

J. B. HARLEY

The New Nature of Maps
Essays in the History of Cartography

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INTRODUCTION BY

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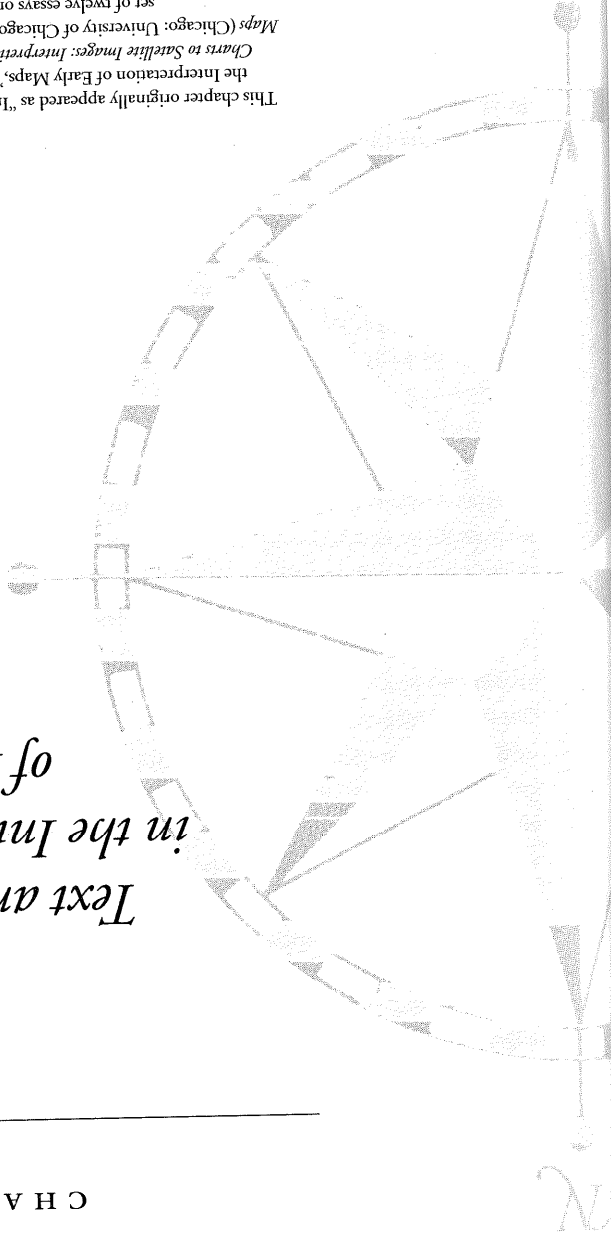
archival history, distribution, and use. What can the nonpositivist scholar do except say, "Just as I thought: more glorification of state power," before or after taking Skelton's and Woodwards' advice? This, roughly speaking, is just what several recent writers have done.¹³⁹ It is what Harley himself has done in his capacity as coeditor of a monumental history of cartography.¹⁴⁰ Com-mended on occasion for an ability to lay out research agendas,¹⁴¹ he provides no list of tasks for postmodern or post-postmodern map historians, and there seems to be no evidence that he believed the time was ripe for doing so. Of course, his untimely death has done much to weaken this criticism. For the full Harleyan agenda, and the research based on it, we must depend upon a later generation.

HARLEY'S PHILOSOPHICAL WRITINGS deserve praise as a stimulus to thought in readers who might otherwise have remained unselfconsciously empirical. His allusions and citations provide an extraordinarily comprehensive guide to parallel literature in many disciplines. For the more traditionally minded cartographic historian, his abundant and wide-ranging illustrations amply demonstrate the influence of social and political factors on the way maps have been devised, produced, and used. He has subjected the "technocratic" claims of modern cartography to the kind of critical onslaught that outsiders are always glad to see leveled at any entrenched professional group. Not least important, in each of these activities he has found new ways of taking pleasure in the map itself. The writings considered here will survive as tokens of intellectual light-footedness and literary skill. All this can be gratefully acknowledged without accepting either their methods or their conclusions. And it remains possible that some other map scholar of powerful intellect will one day restate Harley's case with enough rigor and precision to convince the silent majority of his colleagues. This essay may be read as an appeal for volunteers.

