

HOW MAPS TELL THE TRUTH BY LYING

AN ANALYSIS OF DELISLE'S 1718

CARTE DE LA LOUISIANE

by

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Through the work of dedicated professors, I have developed a deeper appreciation of what maps are, how they are constructed, used, and the information they convey. As my view of maps broadened, my perception of the sixth floor of the UTA library, changed from a static repository of old maps to a gateway into hundreds of past worlds. This thesis is an attempt to share some of the insights I have gained through studying maps and to use these insights to uncover the story intertwined within the lines of just one of the hundreds of maps tucked away in the quiet coolness of the sixth floor.

I thank the Arlington Independent School District for funding this educational opportunity. I have and will continue to share the knowledge that I have gained through the Master's program with my students. I would like to thank all my professors for broadening my intellectual horizons, with special thanks to Dr. Dennis Reinhartz whose passion for cartography was infectious and who forced me to question what a map is. Thanks also to Dr. John Garrigus and Dr. Joyce Goldberg, who despite their busy schedules, took the time to help a struggling graduate student. Their help was much needed and appreciated. I also thank my wonderful wife, Brehan, for taking care of the house and our children. Finally, I dedicate this paper to my mother who never fails to take an interest in whatever topic I explore. Without the help of these people and more this thesis would not be what it is. Be that as it may, any errors or inadequacies are solely my own.

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ABSTRACT

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Maps do more than simply record geographical locations. Maps graphically display information that is at once geographic, economic, political, social, scientific, and religious. Through careful analysis, including the conscious and subconscious selections of map-makers, maps reveal a perception of the world. This is the subjective vision of the world buried beneath the seemingly “objective” façade of the map--the hidden story that the cartographers did not even know they were telling. Such an analysis applied to Guillaume Delisle's 1718 “*Carte de la Louisiane et du Cours du Mississippi*” not only reveals the state of French geographic knowledge about the North American continent, but also reflects political, social, and economic aspirations as well as a culture in transition from a Catholicized classical Greek view of the world and humans' place in it to a view of the world through the emerging eyes of science in the service of the state.

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CHAPTER 1

INTRODUCTION

Maps do more than simply record geographical locations: maps link locations to the past and present, and even propose future possibilities. Maps graphically display information (or data) that is at once geographic, economic, political, social, scientific, and religious and they can be a starting point for the study of past cultures. Through careful analysis, including the conscious and subconscious selections of map-makers, maps reveal a perception of the world that is as fascinating as it is complex. This is the subjective vision of the world buried beneath the seemingly “objective” façade of the map--the hidden story that the cartographers did not even know they were telling. Such an analysis applied to Guillaume Delisle’s 1718 “*Carte de la Louisiane et du Cours du Mississippi*” not only reveals the state of French geographic knowledge about the North American continent, but also reflects political, social, and economic aspirations as well as a culture in transition from a Catholicized classical Greek view of the world and humans’ place in it to a view of the world through the emerging eyes of science in the service of the state.¹

Despite or perhaps because of the many advancements in the field, there is considerable disagreement among scholars over the definition of a map.² This thesis

¹ See figure 1. Guillaume Delisle, *Carte de la Louisiane et du Cours du Mississippi Dressée sur un grand nombre de mémoires entr’autres sur ceux de Mr. le Maire par Guillaume Delille de l’Académie Rle. des Sciences*. Paris, June 1718. Engraver unknown. Published separately. H. 19 3/8”, W. 25 3/4 ”

² Denis Wood picks apart several definitions of a map in his article, “How Maps Work.” Denis Wood, “How Maps Work,” *Cartographica* 29/3,4. (1992): 66.

proposes a composite definition of a map, examines the implications of this definition, and then applies a material-history analysis approach to the Delisle map. It will discuss what maps are and how they work, and examine the implications of this definition. The thesis will then provide a map analysis based on the implications and will end by calling for further work in the field of cartography as well as the continuation of interdisciplinary research. The nature of maps requires the map-maker to create a representation of reality, and this representation can provide valuable insights into the intellectual and cultural climate in which it was created. Europeans used maps not only as sources of geographical knowledge about the world but as communication devices in dialogue about how the world was to be ordered. Therefore any scholar interested in the Trans-Atlantic exchange cannot afford to ignore cartographic evidence.

Since the 1970s, the study of cartography has undergone dramatic and positive change and the use of maps as primary sources can no longer be denied. The case for the usefulness of maps as historic documents was made by scholars such as Conrad Heidenreich, who lamented that “with few exceptions, they [maps] are a forgotten source of historical, ethnographic, and geographical data, a source that can, with careful study, augment the documentary evidence pertaining to an area.”³ Heidenreich preceded to lay out a method to analyze historical (specifically seventeenth century) maps. This method which focused mainly on the technical aspects of the map, would soon be augmented by scholars who began to examine maps as cultural expressions. An early proponent of maps as sources for more than geographical knowledge, Brian Harley argued for the use of

³ Conrad Heidenreich, “Seventeenth-Century Maps of the Great Lakes: An Overview and Procedures for Analysis.” *Archivaria* [Online] 1:6. (1978). 83.

maps to “illuminate cultural history or the social values of a particular period or place.”⁴ In his influential essay, “Deconstructing the Map,” Harley insisted maps be regarded as “texts” to be “deconstructed” to reveal the power structures that created them.⁵ Harley concluded that “deconstructing” maps would dispel the myth of cartography as an objective science, highlight the historical importance of maps, and bring cartography into collaboration with other disciplines. This call for a new type of cartography was answered by many scholars such as Barbara Belyea, Denis Cosgrove, Christian Jacob, David Woodward, and Denis Wood. These scholars wrote articles and published books that pushed the limits of what could be learned by studying maps as well as by studying their production.

Harley admitted being influenced by the philosophical writings of Michel Foucault, who stressed that to be properly understood artifacts must be placed within their original context.⁶ This philosophy of knowledge also influenced another group of scholars who developed a method to examine images called material-history analysis.⁷ Embraced by Victoria Dickenson to examine scientific images of the New World, such analysis consisted of “a complete description of the object, including the material from which it is made, the manner of its making, its age, its culture, and where possible, a description of its maker...[material-history analysis] often relates the object to similar objects from the same culture and others... [and] goes further to speculate upon the purpose for which the object is made and to discuss its iconography, the internal

⁴ Paul Laxton, ed., *The New Nature of Maps: Essays in the History of Cartography* (Baltimore: John Hopkins University Press, 2001), 34.

⁵ J.B. Harley, “Deconstructing the Map,” *Cartographica* 26/ 2 (1989): 12.

⁶ Laxton, ed., 152.

⁷ Steven Lubar, and W. D. Kingery, eds. *History from Things: Essays on Material Culture* (Washington DC: Smithsonian Institution Press, 1993), ix.

coherence of its decoration or depiction.”⁸ This type of analysis can be applied to a map image to great effect.

People interested in maps can usually be divided into two basic categories: map collectors and cartographic historians. Because of the nature of their business, collectors tend to be more interested in the formal characteristics and technical aspects of the maps they seek to buy, sell, and display. Historians of cartography have long helped collectors determine the significance and idiosyncrasies of collectors’ maps. In the past thirty years, cartographic historians have reinterpreted how maps can be used, focusing on how maps reveal the political and social agendas of the cultures that created them in an attempt to make cartography relevant to other historians. The purpose of this thesis is to address the interests of both these groups by presenting the technical aspects of the map as well as examining it in its cultural context. This is an analysis of the complete map, at once a work of science and a work of art, available technology and creative cultural expression, and as such it reflects the political, religious, intellectual, social, and personal influences that went into its creation. This examination of what maps are and how they function and the resulting analysis might serve as a model for further study as well as a source of information that could be useful to a wide variety of scholars in different disciplines, such as anthropology, archeology, intellectual history, social history, and more. Despite the thoroughness of the present analysis, the possibilities presented by this

⁸ Victoria Dickenson, *Drawn From Life: Science and Art in the Portrayal of the New World* (Toronto: University of Toronto Press, 1998), 14. Or as Michel Foucault, the scholar credited with developing the philosophical underpinnings of this method, put it “We must grasp the statement [in this case the map] in the exact specificity of its occurrence, determine its conditions of existence...” Michel Foucault, *The Archaeology of Knowledge*. Trans. A.M. Sheridan Smith (New York: Pantheon Books, 1972), 28.

map for expanding our knowledge about the past are not exhausted and further study and reinterpretation is encouraged.

CHAPTER 2

THE NATURE OF MAPS

Articulating a satisfactory definition of a map is difficult because it must include several basic elements. First, maps are graphic displays of relations between objects. The primary concern of maps is where one object is relative to another.⁹ Second, maps must be acknowledged by scholars as socially constructed; they are created within a specific culture that determines the form the map will take.¹⁰ It is vital for all people who use maps to understand that all maps are abstractions of reality whether of the physical world or an imaginary world.¹¹ Finally, maps are communication devices.¹² Through their communicative dimension, maps play an important role in building geographical knowledge. In a certain sense, to know geography is to know the world. In short, maps are socially constructed graphic displays that communicate spatial relationships. With this definition in place, the way in which maps communicate an intelligible and persuasive image will be studied.

⁹ Arthur H. Robinson and Barbara Bartz Petchenick, *The Nature of Maps: Essays toward Understanding Maps and Mapping* (Chicago: University of Chicago Press, 1976), 55.

¹⁰ This is the essence of Harley's "new" nature of maps. See Laxton, ed., 35.

¹¹ The only map that could faithfully display all of a given reality would have to be an exact copy of the reality itself, which would defeat the purpose of making a map. Therefore the only absolutely correct representation/map of the world would have to be the world itself. Christian Jacob, *The Sovereign Map: Theoretical Approaches in Cartography throughout History*, trans. Tom Conley (Chicago: University of Chicago Press, 2006), 14.

¹² Robinson, 20-23 and Jacob, 21. While Jacob admits the fundamentally communicative nature of maps, he seems to have no problem admitting the existence of mental maps (See Jacob, 12). Yet it stands to reason that mental maps, while existing on the level of ideas, lack the communicative aspect and therefore fall short of being a real map. Only when the mental map/idea is expressed in graphic or physical form can it be called a map.

Maps are created using a variety of symbols, lines, and/or texts interwoven on a given space. These symbols/icons accomplish the most basic of the map's functions, which is to answer the questions "where and what is it?" Denis Wood identifies ten "cartographic codes" that work together to form the map.¹³ Symbols or icons are fundamental to the construction of maps and are designed to represent objects, places, and events. The reduction/abstraction of reality to a set of symbols for the purpose of communication is one of the map-maker's toughest challenges and also one of the most subjective elements in cartography.¹⁴ Symbols are arranged within a specific area or space and are assigned a time period. Once the cartographer sets the temporal and spatial boundaries of the map, the space and the symbols are assigned names with symbolic as well as literal meanings. Not all labels are created equal and the size and shape of the lettering reveal what the map-maker deemed important. Often larger cities have their names written larger on a map than smaller cities. These map elements are bound together, framed, and rendered coherent by what Wood calls the "presentational code," which consists of the map's title, legend, cartouche, borders, date, emblems, accompanying texts, references, and more. Working together, these elements form an image that conveys spatial relationships and give the map its internal coherence, yet there are also "sets of conventions or rules" that operate outside of the map alongside the

¹³For more on the cartographic codes, see Denis Wood, *The Power of Maps* (New York: The Guilford Press, 1992), 111-130, and Wood, "How Maps Work." Considering maps are more image than words, not everyone agrees with this linguistically based breakdown of the map. Yet even Wood's critics admit that, "To date, there is no study to match its (Chapter 5 of Wood's *The Power of Maps*) analysis of exactly how a map works." Barbara Belyea, "Review Article of Denis Wood's *The Power of Maps* and the Author's Reply." *Cartographica* 29/3,4 (1992): 94-99.

