Lecture 5: Mapping, GIS and Planning, and NIS

I. Housekeeping

Feedback/Feed yourself session on Monday, October 25th at 6pm

Portfolio critique Session - Looking for volunteers!
Web-portfolio due on Monday, November 8th
Where we are today

II. Overview

Mapping is an inextricable facet of our disposition.
Mapping is fundamentally political.
GIS is central to planning.
Web-based NIS are becoming more popular.
There are advantages and disadvantages to using NIS.

Mapping is an inextricable facet of our disposition.

From prehistoric drawings of the night sky painted in cave dwellings to our more recent efforts to create a comprehensive genetic record of the human genome, we – as humans – have relied on maps to communicate what we are trying to understand about our world and about ourselves.

Map-making is both the result and the act of exploration and an inextricable facet of our disposition.

Use maps to find places we don't know, describe the places we know, and plan for the future.

Maps are fundamentally political.

It is a method of broadcasting our interests to others and uncovering interests for ourselves.

Monmonier's How to Lie with Maps 1991
Wood's The Power of Maps 1992
Crampton's Political Mapping of Cyberspace 2004
Peters projection

Planners use GIS to advance their work.

High-speed PCs and user-friendly software allow ordinary people to manipulate spatial data and create maps. Today, everyone is a cartographer.

III. Neighborhood Information Systems

In practical terms, neighborhood information systems...

1. Are publicly accessible, web-based tools for analyzing a specific place (city or smaller)
2. Help users visualize and analyze spatial information
3. Seek to democratize information to improve public participation
4. Serve community groups, foundations, public agencies, and researchers
5. Aid strategic neighborhood planning and redevelopment, community building, decision-making, and policy formulation

- **Philadelphia** (Census and city-wide administrative data)
- **Lawrence** (Small city; Project-based; Engagement in neighborhood planning)
- **Los Angeles** (Multiple levels of access; Incorporates local knowledge - other ways of knowing/including new and silenced voices; State-level)
- **NNIP** National Neighborhood Indicators Partnership

In theoretical terms, neighborhood information systems transform data to action.

Thinking Visually by Robert McKim (Lifetime Learning Publications, Belmont, 1980)

1. **Abstraction ladder**
2. **Graphic abstraction ladder**

- What should planners keep in mind while collecting data? (Is it an accurate representation of reality?)
- Analyzing data? (Does data manipulation, such as aggregation, alter the results?)
- Presenting data? (How does the tool impact the message?)

What Are the Shortcomings of NIS?

Data Collection: Wealth is a function of 'median' values, 'household' income, and 'earnings'
What about social capital? Other measures of wealth? Population measures (residential, slice in time, those that respond)

Data Analysis: What is a neighborhood? Is the block/block group the most useful unit?

Data Presentation: Classification Matters; visual literacy

US Census Bureau

National census of population mandated by the **Constitution of the United States**

1. Conducted every ten years (mail survey)
2. Representatives (and taxes) are apportioned based on census counts
3. Impacts distribution of Federal dollars
4. View some Census data at **U.S. Census 2000 Home Page**
5. What data are collected? **Sample Long Form from 2000 Census**

Other Population Surveys

1. What kind of systems do other countries have? -- National Census
    i. **UK** (Census 2001)
    ii. **France** (Le recensement de la population)
    iii. **India**
    iv. **China**
    v. **Brazil** (Censo 2000)
    vi. **Tanzania**
2. Population estimate
    i. **US Census Bureau**

Future leaders of the world, remember...data are not objective, there are ethical and value choices inherent in the process of capturing and manipulating data. These choices will impact decision-making processes. Strive to be a responsible information steward

