

1957

## Science and Historical Truth on French Maps of the 17th and 18th Centuries

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### Recommended Citation

Johnson, H. B. (1957). Science and Historical Truth on French Maps of the 17th and 18th Centuries. *Journal of the Minnesota Academy of Science, Vol. 25 No. 1*, 327-337.  
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## Science and Historical Truth on French Maps of the 17th and 18th Centuries<sup>1</sup>

French maps of the 17th and 18th century represent a period of transition in French cartography. Prior to the turn of the 17th century traditionalism and conservatism were the rule, induced partly by the practice of using the same copper plates repeatedly, on which slight improvements, additions, and corrections were technically easy. Aside from new information gained through explorations and from the comparative study of various sources nothing new was added to the science of cartography. A "reformation of cartography" began around 1700, mainly due to French cartographers (Sandler, 1905). They owed most of their advances to the achievements of the *Académie des Sciences* in Paris. These advances included Jean Picard's measurement of the length of a degree of a meridian between Amiens and Malvoisine from 1669 to 1671; the computation of the circumference of the earth; the development of a method to determine longitude by Jean Dominique, the director of the observatory at Paris; the practical rules to determine correct position by astronomical observation (Brown, 1950; Skelton, 1952). Claude Delisle, his son Guillaume Delisle and J. B. Bourguignon d'Anville led in the new science of mapping the world accurately. In 1744, César Francois Cassini de Thury completed the triangulation of France and thus set another new standard for accuracy.

Prior to the age of accuracy maps were often decorated to look beautiful, to honor persons in high offices or the patron who had commissioned a map, and simply to be more interesting. Maps were guides, not only for explorers, but also for statesmen who planned the strategy of building colonial empires. Thus some items were

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<sup>1</sup>This investigation was supported by the DeWitt Wallace Macalester Research Fund.

intentionally and legitimately omitted or emphasized by the craftsmen. The information contained on such a map must not be assumed to be always identical with the actual geographic knowledge extant at the time. Information may have been intentionally withheld, may not have been available to the mapmaker, it may have appeared unimportant to him, or the craftsman found it technically impossible to add it onto the older plate.

Mapmakers used pictorial symbols rather than abstract or geometric signs and often filled blank spaces with fabulous animals, elaborate coats of arms and decorations in mapmaking.

The description and interpretation of a historical map usually consists of the establishment of its date and origin, a comparison of geographic reality as it is known today with the information contained on the map and of a specification of the differences between the map and its predecessors. Another approach is attentive to the ideological background, the historical concepts and values of the period from which a map dates and which it may reflect. This second approach proved rewarding for an understanding of the meaning of mountain ranges on French maps of North America. Not only French, but other cartographers also drew mountains, steep ranges and sharp crests in locations where mountains of such picturesque appearance did not or do not exist.<sup>2</sup> But the French contributed the major share of discoveries in the interior of North America during the seventeenth century and the representation of the lands, discovered or to be discovered by them, is of particular historical interest.

The interest of a well-known man of literature in the United States also was aroused by these mountain ranges. Bernard De Voto was no geographer, but his book *The Course of Empire* (1952) is accompanied by maps drawn by Erwin Raisz, an outstanding American cartographer, and much of De Voto's presentation is based on

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<sup>2</sup>Good examples are Cornelius Wytfliet, Maps of Florida, Virginia and Norumbega from *Descriptio Ptolemaicae augmentum*, Louvain, 1597; Marc Lescarbot's map from *Histoire de la Nouvelle France*, Paris, 1609; Delisle's *Carte du Canada* of 1703; Delisle's *Carte De la Louisiana et du Cours du Mississippi* of 1718; the Mercator Map of North America, Duisburg, Germany, 1569, and many maps in Joan Blaeu, *Le Grand Atlas*, Amsterdam, 1667. Other examples in Charles O. Paullin, *Atlas of the Historical Geography of the United States*, Washington & New York, 1932 with reproductions of important maps on plates 8-32.

