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EXPECTATION VERSUS REALIZATION: THE HISTORY OF THE ATLAS
OF EARLY AMERICAN HISTORY

Introduction

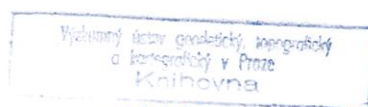
Just as it is considered worthwhile for geographers to study distinct regions of the earth, despite unique characteristics that prevent application of observations to other regions, cartographers profit similarly from study of the preparation of maps presenting interesting, if unique, problems. While there may not be direct transfer from findings based on the studied maps to those being newly constructed, principles of general utility and interest often emerge. One project worth considering in this respect is that which produced the Atlas of Early American History in 1976.¹

The need for an atlas depicting spatial information for the United States from 1492 to 1830 was long felt by several editors associated with the Institute of Early American History and Culture, Williamsburg, Virginia. Planning of a volume to fill these needs was begun in 1960, but a project for its production was not established until 1970. Publication of the Atlas of Early American History: The Revolutionary Era, 1760-1790 took place in July, 1976.

The published volume presents many contrasts with original expectations for this unique and monumental volume. Some of these contrasts between expectation and realization are described in this paper by the cartographic editor who was with the Atlas Project (located at The Newberry Library in Chicago) throughout its five-year span.

The original outline of contents for an atlas of the period 1492-1830 was prepared by Dr. Lester J. Cappon, an historian, who estimated that it might take approximately five years and \$600,000 to produce such a volume. As published, the volume includes only the period 1760-1790, or about three pages of the original outline of contents. This limited undertaking, nevertheless, required five years and the efforts of more than twelve full-time historians and cartographers, and cost nearly \$1.5 million. Funding was obtained in about equal parts from the U. S. government and private sources. In these terms it might take twenty years and cost \$6 million to realize the entire original outline. But given the expense incurred for this single volume, it is doubtful that comparable volumes for the periods 1492-1760 and 1790-1830 will be made.

Neither the editor-in-chief nor the cartographic editor had previously compiled large-scale historical maps from primary data, and lacked appropriate expertise on which to base accurate predictions. While planning the Atlas, the historians and cartographer held as true a number of tacit and explicit assumptions, some of which later proved to be false or irrelevant. Closer examination of some of the discrepancies between expectations about the Atlas, and the Atlas as it was finally realized, reveals certain principles that have implications not only for the historical mapping considered here, but for cartography in general.



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The Research Process for Historical Mapping: Expectation vs Realization

The research demands for the Atlas were extraordinary. One historical geographer had early warned that they would be:

"But one must be realistic; the production of these 'Early American' distributions would entail major research projects -- how would these be financed, and who would be prepared to undertake them? Very little of the basic work necessary for such maps has been done, as you well know. (I have been attempting the mere revision of one of the few such maps that exist and am dismayed by the amount of work that this one very minor item involves.)"²

For the most part, however, the staff was not aware at the outset exactly how difficult it would be to carry out the research necessary to produce the planned volume of new maps. It was anticipated that there were a great many monographs, dissertations, and scholarly articles that could be "assembled" in order to compile a new map depicting eighteenth century conditions. But such was never the case; verbal information is virtually never complete enough so that it can be mapped directly. Days were sometimes spent by staff historians trying to find out exactly where a single place, cited in text, was located. We had to know with considerable assurance that it was on this river, not a mile away from it, and at the north side of the crossroads, not half a mile away.

A map demands specificity and completeness to a degree that is not often necessary for textual material. A map must be complete in order that visual patterns produced on its surface can be taken as patterns characteristic of the phenomenon mapped, not as artifacts of the shape of available plotted data and data gaps on the map.

The historian can generalize about crop patterns or the distribution of religious denominations in a few summary paragraphs in a monograph, but a "summary" map cannot be made without the knowledge of every specific detail that leads to the ultimate generalization. The total number of sources examined by the researchers as they compiled the maps for this atlas is not known, but it is known that almost 10,000 bibliography cards were prepared and that about 2,000 of these were considered to be of sufficiently direct importance to be cited in the published bibliographic essays.

