

“Writing has nothing to do with signifying. It has to do with surveying, mapping, even realms that are yet to come.”

Gilles Deleuze and Félix Guattari, *A Thousand Plateaus*.<sup>1</sup>

Conceptual tools, maps often form an integral part of textual works. This handout provides you with some basics of visual literacy as they apply to cartographic sources. Understanding what maps are, their basic elements, and how to read them, will enable you to use maps effectively in your writing and analyses.

### What are visual literacy and visual rhetoric?

Visual literacy refers to the ability to “read” or “write” images, such as maps, much like the way we “read” and “write” language. This form of literacy requires an awareness of “visual rhetoric”—the ways visual images communicate meaning. By definition, visual rhetoric includes specific concepts of design or aesthetic theory and describes how images reflect, communicate, and shape cultural meaning.<sup>2</sup>

### What are maps and how are they used?

Maps are tools that communicate information to a reader. More specifically, maps are visual representations that writers can analyze and contextualize in order to incorporate them effectively into their work. Usually two-dimensional representations of three-dimensional space, maps use symbols and objects to represent various types of data. Maps have been used by nearly every, if not all, cultures in the world and are one of the oldest methods of nonverbal communication.<sup>3</sup> One scholar notes, “humans were probably drawing maps before they were writing texts.”<sup>4</sup>

Historically and in the modern day, people use maps to illustrate spatial relationships, whether among populations, land areas, economic data, trade flows, or other categories. All maps, however, present a “selective view of reality,” because they convey only partial information—what the cartographer, or mapmaker, determines best serves the purpose of the map itself.<sup>5</sup> In other words, maps are not objective representations of reality. Rather, the cartographer makes decisions about what to include, what to exclude, what to emphasize, and how to visually represent the information. All these decisions reflect how mapmakers interpret what they are mapping.

### What are the basic elements of a map?

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<sup>1</sup> Gilles Deleuze and Félix Guattari, *A Thousand Plateaus*, trans. Brian Massumi (Minneapolis: University of Minnesota Press, 1987), 5; cited in Bosteels, “A Misreading of Maps: The Politics of Cartography in Marxism and Poststructuralism,” in *Signs of Change: Premodern, Modern, Postmodern*, ed. Stephen Barker (Albany, N.Y. State University of New York Press, 1996), 138.

<sup>2</sup> For more information about visual literacy and visual rhetoric, see “Overview: Visual Rhetoric/Visual Literacy,” Duke University Writing Studio, [http://twp.duke.edu/uploads/media\\_items/overview-vis.original.pdf](http://twp.duke.edu/uploads/media_items/overview-vis.original.pdf) (accessed January 27, 2009).

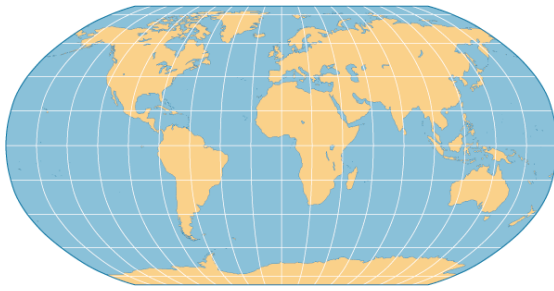
<sup>3</sup> Joni Seager, “Maps,” World History Sources, <http://chnm.gmu.edu/worldhistorysources/unpacking/mapsmain.html>, (accessed January 27, 2009).

<sup>4</sup> Ibid.

<sup>5</sup> Mark S Monmonier, *Mapping It Out: Expository Cartography for the Humanities and Social Sciences* (Chicago: University of Chicago Press, 1993), 21.

*Scale* is the degree of reduction and the ratio between a distance on the map and the corresponding distance on the Earth.<sup>6</sup> In other words, the scale will tell you how to translate the area or distance on the map into the actual area or distance that is being represented. You will most likely find this mathematical ratio in the map's legend.

