of a planetary body or portion thereof"—a definition which will permit the greatest latitude in discussing the cartographic format without violating any commonsense feelings about what a map is. The other definitions can be taken from regular dictionaries: *research* is "careful, systematic study and investigation in some field of knowledge," and *historical* means "based on people or events of the past."<sup>1</sup>

In the strictest sense, all maps are historical because history encompasses events of even an instant ago. While admitting this, we must also admit that it is often convenient to break a field down into periods, perhaps by arbitrary time periods (e.g., pre-1700 maps, nineteenth-century maps) or by production technique (e.g., engraved maps, lithographed maps). This is perfectly legitimate as long as these categories of convenience are not considered cosmic law. As Crone, Thrower, Woodward, and others have pointed out, there are few sudden extinctions of one mode of production with instant replacement by another, but rather more or less gradual replacements over a period of time in a geographically widespread industry.<sup>2</sup>

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For purposes of this article, then, all maps are historical. If the maps of the last few years have not received the attention given to maps produced two hundred years ago, we merely have to wait two hundred years. The ephemeral maps of today will become the sought-after rarities of the future. The well-reasoned arguments over what constitutes "modern" cartography are superfluous to our purposes—indeed, it is conceivable that someday the term *modern cartography* may only refer to computer cartography.

Historical map research may be divided into intrinsic research and extrinsic research. This is roughly equivalent to "pure" and "applied" research in the sciences. Intrinsic map research is concerned with the map itself as the object of study. Such study has a long and mostly honorable history. This history need not be detailed here because R.A. Skelton has done it so concisely,<sup>3</sup> but some highlights and prominent names should be noted. Since anything less than a complete history must be very subjective, I express the traditional *mea culpa* if I slight anyone's favorite historian of cartography.

No field of scholarship springs full-blown like Minerva from the brow of Jove, but rather depends upon a string of researchers reaching back into the mists of antiquity. We may decide upon symbolic moments of birth but, as in human birth, there is always a period of gestation. Contributions to the study of maps were made from the Renaissance to the present by collectors of maps. In the early to mid-nineteenth century, the names of E.F. Jomard, the Viscount of Santarem and J.G. Kohl stand out as scholars who brought together important collections of early maps in both original and facsimile. Joachim Lelewel stands as a harbinger of things to come with his five-volume *Géographie du Moyen Âge*, which was profusely illustrated with facsimiles of important maps.<sup>4</sup> The "birth" of the modern study of the history of cartography can be said to begin with the publication of A.E. Nordenskiöld's *Facsimile-Atlas to the Early History of Cartography* in 1889.<sup>5</sup> Nordenskiöld brought to the study of early maps a mind trained in the sciences and a zeal to organize the field. Nordenskiöld stands as the watershed and, for some, the patron saint of historical map research. At this writing, the five-volume catalog of Nordenskiöld's library is being published by the Helsinki University Library, with U.S. distribution by Humanities Press.

The twentieth century has witnessed an increase in map researchers and in published findings. Monumental studies of maps of Michigan and the Great Lakes by Louis Karpinski, of maps of the southeastern United States by William Cumming, and of Portuguese cartography by Armando Cortesão are just a few of the highlights.<sup>6</sup> Leo Bagrow has not

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only written one of the important histories of cartography,<sup>7</sup> but also founded *Imago Mundi* in 1935, one of the most important journals for publishing the results of historical map research. Coolie Verner has written on descriptive cartobibliography with emphasis on copperplate variations.<sup>8</sup> Subtly dominating this century is R.V. Tooley, whose researches have touched on many of the major topics currently fashionable, and who has encouraged others by founding *The Map Collectors' Circle* (sometimes also known as *Map Collectors' Series*), a publication now unfortunately defunct, and *The Map Collector*. Perhaps Tooley's greatest personal contribution is his *Dictionary of Mapmakers*.<sup>9</sup>

While many map collections in libraries and other institutions are quite good and may even publish important works, and while lately there have sprung up a few centers for map studies, two institutions dominate the field not only because of the fineness of their collections, but because they sponsor publication of the findings of researchers: The Herman Dunlap Smith Center for the History of Cartography at the Newberry Library in Chicago has, under the direction of David Woodward, programs for publication of research results, public lectures and continuing education in the map field. The Geography and Map Division of the Library of Congress encourages both its staff and outside scholars to make use of its resources.