The Atlas staff learned that there is a profound difference between historical and modern thematic mapping. At present, thematic mapping consists of acquiring and plotting place-associated data, where the "place" can be a settlement, a political unit or a census tract. In all cases, the location and/or extent of the place is either known or can be determined readily and accurately. The historical process is significantly different. For this volume of maps, detailed research had to be carried out to determine both the place location and the thematic information associated with the place. For example, a researcher might determine with relative ease that a particular Anglican congregation in Virginia was founded in 1684 at a particular place. But he might then spend hours, or even days, trying to establish where such a place should be located on the map. The place might be long gone, and might never have been mapped while it was in existence. Such two-level research, for both locational

and thematic information, was the rule at the Atlas Project rather than the exception. A considerable shift in expectations evolved in this matter.

The Nature of "Mappability": Expectation vs Realization

There was at the outset of the Project a general anticipation that Cappon's original outline of contents would be the primary guide to establishing the list of maps to be compiled and included in the Atlas. To a significant extent, this expectation was correct. But there were major exceptions that are of considerable interest because of their implications for the nature of cartography. It is not correct to anticipate that an outline of content having verbal-logical structure can be transformed, on a 1:1 basis, into a series of maps that will both retain that structure and have cartographic integrity. We can consider this matter in some detail.

Cappon wrote in 1971: "Since colonial trade was a part of imperial world trade, we cannot restrict our cartography to North American ports. Indeed we must show in various ways how the American colonies were an integral part of the European system."³ This is a good example of a topic, imperial trade, that is of great interest to early American historians and has historical validity. But it has little or no cartographic validity; that is, it is not a topic that can be mapped directly. How can one map "trade"? Indirectly, one could include flow diagrams for various commodities, or could locate

important parts on a map. But such information could often be presented as well or better in far less expensive form, such as charts or tables.

Furthermore, a map can never "show how". Maps are limited to the depiction of a surface having objects or phenomena distributed on it. They are static, non-discursive, and unable to depict directly a dynamic, abstract relation such as that encoded in the word "how".

Upon further examination, other historical phenomena and concepts prove unmappable for similar reasons. While maps can imply abstract concepts, such notions are often better confined to verbal descriptions. Several distinct classes of unmappable concepts occur:

<u>Concept</u>	<u>Examples</u>
Dynamic phenomena or processes	"change" "expansion" "conflict" "commerce" "event"
Relations	"how" "why" "part of" "related to"
Broad abstractions	"organization" "trade" "war" "empire"

A map can only show the location of a phenomenon or event, and cannot directly show the nature of either. In planning topics to be mapped for the Atlas, we did not take this into account adequately, at least in the beginning.

There is another reason that certain historical topics turn out to be unmappable. It is that while there are data that are place-

associated, and would, therefore, seem to be appropriate for mapping, the places are so well known as to be considered common knowledge, not requiring cartographic treatment. An example of this situation is the "triangular trade" of early American history. Maps are often made for this topic, showing big arrows connecting the United States, Africa, and the West Indies -- to no one's real benefit. Most scholars do know where these places are, and a brief verbal description is more suitable for describing the commercial relations among them.

Political events and conditions are also of great importance to historians, and these may be place-associated. But political phenomena do not often lend themselves to cartographic depiction. One scholar pointed this out in reviewing an early outline of proposed Atlas contents: "The political maps are of questionable value in many cases. What can be shown on a map of the Stamp Act Crisis or non-importation agreement that is not already known in more convenient form? ... Presumably virtually all of the information that maps could show is available in more easily accessible text books or monographs."⁴ Similar topics would include local events, of interest to historians in their broader consequences and implications, but of no cartographic significance. The Regulator activity in the Carolinas in the late 1760's is such a topic -- we finally managed to include maps in the Atlas that relate to it by showing the shifts in county and judicial district boundaries that took place as a result of Regulator action. But these maps would have little meaning for the reader who does not have a background of knowledge on the events that took place -- perhaps

a case of the "known if known" phenomenon.