IV. Student examples (Lab 4)

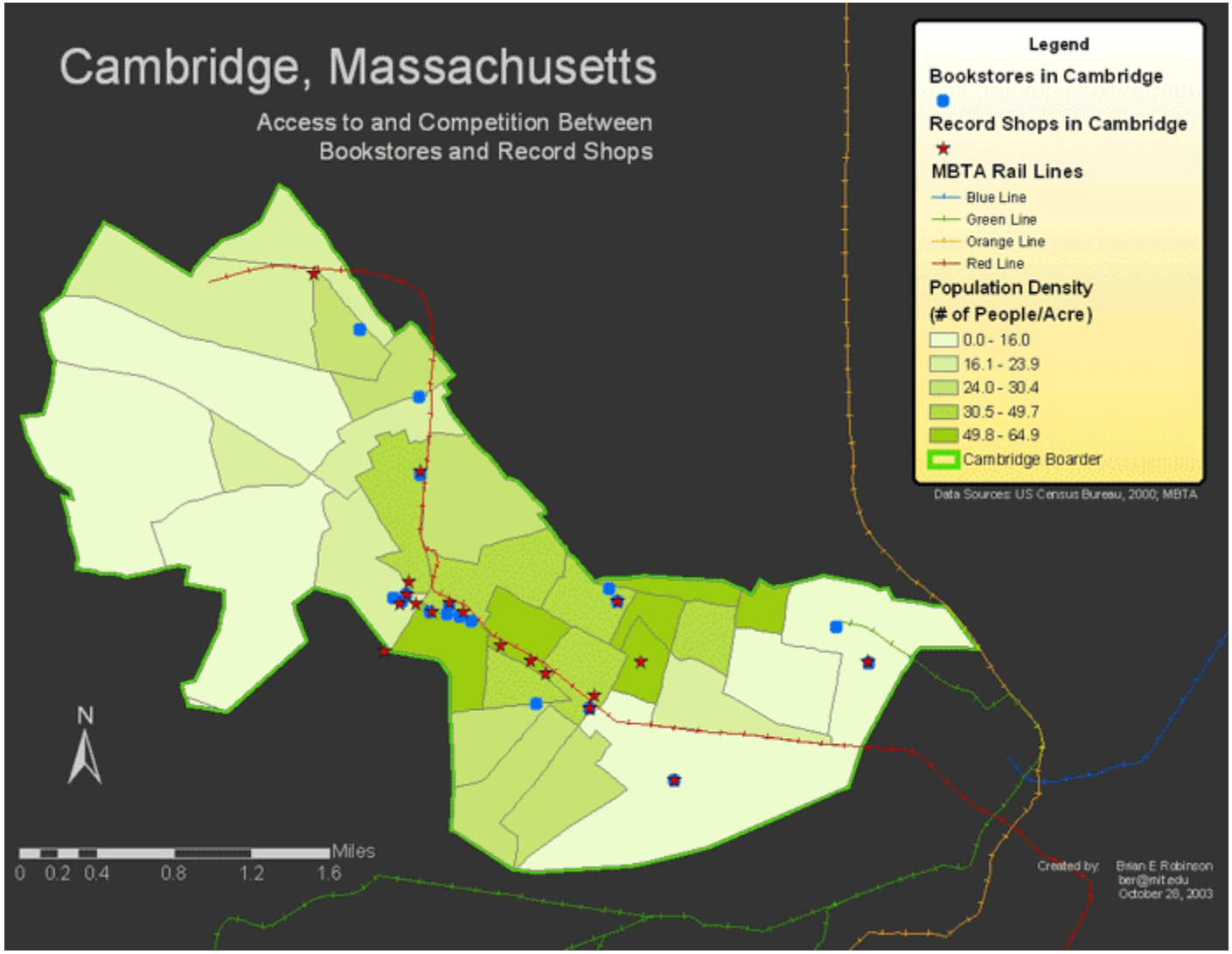
Brian Robinson

Sean Sacks