*Map projection* is a method to show a three-dimensional object in a two-dimensional plane. (Think of a flat, two-dimensional map of the Earth.) There are a variety of methods to accomplish this task. The process, however, often distorts the three-dimensional object in some way just by the very nature of trying to show a three dimensional object as a two dimensional representation.<sup>7</sup> A system of lines on a plane, such as longitude or latitude, corresponding to imaginary lines on land, illustrates projection on a map.<sup>8</sup> Below are examples of two types of projections of the earth, a Robinson and a Mercator projection. (Figures 1 and 2).<sup>9</sup>



**Figure 1 Robinson Projection**



**Figure 2 Mercator Projection**

*Symbols* are graphically-coded variables that communicate geographic patterns and networks or indicate other quantitative data such as population. Symbols use visual elements such as shape, orientation, hue, texture, size, value (light/dark), and numerousness to convey meanings. Symbols should be logical and unambiguous.<sup>10</sup>

The map's *legend* explains what each visual symbol represents. Often, the legend also contains the scale.

### What can writers learn by “reading” maps?

<sup>6</sup> Ibid.

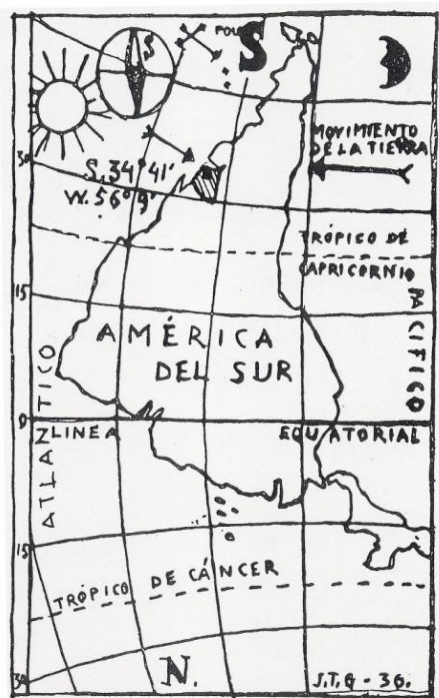
<sup>7</sup> “Map Projection,” Geographic Information Systems, <http://gislounge.com/map-projection/>, (accessed January 27, 2009).

<sup>8</sup> Perry-Castañeda Map Collection, “Glossary of Cartographic Terms,” of University of Texas, Austin, <http://www.lib.utexas.edu/maps/glossary.html> (accessed March 18, 2008).

<sup>9</sup> Robinson projection of globe from Terra ETL Blog, “The Robinson Projection: Not Shaped Like an Egg,” <http://terraetl.blogspot.com/2007/10/robinson-projection-not-shaped-like-egg.html>, accessed January 27, 2009; Mercator's map from Social Studies, “Glossary of Geography Terms,” Educational Oasis, [http://www.educationoasis.com/curriculum/Social\\_Studies/resources/geoglossary.htm](http://www.educationoasis.com/curriculum/Social_Studies/resources/geoglossary.htm), (accessed November 10, 2010). For more detailed information about map projections, see: USGS Science for a Changing World, “Map Projections,” U.S. Geological Survey, <http://egsc.usgs.gov/isb/pubs/MapProjections/projections.html> (accessed February 21, 2009).

<sup>10</sup> Monmonier, 12, 56-59.

The short answer is a lot! Writers can use maps, both in their analyses of texts that include cartographic images and in their own writing, in order to present evidence graphically. To realize the analytic potential of maps, however, it is important for writers to understand how to “read” them.