¹⁴Wood, "How Maps Work," 73.

cartographer's motivation and goals that shape what icons/symbols are chosen, what space is portrayed in what time frame, and how objects are labeled and presented.¹⁵

The theme of a map determines which symbols are to be the focus of the map. For example, a road map would include symbols for the different types of roads while a hydrographical map may not. The topic or subject of the map dictates exactly what space is being represented and in the process names this space. Thus, the depicted territory receives a name and can be referenced. The map is placed within a time frame/era or left timeless. The overall "look" or tone of the map is influenced by what the map-maker is trying to say with his/her map. Therefore, a government zoning map will have a much different "look" than a tourist map. One has a serious, scientific, and official tone while the other has a more flippant and fun-loving tone. With all the elements in place, the map is ready to be employed, whether to facilitate the use of the nation's roadways, assign certain rights and responsibilities to a territory, or to promote tourism. Maps work by "linking territory with what comes with it, something they achieve by fusing onto a common plane multi-coded images of the very world the map itself will bring into being."¹⁶

Artificially separating out the map-making process into these distinct elements/codes strips the map of its polished finish and exposes the map as anything but an objective mirror of reality. Examining the elements of a map's construction reveals how the cartographer, steeped in his own culture and coming to the project with his own specific interests, is able to create a representation of reality to suit his own purposes from the space designated, through the lines drawn, and all the way to the decorative

¹⁵ Wood, "How Maps Work," 73; also Wood, *The Power of Maps*. 132-140.

¹⁶ Wood, "How Maps Work," 73.

flourishes.¹⁷ Despite their subjective nature, maps implicitly claim the level of reality and often people act on them as such. The confusion between map and reality occurs because maps correspond to the realities of which they are abstractions and communicate this knowledge effectively.

If maps fail to correspond to what they are designed to represent, they lose their validity and usefulness and are disregarded. This is the case whether the map is of the physical world, an imagined world, or of spiritual or social realities. This criterion can be used with non-Western cartography, which often befuddled the European explorers. What seemed to be inaccurate to the Europeans was perfectly understood by the members of another society.¹⁸ Accuracy, therefore, can only be determined by analyzing the symbolism and intent of the map-maker in his/her own temporal and cultural context. This means understanding what type of information is being presented, whether it is physical, spiritual, thematic, social, or a combination, and the time period in which it is created.¹⁹ Although the ultimate test of a map is to experience the reality portrayed, it is impossible to physically visit the infinite number of places that can be mapped. The map-reader must trust the map. People put such trust in subjective abstractions of reality because maps have authority.

¹⁷ The importance of map decoration especially the cartouche is treated very well by G. N. C. Clarke in the article "Taking Possession: The cartouche as cultural text in eighteenth-century American maps." *Word and Image*, 4/ 2, (1988): 455-474.

¹⁸ Malcolm G. Lewis, ed., *Cartographic Encounters: Perspectives on Native American Mapmaking and Map Use* (Chicago: University of Chicago Press, 1998). Native Americans tended to have a very different conception of space and distance than Europeans. For example, most natives conceived of the distance between two places in terms of days' travel rather than in leagues.

¹⁹ An extreme example of this would be a map created for disinformation purposes. The intent of the map is to mislead and the map would be considered dysfunctional or "inaccurate" if it actually revealed what was meant to be hidden.

A map's authority comes from a variety of sources and these act together to reassure the map-reader that the map can be trusted and implies that the map is reality.²⁰ The sources for a map's authority are far from static. Different sources have risen to the foreground throughout the history of cartography. The Delisle map of 1718 exemplifies a major shift in cartographic authority in the Western cartographic tradition as the authority of science superseded that of the monarch and the classical Greek tradition.²¹ As will be explored later, this shift is apparent both in the presentation as well as the contents of the map.

The prime source of authority for pre-aerial photography maps was personal experience.²² An individual would translate his/her personal experience of reality into a set of spatial relations. Because the geographic information was dependent on personal observations, that person's reputation was important in judging the authority of the map. The father of Western cartography, the Greek Ptolemy, mixed reports from trusted travelers and the maps of others with philosophy to develop a combination of both experiential and speculative cartography. Like Delisle, Ptolemy is an example of a "géographe du cabinet" who relied on the reports of others to compile his maps.²³ In these cases, as will be demonstrated in the following map analysis, the map's authority is

²⁰ Wood, "How Maps Work," 67.

²¹ The importance of the Delisle 1718 map of Louisiane is widely acknowledged. See Christine Marie Petto, *When France Was King of Cartography: The Patronage and Production of Maps in Early Modern France* (New York: Lexington Books, 2007), 101-106.

²² Cartography and the Western view of the world underwent a significant transformation with the advent of aerial photography, remote sensing, and then satellite imaging. These advances in technology virtually erased the role of explorers in creating maps. Norman J. W. Thrower, *Maps & Civilization: Cartography in Culture and Society* (Chicago: University of University Press, 1999), 173-177. Denis Cosgrove presents an interesting discussion on how the view from above changed the Western conception of the globe/earth. Denis Cosgrove, *Apollo's Eye: A Cartographic Genealogy of the Earth in the Western Imagination* (Baltimore: Johns Hopkins University Press, 2001).

²³ Thrower, 23-24.

less dependent on the sources of information as on the reputation of the cartographer who is responsible for reconciling the various travelers' experiences into a grand scheme of the world. During the Middle Ages, when Ptolemy's teachings were lost to Western Europe, the underlying theory in European cartography was Bible-based and Catholic.

Thus for a time (476-1410), spiritual authority replaced the reputation of the explorer or cartographer in Western Europe as the main source of cartographic authority especially since with the decline of the urban centers most scholarship and the copying of texts took place in monasteries.²⁴ Maps during this time period were often oriented towards the East and placed Jerusalem in the center of the world. Maps blended biblical locations with experienced physical features to create an amalgam of physical and spiritual realities; it offered a unique Catholic vision of the world.²⁵ The result was a map on which the Garden of Eden and sites such as Rome and Paris shared the same level of geographic reality and demonstrates how religion was integral and ubiquitous in medieval society. These maps claimed to embody the ultimate source of authority, the Word of God, yet this conception of the world would soon have to yield to a different view as the source for cartographic authority shifted.

Around 1300, starting in Italy and then spreading to the rest of Europe, there was a resurrection of classical learning. One of the many texts that was recovered from the ancient Greeks was the geographical writing of Ptolemy, which became the source of cartographic authority for the next few hundred years. Ptolemy emphasized placing locations within a graticule and the cartographers of the Renaissance responded by

²⁴ These years are chosen because they extend from the fall of the Western Roman Empire to the date that Ptolemy's influential text *Geographia* was translated from Greek to Latin. Thrower., 58.

²⁵The most famous example is the Hereford *mappamundi*, which represents a culmination "of the geographical lore, secular and sacred, of the Middle Ages." Ibid., 44.

making maps with a conscious selection of the map's projection and scale. Ptolemy's concepts are still present in maps produced today. The dominance of Greek tradition as the major source of cartographic authority began to wane as European explorers, first the Portuguese and Spanish and then the rest of Europe, expanded the limits of their world and encountered continents that were not to be found in Ptolemy or the religious maps of the Middle Ages. With the advent of the Age of Discovery, Greek tradition, while still influencing cartography, could no longer provide all the answers to the new geographic questions raised by the discovery of new continents and a new source of authority was needed to assure the map-reader that what he/she was looking at was legitimate, trustworthy, and a true representation of reality.

The Age of Discovery coincided with the age of the great monarchs of Europe, who in large part sponsored the various voyages of discovery, conquest, and colonization. This activity brought the government into close contact with cartographers who were commissioned to make maps of the new territories as well as to map the countries of Europe for administrative purposes.²⁶ This period witnessed an explosion of cartographers and of cartographic production. Advances in printing techniques made maps much cheaper and therefore they became available to a growing literate population.²⁷ As the Age of Discovery came to a close at the beginning of the seventeenth century, the countries of Europe moved to solidify their claims to the newly "discovered" territories which included but was not limited to mapping the land.²⁸ Because the

²⁶ Petto, 4-5.

²⁷ David Woodward, ed., *Five Centuries of Map Printing* (Chicago: University of Chicago Press, 1975), 1.

²⁸ Other methods for claiming the land included "planting the flag" and conducting official ceremonies. Claiming the territory was very different from actually controlling it as the French would find out in North

absolute monarch was the source, even only if nominal, of all authority for the country, the king or queen became a source for cartographic authority as cartographers, especially in France, vied to receive the approval/validation from the King. In France, the title “géographe du roi” lent a cartographer an air of respect and gave him a commercial advantage in the sale of his maps.²⁹ It is precisely at this time that the cartographer considered in this study, Guillaume Delisle, reached the heights of skill and influence. But even as the title of “Premier Géographe du roi” was created and bestowed on him in 1718 by Louis XV, Delisle’s maps reveal that another source of cartographic authority had become even more important than the monarchy; this was the power of science.³⁰ While Delisle used the trappings of science to bolster the credibility or authority of his maps, it is important to note that his cartography was not the more scientific cartography of the late eighteenth century based on direct measurement, surveys, and triangulation. Yet Delisle’s work, epitomized by the map of 1718, reveals a decisive shift towards this more scientific mapping as Delisle based his maps on astrologically determined latitudes and longitudes and then incorporated a multitude of other locations gleaned from the critical examination of primary and secondary sources.³¹ In this way, Delisle is both the culmination/epitome of the “géographe du cabinet” tradition as well as a precursor to the more scientific and imperial minded cartography of the later part of the eighteenth century.

America. Maintaining control required the construction of forts, the development and growth of colonies, as well as establishing profitable trade arrangements.

²⁹ For more detail see Petto, Chapter 4, “Selling maps and selling power,” 149-160.

³⁰ Petto, 153.

³¹ The success and influence of Delisle’s work was acknowledged by his peers who considered Delisle as the “touchstone of quality and integrity” and this evaluation of his work was evinced in that Delisle was to be the most frequently cited geographer until the end of the eighteenth century. Anne Godlewska, *Geography Unbound: French Geographic Science from Cassini to Humboldt* (Chicago: University of Chicago Press, 1999), 34,47.

The scientific revolution (circa 1550-1700) had a profound effect on European intellectual development in the eighteenth century.³² The perfectibility of knowledge, including geographic knowledge, through the scientific method occupied the minds of the intellectuals throughout continental Europe. These thinkers joined academic and scholarly societies such as the Académie Royale des Sciences. Membership in these elite organizations became a badge of honor and a testament to the trustworthiness and scientific credentials of the individual. In cartography, this scientific turn evinced itself in a change in the over-all map design as “myths and monsters” were slowly erased and maps assumed a plain and “scientific look” that is recognizable to this day. Cartography flourished under this guise until the advent of aerial photography, satellite images, and computers.

The art and science of cartography is undergoing yet another shift as the mantle of authority passes from one era of scientific knowledge to a more advanced era of scientific technology.³³ In a way, the source of cartographic authority has come full circle as once again it is the collector of the data, in this case satellite technology, which gives the map its authority. It is important to remember that even though one source of cartographic authority may have occupied the foreground at any given time, all these sources of authority work together constantly building and reinforcing the power of the map to claim that it is the geographic reality portrayed. To a certain extent, the world is reduced

³² Roy Porter, ed., *The Cambridge History of Science* (Cambridge: University of Cambridge Press, 2003), 4: 7. The eighteenth century saw the consolidation and furthering of the scientific revolution of the previous century.

³³ In satellite imagery cartographers finally have the perfect and most reliable of explorers. Satellites can traverse any terrain and send back a picture perfect record of the territory. The direction of mapping in the future is impossible to predict yet it is safe to say that maps and mapping will continue to evolve in new and exciting ways. For an example of some of these ways, see James Corner, “The Agency of Mapping: Speculation, Critique and Invention,” in *Mappings*, ed . Denis Cosgrove (London: Reaktion Books, 1999), 213-252.

to the map and it is sanctioned by experience, religion, tradition, the government, science, and technology. Thus, maps work by using a basic set of symbols and codes to graphically communicate spatial relations. They are believed because they can be checked against the reality they claim to portray. However, because it is improbable that any individual would or could check every spatial relation revealed, the map-reader turns to the other sources of cartographic authority to be reassured that the geographic information presented is valid.

CHAPTER 3

IMPLICATIONS

Maps, by virtue of their nature, contain large quantities of information that can be retrieved by peeling back the various levels of knowledge embedded on their surface and even by examining the methods used in their construction. The levels of knowledge communicated by maps, like the cartographic codes that constitute them and the sources of authority that sanction them, are interwoven and presented as a whole. For the purpose of discussion, however, they will be artificially separated into the broad categories of conscious and subconscious selections of the map-maker.