CHAPTER ONE

Text and Contexts in the Interpretation of Early Maps

This chapter originally appeared as "Introduction: Text and Contexts in the Interpretation of Early Maps," in David Buisseret, ed., *From Sea Charts to Satellite Images: Interpreting North American History through Maps* (Chicago: University of Chicago Press, 1990), 3–15. It introduced a set of twelve essays on selected types of American maps.



Mirror or Text?

The usual perception of the nature of maps is that they are a mirror, a graphic representation, of some aspect of the real world. The definitions set out in various dictionaries and glossaries of cartography confirm this view.² Within the constraints of survey techniques, the skill of the cartographer, and the code of conventional signs, the role of a map is to present a factual statement about geographical reality. Although cartographers write about the art as well as the science of map making, science has overshadowed the competition between the two approaches. The corollary is that when historians assess maps, their interpretive strategies are molded by this idea of what maps are claimed to be. In our own Western culture, at least since the Enlightenment, cartography has been defined as a factual science. The premise is that a map should offer a transparent window on the world. A good map is an accurate map. Where a map fails to deal with reality adequately on a factual scale, it gets a black mark. Maps are ranked according to their correspondence with topographical truth. Inaccuracy, we are told, is a cartographic crime.

This value judgment is often translated into the way we read old maps. It promotes a mode of interpretation that emphasizes the factual or literal statements maps make about an empirical reality. Whether depicting the Caribbean landfall of a sixteenth-century navigator or the relic features of some ghost town from a nineteenth-century mining boom, the map is judged in terms of the positioning of its coordinates, the shape of its outlines, or the reliability of features measured in the landscape. It is used purely and simply as a quarry of facts in the reconstruction of the past. I am not suggesting that we downgrade this historical application of old maps. As an index to the location of things, processes, and events in the past maps are a unique form of documentation. Locating human actions in space remains the greatest intellectual achievement of the map as a form of knowledge.

There is, however, an alternative answer to the question "What is a map?" For historians an equally appropriate definition of a map is "a social construction of the world expressed through the medium of cartography." Far from holding up a simple mirror of nature that is true or false, maps redescrbe the world—like any other document—in terms of relations of power and of cultural practices, preferences, and priorities. What we read on a map is as much related to an invisible social world and to ideology as it is to phenomena

Old maps are slippery witnesses. But where would historians be without them?

—J. H. PARRY, 1976

Among the many classes of documents regularly used by historians, maps are well known but less well understood. We could compile an anthology of statements that categorize maps not only as "slippery" (the adjective used by the distinguished historian J. H. PARRY), but also as "dangerous" or "unreliable." Historians have tended to relegate maps—along with paintings, photographs, and other nonverbal sources—to a lower division of evidence than the written word.¹ Much historical research and writing is undertaken without systematic recourse to contemporary maps. Moreover, even where maps are admitted as documents, they are regarded as useful principally for a narrow range of selected historical questions. It is widely acknowledged, for instance, that maps are valuable for such topics in United States history as its discovery, exploration, territorial expansion, and town planning. Less frequently are they considered as offering crucial insights into processes of social history. When a historian reaches for a map, it is usually to answer a fairly narrow question about location or topography and less often to illuminate cultural history or the social values of a particular period or place. Why should maps have suffered such neglect?

Part of the answer, as already noted, lies in the attitudes of historians. Writing about the history of maps per se has been at best a marginal interest for mainstream historians: when, we may ask, did an article about cartography last appear in *The American Historical Review*? Yet part of the problem also lies with those who call themselves historians of cartography. In describing the bibliographical and technical complexity of maps, they have failed to communicate an understanding of their social nature. In the light of these tendencies, the answer to the question "What is a map?" is a vital preliminary to the fruitful interrogation of maps as historical documents.

seen and measured in the landscape. Maps always show more than an unmediated sum of a set of techniques. The apparent duplicity of maps—their “slipperiness”—is not some idiosyncratic deviation from an illusory perfect map. Rather it lies at the heart of cartographic representation. Herein lies a historical opportunity. The fascination of maps as humanly created documents is found not merely in the extent to which they are objective or accurate. It also lies in their inherent ambivalence and in our ability to tease out new meanings, hidden agendas, and contrasting world views from between the lines on the image.