the study of early maps. He emphasizes the significance of an illusory east-west running mountain range on maps of the North American continent from the early discoveries to, at least, 1677, and criticizes: "I am not writing the history of American geography but must insist on the importance of this concept whose consequences have by no means been sufficiently appreciated . . . The importance and persistence of the idea, and the misconceptions caused by its variations can be appreciated only by studying a chronological sequence of 16th, 17th, and 18th century maps." He then proceeds to discuss in great detail the longitudinal and latitudinal position of this east-west running mountain range on various maps.

It is not necessary to reproduce a chronological sequence of maps many of which have been reprinted in books on historical cartography. One good example of the mountain range, running from east to west across the central plains of the Mississippi basin is found on the map of 1650 *Amérique Septentrionale* by Nicolas Sanson of Abbeville, the "geographe ordinaire du roi," reproduced in Plate 1. The original is more impressive than the black and white reproduction since the mountain crests are emphasized by colored lines drawn by hand on the printed page.<sup>3</sup>

The French, in their geographical explorations, entered North America via the St. Lawrence River. Jacques Cartier discovered it in 1534 and penetrated up to *Le Mont Royal*—Montreal—one year later. The narrations of his travels contain the tales of inland waters, which he heard from the Indians, and the first observations which were to become the habit of all French explorers, voyageurs and travellers (Cartier, 1580). He estimated the size of the hinterland of the rivers, the character of the area which they drained, the whole land by observing the volume and character of the stream. Samuel de Champlain, the second great explorer of Canada, penetrated to Lake Huron via the Ottawa River and Lake Nipissing route. He was the first great hero of the canoe age in North America when many

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<sup>3</sup>The original loose sheet map is in the Bell Collection. Similar maps are found in Nicolas Sanson (1683). A number of original single maps and an outstanding collection of first editions of books with important early maps are available in the James Ford Bell Collection at the University of Minnesota Library. The author is grateful to John Parker, curator of the Bell Collection, for his helpful assistance.

water routes and river shores became known, but little of the land. He defended French claims on Canada as the vast land which is drained by the St. Lawrence River, against British claims which also extended into the interior and were defined by latitudinal lines drawn through certain points on the spottily settled coast (cf. Champlain, 1632.)

In his first report to Colbert, the controller general of finance under Louis XIV, Talon, the first Intendant of Canada wrote on October 4, 1665, from Quebec: "Canada is of very vast extent . . . The whole of this country is diversely watered by the St. Lawrence River and other beautiful rivers which discharge into its bed" (O'Callaghan, 1855). A short time later, on June 14, 1671, Sieur de Saint Lussou claimed the whole interior of North America for the king of France by "taking possession of the Sainte Marie du Sault, also of Lake Huron and Superior, the Island to Caientoton (Manitoulin) and of all other countries, rivers, lakes and their tributaries contiguous and adjacent thereto, those discovered and to be discovered" (Kellogg, 1917). These are official statements and noteworthy for emphasis on rivers to which the land is adjacent rather than on territory bounded by rivers. Sanson's map of 1650, his later maps, and the atlas of 1683 produced during the period when the French crown became increasingly interested in Canada, clearly reflect the whole concept of La Nouvelle France in North America as the area of the drainage basin of the St. Lawrence. This includes the Great Lakes. The east-west running mountain range, the handling of the headwaters of the Mississippi served the purpose of setting off Spanish Florida from French Canada. An analysis of the wrong location of this mountain range is neither scientifically rewarding nor historically valid.