The most superficial level of knowledge communicated by maps is geographic or spatial information. This information is consciously selected by the map-maker and is shaped by a number of considerations. The cartographer is limited by the quantity and quality of the geographic information available at the time. Thus maps reveal the state of geographic knowledge at a particular time. The printing technology of the time must be considered as it could have had a limiting effect on what could or could not be printed.³⁴

Besides available information and technology, maps are further consciously shaped by the cartographer's agenda whether commercial, political, social, or religious. Maps are often created in such a way as to achieve some benefit to the map-maker.³⁵ Market and social forces push the map-maker to create maps of places in which people are interested and in ways that people will accept. Map-makers are also often influenced

³⁴ "Technical matters are critical to the graphic character and quality of the final map." Woodward, 23.

³⁵ Petto, 15.

by overt political and/or religious considerations. For example, while religious themes dominated the maps of the middle ages, the maps of the late seventeenth and early eighteenth century marked the beginning of the science of cartography in the service of the state.³⁶

This highlights the reciprocal relationship between the source of cartographic authority and the information or knowledge displayed on the map. The map is sanctioned by the individual, group, religion, or government that is in power and in turn the map validates, reinforces, and gives expression to the power holder's view of reality.³⁷ Finally, the map-maker makes conscious selections for "scientific" or personal reasons.

All map-makers are human. No matter how objective they try to be, a large amount of subjectivity is present. The extent of this subjectivity varies with the individual and is what makes maps so different from each other and also makes them fascinating. Scientific cartographers may attempt to hide their subjectivity behind the veil of "objective" science, yet this very aura of objectivity is just one example of the second level of knowledge that is embedded within the map: that of subconscious information.

Maps are abstractions of reality and therefore only certain objects can be displayed on the map. Various forces influence the map-maker's conscious selection of what and how objects will be presented on the map. In the definition and study of their nature, maps were shown to be a method of communication and that map-makers use a variety of codes to present the information in a way that is not only coherent but that promotes their particular agendas. While the cartographer makes conscious decisions

³⁶ Petto, 12.

³⁷ Laxton, ed., 168.

concerning the content and look of the map, the basic form of the map is determined by the culture within which the map is produced. This cultural predisposition is ubiquitous and inescapable and made evident in every map.³⁸ Culture operates on a subconscious level and includes not only an inherited cartographic tradition but a linguistic tradition as well, but most importantly how the individual conceives of the world and his place in it.³⁹ Precisely because all maps are “lies” or fabrications, i.e., social constructions with all the aforementioned limits, a close analysis of them can complement knowledge of how the world was perceived by the European map reading public of the past.⁴⁰

³⁸The material-history analysis is based on the study of artifacts as cultural products. Dickenson understands artifacts to include scientific images and maps. Dickenson, 13.

³⁹ This is one of the major themes of Denis Cosgrove’s book, *Apollo’s Eye*. Cosgrove traces how Western Europeans have imagined the world throughout history and expressed these imaginings in world maps. Norman Thrower echoes this statement when he asserts that maps “well reflect the state of cultural activity, as well as the perception of the world in different periods.” Thrower, 1.

⁴⁰ For scholars who call maps “lies” see Wood, “How Maps Work” and Mark Monmonier, *How to Lie with Maps* (Chicago: University of Chicago Press, 1991).

CHAPTER 4

ANALYSIS OF DELISLE'S 1718 *CARTE DE LA LOUISIANE*

Armed with a new understanding and appreciation for the complex layers of information that are interwoven on maps, we turn to Guillaume Delisle and his “*Carte de la Louisiane*.” The intent is to closely analyze the map examining its technical aspects as well as placing the map into its personal, social, political, intellectual, and scientific contexts in an attempt to understand the “underlying cultural assumptions and beliefs that are revealed in the style of the object.”⁴¹ Although this method will work on any map, the Delisle 1718 “*Carte de la Louisiane*,” because of its intellectual and political influence, is a fascinating and relevant object for inquiry. Some of the reasons for the importance of this map include: the map is considered to be politically charged depicting explorers’ routes and controversial territorial claims in the New World; the map is an example of French cartography at the height (the rest of Europe looked to France for the most accurate maps); the map had wide circulation in Europe; it remained in print for years either copied exactly or used as a base map; the map exemplifies the shift in cartography to more “scientific” looking maps; and probably most important to some, it is the first printed map to use the word “Tejas.”⁴² This map, created by the leading

⁴¹ Dickenson, 13-14.

⁴² William P. Cumming, et al, *The Exploration of North America 1630-1776* (New York: Viking Press, 1974), 156. The map remained in print until at least 1782 (64 years) undergoing only a few minor changes. In state two of the map New Orleans was added (1718) while in state three (1745) and state four (1782) the title was revised to reflect the ownership of first Phillipe Bauche and then Dezauche. A prime example of a blatant copy is John Senex, *A Map of Louisiana and of the River Mississippi* London, 1721. It is Delisle’s map translated from French to English. Even Herman Moll’s cartographic response to the Delisle map

cartographer in Europe in the early eighteenth century, represents not only how Europeans viewed North America but proposed a pro-French version of the continent. The British and Spanish areas of the map appear small compared to the large French claim, while the actual French presence in the interior of the continent in 1718 was minimal.⁴³ This French vision would not be accepted by other European nations, especially the British, and a political and cartographic dialogue between Britain and France ensued.⁴⁴ The map, because of perceived territorial transgressions against British colonies, caused a political controversy between England and France that would not be settled until the French and Indian war of 1754.⁴⁵ The English Board of Trade filed several complaints and a rival English map was made by Herman Moll in 1720.⁴⁶ Thus, the map's analysis also sheds light on the ever-changing complex relationship between Europe and the Americas also known as the Trans-Atlantic Exchange.

The map is 18.5 by 25.2 inches and is printed on paper using the copperplate printing technique that was popular at the end of the seventeenth century at Delisle's own workshop on the Quay de L'Horloge with "le privilège du Roi."⁴⁷ The map uses a rectangular conformal projection and while the lines are not drawn across the map, the latitude is numbered along either side from 46 to 26 on the left and from 46 to 32 on the

borrowed information taken from Delisle. Margaret Beck Prichard and Henry G. Taliaferro, *Degrees of Latitude: Mapping Colonial America* (New York: Harry N. Abrams Inc., 2002). 118,123.

⁴³ James Pritchard, *In Search of Empire: The French in the Americas, 1670-1730* (Cambridge: Cambridge University Press, 2004), 42, 423. or Francis Parkman, *France and England in North America* (New York: Viking Press, 1983), 2: 550-551.

⁴⁴The Spanish were also angered by the French territorial claims made by the Delisle map. Petto, 100,106.

⁴⁵ Dennis Reinhartz and Charles C. Colley, *The Mapping of the American Southwest* (College Station: Texas A&M University Press, 1987), 32-33.

⁴⁶ See Herman Moll, *A New Map of the North Parts of America Claimed by France* (London, 1720), British Library, Maps 69917 (29).

⁴⁷ See Woodward, ed., 51-76 for more detail on copperplate printing. This map went through four stages from the first in 1718 to the last in 1782. This map is the first stage. Margaret Beck Prichard and Henry G. Taliaferro, *Degrees of Latitude: Mapping Colonial America* (New York: Harry N. Abrams Inc., 2002), 118.

right. An inset map of the mouth of the St. Louis River and the city of Mobile occupied the bottom right side of the map covering up the latitude numbers 31 to 26 and the longitude numbers 298 to 305. The longitude numbers that are visible appear only along the bottom and are numbered 271 to 297. Along the top of the map written in big bold letters is the title which reads “Carte de la Louisiane et du Cours du Mississipi.” The title then continues in smaller italicized letters “Dressée sur un grand nombre de mémoires entr’autres sur ceux de Mr. le Maire par Guillaume Delille de l’Académie Rle. des Sciences.” As the title suggests, the map is centered on the interior of what would later be called the continental United States and the Mississippi River. To the north, the map extends to the bottom of Lake Superior, while the Atlantic sea coast and the Rocky Mountains mark the boundaries to east and west. The point at which the Rio del Nord (Rio Grande) flows into the Gulf of Mexico marks the southern most extent of the map.



Figure 1: DELISLE’S 1718 MAP OF “LA LOUISIANE”
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The principles governing the use of latitude to locate a place have not changed since the time that Delisle applied them while creating this map and therefore it is easy to compare the latitudinal accuracy of the 1718 map to that of a modern map.⁴⁸ When compared to a modern map, Delisle's latitudes for some easily found points (e.g., the mouths of the Rio Grande and the Mississippi Rivers; the conjunctions of major rivers entering the Mississippi such as the Red, Arkansas, Ohio, and Illinois Rivers; and some major cities such as New York, Charleston, and Montreal) are remarkably accurate.⁴⁹ The latitudes from Delisle's map are never more than 40 minutes of latitude in error and the vast majority of places have only a few minutes of latitude difference. While tools existed in the seventeenth century for accurately calculating latitude, the problem of accurately calculating longitude persisted until the invention of the chronometer in 1759.⁵⁰

At the beginning of the eighteenth century, calculation of longitude shifted from "dead reckoning" (or estimating the distance between two places) to using astronomy as a result of the work and influence of the astronomer Giovanni Domenico (later Jean-Dominique) Cassini (1625-1712). Cassini oversaw the construction of a "planisphère terrestre" on the floor of the Paris Observatory on which no location could be added unless its coordinates had been determined astronomically.⁵¹ To calculate longitude

⁴⁸ Heidenreich, 107.

⁴⁹ David Buisseret comments on the accuracy of the shape of Delisle's Gulf Coast as portrayed on his 1703 *Carte du Mexique et de la Floride* claiming it to be the "first generally reliable map." David Buisseret, "Spanish and French Mapping of the Gulf of Mexico in the Sixteenth and Seventeenth Centuries" in Reinhartz and Colley, eds., 17.

⁵⁰ These tools included the astrolabe and the cross staff which were used to measure the angle of the sun at high noon.

⁵¹ Thrower, 110.

astronomically, Cassini made tables of the revolutions of the moons of Jupiter that allowed one to determine the local time. The local time could then be compared to Paris time and the correct longitudinal distance could be calculated. Using this method the accuracy of many maps improved. This is especially true of Delisle's maps because not only was Delisle a student of Cassini, but he also had access to this master map.⁵² Yet the number of these astronomically determined longitudes was limited most likely because sighting the moons of Jupiter required a relatively sophisticated telescope and a degree of astronomical knowledge as a result a good deal of "estimating" took place. Longitude was numbered in 360 degrees eastward from a prime meridian, which for French maps after 1634 was set as Ferro of the Canary Islands.⁵³ Taking all this into consideration, it is possible to compare the longitudes of different physical and human features on Delisle's map to modern longitudes. The comparison reveals that Delisle placed the major cities on the east coast of the continent and the Great Lakes no more than thirty-five minutes (roughly 27 miles) off modern longitudes. This accuracy is understandable considering these locations were the most well known, having been lived in and traveled through extensively, which allowed for the necessary astronomical observations to take place. To the west, the longitudes become increasingly less accurate, which can be attributed to the lack of any astronomically determined longitudes and therefore the reliance on estimated distances pulled from travel narratives. For example, the location of the mouth of the Rio Grande on the Delisle map is the least accurate location, a full three degrees of longitude (approximately 188 miles) too far west. The Mississippi River from its mouth to its upper reaches is consistently in error by two degrees of longitude or

⁵² Thrower, 110.

⁵³ Heidenreich, 106.

about 100 miles too far west.⁵⁴ The courses of the major rivers pictured on the Delisle map are accurate near the coast and along the Mississippi River but become speculative as they travel east and west into the interior of the continent. One example is the Rio Grande, which is easily recognizable as it empties into the Gulf of Mexico but veers northward and is extended to an imaginary source at 45 degrees north latitude. On a modern map the Rio Grande does start in the Rocky Mountains but at 38 degrees north.

Related to latitude and longitude is the calculation of the map's scale. The 1718 map includes a scale marking off one hundred French leagues that roughly converts to 201.8 statute miles or approximately 1:4,700,000. Again the distances correspond more closely to modern maps around the Great Lakes and the eastern coastline. The distances between Montreal and the Great Lakes are notably the most accurate with differentials of less than fifty miles.⁵⁵ The distances tend to be shorter along the western portion of the map. The differences can be attributed again to the amount of information available to the cartographer.