Having noted some of those engaged in map research, we still must address ourselves to the question of what it is. Treating a map as an artifact in intrinsic map research means more than looking at it as a physical object. It is a physical object created by a particular technology in a particular cultural milieu. The material of the map, traditionally paper or parchment, can be examined physically for watermarks and fibers or other physical characteristics, as well as chemically. The inks and coloring materials can be analyzed. The technology of reproduction—from calligraphy on manuscript maps, through wood and metal engraving, to lithography—can be studied. Maps, unless created by governments for high state purposes, are objects of commerce, and their manufacture reflects the economic climate of the times as well as the structure of the map business. How the information to be symbolized on the map was gathered and compiled, as well as the study of the development and use of the symbols used, might be termed the “intellectual history” of the map. All maps can be examined in these various ways: as single maps, as groups of related maps, maps depicting a particular area, maps produced in a particular place, maps produced by a particular map maker, maps produced by a given technique.

The world of map research is more extensive than some may think. A sense of the size and diversity can be gained by looking at an issue or

two of *International Directory of Current Research in the History of Cartography and in Carto-Bibliography*,<sup>10</sup> issued to coincide with the biennial meetings of the International Conference on the History of Cartography. Research ranges from the atlases lithographed by Frederick Borquin to maps of the Dutch Polders, from early maps of Russia to wax engraving. There is a sizable international community of map researchers.

The fruits of these labors are published not only in the aforementioned *Imago Mundi* and *The Map Collector*, as well as in such specialized journals as *The American Cartographer* and *The Canadian Cartographer*, but also in more general publications. Local history publications often have map articles; genealogical magazines cite maps; map articles have appeared in all of the major historical journals; even the three journals of map librarianship in North America—*Special Libraries Association Geography and Map Division Bulletin*, *Western Association of Map Libraries Information Bulletin*, and the *Association of Canadian Map Libraries/Association des Cartothèques Canadiennes Bulletin*—publish the results of scholarly research as well as more mundane matters. Both *The Quarterly Journal of the Library of Congress* and *Prologue* (issued by the National Archives) are replete with articles on maps. Maps are relevant to so many facets of our existence that it is only fitting that journals devoted to these facets mention maps.

When studying maps, it is helpful to know where the maps under consideration are located. Unfortunately, there is at this time no map resource equivalent to the *National Union Catalog*. The catalogs of some individual collections have been published, frequently by G.K. Hall, and the newly received maps in several libraries are already going on-line on OCLC, but even some of the cartobibliographies which attempt to list locations are far from complete. After checking the printed sources, it is still advisable to go through the "Old Boys' Club" of map librarians to track down copies of maps.

But research goes beyond just fondling the map. One must read as much relevant, published research as one can find. Here we are more fortunate. The map library, cartographic and geographical journals frequently list monographs, collections, facsimiles, and articles which have been published elsewhere. The Library of Congress Geography and Map Division has over the years developed a card file, *The Bibliography of Cartography*, published in book form by G.K. Hall, which lists a large amount of scholarship in the map field.<sup>11</sup> While the subject of the antiquarian map trade deserves its own article to do it justice, I would be remiss if I didn't mention at this point that catalogs from the major dealers often become important reference works in themselves, though

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the research involved in producing them may be considered extrinsic because the purpose is to sell maps.

It is often difficult superficially to distinguish intrinsic and extrinsic map research. We can glibly say that intrinsic map research is concerned with understanding the cartographic artifact and how it came to be, while extrinsic map research is concerned with the cartographic artifact as a carrier of information. This information can vary from the comparatively simple spelling of place names at a given time to the results of a chemical analysis of the ink on a map. The distinguishing feature is intent. It may seem that the antiquarian map dealer is researching the map for itself, but what is really sought is information about the uniqueness or rarity of the map so that an appropriate amount can be charged for it: I would call that motivation ulterior. It may seem that the historian of technology is concerned with dating a given map, yet the real purpose is not to date the map but to use this information in studying the printing technology. The two aspects of map research are mutually supportive, and one should not be considered less worthy than the other.

Maps are and were designed to be carriers of information. To use this intended information in a cursory fashion is reference rather than research. Information may age and even become incorrect, but rarely becomes useless. Many of the county atlases of the nineteenth century contain paid advertisements for various firms and enterprises in the county. Not only can something of the economic and social climate of the county at the time of publication be determined by such advertising matter, genealogists find it a gold mine of information on ancestors and their activities.