After the discovery of the Mississippi through the travels of Jacques Marquette and Jean Baptiste de La Salle and the extension of French claims over the Mississippi basin, the east-west running mountain range disappeared from maps, for instance on those which accompany Louis Hennepin's (1683) descriptions of Louisiana. However, the delineation of political claims in terms of rivers with their adjacent lands or of drainage basins continued to be used in

political instruments. The grant for Antoine Crozat, issued by Louis XIV on September 14, 1702, to develop the trade along the lower Mississippi defined Louisiana as the area of the St. Louis River (Mississippi) up to the Illinois, of the River St. Philippe (Missouri) and of the St. Jerome (Wabash) "with all countries, territories and lakes in this region and with the rivers which flow directly or indirectly into the St. Louis River in this area" (Lettres, 1712:1-2). The wording of the patent was literally incorporated into the new patent for the *Compagnie des Indes* which administered Louisiana from 1720 to 1731. Under the administration by the French government the uncertainty relative to the administrative boundaries in the Illinois country continued and the governors of Canada and Louisiana exchanged letters as late as 1748 in which they discussed whether Illinois should be subject to Quebec or to New Orleans (Kellogg, 1925).

One of the most enlightening documents in the political geography of New France is the memoir by Count de La Gallissonnière, written in December, 1750, after his short service as governor of Canada from 1747 to 1749 (O'Callaghan, 1858). The document reveals most of all de la Gallissonnière's sharp understanding of the importance of the Ohio River for the French empire in North America. For various reasons the French had largely by-passed the Ohio and therewith the southern shore of Lake Erie. It is also noteworthy that de la Gallissonnière urged that *les eaux pendantes*, the divide, become the boundary between British colonies to the east and French Canada and Louisiana to the north and west. The divide between the Atlantic coast on the one side and the Mississippi and St. Lawrence drainage basins on the other, that is, the crest of the Appalachians Mountains, was used in the Proclamation of Quebec of October 7, 1763, in which the vast land that France had ceded to England was divided administratively.<sup>4</sup> The Proclamation Line of 1763 is based, for its longest stretch, on the divide, a physiographic basis which is not easily recognized on the maps of historical atlases which show political, rather than physical characteristics of areas (Shepherd, 1956; Putzger, 1918; Muir and Philip, 1927).

<sup>4</sup>The proclamation was published for the first time in *Gentleman's Magazine*, October, 1763, and is reprinted in Henry Steele Commager, ed., *Documents of American History*, 3rd edition, New York, 1948, pp. 47-48.

The awareness of divide and drainage basins was natural, however, for explorers and fur-traders who used lakes and rivers for their travel, again and again canoed upstream, portaged across divides and then again floated, paddled and rowed downstream in the next drainage basin. When Jacques Marquette arrived at the swampy, level portage from the Fox River to the Wisconsin River in June 1673, he wrote in his diary: "And thus we left the waters flowing to Quebec four to five hundred leagues from here to float on those that would henceforth take us through strange lands" (Kellogg, 1917). Through the following decades the understanding of the river courses and of the possibilities to cross from one to the other became increasingly important for explorers, traders, and military men of French Canada. An example of deliberate usage of mountain ranges to indicate divides, even in near-level land; where nobody suspected mountains and their absence was well-known, is reproduced in Plate 2.

Philippe Buache was one of the foremost cartographers of France in the middle of the 18th century and his *Carte Physique de Canada* of September 4, 1754 incorporated the latest discoveries by French officers in the area west of Lake Superior. The map was drawn for the *Académie des Science*. All signs used on the map are carefully listed in the key and are abstract rather than pictorial. The usage of mountain ranges is explained in detail in the "remarks" to the left, in the third and fourth passage. They read in translation: "The mountain chains drawn along the courses of the headwaters of the rivers divide this part of Canada into three drainage basins. One is inclined toward the Gulf of Mexico, where the waters of the Mississippi flow; the other is inclined toward Hudson Bay into which Bourbon River (Nelson River) discharges, the outlet of recently discovered lakes; the third is inclined toward the Northern Ocean into which the St. Lawrence River discharges, which—being formed mainly by the waters of Lake Superior and the other lakes—has its sources, as one sees now, in the region of Lake Sesakmaga and Tecamamiouen which are also the region of the headwaters of the Bourbon River."