In introducing ways of interpreting the maps of America, I propose a different interpretive metaphor. They will be discussed as text rather than as a mirror of nature. Maps are text in the same senses that other nonverbal sign systems—paintings, prints, theater, films, television, music—are texts. Maps also share many common concerns with the study of the book, exhibiting a textual function in the world and being “subject to bibliographical control, interpretation, and historical analysis.”³³ Maps are a graphic language to be decoded. They are a construction of reality, images laden with intentions and consequences that can be studied in the societies of their time. Like books, they are also the products of both individual minds and the wider cultural values in particular societies.

Signs, Symbols, and Rhetoric

Like all other texts, maps use signs to represent the world. When these become fixed in a map genre, we define them as conventional signs. Maps do not possess a grammar in the mode of written language, but they are nonetheless deliberately designed texts, created by the application of principles and techniques and developed as formal systems of communication by map makers. In modern cartography strenuous efforts have been made to standardize these rules of map composition. Textbooks and models tell us how the world should “best” be graphically represented in terms of lines, colors, symbols, and topography.³⁴ For some of the older maps that are described below there were also rule books for their construction and design, and vocabularies of different signs. Such works can act as a grammar or dictionary in learning to read or translate the map text.

The symbolic dimension of maps also links them to other texts. Modern cartographers usually regard their maps as factual statements written in the

language of mathematics, but they are always metaphors or symbols of the world. A mode of interpreting such symbolic layers of meaning by employing iconographical principles will be discussed below.

Maps are also inherently rhetorical images. It is commonplace to say that cartography is an art of persuasion. What goes against modern wisdom is to suggest that *all* maps are rhetorical. Today’s map makers distinguish maps that are impartial or objective from other maps used for propaganda or advertising that become “rhetorical” in a pejorative sense. Cartographers also concede that they employ rhetorical devices in the form of embellishment or ornament, but they maintain that beneath this cosmetic skin is always the bedrock of truthful science. What I am suggesting is that rhetoric permeates all layers of the map. As images of the world, maps are never neutral or value-free or ever completely scientific. Each map argues its own particular case. The thematic maps discussed by Kartow and Grim,³⁵ for example, are especially rhetorical. They are part of a persuasive discourse, and they intend to convince. Theirs is not an innocent reality dictated by the intrinsic truth of the data; they are engaging in the ancient art of rhetoric. Most maps speak to targeted audiences, and most employ invocations of authority, especially those produced by government, and they appeal to readerships in different ways. The study of the history of cartographic representation, when employed as an aid to the interpretation of maps as historical documents, is also a history of the use of the different rhetorical codes employed by map makers.³⁶

The Cartographer’s Context

The basic rule of historical method is that documents can only be interpreted in their context. The rule applies equally to maps, which must be returned to the past and situated squarely in their proper period and place. The readers of this book may be disappointed to learn how little contextualization of maps there is in the literature of the history of cartography. Connoisseurs’ books on maps, for example, are oblivious of the social reality beyond the decorative cartographic specialists in the history of maps, those trained as cartographers, seldom step beyond the workshop door and into the outside world. Context is simplistically portrayed as “general historical background.” What is lacking is a grasp of context as a complex set of interactive forces—a dialogue with the text—in which context is central to the interpretive strat-

egy. We tend to regard context as “out there” and the maps we are studying as “inside.” Only when we knock down this barrier—this false dichotomy between an externalist and an internalist approach to historical interpretation—can map and context be studied in an undivided terrain. To achieve this it is necessary to distinguish between three aspects of context that intersect the reading of maps as texts.⁷ The three aspects of context in my argument will be (1) the context of the cartographer, (2) the contexts of other maps, and (3) the context of society.

The context of the cartographer is best represented in the literature of early map interpretation. It is almost sixty years since the historian J. A. Williamson wrote, “It is impossible to be dogmatic about the evidence of maps unless we know more than we commonly do about the intention and circumstances of those who drew them.”⁸ This simple dictum—enshrining the why, who, and how approach to maps—is a good starting point. Yet the relationship between the maker and map is far from straightforward. It is neither a simple question of establishing authorship—as with books and documents—nor of determining the intention of the map maker.