The compass rose is situated in the center of the Gulf of Mexico and has sixteen points with a fleur-de-lis indicating the geographic north. The magnetic north is not shown. This, along with the fact that the compass rose consists of only sixteen points

⁵⁴ The misplacement to the West of the Mississippi River began with Marquette and Jolliet, the first Europeans to navigate the river. On his manuscript map of the expedition, Marquette placed the river 54 miles to the west of its correct longitude. Jolliet furthered the westward movement on his and Franquelin's maps of 1674 and 1675. Franquelin's 1684 map of the voyages of LaSalle witnessed the Mississippi flowing through what is now Texas. LaSalle's version of the Mississippi was then incorporated into Vincenzo Coronelli's 1688 globe with the river flowing through the Rocky Mountains and into the Gulf of Mexico in Texas. In this context, the Delisle map represents a marked improvement in the location of the river. See Franquelin's map of La Salle's expedition, (1684) *Jesuit Relations*, vol. 63 front piece; Vincenzo Coronelli's "Globe from the Globe" (1688) available online at <http://www.newberry.org/smith/exhibits/fe/10c.html>. The Mississippi is still too far west in a 1750 manuscript map by Jacques-Nicolas Bellin. See Bellin, "Partie Occidentale du Canada", (1750) LOC G 3400 1755. B412 Vault or online at <http://hdl.loc.gov/loc.gmd/g3400.ar077400>.

⁵⁵ The width of Lakes Michigan and Erie are respectively 37 miles too wide and 15 miles too short but still relatively accurate.

rather than the thirty-two points that would have helped sailors who navigated by rhumbs or fractions, suggests that this map was not created as a navigational device but for some other purpose.⁵⁶ The map legend or “Explication des Marques” is made of four symbols and is located at the bottom of the map next to the compass rose. The first symbol is a small hut that symbolizes Indian/native habitations. This is followed by an asterisk and a plus sign that represent respectively displaced Indian nations and destroyed Indian nations. The last symbol in the legend is an undulating line that is used to mark the routes of Fernand De Soto and Louis de Moscoso in the area around the Mississippi where they were chased by Indians.

Although not in the legend, cities are marked on the map by either small squares, small circles, or a rectangle with a cross on the top with a square next to it, while mountains are represented by a uniform group of mounds with the right side shaded in. The mountain symbols vary in size and shading rather than shape to signify the height of the different mountain ranges. For example, the symbols for the Appalachian Mountains are smaller and lighter compared to symbols designating the Rocky Mountains that appear darker and larger. Between Lake Michigan and Lake Huron, is a symbol resembling a centipede that is identified by a label as a plateau and in the colony of Virginia there are small mounds and dots, which a label identifies as swamp land. Lakes and oceans are differentiated from land by dark shading around the coastlines.

There are hundreds of labels on the map naming everything from lakes and rivers to colonies, major cities, forts, and the names of the native populations. The largest label is that designating the entire center of the continent as “La Louisiane.” The other labels

⁵⁶ Heidenreich, 108.

range in size with the names of rivers written in small italicized print while the cities are merely in small block print.⁵⁷

The map is truly astonishing not only in its relatively accurate portrayal of the Great Lakes, East Coast, and Mississippi River, but also in the sheer amount of geographical and anthropological information. Considering that the cartographer who constructed this map never crossed the Atlantic, it is all the more impressive. The extent to which this map is an improvement on European knowledge of the continent can be seen by comparing it to the Nicolas Sanson's 1650 map of North America.⁵⁸



Figure 2: NICOLAS SANSON'S 1650 MAP OF NORTH AMERICA

On the latter, the Great Lakes are not completed, a ring of mountains stretch in a crescent from Florida to west of the Mississippi River, and California is an island.

⁵⁷ For a complete list of physical features, native peoples, and cities/other place names, see appendix A.

⁵⁸ Nicolas Sanson d'Abbeville, *Amérique Septentrionale*, 1650. See figure 2.

In the title to his map, Delisle lists three things: his name, the large numbers of memoirs he used to construct the map, and his membership in the Académie Royale des Sciences. An examination of these will help explain why this map was considered authoritative by Europe's literate population. A brief biographical sketch will reveal that thanks to his family history, the name Delisle carried weight among the French elite. Delisle's "scientific" cartographic method, which used astronomically determined latitudes and longitudes as a base and then relied on the collection and evaluation of primary sources requires explanation. The large number of memoirs mentioned in the title highlights the use of this method. The reference to the Académie Royale des Sciences points to the intellectual setting and social/political context of the time.

Guillaume Delisle was born on 28 February 1675 in Paris, to Claude Delisle and Marie Melaine.⁵⁹ Delisle's mother died shortly after the birth of his brother, Simon-Claude, when Guillaume was only eight or nine years old. Thus his father, Claude (1644-1720), had an enormous influence on Guillaume's education and choice of occupation, even though Claude later remarried and had three more children, two boys and a girl.⁶⁰ Guillaume's grandfather had been a fairly well-off doctor and had sent his son Claude to the Jesuit College de Port-a-Mousson.⁶¹ Rather than becoming a doctor, Claude moved to Paris to teach history and geography to the sons of nobles. He rapidly earned a

⁵⁹ A brief summary of Delisle's life and works can be found in R. V. Tooley, *Maps and Mapmakers* (New York: Crown Publishers Inc., 1978). 42-43, but the most complete biography to date and a major source of information concerning Delisle is Nelson-Martin Dawson, *L'Atelier Delisle: l'Amérique du Nord sur la table à dessin* (Québec: Les Editions du Septentrion, 2000).

⁶⁰ Dawson, 20. Delisle's mother died some time between 1683 and 1684.

⁶¹ For the influence and quality of Jesuit education in France, see J. C. H. Aveling, *The Jesuits* (New York: Dorset Press, 1987) and François De Dainville, *L'éducation des Jésuites* (Paris: Editions de Minuit, 1978). For Jesuit education concerning geography, see C. Daniel, "La Géographie dans les collèges jésuites aux XVII et XVIII siècles," *Etudes Religieuses, Philosophiques et Historiques* (1879): 801-824.

reputation as a man of science and an excellent teacher.⁶² Claude's scholarly reputation gained him access to some of the leading figures in French intellectual circles, including the renowned cartographer Nicolas Sanson and, more importantly for Guillaume, the proponent of scientific mapping based on astronomy and triangulation, Jean-Dominique Cassini. After Claude instructed Guillaume in history and geography, he apprenticed his son to this very influential intellectual/scientific figure.⁶³ It was under the tutelage of Cassini that Delisle was fully inculcated with the emerging scientific method and he would take this passion for scientific rigor and apply it to cartography.

Not only was Delisle exposed to one of the best possible educations available at the time, he proved to be an adept student from a very young age. In his eulogy written by Bernard le Bovier de Fontenelle, Fontenelle boasts that Delisle designed his first maps of ancient history at the tender age of nine.⁶⁴ Regardless of the veracity of this anecdote, it is clear that Guillaume was considered to be a child prodigy.

Twelve years later, with the help of his father, Delisle signed his first map; the French colony in North America and its surroundings. Although he would design maps of France and all different parts of the world, North America was Delisle's most innovatively mapped region.⁶⁵ These innovations were the result of Delisle's access to manuscript maps and journals describing the interior of the continent made by French explorers and missionaries. Delisle even had the opportunity to interview several of these

⁶² Bernard le Bovier de Fontenelle, "Eloge de Monsieur Delisle," *Eloges des Académiciens de l'Académie Royale des Sciences, 1776*. (Paris: Librairie Philosophique J. Vrin, 1981), 278.

⁶³ For more on the contributions of Cassini to the advancement of cartography, see Thrower, 110.

⁶⁴ Tooley, 42, and Dawson, 25. The original source for this story comes from the Delisle eulogy written by Bernard le Bovier de Fontenelle.

⁶⁵ Petto, 101. See Nelson-Martin Dawson, *L'Atelier Delisle: l'Amérique du Nord sur la table à dessin* (Québec: Les Editions du Septentrion, 2000), Annex V for a complete Delisle map bibliography. Out of 125 original works, ten of them are of North America or contain part of the continent. See appendix B for a list of these maps.

figures.⁶⁶ In 1700, Delisle produced a globe before turning again to North America in 1703.⁶⁷

The distinctiveness, originality, and ingenuity of the father/son team was highlighted in a well-publicized case of plagiarism.⁶⁸ In 1699, the cartographer Jean-Baptiste Nolin published a world map that closely resembled the world map that the Delisles had been working on since 1697 and that would be published in 1700. Claude wasted no time and openly accused Nolin of copying certain cartographic innovations appearing only on the Delisle map.⁶⁹ Nolin vehemently denied any wrongdoing. The controversy played out in various letters published in the *Journal des Savants* and ended with a cartographic showdown in which both map-makers were brought before a panel of experts, including Cassini, and were asked to explain their methods and reveal the sources for the information found on their respective maps. Despite Nolin's argument that the geographic information he used was in the public domain, the panel decided in favor of the Delisles. The panel was not only settling a case of plagiarism but also officially endorsing the new "scientific" cartographic methods employed by the

⁶⁶ Dawson, 154. For example, in his notes Delisle mentions information that he gathered by talking with M. Iberville, Sieur Nicolas, and M. Le Sueur to name a few.

⁶⁷ Although Guillaume's name is the only name on this map, scholars have debated how much of the work was really Guillaume's and how much of it was his father's. See Jean Delanglez, "The Sources of the Delisle Map of America, 1703," *MidAmerica* 25/4 (1943): 275-298, and Christopher W. Cane, "Whose Map is it Anyway?" *Map Collector* 36 (1986): 16-20. Delanglez argues that Guillaume was still too young to produce such quality work while Cane suggests that Guillaume was quite capable but undoubtedly used Claude's materials and insights. Dawson agrees with Cane in that the maps were most likely "affaires de famille" and that Claude did not sign the maps as a way to promote his son's advancement in society. Dawson, 26-29. This last argument, which is a compromise between the two extremes, appears to be the most reasonable considering that Guillaume was trained by his father to carry on the family business.

⁶⁸ Numa Broc, "Une affaire de plagiat cartographique sous Louis XIV: le procès Delisle-Nolin." *Revue Histoire des Sciences* 23 (1970): 141-153.

⁶⁹ Dawson, 31. The innovations both dealt with North America, one being the mouth of the Mississippi River and the other the shape of California.

Delisles.⁷⁰ Nolin was told to stop printing his map and the Delisle reputation was further established in French intellectual circles.

Whether by design or by chance, the plagiarism trial propelled young Guillaume into the scientific spotlight and with its favorable conclusion he was well positioned to advance further in the ranks of the French intellectual/scientific elite. Less than two years after the trial, twenty-seven-year-old Guillaume entered the Académie Royale des Sciences as a student of astronomy under the continued tutelage of Master Cassini.⁷¹ From this point on, Delisle signed his maps as a member of this prestigious society. From 1702 until after his death, the Delisle cartographic reputation spread throughout Europe. The Delisle name became recognized by the intellectual and social elite as a leader in cartographic information.⁷²

Until he was thirty-two years old, Guillaume lived and worked with his father. Only in 1707, when he married, did he move out and set up his own cartography business. From this point on, Delisle's maps were strictly his own work, marked with the address of his new workshop at the Quay de L'Horloge. This new location placed him in the center of Paris surrounded by other geographers.

The next step in the establishment of Delisle as a leader in his field came in 1714. Louis XIV sought out the Delisles to instruct the young Dauphin in geography and history. When Louis XIV died in September of 1715, the Delisles continued to educate the young king who would eventually publish these lessons under the title, "Cours des

⁷⁰ Dawson, 37.

⁷¹ The Académie did not have a program in place for cartography or geography.

⁷² Numa Broc, *La Géographie des Philosophes: Géographes et Voyageurs Français au XVIII Siècle* (Paris: Editions Ophrys, 1975), 269.

Principaux Fleuves et Rivières de l'Europe."⁷³ The honor was given to both Claude and Guillaume, but unfortunately only a couple of years later the aging Claude became too sick to work and passed away.⁷⁴ This left Guillaume as the head of the Delisle family.

