

Choropleth Map

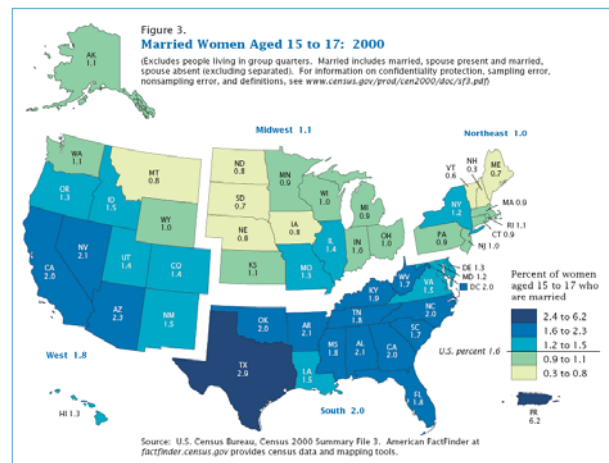
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Definition: Choropleth maps are a type of thematic map displaying data by area. Quantitative spatial data is used to color or shade intensities proportional to the magnitudes of values in a given area. It provides an easy way to visualize how a measurement varies across a geographic area. The darker shading is usually indicative of higher values, and special attention should be given to color choice.

Choropleth maps are most often classed, in which data is grouped to create classes. There are three main categories of classes; equal frequency, equal interval, and natural breaks. In unclassed choropleth maps, areas are shaded on a continuous scale, based on individual values, not divided into classes.

Choropleth maps are often used for political districts (counties, wards, census tracts); with a different color used to indicate the data value for the area (a map of voting precincts might be colored red or blue to indicate which party won an election). A map of census tracts might use shades of a color to indicate population density.

Application: The example on the right is a classed choropleth map using U.S. Census data. It shows the percent married for women aged 15 to 17 by state. The South and the West had similar proportions of married women in this age group (2.0 percent and 1.8 percent, respectively), while the Northeast and the Midwest had slightly lower but still similar proportions (1.0 percent and 1.1 percent, respectively). Of all states, Texas had the highest percentage of women aged 15 to 17 who were married (2.9 percent). Many states had only around 1 percent or less, such as New Hampshire, Maine, and Vermont in the Northeast (Lugaila and Overturf, 2004).



References/Sources:

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Lugaila, T. and J. Overturf. 2004. Children and the Households They Live In: 2000, Census 2000 Special Reports. U.S. Census Bureau. <http://www.census.gov/prod/2004pubs/censr-14.pdf>

Mersey, J. 1990. Colour and thematic map design: The role of colour scheme and map complexity in choropleth map communication. *Cartographica*, 27(3).

Slocum, A. Terry. 2005. *Thematic Cartography and Geographic Visualization*. Upper Saddle River, NJ: Pearson/Prentice Hall.

Slocum, A. Terry. 1993. *Comparison of Methods for Learning Choropleth Maps [1988-1990: United States]*. Ann Arbor, MI: Inter-University Consortium for Political and Social Research.

Tyner, Judith. 1992. *Introduction to Thematic Cartography*. Englewood Cliffs, NJ: Prentice Hall.

URL:

The DDViewer on the Center for International Earth Science Information Network (CIESIN) website provides rapid data mapping, viewing and analysis to the internet community.

<http://plue.sedac.ciesin.columbia.edu/plue/ddviewer/>

The American FactFinder (AFF) on the U.S. Census Website allows users to create, view, print, and download choropleth maps. Variables are available from Census 2000, the 1990 Census, the Economic Census, and the Population Estimates program.

http://factfinder.census.gov/servlet/ThematicMapFramesetServlet?_bm=y

ColorBrewer is an online tool designed to help people select good color schemes for maps and other graphics

<http://www.colorbrewer.com>