With respect to authorship, if we exclude manuscript maps that are unambiguously identified and have a known provenance, the historian is frequently confronted with disentangling multiple authorship. Most maps are the product of a division of labor. As we enter the long transition from the manuscript age to the age of printing, the cartographic division of labor is accentuated, the author becomes a shadowy figure, and the translation from mapped reality to map is more complex. The question arises, “To what extent was a particular map the work of a surveyor, an editor, a draftsman, or an engraver?” Who has determined its form and content? As we concern ourselves with different craftsmen, Williamson’s question about circumstances becomes more difficult to resolve. The relationship between the facts of the map maker’s lives and what appears in the map is correspondingly fragmented. Within the frame of one map there may be several texts—“an intertextuality”—that has to be uncovered in the interpretative process.

More than many other texts, maps are thus mediated by a series of technical activities, each performed by a different “author.” R. A. Skelton once wrote: “As bibliography to literary criticism, or as diplomatic to the interpretation of medieval documents, so is the technical analysis of early maps to

the studies they serve.”⁹ It is this requirement—reconstructing the technical contexts of map making—that places a heavy demand on the ancillary skills of the historian. The student of early maps may have to become an expert on the histories of different types of maps,¹⁰ be well versed in navigation and surveying techniques,¹¹ be familiar with the processes by which maps were compiled, drafted, engraved, printed, or colored, and know something about the practices of the book and map trades. Every map is the product of several processes involving different individuals, techniques, and tools.¹² To understand them, we need to deploy specialist knowledge from subjects as diverse as bibliography and paleogeography, the history of geometry and magnetic declinations, the development of artistic conventions, emblems and heraldry, and the physical properties of paper and watermarks. The pertinent literature is likewise scattered in a large number of disciplines and modern languages,¹³ straddling the history of science and the history of technology as well as the humanities and social sciences. But how the author or authors of a map made it in a technical sense is always a first step in interpretation.

Establishing the map maker’s intention is similarly less straightforward than might appear at first sight. Every map codifies more than one perspective on the world. As an expression of intention, function remains a key to reading historical maps, but such purposes were often loosely defined, or the map was directed at more than one kind of user. While we may accept, for example, that fire-insurance maps have a single use, many other groups of maps were designed for a variety of purposes. Such multiple aims complicate the assessment of maps as historical documents. Topographical maps or city maps and plans were made to fulfill several needs at once. They were designed as administrative or jurisdictional records, for defenses, for economic development, or perhaps as general works of topographical reference. The simple link between function and content breaks down. It is inadequate, for example, to define a topographical survey as merely producing a “map showing detailed features of the landscape.” Topographical map series were often of military origin, and they emphasized features of strategic significance. In the United States, even after the Geological Survey assumed control of the national topographical survey in 1879, maps were still expected to serve logistical military purposes as well as geological and other civilian functions. Even today we can detect traces of the military mind in the woodland density categories of USGS maps that

gressional legislation and the personal intervention of civil servants, and not as a result of a national policy for map making.¹⁶ Both the geographical order in which surveys were conducted and the content of the maps were influenced by the need to map first areas with valuable mineral deposits. Policy concerns as much as the skills of individual map makers gave rise to the diverse images of the American landscape preserved in the national series of topographical maps.

In qualifying the limits of the individual cartographer's influence, I am not denying that "map makers are human."¹⁷ Unusual personal skill as well as idiosyncrasy still flourishes in the interstices of institutional practice. In the maps of the township and range system, for example, "possibilities of error, omission, personal bias and even misrepresentations abounded."¹⁸ Even in today's machine-generated maps and aerial images, historians should remain alert to deviant ways in which individual technicians may have inscribed their routine tasks. This may be more difficult to detect behind the assertive rhetoric of computer technology, but again the standard historical record does not exist.

Similar observations may be made about commercial mapping. This forms an important part of the cartographic historical record in the United States,¹⁹ but it also shows conflicts of interest. The market place usually constrains the free play of cartographic standards. One text we always read in these maps is a financial balance sheet. "Where the detective hunts for fingerprints," it has been remarked, "we must look for profit if we are to understand the basic mechanism of early map publishing. . . . No salesman ever tells the whole truth and it would be an unwary historian who took land sale maps for a true cartographic record."²⁰ Moreover, as the size of map businesses increases and print runs grow longer, cartography acquires a corporate image. The patron is now a larger public or perhaps a special interest group, such as the consumers of highway maps, who look over the cartographer's shoulder to influence what is being mapped.