Upon the death of his father, Guillaume became responsible for teaching both history and geography and as had his father before him, he constructed historical maps depicting France at various stages in its history as well as maps of the Greek and Roman empires. In recognition of his service to the king and the state as both a provider of excellent maps and royal educator, Louis XV created the honorific title of "Premier Géographe du Roi" and on 24 August 1718 bestowed it upon Guillaume. Along with the title came a pension of "1,200 livres par chacun an."⁷⁵ The high caliber and prodigious output of maps continued until Guillaume's death. On his way home from work on 25 January 1726, Guillaume suffered an epileptic seizure and died later that night.⁷⁶ He was fifty-one years old. At the time of his death, Guillaume's work was considered the best of his time not only in France but throughout the world. The Delisle cartographic tradition would continue but with less rigor under the direction of Philippe Buache (1700-1773), who not only was trained by Guillaume but also married his daughter, Charlotte.⁷⁷

Part of the reason behind his reputation was the result of Delisle's "scientific" cartographic method. Delisle firmly believed that the goal of geography was to correctly position places in their "true" latitude and longitude.⁷⁸ Yet the cartographer's job was not

⁷³ Dawson, 45.

⁷⁴ Ibid., 43. Claude suffered from a bout of epilepsy and died in 1718 at the age of seventy-four.

⁷⁵ *Brevet de Premier Géographe du Roi pour le sieur Guillaume Delisle*. Archives Nationales de France, 0/1/62, F183 v-184 ; reproduced in Dawson, 44.

⁷⁶ Despite Delisle's success or perhaps because of it, he was not without his detractors and critics. At the time of his death there was a rumor circulating around Paris that he was an alcoholic. Ibid., 184.

⁷⁷ Tooley, 43.

⁷⁸ Dawson, 95.

to go out into the world and make the necessary observations and calculations, rather the cartographer was to collect as much information as possible--oral, literary, and cartographic and incorporate these sources on the map. The locations whose latitudes and longitudes were known astronomically were positioned on the map first and then the rest of the information gleaned from the many other sources would be added. An important part of the method was to evaluate the sources critically to remove inconsistencies and improve the accuracy of the information placed on the map. The Delisle “scientific” method, therefore, relied on two basic principles: the importance of collecting large amounts of current information and in the careful critique of these sources.⁷⁹ It is important to note that this “scientific” mapping differs greatly from the more scientific mapping based on triangulation and intense land surveys.⁸⁰

The Delisle cartographic method, which was successfully defended in the plagiarism case against Nolin, was the product of the new “scientific” intellectual climate that was sweeping through France and the rest of Europe at the time.⁸¹ The early eighteenth century falls into the time period known as the Enlightenment (1680-1740). The scientific revolution that was started by Johannes Kepler (1571-1630) and Galileo Galilei (1564-1642), developed by René Descartes (1596-1650) and Gottfried Leibniz (1646-1716), and completed by Isaac Newton (1643-1727) gained widespread popularity and became firmly entrenched in European intellectual culture.⁸² The over-arching

⁷⁹ Dawson, 99.

⁸⁰ The southwestern part of North America was not scientifically mapped until the arrival of soldier engineers in the 1800’s. For more about the role of soldier engineers and mapping see Dennis Reinhartz and Gerald D. Saxon, eds. *Mapping and Empire: Soldier engineers on the Southwestern frontier* (Austin: University of Texas Press, 2005).

⁸¹ Dawson., 96.

⁸² Porter, ed., 23. This acceptance can be seen by the growth of scientific institutions such as the royal academies of England and France as well as in the development of scientific journals.

motifs of the enlightenment were the primacy of rational thought and the power of illumination.⁸³ This new philosophy under the guise of scientific inquiry was to be the “new broom par excellence that would sweep mystifications and obscurantism aside, removing the mumbo-jumbo of the Church and the ‘feudal ways.’ ...”⁸⁴ Mathematical reasoning and the experimental method rather than religion would be used to explain the universe and improve the human condition. As John Locke (1632-1704) argued, it was “observation rather than innate ideas or revelation [that] defined the route to secure knowledge.”⁸⁵ Despite this downplaying of religion in the acquisition of knowledge, Newton’s own ideas were held together by belief in an all-powerful God. This God is eternal, all-powerful, and perfect but humans can know nothing of His nature only His attributes (such as His wisdom and power) through observing nature. Newton’s concept of God would become “the God of deism, the all-knowing, all-good Creator who, after making the best possible universe and giving it ironclad rules of operation, withdrew into His heavens to watch His perfect piece of machinery tick away with beautiful precision.”⁸⁶ Once man had discovered these rules of nature, he could use them for his own practical purposes.

As Europe re-urbanized, the centers of scholarship shifted from monasteries to major urban centers. Classical Greek texts that had been lost for centuries were rediscovered often through the work of Muslim scholars. With this rebirth of humanism the acquisition of knowledge began a slow shift from God-centered to man-centered. The notion that God was still interacting with mankind, cared about him and what he did, was

⁸³ The Sun King Louis XIV became the model of the enlightened absolute monarch.

⁸⁴ Porter, ed., 10.

⁸⁵ Ibid., 741.

⁸⁶ Thomas P. Neill, *Makers of the Modern Mind* (Milwaukee: The Bruce Publishing Company, 1949), 152.

in many ways forgotten when it came to applying the new knowledge that science uncovered. Applied to the Delisle map of 1718, this type of man-centered pragmatism promoted a view of the world as open to capitalistic exploitation by competing European powers in which cartographic knowledge of a region became a license for claiming a territory, its natural resources, and even the people living there.

The consolidation and diffusion of science and the scientific method can be seen in the establishment of scientific institutions and societies. In France, Louis XIV established the Académie Royale des Sciences in 1666 and under the eye of Jean Colbert, the Minister of Finance under Louis XIV, these state-sponsored scientists would be used to further state interests especially in the realm of cartography.⁸⁷ Indeed the role of scientist as a noble or clergyman with an interesting hobby was giving way to the civil expert of the future.⁸⁸ Colbert, in his drive to promote French mercantilism and French colonial activities, recognized maps as essential instruments in the development of an empire.⁸⁹ The rise in the number and quality of educational facilities both public and private contributed to the growth of an urban reading public, which in turn led to the publication of periodical journals such as the *Journal des Savants* and many others. Science became more than an acceptable pastime; it became a badge of honor and good social standing.⁹⁰

The wealthy, who lacked any special scientific talent, could promote their enlightenment and scientific credentials by becoming patrons of the sciences. Patrons

⁸⁷ Petto, 57. Scientists were also useful in the areas of manufacturing, agriculture, medicine, public works, warfare, and as a way to promote the regime as being “enlightened” and “modern.” In the case of Louis XIV, he also wanted a “source of glory that would outshine the Royal Society in London.” Porter, ed., 107.

⁸⁸ This also proved true for cartographers. The later eighteenth century saw the rise of government offices for map-making and separate consolidated commercial printing/publishing companies. Petto, 183-187.

⁸⁹ Porter, ed., 825 and Petto, 57.

⁹⁰ Porter, ed., 9. Science became a part of popular elite culture with ladies attending lectures on Newtonism.

would commission or finance projects and help draw attention to the work of the cartographer ensuring his financial success, and in return the cartographer would dedicate his maps and atlases to his benefactors in recognition and in hopes of continued protection. Louis XIV, in his quest for glory, was the predominant patron of French society and it was he who began granting the title of “géographe du roi.”⁹¹ This title was not reserved for only one cartographer and any number of cartographers could boast of this honor. Therefore cartographers often sought the protection of as many nobles, aristocrats, ministers of government, and ecclesiastical figures as possible.

The Delisles developed close ties to different influential figures as the social and political situations changed. The first patrons were Louis Phélypeaux de Pontchartrain, Comptroller General of Finances in 1689 and then “Chancelier du Royaume” in 1699 and his nephew l’abbé Jean-Paul Bignon, major figures in the promotion of French colonialism as a way to increase revenues for the government while at the same time stymieing British and Spanish colonial expansion in North America. With the help of his uncle, Bignon, became director of the *Journal des Savants* and in 1702 librarian of the king.⁹² From 1708 to 1715, the Delisles sought and received the attention of Nicolas Desmarests, the new controleur général of finances. The death of Louis XIV shook up the royal court and the Delisles benefited. The Regency blamed France’s economic problems on Desmarests and removed him from office in disgrace and Phélypeaux de Pontchartrain retired, but fortunately for the Delisles, the Régent, Philippe duc d’Orléans, was a former student of Claude. Soon the Delisles’ workshop was generating maps for

⁹¹ Petto, 13.

⁹² Dawson, 70.

the various treaty negotiations of the French government.⁹³ The Delisles worked closely with the inner court and would continue to have favorable relations with the government of Louis XV and his advisor Cardinal André Hercule de Fleury.

Although the Delisles did sell maps out of their workshop, their primary motivation was to serve their patrons and the state and thereby further their own “commercial, bureaucratic, or[and] academic positions.”⁹⁴ Their social connections brought them into contact with some of the most powerful political personages of the time. As a result of his close proximity to the center of power in France as well as his connections to powerful members of the political and social elite, Guillaume likely would be well aware of the current political situations facing the government of France when he was constructing his maps. The worldview presented by Delisle on his map in part reflects the world around him and that world was France at the dawn of the eighteenth century. At this time, France was the cultural center of Europe.⁹⁵ The long reign of Louis XIV (1638-1715) had ended. In spite of having left France in debt because of the cost of paying for five wars, when Louis XIV died, France was one of top three major European powers.⁹⁶ Yet the centers of power had already begun to shift from France, which had dominated Europe between 1661 and 1687, to the northern and eastern powers of England, Germany, and Russia. The last war fought by Louis XIV, the War of Spanish Succession, pitted France and Spain against England, the United Provinces, and

⁹³ Dawson, 84.

⁹⁴ Petto, 15.

⁹⁵ Emmanuel Le Roy Ladurie, *The Ancien Regime: A History of France, 1610-1774*, trans. Mark Greengrass (Cambridge MA: Blackwell Publishers Ltd., 1996), 244.

⁹⁶ These wars included the War of Devolution (1667-8), the Dutch War (1672-78), War of Reunions (1683-4), the Nine Years War (1688-1697), and the War of Spanish Succession (1701-1714). John A. Lynn, *The Wars of Louis XIV, 1667-1714* (Harlow: Pearson Education Limited, 1999), 362. The other two major powers were Britain and Austria (Russia though growing in power was still not a major player in European affairs). The lesser powers of Europe included the Dutch Republic, Prussia, Savoy, and Spain.

Austria and its conclusion in the Treaties of Utrecht (1713-15) created a European power equilibrium that would last for almost eighty years. England gained the most in these treaties including several French territories in North America such as Newfoundland, Hudson Bay, and Acadia all of which were near the French colony of Quebec.⁹⁷ France agreed to recognize British suzerainty over the Iroquois who occupied a strategic location between the colonies of New York and New France and were also forced to allow the British access to trade with the Indian tribes in the interior of the continent.⁹⁸ Despite these setbacks, the French still had high hopes for a French-dominated continent centered around the Mississippi River and flanked by Louisiana and Canada. The blow delivered to French colonial ambitions brought about by the Treaties of Utrecht served as an impetus to strengthen the French presence in North America and resulted in a surge of new fort and trading post construction in an effort to stave off British expansion.⁹⁹ While England increased in power and France maintained its powerful position in European politics, the Dutch and the Spanish paid the price for the positions of their powerful allies and suffered the most on the political scene.¹⁰⁰

Shortly after the Treaties of Utrecht, Louis XIV died (1 September 1715) and France fell into a period of uncertainty as Philippe d'Orléans assumed the regency for the then-five-year-old heir to the French throne. The regency lasted eight years (1715-1723)

⁹⁷ Le Roy Ladurie, 244.

⁹⁸ Frances Gardiner Davenport, *European Treaties Bearing on the History of the United States*, vol. 3 (Washington: Carnegie Institution, 1917-37), 211-213.

⁹⁹ Pritchard. 404. These forts included Fort Condé (1702 refurbished in 1723), Fort de Chartres (1718), Fort Detroit (1701), Louisbourg and Ile Royale (1713), Fort Maurepas or Bilocci (1699), Fort des Miamis (1715), Fort Michilimackinac (1715), Fort Niagara (1688 regarrisoned 1726), Fort Oleans (1718), Fort Ouiatenon (1717), Fort Rosalie (1716), Fort St. Francis (1717), Fort St. Jean Baptiste (1716), and Fort Toulouse aux Alibamons (1717).

¹⁰⁰ In the treaties France sacrificed Spanish peripheral territories as well as the dynastic inheritance of their King Phillip V while the Dutch were deserted by the British. Le Roy Ladurie, 246-247.

and managed to maintain control of the country first by adopting a consensual stance towards the nobility and then increasing their participation in government.¹⁰¹ Under the regency, France became less openly hostile to the British and the Dutch and more anti-Spanish, marking a shift from Louis XIV's religiously driven, foreign policy towards a more capitalist tradition.¹⁰² It is during this transitory period that Delisle was collecting data and constructing his map of French territories in North America.