Even with intrinsic map research, it is wise to go beyond the artifact itself if at all possible; with extrinsic research, it is mandatory. With additional outside documentation, maps can be valuable corroborative evidence, but alone they can be misleading if interpreted incorrectly. An eighteenth-century map may indicate a structure approximately where a current building is located, but it can never alone prove that the buildings are identical; an actual site survey, combined with a knowledge of architectural styles, is needed along with other textual evidence. The indication on a county plat map\* of an extensive farm owned by someone with the sought-after ancestral name is no proof that the farm really was owned by the desired ancestor without other linking documentation. Two funeral parlors in a town can indicate either a thriving

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\*A plat map is one primarily concerned with showing property lines, and includes physical or other features as they relate to ownership.

death business or a religious (or social or ethnic) division in the town which requires two marginally successful funeral parlors—or it may mean something else entirely. The cast of mind of a Sherlock Holmes is most useful in any research.

Elsewhere in this issue, Mai Treude discusses map users, and an earlier issue of *Library Trends* contains David Cobb's article of "Maps and Scholars";<sup>12</sup> both of these are informative. An entire book could be written on how maps can be used by different researchers. Avoiding that temptation, I shall very briefly note some generalities on the matter. In what follows, I do not consider students as a separate category, because I presume—or hope—that students of architecture, landscape design, or whatever are using (or learning to use) map materials in the same manner as established professionals.

As a group, genealogists are one of the most troublesome in libraries, because the levels of research sophistication range from barely perceptible to quite advanced. Because of this, they are one of the hardest groups to categorize. What they all share is intent: finding their ancestors. They may come armed with impressive and extensive documentation, or they may come with garbled oral family tradition. They may have sprung from the first European settlers in North America, or may have ancestral antecedents from the backwaters of the Russian Empire two generations ago—or both. With genealogical research we can clearly see the inadequacies of maps as the single source of information.

Most of us ultimately spring from the nameless and faceless peasantry of some country, perhaps salted with relationships with a few prominent lines "from the wrong side of the blanket." Only prominent names of individuals appeared on the maps of cities and their environs in the eighteenth century. In some instances, these names change from variant to variant of a map as the patron changes.<sup>13</sup> Until we reach the county atlases of the later nineteenth century, personal names are generally not successfully found on early maps. What the genealogist often seeks is confirmation of place names. Foiling this search are name changes, incorporation of smaller places into larger ones, extinction of communities, and starting with incorrect names. Older maps may help, and in this regard such searches are a bit easier when dealing with North America and western Europe, if for no other reason than that libraries in North America are more likely to have maps and gazetteers showing an earlier time for these areas than for eastern Europe and other parts of the world. Names in these areas also have been somewhat more stable and boundaries, while not absolute, have changed less in the last two centuries than in eastern Europe. In eastern Europe there can be towns with

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three (or more) names in different languages, some of which are not in the Latin alphabet. Such place names have a very good chance of becoming garbled in the retelling of family histories; Gaelic names in Wales and Ireland can also be troublesome. Here the librarian may have to engage in Socratic questioning of the library user to try to find other names mentioned in the family saga, and whether grandfather ever mentioned the sun being in his eyes when he walked to the larger market town. Sometimes, with luck, using modern maps (say, those produced by the Defense Mapping Agency at a scale of 1:250,000) with older maps can get good results. *Ritters Geographisches-Statistisches Lexikon* and *Stieler's Atlas of Modern Geography* can be useful for tracing German names in eastern Europe.<sup>14</sup>

The second half of the nineteenth century saw the rise and full flowering of the county atlas in North America. These works indicated the major land owners, which is not very useful if the ancestors were tenant farmers; still, a picture of the county can be gained and the family history may contain a mention of the landlord, so occasionally they can be useful. The value of maps for the genealogist depends very heavily on how much information is brought to the maps.

Paralleling the county atlases were the city ward atlases, created primarily for insurance companies. Again, only owners of large tracts are mentioned by name, but a picture of a neighborhood can be had by combining the census data with the map information. Street names change as rapidly as those of towns and villages, often changing the house-numbering scheme, so early maps and atlases of cities frequently must be consulted to find out where grandfather lived. These atlases will show all the structures at the time of survey. Now-vanished churches with their graveyards, as well as the factory where grandfather may have worked, may be seen in their spatial relation to the row house where he lived.

As map users, architects and planners can be lumped together. Very generally, architects are concerned with a site, while planners (called variously "city planners," "urban designers," "landscape architects," and a host of other euphemisms) are concerned with a larger area. Both will use older cartographic materials to spy out the earlier lay of the land. They will use prints and photographs, older business directories, and guide books to get a picture of the site or area. If they are concerned with restoring or recreating a particular period, the fire insurance atlases, because they were concerned with structures, often indicate the outlines of a building, the building materials, the existence of outbuildings, and sometimes within a few years, when additions to buildings were constructed. Once the architects and planners dream their grand

schemes, it is up to the engineer to realize them. The builder's concern for historical information is quite pragmatic: how extensive are the old foundations on the building site (that no one ever told him about), and where did the now-buried stream run which is giving him water in the basement?