The Context of Other Maps

A major interpretive question to be asked of any map concerns its relationship to other maps. The inquiry has to be focused in different ways. For example, we could ask: (1) What is the relationship of the content of a single

are still classified in relation to the case with which infantry can move through the countryside.¹⁴ In many nineteenth-century topographical maps, with military needs in mind, relief was similarly emphasized at the expense of cultural detail.

Intention thus cannot be fully reconstructed through the actions of individual map makers. A simple intention may still be found in individual manuscript maps, but there are also broader aspects of human agency that impinge on interpretation. Cartographic intention was seldom merely a question of an individual's training, skill, available instruments, or of the time and money needed to complete the job properly. Cartographers were rarely independent decision makers or free of financial, military, or political constraints. Above the workshop there is always the patron, and consequently the map is imbued with social as well as technical dimensions. We might do well to adapt to cartography the words of Michael Baxandall on fifteenth-century Italian painting. Such art was always

the deposit of a social relationship. On one side there was a painter who made the picture, or at least supervised its making. On the other side there was somebody else who asked him to make it, provided funds for him to make it and, after he had made it, reckoned on using it in some way or other. Both parties worked within institutions and conventions—commercial, religious, perceptual, in the widest sense social—that were different from ours and influenced the forms of what they together made.¹⁵

In much of history, the cartographer was a puppet dressed in a technical language, but the strings were pulled by others.

The role of patronage varies considerably in the maps of America. With earlier manuscript maps, such as those of the age of European exploration, patrons were powerful individuals—kings or queens, princes or popes. By the nineteenth century, however, American map makers were increasingly draigooned by larger institutions such as the General Land Office and the United States Geological Survey. Personal map-making skills were subordinated not only to sets of standard instructions designed to make whole classes of maps uniform but also to state and federal politics. With political influence in mind, we should be chary of interpreting the official topographic surveys of the United States as "standard" historical documents. It has been said that "the geodetic and topographic surveys conducted by the federal government throughout the nineteenth century evolved as byproducts of ad hoc Con-

ing conclusive evidence of provenance. There are many pitfalls. R. A. Skelton has written that "visual impressions suggesting affinity or development of the outline in two maps may be misleading if we do not take into account the license in drawing or interpretation that the cartographer might allow."²⁷ Or again, there may be technical variations influencing the shape of map outlines or their graticules of latitude and longitude. Maps are easily corrupted in the process of copying, or they may derive from surveying or navigation techniques that have been obscured in the process of compilation. Before the nineteenth century, maps were frequently aligned toward magnetic rather than true north. Magnetic declination varied locally and changed through time so that map makers were unable, in the absence of systematic observations, to correct for this factor. It remains a critical source of error in the comparison of outlines.²⁸

A second aspect of the comparative analysis of early maps involves the study of place-names or toponymy. Like outlines, place-names offer a way of constructing genealogies and source profiles for previously scattered maps. Indeed, the two methods are often used in conjunction, as in the classic studies of the early cartography of the Atlantic coast of Canada.²⁹ Yet the cross-tabulation of the names on a series of maps as a means of classification or of establishing the interrelationships of the group must also be approached with caution.³⁰ In initial periods of exploration, Europeans of different nationalities would have heard names from the mouths of Native American speakers of a variety of languages, and they would have attempted to record them in accordance with their own sound system, in far from standardized spellings. Even where European names were applied to North American geographies, there was ample scope for corruption in the processes of translating and editing them: the names attest to carelessness, mistranslating, or misunderstanding by successive generations of cartographers who had no firsthand knowledge of the places or languages involved. Of names on the maps of the sixteenth-century Dieppe school of cartographers,³¹ for example, it is said that "no two Dieppe cartographers coincide completely in the number of names they record, while spelling varies widely and even the positioning of names is not always consistent."³² Not surprisingly, place-names have sometimes been used uncritically for purposes of comparing maps.³³ The sound practice is to confine the analysis to only those names unambiguously common to a number of maps.