Delisle used basic map elements or cartographic codes to present a powerful and persuasive image of French colonial possessions in North America.¹⁰³ This image is especially important considering how maps were used at the time in the education of princes and in the dissemination of geographical information to the masses via advanced printing techniques.¹⁰⁴ Through maps, European perceptions of the world were created anew, discussed, and reinterpreted by cartographers. Delisle proposed a view of the New World as a land full of potential natural and human resources available to any European power that claimed it by exploration and mapping. There was no question that the land was Europe's to argue over and exploit. The native populations were carefully noted because they could either help or hinder European, especially French, colonial designs. The map employed scientific techniques, such as astronomically determined locations and it displayed only geographic information that could be proven using Delisle's "scientific" method of cross referencing multiple primary sources, for inventorying the land that was to be exploited by private companies and the state. This map image not

¹⁰¹ Le Roy Ladurie, 281. Part of Philippe's strategy was to give the parliament more power in return for legitimacy. This approach worked but as soon as Philippe had secured a firm grip on the government in the later part of his rule, he proceeded to strip the nobles and parliament of these powers.

¹⁰²The Jesuit-style foreign policy pursued by Louis XIV and his ministers focused on the needs of the State but with constant reference to the balance between Catholics and Protestants. *Ibid.*, 286.

¹⁰³ The map does not show the substantial French possessions in the Caribbean.

¹⁰⁴ Petto, 76. The old axiom "knowledge is power" applies to geographic knowledge, too.

only reflects how some elite Europeans viewed the New World, but by its widespread diffusion could not fail to promote, reinforce, and legitimize this view--a view that lent itself to exploitation.

As his father before him, Delisle was motivated by interest for himself and his family. There were two complementary options for social and commercial advancement available to French cartographers during this period. The first was to obtain and maintain the patronage of a powerful member of society. This was done by making maps for and dedicating maps to these powerful people. The second was to use the mantle of science to give these maps more authority and widen their appeal. Delisle purposely used both options and created a map that was not only scientific but also reflective of the desires of the French elite. The result of his efforts was that only two months after the publication of his 1718 map Guillaume received a new honorific title and a state pension. Now Guillaume would be paid by the government to continue making maps that the government could use to consolidate and administer its own territory and to build new empires abroad.

Delisle revealed the use of science in the service of the state for social and economic advancement in every element of the map's design from the area portrayed to the final look of the map. The map is centered on the Mississippi River and the interior of the continent, thereby relegating the British and Spanish territories to the margins. The title of the map, along with the largest label, proclaims this vast interior area to be "La Louisiane," clearly belonging to the French. What is not shown are the Spanish-claimed territories to the West as well as the territories (Hudson Bay area, New Foundland and Acadia) that France was forced to surrender to Britain in the Treaties of Utrecht. In what

would be a controversial move, Delisle delineated the boundary of the British colonies to the east of the Appalachian Mountains reducing their size and enlarging the territory claimed by France.¹⁰⁵

These territorial claims are bolstered by the historical annotations and the marking of explorers' routes on the map.¹⁰⁶ Since European exploration served as the basis for land claims, these routes, with the names of the explorers and the dates of their expeditions were part of the "scientific" proof that the territory belonged to the French. The inclusion of the routes also served to highlight the Delisle method of scouring the published travel narratives, manuscript maps of the explorers, published maps, and unpublished accounts. He also conducted personal interviews to gather and corroborate the information included on his maps.¹⁰⁷ Associated with this concept of using past records to determine which country had been the first to explore the area and thereby justify the claim to the territory, Delisle included the location of several "old forts" as further proof of the French long term presence. Even the labeling of rivers either in French or in native languages and the indication of native tribes proved to be a way to indicate that the French have knowledge of the territory and therefore can claim it as their own. Another interesting historical annotation that irritated the British was Delisle's

¹⁰⁵ Petto, 100. The British claimed that the colonies extended to the western edge of the Appalachians and in the case of Virginia, all the way to Lake Erie. See H. Moll, *A New and Exact Map of the Dominions of the King of Great Britain...* 1715. This map shows not only the colonies but the territories the French lost in the Treaties of Utrecht.

¹⁰⁶ For a complete listing of these routes, see appendix C. At the very top of the map, Delisle includes a note next to the Mississippi River that reads, "We have gone up the Mississippi to here" thereby cartographically establishing the northern boundary of French territory.

¹⁰⁷ For an extensive look at how Delisle compiled and analyzed travel narratives and interviewed explorers see Dawson, 101-115.

claim that Caroline was named in honor of Charles IX by the French when they claimed the territory.¹⁰⁸

While the bold labeling of territories, cities, forts, and physical features, the citing of historical information, and the identification of native tribes conveyed the message that “La Louisiane” was a firmly established colony, the inset map of the mouth of the St. Louis River and Mobile lent even more credence to this claim. In reality in 1718 the French colony that was clustered around the mouth of the Mississippi was far from large and prosperous, consisting of between four to seven hundred men, women, and children.¹⁰⁹ The French government needed colonists to secure and maintain their claim to the land while at the same time the private company that was running the colony needed more colonists if it wanted to become profitable. French commercial interest in this area was building as a result of John Law’s daring financial solution to France’s economic troubles. Reeling from the hard economic times coupled with the massive debt inherited from Louis XIV, the Regency turned to a Scottish gambler turned economist named John Law.¹¹⁰ Law devised a plan to strengthen the French economy and reduce the government debt by transitioning the French economy to paper money while simultaneously selling government debt for equity in the Compagnie d’Occident. This

¹⁰⁸ Delisle also points out that the city of Charlestown was named “Charlesfort” by the French. Interestingly enough the Moll 1715 *A New and Exact Map of the Dominions of the King of Great Britain...* contains an inset map of the city of Charlestown and a blown up inset of Carolina. It may be possible that Delisle was responding in his “scientific” manner to what he perceived as false British claims to what should be considered French territory. If this is true then it was really Moll who began the cartographic war over North America. The cartographic war would continue until 1754 and the French and Indian War. Reinhartz, 32-33. For another British map that addresses the territorial concerns raised by the Delisle 1718 map, see Henry Popple, *A Map of the British Empire in America with the French and Spanish Settlements Adjacent Thereto* (London, 1733).

¹⁰⁹ The highest estimates place seven hundred French men and women in the colony while the lowest estimate was slightly under four hundred. Parkman, 545.

¹¹⁰ Peter M. Garber, *Famous First Bubbles: The Fundamentals of Early Manias* (Cambridge: MIT Press, 2000), 92.

company was created by Law in August of 1717. The company had a monopoly on trade with Canada and Louisiana and although it was meant to bolster colonial trade its primary function was government debt management.¹¹¹ Although the Regent was a firm backer of this company (he owned a forty percent stake in the name of the king), it was slow to take off. After the acquisition of the East India Company and China Company in May of 1719 the shares in the company skyrocketed only to collapse in the summer and fall of 1720 after shareholders tried to convert capital gains to goods or gold.¹¹² Regardless of the ultimate financial status of the company, Law's scheme and therefore the North American colonies were widely talked about in Paris.¹¹³ In terms of promoting "La Louisiane" as a colonists' paradise and worthy of investment, Delisle clearly portrayed the major waterways that would promote commerce and dutifully labeled "portages," but his major selling point for the French colony was the existence of mines. The earlier financial success of the Spanish in mining gold and silver in the Americas sparked the interest of both the government and private companies seeking to make huge profits and this may have led explorers to carefully note the location of mines whether real or invented.¹¹⁴ This information would be available to Delisle who chose to incorporate it in his map.¹¹⁵ Delisle positioned numerous labels throughout "La Louisiane" declaring the presence of mines. Specifically, he cited the location of copper mines and in two other

¹¹¹ Antoin E. Murphy, *John Law: Economic Theorist and Policy-maker* (New York: Oxford University Press, 1997), 167-69.

¹¹² Garber, 99. Law was disgraced and forced to leave France penniless.

¹¹³ While the plan had the full support of the Regent, it faced opposition in the parlement and was distrusted by the French nobility. Murphey, 170.

¹¹⁴ Lyle N. McAlister, *Spain & Portugal in the New World: 1492-1700* (Minneapolis: University of Minneapolis Press, 1984), 368-369.

¹¹⁵ The founder of Louisiana, Iberville was instructed to look for mines above all else as this was "la grande affaire." *Mémoire pour servir d'instruction au Sieur d'Iberville* cited by Parkman, 538.

places he informed the map-reader that the area is full of mines. There is also a river labeled as the “river to the mine,” which connects to the Missouri River.

Delisle included the locations of a large number of native populations and villages. This information could be useful in military planning and the construction of alliances. Large populations of natives could be a source of forced labor to work in the aforementioned mines as was done by the Spanish.¹¹⁶ Another reason may have been that natives were the principle traders of the colonists and therefore the location of native settlements would be of some commercial interest. When possible, Delisle identified the native group’s position either affiliated with a European power or at war with a European power. For example, along the border between “La Louisiane” and the Spanish territories Delisle noted that “these nations are at war with the Spanish.” This information could be useful for both commercial and political reasons in setting up trade and military alliances with the native populations. It is interesting to note that Delisle did not portray a vast empty continent ready to be peopled by Frenchmen. One reason for this might be that unlike the British colonists who came over seeking land and a permanent home, the French were more interested in exploiting the natural resources and then returning to France and therefore the presence of natives on the land was incidental.

Taken as a whole, the Delisle map appears to be a factual and scientific document. Indeed this was the hallmark of Delisle’s scientific cartography, and yet while it is obvious that Delisle was wrapped up in the scientific fervor of the times he was also motivated by his own commercial interests. Government officials needed “scientific” documents to divide up territories and levy taxes and other administrative and military

¹¹⁶ McAlister, 210-212.

reasons. Governments needed maps to establish the boundaries of colonies and communicate these boundaries to other competing powers. Closely aligned to the government, private companies needed maps to effectively plan and implement overseas commerce policies and establish trade monopolies. Finally, a growing newly literate public wanted maps not only as a source of geographic information but as symbols of their learnedness.¹¹⁷ Because the map is not meant to be considered a work of art but a product of science, it lacks an ornate dedicatory cartouche and is devoid of any illustrations.¹¹⁸ In the title of the map, Delisle seeks only the cartographic authority that comes from being a member of the “Académie Royale des Sciences.”

Yet, the map is ascetically pleasing. It has a symmetry and style that makes it just as much art as it is science. To achieve this look, Delisle took some liberties with the western portion of his map for which he had little if any information available. For example, the upper left corner of the map is occupied with a note about the natives while the Rio Grande is stretched all through the Rocky Mountains to the forty-fifth parallel. To fill the space next to the mountains, Delisle indicates with large printed letters that this is the country of the Apaches and the Padoucas. Perhaps Delisle thought that a well-proportioned map could be marketed more effectively to the segment of the population that displayed them as status symbols.

¹¹⁷ Margaret Beck Pritchard, “‘Useful & elegant furniture for screens, halls, larger rooms, stair cases’: Maps as Symbolic Objects” in Margaret Beck Pritchard and Henry G. Taliaferro, *Degrees of Latitude: Mapping Colonial America* (New York: Harry N. Abrams Inc., 2002), 43-56.

¹¹⁸ Moll’s 1715 and 1720 maps of the continent contain dedicatory cartouches and wonderful inset illustrations. A contemporary of Delisle, Nicolas De Fer, published a map of North America in 1718, which while it was devoid of a cartouche filled in the blank places in the map with little pictures of native groups in various activities from hunting to carrying canoes. Nicolas De Fer *Partie Meridionale de la Riviere de Missisipi et ses environs...*(1718).

At the very center and underlying all the many facets of the map, it is possible to perceive a culture in transition from a religious (Catholic) view of the world melded with classical learning to that of the new scientific philosophy at the service of the state. The Greek cartographic tradition is present in the basic design of the map including the conscious use of a map projection as well as the use of latitude and longitude. Although the Delisle map does not indicate the direction of the winds or personify them as was case with the some of the maps based on the teachings of Ptolemy, it can recognized as developing out of the Greek tradition.¹¹⁹ The religious view of the world epitomized by the previously discussed Hereford T. O. map has been effectively erased. Only the faintest traces of the Catholic view of the world proposed by French Jesuit missionaries remains. In this Catholic world view all human souls including those of the natives could be saved, God was the originator and sustainer of all creation and therefore ultimately all the earth belonged to Him. Likewise, the government derived its authority from God and was responsible for promoting Catholicism not only locally but throughout the world.

