

cartographic perspectives

Number 28, Fall 1997

in this issue

INTRODUCTION 1
James R. Carter and Ute Dymon

FEATURED ARTICLES
Use of Tactile Maps by Blind and Visually Impaired People 4
*Simon Ungar, Angeles Espinosa Bayal, Mark Blades,
Espernaza Ochaíta, and Christopher Spencer*

Regional Recognition and Delimitation from Topographic
Maps: User Strategies 13
Christopher Board

Map Use Steps and Their Data Quality Requirements 21
Ferjan Ormeling

Map Use - Perspectives in Geographic Undergraduate
Education 25
Derek Thompson

User Interface Studies in the Virtual Map Environment 29
Jeffrey S. Torguson

REVIEWS
Exploring Geographic Information Systems 32
Eric Fowler

Shapes of Ireland: Maps and Their Makers, 1564-1839 35
Sharon Hill

Counties USA 1997: A Directory of United States Counties 37
Scott R. McEathron

continued on page 2

messages

FROM THE GUEST EDITORS

Introducing the Special Issue on Map Use

In a personal conversation at the Symposium on Cartographic Design and Research in Ottawa in 1994, Muehrcke opined that 'it just gets down to a question of map use.' In his formal paper from that Symposium, Muehrcke (1996) cited map use many times in "The Logic of Map Design." Some examples from the paper include: "Much of the discussion in this book focuses on the importance of the map user. I would go further to state that changes in the way maps are used in the electronic age are probably far more significant than changes in how they are made." (272-3) "The cartographic literature, including our textbooks, does not seem to be as much at fault here as the cartographic literacy of those who use maps." (273) "Some of our critics seem to have missed the point here—the issue of user responsibility. . . users must learn to handle mapping tools responsibility." (275) "If we are really

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concerned about the map user, the basis for making much bigger and quicker gains is already within our grasp. We only need to catalogue and teach the strategies practised

by expert map makers and users" (277) "Unfortunately, . . . the level of user sophistication is dismal." (277)

This concern with the map user is consistent with the work of the authors of the papers collected here. In meetings of the Map Use Commission at the International Cartographic Association General Assembly in Barcelona in 1995, there were many discussions about collecting our thinking on map use. We decided to organize one or more sessions on map use at the Annual Meeting of the Association of American Geographers in Charlotte in 1996. Here are some of the papers presented in two sessions at that meeting.

The Web pages of the Map Use Commission (1997) spell out the terms of reference and directions of the Commission. Included there are the organizing themes of the study of map use. These themes focus on what are considered to be the four major dimensions of map use: the individual map user, a map user community, the map use environment, and the map use task. Monmonier (1996) has suggested the addition of a societal dimension of map use.

Individuals bring various skills, competencies, experiences, abilities or disabilities to the act of map use. Some of the papers here focus on different types of individuals. Ungar, et.al., report on two studies of blind and visually impaired users. One study involves blind adults who are experienced in

navigation with tactile maps. Another study examines children, where a group of blind children is compared to a group of sighted children in performing given tasks. Board attempts to catalog the expertise of a group of educated geographers who bring considerable knowledge to the higher level task assigned to them. Thompson pleads for guidance in working with college students who have little or no knowledge of maps and mapping but who are called upon to make and study maps to learn about cities.

Carter (Map Use Commission, 1997) contends that in many cases map user communities determine what maps will be produced, at which scales, and in which forms. The experts in these communities set standards for acceptable uses of their maps, although in many cases these standards are implicit rather than spelled out. In the papers in this issue, Board carries out his study using topographic maps from many different nations. The nature of the community that specifies small scale topographic standards has been so effective that the same tasks can be performed with maps from many different sources. It can be said that the other authors are seeking some standards that may lead to better map use in the future.

For centuries we have thought of maps as ink on paper, being the result of some printing process. While these paper maps are static and fixed in time, a user can linger over a paper map, make measurements, magnify segments of the map, and annotate the map. Of course, these paper products may not be convenient to use under some environmental conditions. As we move into an electronic age, the environments in which maps are being used is changing radically. We have dynamic maps that may be very current. Users have unique tools that allow them to interact with the maps in ways not

in this issue (continued)

CARTOGRAPHIC TECHNIQUES	38
A Desktop Approach to Shaded Relief Production <i>Tom Patterson</i>	
NACIS NEWS	40
ANNOUNCEMENTS	42

possible with the paper maps. While all of the papers in this issue feature some aspects of the map use environment, Torguson most strongly focuses on the map use environment where users can interact with maps in electronic formats. Ormeling hypothesizes ways that maps will evolve in response to user actions. He emphasizes that it is equally important to 'get the user the right information as it is to make certain the user gets it right.'

There are many ways to classify map uses, or tasks. Each of these papers have a component relating to one or more uses. In the papers by Ungar, et.al., the tasks are assigned by the researchers. In one case, persons are required to use tactile maps to navigate a specific route. In another case, children are required to learn a geographic arrangement and to recreate that pattern in a given time. Thompson wants his students to use maps to gain an understanding of a complex urban world. Board reports on a higher level task, where users are asked to integrate map details to find complex regions. Ormeling is concerned about the design of maps appropriate to the many tasks involved in using maps.

These papers do not tell us all that we need to know about map use, but they represent a good illustration of the many dimensions of this important area of study. As such, they give us a perspective on cartography, and thus deserve to be published in *Cartographic Perspectives*.

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