The last passage explains the cartographic technique: "Although our officers have marked by signs the heights of land and the river

courses on their maps of discoveries, they still suspect—like the savages—that these communications which the rivers with opposing courses offer can only be used by portages . . . But in order to express the natural state of the terrain, rather than to employ signs, we have here shown mountains between the sources of neighbouring rivers in the parts west of Lake Superior, into which some rivers discharge while others flow to the west and south.” (See Plate 3.)

“*L'état naturel du Terrain*”, the natural state of an almost level region, is sharply accentuated by mountain crests. It would be a gross injustice to the scientist who drew this map to speculate about the illusions that these mountain ranges represent. They are symbols for a physiographic feature of great importance in the history of French Canada and to the men who were to penetrate, chart, and administer it. This map is unique in its clear explanation of the intention of the mapmaker. In other cases, illustrated by Sanson's map, the intention has to be discovered by the study of the historical background. If maps are scientific instruments, and this geographer believes that a great number of them are, their meaning is likely to be better revealed by an evaluation in terms of the historical period which they represent than by the application of standards that belong to another age in the history of science.

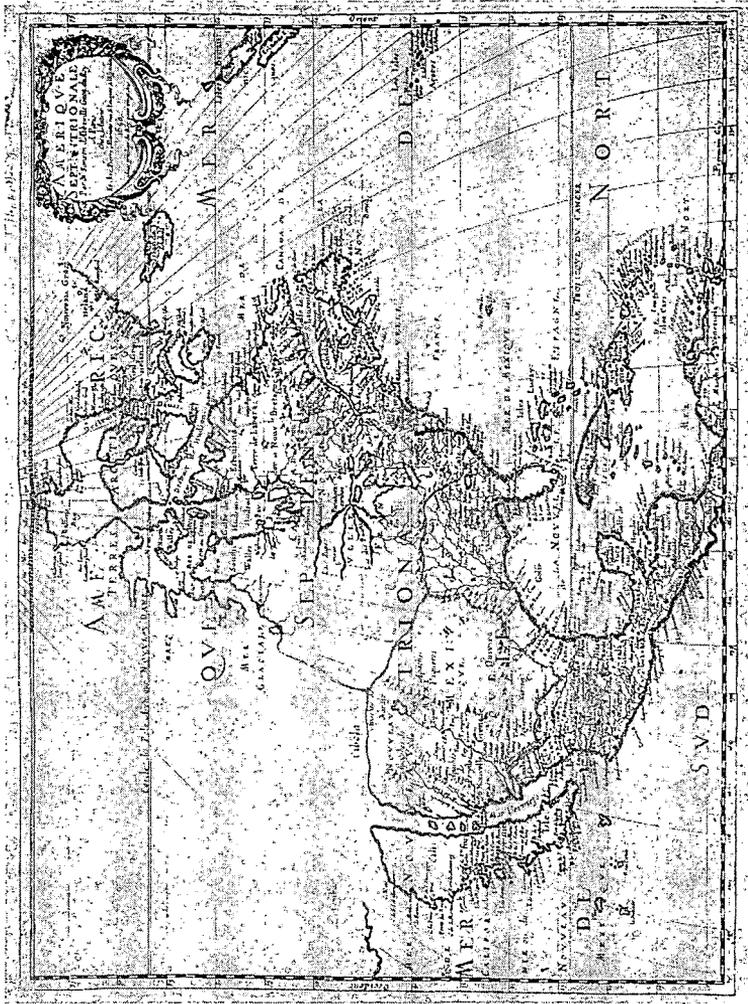


Fig. 1. From Amerique Septentrionale by Nicholas Sanson of Abbeville, 1650.