There is another class of map that is often thought relevant for inclusion in historical atlases, but which turns out to be only minimally mappable. It is the class that includes voyages, trade routes, travelers' routes, etc. The reasons for this are not easy to describe, but once understood are compelling. Some examples demonstrate this.

We planned to include, and finally did include, maps of certain travelers' routes. The Bartrams' scientific travels are of considerable historical interest. Historical travelers' records tend to lack data which will tie observed locations to locations that can be identified at present -- "a hill" "a spring" "a path" cannot now be easily located, at least without fieldwork. Generally anyone interested in travelers' routes is interested in details of location, not just the general information that they traveled in the southeastern United States. Yet, one cannot map "general vicinity of travel" at that level of generalization; the map must contain specific locations from which the map percipient can form his own generalizations. For historical maps, this is a difficult and practical problem.

On the subject of the Bartrams' travels, Cappon noted in a 1971 article: "It may be recalled that the eighteenth-century scientist was a tireless gatherer of data from his observations of nature. His activities may be geographically portrayed in a manner which would carry historical implications for the well-read scholar."⁵ Just how a map

of route lines can carry "historical implications" is not specifically made clear. The Bartrams traced and retraced the same routes so often that the resulting tangle of lines at small scale can be clarified only through other means, such as the color-coded legend and itinerary devised for the Atlas. It seems doubtful that such lines can actually carry "historical implications".

Ocean voyages and trade routes are unmappable for yet another reason. The route itself exists over an undifferentiated water surface, and the details of location on it (e.g. latitude and longitude) are of interest only in a general way. The real interest is in the origin and destination points, much as it is on air travel maps today. What is between these points is only schematic, yet showing entire routes uses a great deal of expensive printed space on the map.

Aware that static maps cannot depict directly dynamic processes, we tried to plan Atlas maps dealing with these phenomena in such a way that relations or other classes of information could be established and mapped directly. As an example to clarify this, (on the first page of the Atlas), we wanted to show the expansion of the British Empire (vis-a-vis the Spanish and French) as a result of the peace treaty of 1763. Now the word "expansion" is not mappable directly, for it implies knowledge of three things: initial state of affairs, A; final state of affairs, B; and the relation between A and B, such that change in the direction labeled "expansion" occurs. The map problems on this first page would have been considerably simpler if Britain had only

expanded, but in fact it had also contracted in some places. Furthermore, it is essential in this situation to be able to see at whose expense all expansion and contraction took place. It seemed desirable to summarize all this information about the state of affairs in 1763 on one map. We were able to do it, but the map is not an easy one to understand at a casual glance. The information load is high, and the coding quite efficient (rather than highly redundant), so some intellectual effort, as well as visual effort, must be made to grasp condition A, condition B, and the relation between the two conditions for each place on the map.

The particular nature of any distribution bears on its mappability, and historical and modern maps are identical in this regard. If a phenomenon is either ubiquitous or non-existent, a map is not necessary. Or, if a phenomenon is distributed in such a way that the distribution can be easily coded in verbal language, then a map is also likely to be an inefficient or unnecessary expense.

Conventions in Historical Mapping: Expectation vs Realization

There are traditional ways in which certain historical topics are commonly mapped. At the outset, we tended to assume that we would carry on such traditions, as for example, mapping military activity via the medium of battle maps. We planned to include also a series of maps showing boundary disputes among political units for much the same reason. Yet, as we examined some of these traditions, we became disenchanted with them, and began to hope that we would be able to conceive of better

approaches to mapping certain topics. We were concerned at times with meeting the expectations of our readers -- perhaps tradition should prevail over novel presentations because of such general expectations.