At one time it might have been appropriate to make a distinction among historical geographers, social historians, economic historians, transportation historians, and the like, but in a period seeing increasing integration of hitherto-disparate studies, it is better to consider them all historical researchers of various persuasions. More accurate pictures of a specific area in a particular time period can only be gained by integrating the findings of researchers in several fields. Such a picture would include how and where people lived, how and where they earned their livelihood, how and where they amused themselves, and how they moved about from place to place. In both rural and urban settings, maps in conjunction with other records can help discover these things. County maps may show the major roads and rail heads (as well as ownership); city maps may show the street trolley lines; even maps from eastern Europe in the sixteenth century may indicate the spatial relationship of the major towns and the roads and navigable rivers connecting them. This list could go on, but I trust the examples given throughout this paper are beginning to coalesce into a picture of how maps can be used by different groups with different needs. The examples may relate mainly to North America, but the principles are universal.

One group of researchers presents a problem in terms of whether they are engaged in intrinsic or extrinsic map research: the print/graphics scholars. Prints and drawings are studies in themselves. Many print researchers are believers in the print heresy (sometimes called less charitably the "print perversion"), the view which sees maps as a special kind of print. Maps and prints are obviously of the same family and may even be of the same genus, but are decidedly distinct species. There can be fruitful collaborations between the two fields, but only if there is a mutual respect for the individual integrity and distinctness of each. When maps contain views and drawings, as has often been the case throughout the entire history of map making, or when accompanied by views and drawings, as was common in the county atlases of the nineteenth century, the cartographic item is the proper study of both map researchers and print researchers. That most vexing of hybrids, the bird's-eye view, is the proper object of study for both. I place print researchers in the category of extrinsic researchers, because while they may look at the map as a thing to be studied for its own sake, they view it

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as a pictographic artifact rather than a cartographic one.

Having very briefly, and very incompletely, noted how some researchers can use maps, let us now turn attention to where they find maps. Earlier it was noted that there is no single source to track down locations of any given map. There are, however, other ways to skin the cat. For the intrinsic map researcher, it is usually the case that only one version of a map can serve his needs. With extrinsic map researchers, the chances are somewhat better that a wider variety of cartographic materials may suit their needs and answer their questions; what they need may not change from edition to edition of a given map. Of the many map repositories which exist, only a comparative few have published catalogs; however, most of the major collections are listed in *Map Collections in the United States and Canada* or, on an international level, in *World Directory of Map Collections*, with a note of the particular collection's specialization.<sup>15</sup> If, for instance, one needs a map of a certain county in Kansas in a given year, knowing which map collections specialize in that area can be a starting point.

Map collections are found not only in libraries, but in historical societies and archives. Legislative, judicial and executive bodies at the national, state (or provincial) and local levels produce a prodigious amount of records, many of which contain maps. These can range from rather simple and general maps merely indicating locations to detailed site studies. Unfortunately, much of this material is buried in textual records, but the diligent sorting through of official records can be rewarding, as, for instance, when records of litigation over boundary lines contain maps and lists of owners. An additional problem with archives is the changing boundaries of regions and territories. For example, at one time Denver was the westernmost city in the Kansas Territory, and the area north of the Ohio River before the various states came into being was, at one time or another, a U.S. territory, part of British Canada (Quebec Province), and part of French North America. These factors lead to the question of which archives one should consult. Historical societies (sometimes acting in lieu of officially constituted archives) may have manuscript maps buried in their manuscript collections, which can aid various map researchers as well as printed maps. Planning agencies, while concerned with the present and future, may well have collections of copies of older maps, because their studies and suggestions often contain a description of the historical development of an area.