¹¹⁹ See world map from the Latin edition of Claudius Ptolemy's *Geographia* Ulm (1486) in Thrower, 61.

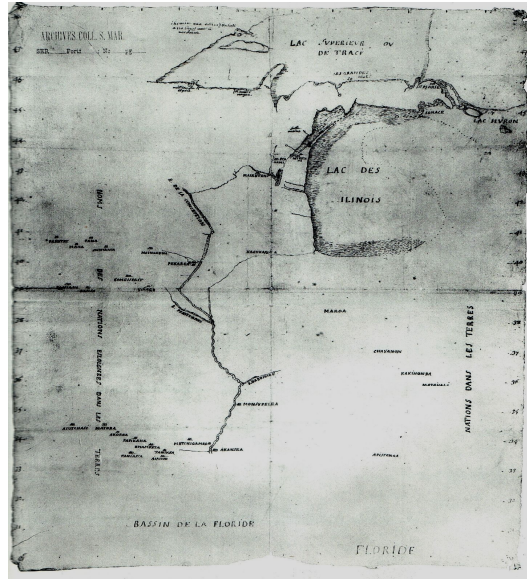


Figure 3: MARQUETTE'S 1673 MAP

Many of the manuscript maps and journal entries concerning the Great Lakes and the Mississippi River were the work of French religious missionaries, especially the Jesuits.¹²⁰ These men sent back to France accurate, but Catholic-oriented manuscript maps, which in turn were used as sources for printed maps. A good example of one such map is the 1673 manuscript map of the Mississippi River made by Father Jacques Marquette after he and Louis Jolliet became the first Europeans to navigate this important waterway.¹²¹ The religious undercurrents of this map are evinced in the details and toponymy that the Jesuit missionary included in his map.¹²² Marquette took special care to identify, locate, and count the different native settlements he encountered as a way to

¹²⁰ This religious organization, because of their extensive education, was on the whole very proficient in the construction of maps. Nellis M. Crouse, *Contributions of the Canadian Jesuits to the Geographical Knowledge of New France: 1632-1675* (Ithica: Cornell Publications Printing Co., 1924), 6. Also see Conrad Heidenreich, "Mapping the Great Lakes/ The Period of Exploration, 1603-1700" *Cartographica* 17/3 (1980): 37-45.

¹²¹ Marquette's map and journal can be found in the Jesuit archives in Quebec. Archives de la Compagnie de Jésus, Saint-Jérôme, Quebec Saint-Jérôme, #196. A photocopy is available in Sarah J. Turner, comp., *Indian Villages of the Illinois Country* (Springfield, IL: Illinois State Museum Scientific Papers, 2/1(1942).

¹²² The author made this argument in an unpublished paper entitled, "Marquette's Map of the Mississippi River: Religion and Cartography in Seventeenth Century New France."

further his purpose on the continent, which was to convert the natives to Catholicism. In the territory that Marquette explored, he retained the native names for all the physical features except the Mississippi, which in keeping with his lifelong devotion to the Virgin Mary, he labeled on his map the “R. de la Conception.” In his own way, Marquette was claiming the land and its inhabitants not for France per se but for God.¹²³

While not all of the French who traveled to North America shared this level of religious enthusiasm, the Catholic concept of regarding the natives as fellow souls showed itself in how the French interacted with, adopted the practices of, and intermarried with the native population.¹²⁴ While still visible in the many religious place names and the city symbols that have a building with a cross on the top of it that appear on Delisle’s 1718 map, the primarily Catholic view of the New World is replaced.¹²⁵ The territory was unabashedly claimed for France. Any native claim to the land was not even considered. It was understood that North America existed to be divided up among the European powers. While native names and locations dominated the map, they are recorded as a part of the scientific cataloging of the new dominions of France. The Illinois are here; forty Panis villages are there; the “Nation du Chat” was destroyed by the Iroquois here. Even the small sized labels warning of wandering and cannibalistic

¹²³This is in direct contrast to the maps which Jolliet made following the expedition which labeled the newly discovered territory in ways to flatter persons in power. For example the new territory is entitled “La Colbertie ou Amérique Occidentale” and the Mississippi River is renamed “Rivière Colbert” in recognition of the power Colbert possessed as Finance Minister. See Louis Jolliet, “Colbert/Griffon” map (1674), *Service Français de l’Hydrographie et de la Marine*, 4044B, #37.

¹²⁴While there was a certain degree of acceptance of the native “other,” European civilization and religion was consistently held to be superior. Allan Greer, ed. *The Jesuit Relations: Natives and Missionaries in Seventeenth-Century North America*. (Boston: Bedford/St. Martin’s, 2000), 16-17.

¹²⁵ The Jesuits fell out of favor with Pope Clement XI in 1704 not for anything they were doing in North America but for their adapting Christianity to fit with the Chinese rituals. The Regency was also hard on the Jesuits and banned them from preaching in Paris in 1715. According to Le Roy Ladurie, France under the Regency underwent a cultural transformation away from Jesuit-style Catholicism to a Protestant and capitalist tradition. Le Roy Ladurie, 282-286.

Indians comes off as a mere recording of data rather than a description of an untamed continent. This cataloging of the physical and human characteristics and the scientific process by which it was completed (the Delisle method, as we have seen, is celebrated throughout the map including the title) reveal that although it grew out of a Catholic worldview blended with Greco-Roman tradition and was created with commercial, social, and political interests in mind, the new way in which Europe was to view the rest of the world was through the developing philosophy of science with an eye to pragmatic capitalism.¹²⁶ The map not only gave expression to this view of the world but through its “scientific” authority, distribution, subsequent re-printings, as well as its incorporation into other maps it re-enforces and legitimizes this view until it is taken to be reality.¹²⁷ This philosophy espoused the idea that only through science and the scientific method could one arrive at the truth. By the use of increasingly more complicated technology to make observations, humans could not only discover objectives truths about the world but



Figure 4: H. MOLL'S 1720 MAP OF NORTH AMERICA

¹²⁶It is interesting to note the role that the Jesuit interest in education and science played in preparing the way for this philosophical shift. Delisle's father and consequently Delisle himself benefited from the rigors of a Jesuit education.

¹²⁷ Applied to the present day, the logical conclusion is a critical re-evaluation of how our maps view the world and our place in it. Do they help exploit the disadvantaged and/or further our political and commercial interests or do they promote peace and unity? For more on cartographic ethics see Brian Harley, "Can there be a Cartographic Ethics?" in Laxton ed., 197-207.

then could use the laws of nature for the benefit of humanity.¹²⁸ Specifically scientific cartography was co-opted and then funded by the governments of Europe not so much for the benefit of humanity as to effectively catalog and administer their dominions both at home and abroad.¹²⁹ Mapping became a tool for empire building. Delisle's 1718 map embodies this shift and adumbrates the great efforts taken in the latter half of the eighteenth century to classify and inventory knowledge about the world.¹³⁰ The importance of science as a secure pathway to objective knowledge about the world can also be seen on Moll's 1720 map of North America with its explanation of distance and scale located at the bottom right.¹³¹ Science and the corresponding technologies would guarantee that every literate British citizen or European for that matter would know for certain the extent of the British Empire. It is interesting to note that the British did not express disagreement with the capitalistic/scientific view of the world. Rather their only argument was that their portion of the territory was too small.

¹²⁸ Porter ed., 741.

¹²⁹ Petto, 59. "The work of eighteenth-century geographers reveals the development of the alignment of mapping and power for a state...and directed by scientific authority and rational thought in service of well-reasoned government."

¹³⁰ Such as Carl Linnaeus (1707-1778) and his system of taxonomy, Denis Diderot (1713-1784) who compiled his famous *Encyclopédie* as well as Georges Louis Leclerc Comte du Buffon (1707-1788) and his *Histoire Naturelle*.

¹³¹ See Figure 4. H. Moll, *A New Map of the North Parts of America claimed by France...* 1720. De Fer's 1718 map resembles Delisle's 1718 map in the title and over look of the map but the blank spaces are filled with depictions of native settlements, natives hunting and canoeing, wildlife, and European ships on the ocean. See De Fer *Partie Meridionale de la Riviere de Missisipi et ses environs...*(1718).

CHAPTER 5

CONCLUSION

As demonstrated by the analysis of Delisle's 1718 map of "*La Louisiane*," European cartographers made maps to communicate geographic information as well as to advance the political or commercial interests of their country while at the same time they attempted to boost their commercial and social success.¹³² In creating these subjective images of the world, the map-maker subconsciously reveals subtle cultural pre-conceptions about how the both the physical and human world is to be ordered. In case of the Delisle map, it was possible to perceive a culture transitioning from a fundamentally God-centered, Greek influenced conception of the world to that of a conception of the world in which humans, by applying the scientific method, are the source of all truth and that this scientific truth could be used by governments and businesses to promote their interests thereby making the world a better place.

Many geographers and historians of cartography have called for the widespread use of maps as primary sources citing, "the wealth of evidence it [maps] holds."¹³³ Yet the vision of specialists in art, map curators, historians, map collectors, and geographers working together has yet to materialize. Some scholars have embraced the possibilities presented by analyzing maps and this has resulted in some fascinating and relevant

¹³² Because these maps or visions of world differed, cartographic dialogues took place between competing cartographers and European powers.

¹³³ Heidenreich, "Seventeenth-Century Maps of the Great Lakes...", 112.

discoveries.¹³⁴ By examining the complete map, from its technical aspects to a close (material-history) analysis of the culture surrounding its creation, and through to its latent subconscious message, the hope is that this map analysis will promote the history of cartography as not only beneficial to map collectors but as an essential for any scholar seeking to understand Western Civilization's interaction with the rest of the world. By their nature maps are abstractions of reality, "lies" as some scholars have called them, but it is precisely because they are social constructions that they cannot help but tell the truth about the people and culture that created them.

¹³⁴ An example of one such study which brilliantly incorporates maps as primary sources is D. Graham Burnett's *Masters of All They Surveyed: Exploration, Geography, and a British El Dorado* (Chicago: University of Chicago Press, 2000).

APPENDIX A

LIST OF LOCATIONS, RIVERS, AND NATIVE TRIBES

Bodies of Water

Ance au Tonorre
B. des Puans
B. S. Rose
Bay de Delaware
Baye de Afcension

Baye de la Mobile
Baye de Saguinam
Baye S Andre
Baye S Joseph
Baye S Loues ow S Bernard
Baye S Louis
Cap Anclote
Cap Canavera
Cap Charles
Cap de Maye
Cap du Nord
Cap Fear
Cap Hattaras
Cap Henry
Cap Hinlope
Cap lock out
Cap S Blaise
Grand Harre de Oeuf
Guf de Mexique
L. Champlain
L. Du S. Sacramento
L. Michigan
L. Nipifsing
L. Ontario
L. Quentio
L. S. Francois
La Baye de Lac
La Baye du S Esprit
La Grande Baye de Chefapeack

Lac aux Outaouacs
Lac des Michigamia
Lac des Vieux Deserts
Lac Ganatcho ou S. Clair
Lac Huron ou Michigan
Lac Maurepas
Lac Pepin
Lac Pimintoui

Land Forms/Portages

C. de la Pointe
C. de L'Hurondelle
Caratock Island
Chemin de Mexico
El Paso S George
Enbouchure de Rio
Bravo
Grand Savane
I a la Sande
I au Chier
I aux Charreuils
I aux Conots
I aux Tefsier
I aux Vaifcar
I Blanche
I Bretan
I Carne
I Chat
I Dauphin
I de Calleton
I de Chingoteac
I des Etats
I L'Ereque
I Longue
I S Michel
I Tortues
I. Manitoualin
I. S. Rofe
Ifse des Rapide
Is Ance Perce
Is de la Chandeleur
Islet Marie
la Grande Pointe
Lae Tonty
Mont Edlo
Plaine elevre et langue
de 70 Lieves
Pointe d'Oziers
Pointe Moyenne
Pointe S Francois
Portage d'Anoivenre
Premier Rapide
Raonack Island
S. Marie

Lac Pontchartrain
Lac Sandoufke
Lac Superieur
Lacs de Sel
Lak Erie ow Duchat
Mer du Nord
Petit Harre d' Oeuf

Saut de Niagara da 600
pieds de haut
Saut S Marie
Second Rapide
Terre Maracageuse
Terre Tremblante
Vokokon Island
Warxes Island

Rivers

Acconachena R.