map (or some feature within it) to other contemporary maps of the same area? (2) What is the relationship of such a map to maps by the same cartographer or map-producing agency? (3) What is its relationship to other maps in the same cartographic genre (of one bird's-eye view, for instance, to other North American bird's-eye views)? (4) Or what is the relationship of a map to the wider cartographic output of an age? The questions vary but their importance is universal. No map is hermetically closed upon itself nor can it answer all the questions it raises. Sooner or later early map interpretation becomes an exercise in comparative cartography.²¹ The cartographic characteristics of the larger family may enable anonymous maps to be identified, unusual signs or conventions interpreted, or inferences made about the parameters of accuracy. Our confidence in a map document may be increased (or diminished) when it exhibits the proven characteristics of a larger group.

In this part of contextual study a corpus of related maps is built around the single map. Just as in the analysis of literary texts the unity or identity of a corpus of texts has to be constructed,²² so too in early map interpretation we can follow definite procedures. These can be applied to a group of maps of the same period, but, equally, the depiction of an area or feature can be traced on a series of maps through time. Three approaches will be noted below, and they may be used either separately or in combination in evaluating a single map within the larger group.

The comparative study of linear topographical features on maps (such as coastlines, river networks, or a system of trails and highways) is a well-tried technique. Outlines are reduced to common scale and are then compared visually. Examples appear in the classic nineteenth-century studies of early maps,²³ and the method can also be adapted to the digital analysis of linear features by computer.²⁴ A recent application of the older method is to the Spanish and French mapping of the Gulf of Mexico in the sixteenth and seventeenth centuries.²⁵ After "photocopying, assembling, and examining a great many maps" it was possible,²⁶ on the basis of salient features in coastal outlines, to identify five main phases of map making. Through the use of this comparative classification, individual maps were then assigned to stages of development and their origin, sources, and topographical reliability were assessed from the characteristics of the larger group.

But if every map has a genetic fingerprint that the method helps to identify, caution must also be exercised. The study of outlines may fall short of provid-

The Rules of Cartography

The first strategy is to attempt to identify "the rules of the social order" within the map.³⁸ Every map manifests two sets of rules. First, there are the cartographers' rules, and we have seen how these operate in the technical practices of map making. The second set can be traced from society into the map, where they influence the categories of knowledge. The map becomes a "signifying system" through which "a social order is communicated, re-produced, experienced, and explored."³⁹ Maps do not simply reproduce a topographical reality; they also interpret it.

The rules of the social order are sometimes visible, even self-evident, within a group of maps. Alternatively, they are sometimes hidden within the mode of representation. Among the category of "visible society," we may place the North American bird's-eye views of towns and cities, the city maps and plans, and the county maps and atlases. They are all cultural texts taking possession of the land.⁴⁰ All proclaim a social gospel and serve to reinforce it. Bird's-eye views of towns, for instance, "sing the national anthem of peace and prosperity, of movement and openness, of calm and order, and of destinies to be fulfilled."⁴¹ The map wears its heart on its sleeve and it comes alive in a context of frontier ethics and patriotism as topography is decoded from the emphatically rhetorical style of the image.

Where the social rules of cartography are concealed from view, a hidden agenda has to be teased out from between the lines on the map. Such a map is duplicitous, and a different strategy is called for. Instead of picking up social messages that the map emphasizes, we must search for what it de-emphasizes; not so much what the map shows, as what it omits. Interpretation becomes a search for silences,⁴² or it may be helpful to "deconstruct" the map to reveal how the social order creates tensions within its content.⁴³ Among the maps that could be so elucidated are some of the eighteenth-century large-scale maps, the topographic surveys of the United States, and the aerial images. Here technology has suppressed social relations. Because they appear to be accurate or objective, such maps are often viewed as nonproblematic documents. A satellite image or a topographical map made by "scientific" methods, so it is believed, has a moral and ethical neutrality. It is a factual and straightforward document. So long as we recognize *technical* limitation, the pathway of interpretation is secure.

