

## CHAPTER 7

# Color Use Guidelines for Mapping and Visualization

CYNTHIA A. BREWER\*

*Department of Geography  
San Diego State University  
San Diego, CA 92182, USA*

### Introduction

When color is used “appropriately” on a map, the organization of the perceptual dimensions of color corresponds to the logical organization in the mapped data. A color scheme typology is presented here that matches a comprehensive listing of the ways in which data are organized to corresponding organizations of hue and lightness, with secondary attention to saturation. Appropriate use of color for data display allows interrelationships and patterns within data to be easily visualized. The careless use of color will obscure these patterns. Careful use of color on maps is particularly important in interactive and animated map contexts, where the map reader must attend to changing patterns on the maps and has little time to look back and forth to a map legend, if one is offered at all. A spontaneously understood color scheme is a great asset in these contexts.

Recommendations on the use of color have a long tradition in cartography (Robinson 1952), and Bertin’s (1981) frequently cited work describes the use of a set of visual variables for map symbolization that includes hue and lightness. Guidelines in cartography texts are generally limited to instructions to use hue for qualitative differences on maps and to use lightness for quantitative or ordered differences (Robinson *et al.* 1984; Campbell 1991; Muehrcke and Muehrcke 1992; Dent 1993; Monmonier 1993). The recommendations in this chapter extend these

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\* Present Address: Department of Geography, The Pennsylvania State University, University Park, PA 16802, USA.