Afhley R.
Assenifipi ou R. de la
Roche
Borachica
Charente R.
Chavann R.
Chicagow R.
Clarende R.
Garone R.
Gironde R.
Grand River Des
Canfez

Grande Riviere
Huakiki R.
La Ducre R.
La Maline R.
La Sablonniere R.
Le Mifsour R ou Riv.
Large ou Pekitanomi

le Missouri R.
Le Moingana R
Loire R.
Malaninicu ow R.
Baquiville
Manamee R.
Matancas
Mellehi R.

Rivers Continued

R. de bon Fecours
ou Hahaton-ouadi
R. de Cataorcour or
Iroquois
R. de
Chachagouche
R. de Efope
R. de Flores
R. De James
R. de la Trinite
R. de los Canchos
R. de Macopin
R. de Macopir

R. de Marameg
R. de Nueces ow
des Noir
R. de Ramos
R. de S Sufanne
R. de Vafija
R. de Wingau

R. del Vino
R. delvdina ow de
Bagres
R. des Aiaouez
R. des Araouez
R. des Caoutas or
R. de May
R. des Ouachos
R. des Outaouacs
R. des Pafegoula

Rivers Continued

Rievriere S. Joseph

Rio de San Marco ow Colorada

Rio del Norte ou Riv. Dw Nort
Rio des Florez
Rio Frio
Rio Guadalupe au de la Madelaine
Rio Hando
Rio Salado de Apaches
Rio Salinas de Nadadores
Riv a Lalleman

Riv ou Aunages

Riv. Des Ahanfas
Riv. Des Panis
Riviere a Margot
Riviere des Cenis
Riviere des Illinois

Riviere des Ofages

Riviere des Ouatehitas
Riviere d'Oubache vierde
Riviere Rouge

S. Jean
S. Martir
S. Mathiew
S. Pierre x2

Mite R.	R. des Quicapow	Somme R.
Mofquitos	R. des Salines	Toushake R.
	R. des Tacatocorow	
Monanloch R.	de Siene	Vilchez
Moratuck R.	R. Des Yafous	Watere R.
Naouefsacouet R.	R. du Cayeux	Waynok R.
Neus R.	R. du Hudson	Zama R.
Noratoch R.	R. du Rocher	
Oca R.	R. Fourchue	
	R. Joseph oudes	
Ochouegen R.	Miamis	
Ohio ou la Belle		
Rieiere	R. Marquete	
Ouaisacadela R.	R. Mexicanno	
Ouisconsing R.	R. Nantounagā	
Ouramani ou R. aux		
pammes Salines	R. Noire	
Patow R.	R. Noire	
Petit R. de la		
Madedene	R. ou Parifien	
Petit Rio dux Cañes	R. Paquitamet	
Petit Riv des Caneix	R. Quiouecouet	
R de Leon	R. S. Antoine	
R. a Boeuf	R. S. Croix	
R. a la Mine	R. S. Francois	
R. a la Saline	R. S. Piere	
R. au Canot	R. S. Remy	
	R. Sante ou	
R. aux Ailes	Jourdaim	
R. aux Ecors	R. Sarco	
R. aux Ours	R. Talacatchina	
R. aux Perles	R. Verte	
R. aux Renards	Rappahanok R.	
	Rieirere des	
R. Bati ou de S.	Anciens	
Therefe	Chaouanons	
	ainfi nommei	
R. Cachie	parceque les	
R. Castistable	R. de Andastes	

Indian Villages

Adai
Afsinais

Indian Villages

Continued

Tchaouachas
Tchatchagoula

Aiouache
Amoki
Anofila
Bayougoula
Bidaye
Caligoa
Caloucha
Canoge fort des
Indiens
Capautoucha
Cenis
Chaouanans
Chaoula
Chattaux
Chicagou
Colapifsa
Eripiames
Ganafteiagon
Gandarafke
Gannaouague
Goyogouen
Gras villages des
Cheraqui
Hubates
Ihatamaa
Judafo
Kanouhanam
Kataapa
Kialba
Les Tamos
Miskouakimina
Mofila
Nabiti
Nacachez
Nacanne
Namiaba
Naouadiches
Nondcequer
Oachinoa
Oneiout
Onontague
Ouanahina
Oumas
Pafcagoula
Quiohouhahan

Tchattaouchi
Teao
Teiaiaigon
Tilapani
Tinamares
Tocapataerrans
Tonicas

Yamefsey
Yatachez

Sante Fort Indien
Sijames
Sitimaches
Sonnontouan
Tafkequi
Talicouet
Tamez
Tapa

Cities & Locations

Albemarle Cte.
Ancient fort de Francois
Arandeton
Aubois
Aubois

Aurestrap
Baltemore
Barkely
Bridlington
Briftol
Bucks Cte.
Calver Cte.

Carlard

Cecil Cte.
Cecilton
Chambly
Charlestown
Chefter Cte.
Clarendon Cte.
Cochitu
Cortuk Cte.
Cte. dAccomack
Cte. De North Hampton
Darinton
Detroit
Dorcefter Cte.
Efope
Elizabeth
F. Denonville
F. S. Therese
Fort et vieux fort

Cities & Locations

Continued

Neucaftle
New Jersey
New Kent Cte.
Nobre des Dios
Nouvelle Biscaye
Nouvelle Royaume de
Leon
Nouvelle York
Orange
Oxford
Parral
Pensacola
Pensilvanie
Portie du Canado ou
Nouvelle France
Presidio del Norte ou S.
Jean Baptide
Pueblo de Pecuries
Rancho del Governador
Reablo
Rie
Rofalio
S Geronimo
S. Augustin
S. Domingo
S. Marie d' Apalache
S. Mary Cte.
S. Phelipe d'Albuquerque
Sa Fe
Senecu
Socorro
Somerset
Sorel
Stafford Cte.

Fort la Motte
Fort Louis
Fort ou Ecors Prudhomme
Ft. Francois
Ganneioue
Graven Cte.
Guadeloupe

Henrico Cte.
Herinton
Ilefu
Jamestown
Kente Catarocoui
La Famine
La Louisiane
La Oja
La Punta
Les Barrancas
Mariland
Mifsicr de los Tejias
Mines S Barbe ou Vallon S Barteleni
Miscales
Montreal
N. Jerfey
Natchez
Natchitoches

Talbot Cte.
Tefsalon
Toniala
Ve de Vernabiletto
Ver de Albuquerque
Vieux Fort de Bilocci
Vieux Fort Hiullier
Villa nueva de S. Maria de
Grado
Villemarie
Virginie
Virie
Warwick Cte.
Weftmerland Cte.
West Chester

Tribes

- 1 Aiaouez
Aiaouez ow Paoutez
- 2 (Deranged)
- 3 Algonquins
- 4 Amilcow (Destroyed)
- 5 Andastes
- 6 Andastes ou Sasquchanos
- 7 Antrpophages
- 8 Apaches
- 9 Apalaches
- 10 Apalachicolis
- 11 Aricara
- 12 Cahinoa
- 13 Camfez

- 14 Cannefy
- 15 Caouaches

Tribes Continued

- 58 Les Nipifsimiens

- 59 Les Octolata (Destroyed)
- 60 Les Padoucas
- 61 Les Paniafsa
- 62 Les Panimaha
- 63 Les Pinnitoui ou Peoria
- 64 Les Poutouatamis
- 65 Les Quicapou
- 66 Les Renards
- 67 Les Tacopata
- 68 Les Tintan
- 69 Les Toaux
- 70 Les Tongeria
Lew Chattas ow Tete
- 71 Plates
- 72 Los Conchos

16	Caouitas	73	Loupeloufsa
17	Chaouala	74	Mataouan
18	Chaouanons	75	Mechemeton
19	Chiaha (Deranged)	76	Mentous
20	Chiahantefou Conchaques (Nomme par les	77	Merouan
21	Espagnols)	78	Miamis (Deranged)
22	Conchatez	79	Mifsilimakinac
23	Conohofse	80	Misfisfsague
24	Cutifaciqui (Deranged) Detrinite par les Iroquois	81	Mobiliens
25	(Destroyed)	82	Mufpa les Carlos
26	Elle a ite Detriute (Destroyed)	83	Nabiti
27	Etiopen	84	Nadacoc (Destroyed)
28	Gandatfieagō	85	Nafahfsez
29	Horheton	86	Natchitoches Nation Ddu Petun
30	Huron Detruits (Destroyed)	87	detrivite (Destroyed) Nation deu Chat
31	Hurons	88	(Destroyed) Nation Neutre
32	Ilinios	89	(Destroyed)
33	Ihouannez	90	Ocute (Deranged)
34	Iroquis	91	Onghetgechalo
35	Iumanes ow Parabuyeis	92	Ouanahinan
36	Kaibrache	93	Ouapama Ouichaatcha ou Les
37	Kappa (Destroyed)	94	Courtes Jambes
38	Les Ahanfa	95	Ouidachenator
39	Les Amikoué	96	Ouidaougeounaton
40	Les Cadodaquios	97	Outaouacs
41	Les Camsez	98	Outaouacs
42	Les Capinas	99	Padoucos
43	Les Chacahante	100	Pafsaguates
44	Les Cheraqui	101	Panis Par les Iroquois
45	Les Chicachas	102	(Destroyed)
46	Les Choqmans	103	Pidi
47	Les Ebahamo	104	Poutouatami
48	Les Grinaiches	105	Quanineo
49	Les Ilatamaa	106	Quinaouatowa
50	Les Kahansics	107	Siouz de L'ouset
51	Les Kanaotinos	108	Taenfas
52	Les Lamefsez	109	Talalouchi Amafsi
53	Les Mafcaiter ou Nation dw	110	Tamarous et Caoucuias

	few		
54	Les Maha	111	Tefcaloufsa (Deranged)
55	Les Mefsouris	112	Tiguas
56	Les Miamis	113	Tonihás
57	Les Mifsifsagué		

APPENDIX B

DELISLE'S MAPS OF NORTH AMERICA

MAPS CONTAINING NORTH AMERICA PUBLISHED BY THE DELISLES

1. *L'Amérique Septentrionale* (Paris, 1700) Bibliothèque Nationale, Cartes, GE BB 565 (XIV) 67.
2. *L'Amérique Méridionale* (Paris, 1700) Bibliothèque Nationale, Cartes, GE BB 565 (XIV)109.
3. *Carte du Canada ou de la Nouvelle France* (Paris, 1703), Bibliothèque Nationale, Cartes, GE BB 565 (XIV) 89.
4. *Carte du Mexique et de la Floride* (Paris, 1703), Bibliothèque Nationale, Cartes, GE BB 565 (XIV) 93.
5. *Carte de la Louisiane et du cours du Mississipe* (Paris, 1718), Bibliothèque Nationale, Cartes, GE BB 565 (XIV) 91.
6. *Carte d'Amérique* (Paris, 1722), Bibliothèque Nationale, Cartes, GE BB 565 (XIV) 66.
7. *Mappemonde* (Paris, 1700), Bibliothèque Nationale, Cartes, GE CC 1246 (9).
8. *Mappemonde* (Paris, 1720), Bibliothèque Nationale, Cartes, GE DD 4696 (19).
9. *Hémisphère Septentrionale* (Paris, 1714), Bibliothèque Nationale, Cartes, GE BB 565 (I) 23.
10. *Hémisphère Occidentale* (Paris, 1714), Bibliothèque Nationale, Cartes, GE BB 565 (I) 20.

APPENDIX C

HISTORIC ROUTES

HISTORIC ROUTES

Hernand De Soto 1539-1542

Luis de Moscoso (De Soto's successor) 1542

René Robert Cavelier, Sieur de La Salle 1684-1687

Louis Juchereau de Saint Denis 1714 and 1716

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- Delisle, Guillaume *Carte du Canada ou de la Nouvelle France*. Paris, 1703.
- Delisle, Guillaume *Carte du Mexique et de la Floride*. Paris, 1703.
- Delisle, Guillaume *Carte de la Louisiane et du Cours du Mississipi Dressée sur un grand nombre de mémoires entr’autres sur ceux de Mr. le Maire par Guillaume Delille de l’Académie Rle. des Sciences*. Paris, 1718.
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