The Context of Society

The third method for comparative cartography—carto-bibliography—has the largest literature. Not only have the definition and finer points of the method been extensively discussed,³⁴ but its practice is fully represented in a series of fundamental works on early American cartography.³⁵ The aim of carto-bibliography is to bring together a series of maps printed from the same printing surface. It applies equally to the woodcut, copperplate, lithographic, or other map-printing processes.³⁶ By this method a sequence of geographical and other changes in related maps can be reconstructed. This in turn allows the publication history of the maps of an area to be pieced together. It also allows the single map to be dated and stored into this sequence, and the extent of geographical revision between states or editions of maps to be detected. Maps are often representations of time as much as space. As Skelton puts it, we discover how "matter from various horizons of time or intellectual development" is incorporated into their images. And we learn that "the search for the ultimate source may lead us back through many stages of revision or adaptation, derivation or transcription, compilation."³⁷ Carto-bibliography is thus a basic tool of the map historian. Either as a technique or as a means of measuring the channels and rate of diffusion of geographical knowledge (thereby linking maps to the context of society), its insights are indispensable.

The third context of cartography is that of society. If the map maker is the individual agent, then society is the broader structure. Interpretation—reading the cartographic text—involves a dialogue between these two contexts. The framework of definite historical circumstances and conditions produces a map that is inescapably a social and cultural document. Every map is linked to the social order of a particular period and place. Every map is cultural because it manifests intellectual processes defined as artistic or scientific as they work to produce a distinctive type of knowledge. There is no neutral causal arrow that flows from society into the map, but rather causal arrows that flow in both directions. Maps are not outside society: they are part of it as constitutive elements within the wider world. It is the web of interrelationships, stretching both inside and beyond the map document, that the historian attempts to read. In exploring this reflexivity, two strategies might be used to survey the context of society in the maps of America.

the former examines how the social rules were translated into the cartographic idiom in terms of signs, styles, and the expressive vocabularies of cartography. The essence of iconographic analysis is that it seeks to uncover different layers of meaning within the image. Panofsky suggested that in any painting we encounter (1) a primary or natural subject matter consisting of individual artistic motifs; (2) a secondary or conventional subject matter that is defined in terms of the identity of the whole painting as a representation of a specific allegory or event (he gave the example of a painting of the Last Supper); and (3) a symbolic layer of meaning that often has an ideological connotation. This does not offer a neat formula for early map interpretation, but it may be ventured that the levels of meaning in a map are similar to those in a painting.⁴⁸ These parallel levels in the two forms of representation are summarized in Table 1.

First, at the level 1, the individual signs, symbols, or decorative emblems on a map are made equivalent to the individual artistic motifs. While the full meaning of any single sign may become apparent only when viewed in the mosaic of other signs in the map as a whole, for some interpretative purposes it may be necessary to evaluate the content and meaning of individual signs (for example, as well as establishing its cultural meaning, we may need to know how far the sign for the depiction of a church or a house on an early map is reliable from the architectural point of view).

Second, the identity of the real place represented on a map is assumed to be the equivalent of Panofsky's level 2 or second stage in interpretation. Its apprehension involves a recognition that a particular map is that of a plantation in South Carolina, of Boston, or of California. It is at this level—that of the real place—that maps have been most used by historians. Moreover, it is for evaluating the real places in maps that most interpretive techniques, whether devoted to their planimetric accuracy or to their content, have been developed. There are numerous exemplars for this type of topographical scholarship.⁴⁹

The third interpretive level in a map is the symbolic stratum. Until recent years, apart from the contributions of a handful of art historians,⁵⁰ this hermeneutic dimension of early cartography was neglected. Only recently has interpretation moved to embrace a symbolic and ideological reading of early maps. Here we accept that maps act as a visual metaphor for values enshrined in the places they represent. The maps of America are always laden with such