In their efforts to read maps, scholars have recently focused their attention on the politics and ideologies of mapmaking. For instance, the mapmaker inevitably draws from a particular cultural and historical context when creating a map.<sup>11</sup> Consider, for example, that in most cartographic representations, we almost always find North at the top and South on the bottom. However, as literary scholar Bruno Bosteels points out, “even for as simple yet important a convention as the positioning of the Northern hemisphere at the top of the map, no ‘natural’ or ‘scientific’ justification is present at hand.”<sup>12</sup> In their reading of maps, critical theorists suggest that the convention of positioning the North above the South reflects the concentration of power and wealth in the Northern Hemisphere—an unequal relationship among the hemispheres that is obscured and legitimized by the presumed rationality of cartographic science. It is this relationship that Latin American artist Joaquín Torres-García sought to critique in his “Inverted map of America” (1936), shown at left.<sup>13</sup>

### What are the key strategies for interpreting maps?

First, learn as much as you can about the context in which the map was created and use that information to inform your analysis. As you become acquainted with the map, you may want to ask yourself the following questions:

- Who made the map?
- What was the political, historical, and social context in which the author created it?
- For what purpose was the map designed, and for whom was it made?
- What information is included in the map? What is missing?

Second, think critically about the symbols used and what they convey about the author’s perspective. Remember, each visual component (from colors to scale to orientation to symbol) is the result of a deliberate decision made by the mapmaker. Part of thinking critically about maps is thinking critically about these decisions. Here are some questions you might want to consider:

- What is at the center of the map? What is closer to the edges? Why might the map be framed in this way?
- What is visually emphasized or highlighted in the map?
- What is visually deemphasized?

<sup>11</sup> Bosteels, 109-138.

<sup>12</sup> Bosteels, 119.

<sup>13</sup> Image reproduced in Aarnoud Rommens, “In Other Words: Subaltern Epistemologies or How to Eat Humble Pie,” *Image & Narrative*, Online Magazine of the Visual Narrative, [http://www.imageandnarrative.be/painting/Aarnoud\\_Rommens.htm](http://www.imageandnarrative.be/painting/Aarnoud_Rommens.htm), (accessed February 21, 2009). Rommens provides a detailed analysis of Torres-García’s map.

- What symbols are used to designate the various things that are represented on the map?
- Why might the mapmaker have chosen these particular symbols?
- What colors does the mapmaker use?
- Are some things (names of places, symbols, etc.) smaller or larger than others? If so, what might this variation in scale signify?

### How can writers use maps as tools to enhance their textual analyses?

Maps are useful for accomplishing a variety of analytical tasks, from identifying and geographically contextualizing a specific location to visually representing layers of information to tell a story or support an argument. They are key elements of the place-based analyses typical of history and anthropology, for example. These visual representations of data can help writers complement the sequential nature of text on a page, where symbols work in tandem with written words to convey the author's message.

### Additional resources

Reading and writing through maps:

Kaiser, Ward L. *A New View of the World: A Handbook to the World Map, Peters Projection*. New York: Friendship Press, 1987.

Monmonier, Mark S. *Rhumb Lines and Map Wars: A Social History of the Mercator Project*. Chicago: The University of Chicago Press, 2004.

\_\_\_\_\_. *Mapping It Out: Expository Cartography for the Humanities and Social Sciences*. Chicago: University of Chicago Press, 1993.

\_\_\_\_\_. *How to Lie With Maps*. Chicago: University of Chicago Press 1991.

Muehrcke, Phillip. *Map Use: Reading, Analysis, and Interpretation*. Madison, Wisconsin: JP Publications, 1998.

Online resources for finding and using maps in your writing:

Duke University Libraries, "How to Find Maps," Duke University,

<http://library.duke.edu/research/finding/maps.html>.

This site provides useful information for locating maps that Duke University owns.

Duke University Libraries, "Maps," Duke University,

<http://library.duke.edu/research/subject/guides/maps/index.html>.

A subject guide for researching maps, this site gives specific information about Duke's map collection.

Perry-Castañeda Library Map Collection, University of Texas, Austin,

<http://www.lib.utexas.edu/maps/>.

This is an extensive collection of downloadable maps, both historical and contemporary.

Perry-Castañeda Library Map Collection, "Glossary of Cartographic Terms," University of Texas, Austin, <http://www.lib.utexas.edu/maps/glossary.html>.

Look here if you are unsure about the terminology associated with maps and cartography.

### Handouts in the Visual Rhetoric/Visual Literacy Series

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