Sheet for sheet, government agencies of one sort or another are the major producers of maps in the world today. By no means will all such

maps find their way into map collections, but a great many, either as single-sheet maps or as maps accompanying textual matter, will be found in government publications collections in libraries. As with archival collections, one may have to rummage a bit, but the rewards can be great. Governmental agencies have been churning out reports for enough years to be significant in all manner of research endeavors. As one example, the U.S. Army Corps of Engineers has changed the face of the land; their records may show the terrain before and after. As another example, nautical charts, almost always a government product, can show the changes in the coastline over the years, changes which can affect not only the permanent residents, but those using the shore for recreational purposes. The greatest grab-bag of all is the *Congressional Serial Set*, a multivolume set containing every report and document relevant to Congress's deliberations; some volumes are nothing but maps. There have been a series of maps of the various naval bases, of the harbors dredged by the engineers, of Indian reservations, of mining activity, of railroads, of lands available for homesteading,...you name it and the chances are rather good it has been included sometime. When you consider that the Smithsonian Institution with its worldwide activities is a government agency, you begin to be staggered at the thematic scope of the mapping possibilities. Not only the Smithsonian and the military services, but other civilian agencies as well are engaged in worldwide activities; the U.S. Geological Survey and the National Weather Service are only the most obvious. The cartographic products of all this governmental activity can be viewed both as maps and as government documents.<sup>16</sup>

Since this is a library publication, it is only appropriate to conclude this article by taking a look at the place of libraries and librarians in historical map research. On the most basic level, libraries are storehouses and librarians are custodians. I don't say "mere" custodians, because the custodial and warehouse functions are most important: if we have not stored the maps and atlases, we will not have them to do anything else with. Included in the custodial function is the hope (but not the absolute requirement) that the materials are stored in some sort of order and can be retrieved when needed.

Beyond simple custody is map librarianship. While this entire issue of *Library Trends* is devoted to the subject, the best beginning book on map librarianship is Mary Larsgaard's *Map Librarianship: An Introduction*; it is *the* book on the subject for beginners.<sup>17</sup> Map librarianship, like other kinds of librarianship, involves selecting material, cataloging and classifying it in some manner, storing it (including preservation

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and restoration), and servicing it. This last, the reference/research function of librarianship, is the only justification for libraries and librarians. Reference and research, however, cannot exist without all the prior processing of the library materials: reference work may be the ultimate fruit of librarianship, but the fruit must be supported by the far less glamorous trunk of processing.

Perhaps in some libraries reference work may end with giving the user a book which contains the needed information. In the specialized forms of librarianship, this is rarely the end of the matter. Beyond just finding the map the user needs, there is often the additional obligation of interpreting the map or other material. An unexplained map is almost worthless if the user doesn't know the meaning of colors and symbols on the map. And there is more to reference than finding the map the user wants. Quite often, the user has a desire to see a map which will do the user no good. The librarian must be prepared to provide not what the user wants, but what the user needs. It is a hackneyed phrase, "the reference interview," yet it still expresses a valid concept. The librarian must understand the problem and use familiarity with the collection to produce useful material which may in part answer questions raised. Because map collections have not been using uniform procedures, even the most sophisticated of users must depend on the local map librarian or map custodian to unravel the local idiosyncracies of each collection. The map librarian may seem to become a partner in the user's research. Map librarians, often in pursuit of cataloging information, have usually engaged in some sort of research themselves and may understand what is involved. Some few map librarians have even gone beyond the usual cartobibliographic endeavors and are accounted scholars in the field. This expertise which the map librarian may have developed can be as important a library resource as any item in the collection.

In looking for trends in research, the safest answer is certainly "more." There is a slowly increasing awareness of maps on the part of the general public, brought about partially by the rising prices of antiquarian maps. While much of this awareness may be reflected in increased numbers of reference questions rather than in research projects relating to maps, the awareness is there. In my own experience I have seen during the last few years an increase in the number of people searching out their ancestors.<sup>18</sup> Ten years ago most high school students used maps for recreational information (where to bike, hike, camp), but recently, seventh- and eighth-grade students have come to the library with assignments requiring them to use older maps and atlases to

reconstruct how their neighborhood looked in earlier times. Students even younger are routinely brought through for quick orientations on maps.

The neighborhood history projects will probably increase, as will the number of amateur genealogists, but there will be no lessening in other areas. We will see intrinsic map research become more refined (and perhaps more specialized). As production techniques are more thoroughly studied, research will turn increasingly to firms and individual map makers in addition to specific maps and map series. We will see an increase in general courses in map librarianship, as well as programs in rare map curatorship (emulating the present program at the Newberry Library). Learned collections similar to *My Head is a Map* and *The Compleat Plattmaker* will continue to be published,<sup>19</sup> but as the earlier years are worked over there will be increasing emphasis on the nineteenth and early twentieth centuries. The coming years may not be easy ones for any human endeavor, as the Chinese curse overtakes us and times become very interesting, but for all the perils and pitfalls which may beset it, historical map research has an exciting future.

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