Such assumptions are false. Representation is never neutral, and science is still a humanly constructed reality. The large-scale maps of eastern North America in the mid-eighteenth century illustrate this contention. At first sight they meet the goals of Enlightenment cartography. They are built on geodesic measurements; they begin to show "cartographic mastery" over the landscapes of eastern North America; and they suppress some of the more overtly fanciful, mythic, and pictorial elements of earlier maps. Take a closer look, however, and they also signal the territorial imperatives of an aggressive English overseas expansion.⁴⁴ Colonialism is first signposted in the map margins. Titles make increasing reference to empire and to the possession and bounding of territory; dedications define the social rank of colonial governors; and cartouches, with a parade of national flags, coats of arms, or crowns set above subservient Indians, define the power relations in colonial life.⁴⁵ But the contours of colonial society can also be read between the lines of the maps. Cartography has become preeminently a record of colonial self-interest. It is an unconscious portrait of how successfully a European colonial society had reproduced itself in the New World, and the maps grant reassurance to settlers by reproducing the symbolic authority and place-names of the Old World. Moreover, as the frontier moved west, the traces of an Indian past were dropped from the image. Many eighteenth-century map makers preferred blank spaces to a relic Indian geography.⁴⁶ I do not suggest that the omissions—the "rules of absence"—were deliberately enforced in the manner of a technical specification. But even where they were taken for granted, or only subconsciously implemented, to grasp them helps us to interrogate early maps.

The Meaning of Maps

Another interpretative strategy applies the iconographical methods of art history to maps. Iconography is defined as "that branch of the history of art which concerns itself with the subject matter or meaning of works of art."⁴⁷ The question "What did the map mean to the society that first made and used it?" is of crucial interpretive importance. Maps become a source to reveal the philosophical, political, or religious outlook of a period, or what is sometimes called the spirit of the age. An iconographical interpretation can be used to complement the rules-of-society approach. While the latter reveals the tendencies of knowledge in maps—its hierarchies, inclusions, and exclusions—

map as a topographical source, we are becoming aware of a cartographic power that is embedded in its discourse.⁵³ The power of the map, an act of control over the image of the world, is like the power of print in general.⁵⁴ Since the age of Columbus, maps have helped to create some of the most pervasive stereotypes of our world.

How the historian uses a map also depends on the context of the individual scholar. Insights are determined not only by the intrinsic qualities of a particular map but also by the historical investigation in hand, by its objectives, by its research methods, and by all the other evidence that can be brought to bear on its problems. Just as there are innumerable maps of America for the historian to consult, so there is an equally unlimited list of research topics for which maps may be appropriate. It has not been my intention to play down the technical aspects of early map interpretation, but in view of the fact that these already have an extensive literature, it seemed important to take this opportunity to sketch in a broader framework within which they can be deployed. The three contexts of cartography that have been outlined are never mutually exclusive but are subtly and often inextricably interwoven. Maps, once we learn how to read them, can become uniquely rewarding texts for the historian.

TABLE I
Iconographical Parallels in Art and Cartography

| | |
|---|--|
| Art | Cartography |
| (Panofsky's terms are used) | (suggested cartographic parallels) |
| 1. Primary or natural subject matter: artistic motifs | Individual conventional signs |
| 2. Secondary or conventional subject matter | Topographical identity in maps: the specific place |
| 3. Intrinsic meaning or content | Symbolic meaning in maps: ideologies of space |

cultural values and significance, plotting a social topology with its own culturally asserted domain. Maps always represent more than a physical image of place. A town plan or bird's-eye view is a legible emblem or icon of community. It inscribes values on civic space, emphasizing the sites of religious belief, ceremony, pageant, ritual, and authority. Or in the nineteenth-century county and historical atlases, there is more on the maps than an inert record of a vanished topography. What we read is a metaphorical discourse, as thick as any written text, about immigrant rural pride, about Utopias glimpsed, about order and prosperity in the landscape. Such maps praise possession of the land, enshrine property demarcations, and memorialize farm buildings and the names of property holders. Through both word and image they appealed to the industry and patriotism of the new Americans. And the longer we look the more symbolic cartography becomes. Thus a Rand McNally highway map speaks to the American love affair with the automobile, and even the seemingly earthy maps of the United States Geological Survey are a symbolic assertion of the changing perceptions and priorities of society rather than just maps of objects in the landscape. In such ways, "maps speak, albeit softly, of subtle value judgments."⁵¹ To read the map properly the historian must always excavate beneath the terrain of its surface geography.

Conclusion

By accepting maps as fundamental documents for the study of American past, we begin to appreciate how frequently maps intersect major historical processes. From territorial treaties to town planning, and from railroads to the rectangular grid, they underlie the making of modern America.⁵² But if this is an immense practical contribution, neither should we ignore the historical influence of real maps upon the more elusive cognitive maps held by generations of Americans since the sixteenth century. In addition to regarding the