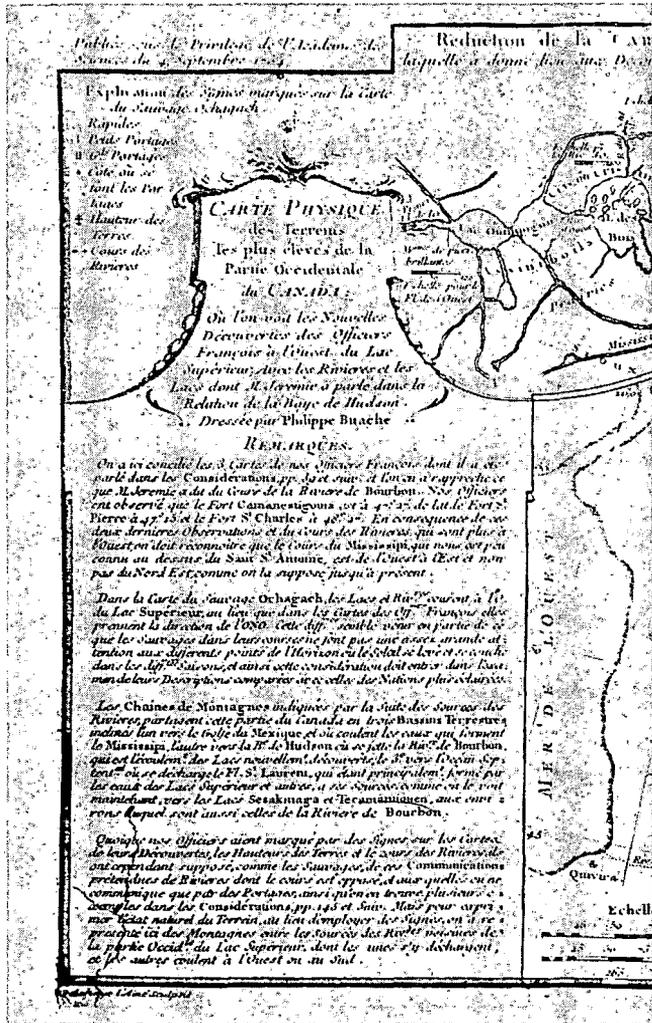


Fig. 3.

LITERATURE CITED

- BROWN, LLOYD A. 1950. *The story of maps*. Boston.
- CARTIER, JACQUES 1580. *A shorte and brief narration of the two nauigations and discoueries to the Northwest partes called Neue France*. London.
- de CHAMPLAIN, SAMUEL 1632. *Voyages de la nouvelle France occidentale*. Paris.
- De VOTO, BERNARD 1952. *The course of empire*. Boston.
- HENNEPIN, LOUIS 1683. *Description de la Louisiane nouvellement decouverte*. Paris.
- KELLOGG, LOUISE PHELPS 1917. *Early Narratives of the Northwest, 1624-1669*. New York.
- KELLOGG, LOUISE PHELPS 1925. *The French regime in Wisconsin and the Northwest*. Madison, Wisconsin State Historical Society.
- LETTRES PATENTES DU ROY 1712. *Lettres Patentes Du Roy, qui permet au Sieur Crozat Le Commerce de la Louisiane*. (Original copy in Bell Collection.)
- MUIR, RAMSAY and PHILLIP, GEORGE 1927. *Historical Atlas*. London.
- O'CALLAGHAN, E. B. 1855-58. *Documents relative to the colonial history of the State of New York*. Albany, Vols. 9, 10.
- PUTZGER, F. W. 1918. *Historischer Schul-Atlas*. Bielefeld, Leipzig.
- SANDLER, CHRISTIAN 1905. *Die Reformation der Kartographie um 1700*. Munich.
- SANSON, NICHOLAS 1683. *Atlas*. Paris.
- SHEPHERD, WILLIAM R. 1956. *Historical Atlas*. (8th Ed.), New York.
- SKELTON, R. A. 1952. *Decorative Printed Maps of the 15th to 18th Centuries*. London.