The first and most complex topic requiring creative effort in an attempt to improve upon traditional cartographic methods was the War of the American Revolution. Battle maps seemed to communicate little information to members of the Atlas staff, and from this evidence we reasoned that they probably also communicated poorly with many of the potential users of this Atlas. As a result, there are no battle maps in the volume, using "battle maps" in the usual sense of the term. Instead, there are two series of maps, one of twenty-four maps for North America and one of fourteen maps for the West Indies, showing the distribution of military activity as it varied in importance over space and through time. The maps in the series are of constant area and scale. For reference purposes, detailed place name maps are included showing where military activity took place, but these are not cluttered (as such maps usually are) with complex tangles of lines and symbols. In addition to introducing a new technique for mapping war, we also introduced an uncommon historical perspective on the Revolution. This shift included a view of the War of the American Revolution as part of what was, for Great Britain, a world war. Considerable attention is, therefore, given to events in the West Indies, and to the military activity with which Britain was involved globally during the span of the Revolution, as well as to shifting diplomatic alignments in Europe.

It is often said (and was said during early days at the Atlas Project) that maps should be self-explanatory, should stand by themselves with no need for text. But they don't, we found especially as we grappled with the problem of depicting the War. As noted above, maps can only show locations -- they cannot show why these are of importance, or what processes are going on, or with what intentions places are occupied or abandoned. These are not matters to which a map is capable of "speaking". Words are the only suitable medium for communicating such notions, and we decided that it was not possible to make military maps that would be completely self-explanatory for readers totally unfamiliar with events of the War. Meaning could be conveyed, if at all, by verbal descriptions of the processes to which the arrangement of items on the maps was relevant. The military maps are accompanied by concise narratives that provide a continuous explanation of what was happening and why.

More broadly, no map has meaning without words. At a minimum, places on the map are labeled with words, names. Thematic maps must have titles and legends that explain clearly what is the name (and sometimes the nature) of the phenomenon being mapped. In the production of the Atlas we devoted considerable thought to the precise wording of titles, legends, and explanatory material on all the maps. We felt we should take nothing for granted in this important reference work. Some maps have captions, which were designed to provide some context or rationale for the map content.

Another topic that seemed to call for innovative rather than traditional treatment was the depiction of boundary conflicts on maps. We found that no matter what system was developed for classifying and symbolizing boundaries, there were still shortcomings and limitations to this traditional approach; not to mention the fact that most such maps tend toward illegibility. The problem is this: when one political unit believes it has jurisdiction over a particular area and another political unit believes that it also has jurisdiction over the same area, the conflict becomes a boundary dispute in the strictest sense of the term only if these two areas are completely congruent. This is not common, however, for what happens most often is that the areas are defined differently by the different parties, giving non-coincident areas of questionable government. Consequently, the dispute is not about a line or lines, but about two partially congruent areas. In the Atlas a series of maps was devised to shift the conceptual and visual emphasis from lines to areas, with an emphasis on territorial character as it varied with regard to the dual concepts of "effectiveness" and "legitimacy" of governmental control. In this period of a rapidly developing nation's history, de facto and de jure governments could be quite different things -- as they still are in certain areas today.

Conclusion:

Many other contrasts between expectation and realization developed as the original conception of the Atlas of Early American History was translated into a printed volume of maps. But the matter of "mappability" is one which might warrant further consideration by cartographers, in other contexts. Perhaps the maps in the Atlas can serve to answer historical questions at the same time that they serve to stimulate cartographic discussion.

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Notes

- 1 Atlas of Early American History: The Revolutionary Era, 1760-1790, Lester J. Cappon, Editor-in-Chief and Barbara Bartz Petchenik, Cartographic Editor. Published for The Newberry Library and the Institute of Early American History and Culture by Princeton University Press (Princeton: 1976).
- 2 Letter from Roy H. Merrens to Gary Dunbar, Institute of Early American History and Culture, April 27, 1961.
- 3 Cappon, Lester J., "The Case for a New Historical Atlas of Early America", William and Mary Quarterly (XVIII), January, 1971, p. 124.
- 4 Letter from Stephen G. Kurtz, Institute of Early American History and Culture, to Lester J. Cappon, February 2, 1971.
- 5 Cappon, op. cit., p. 125