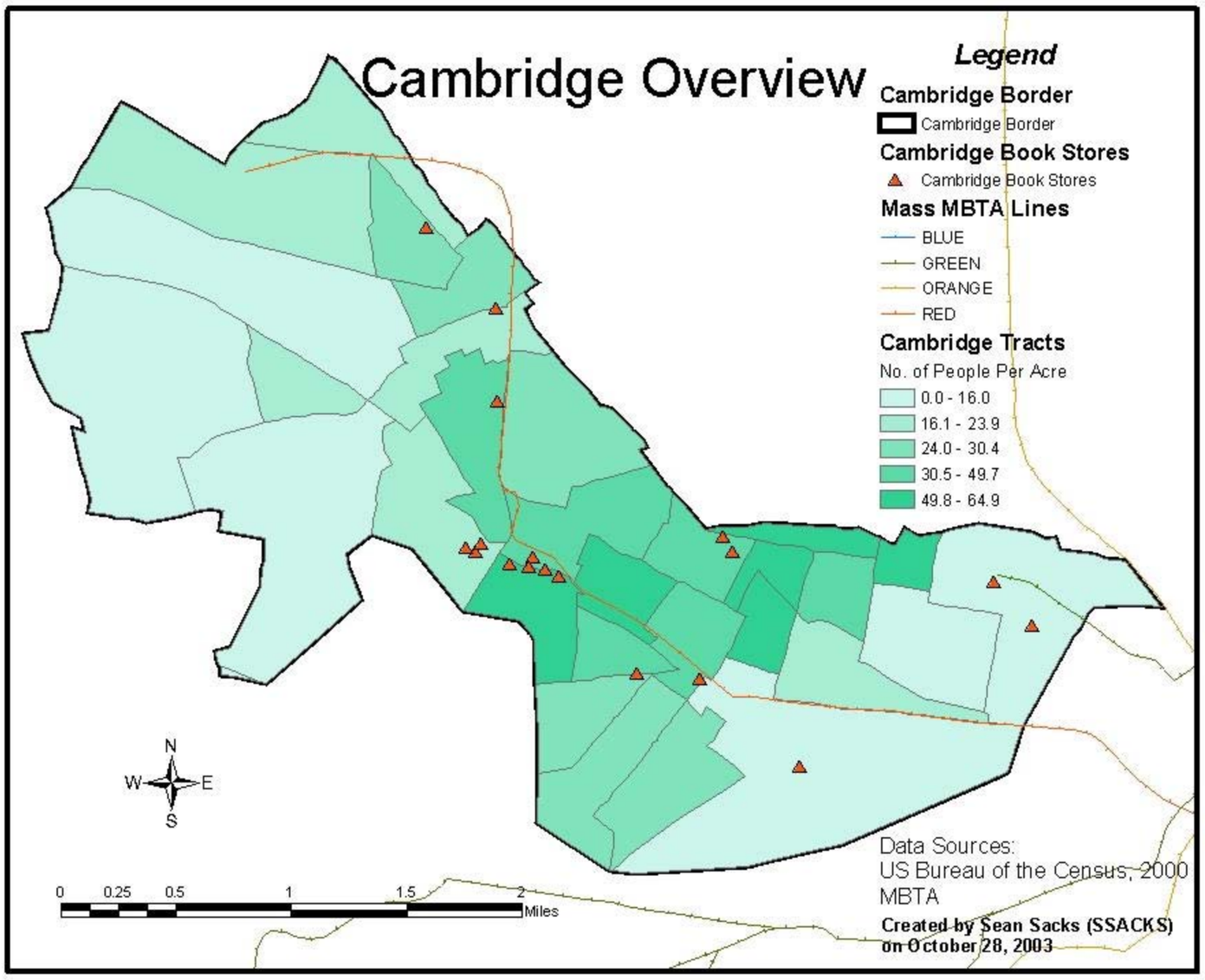
Anne Herbst

Sarah Kelly

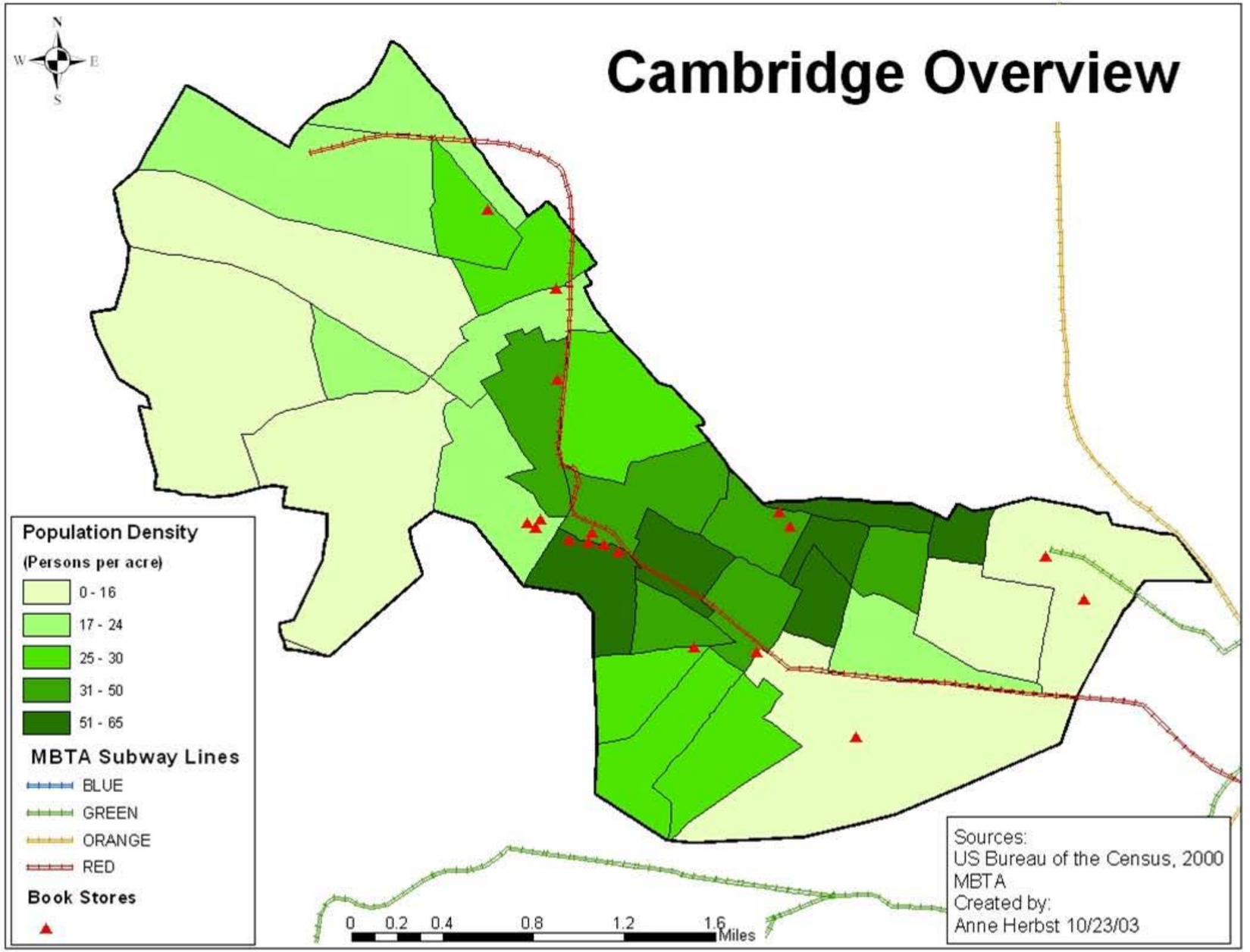
Brian Robinson

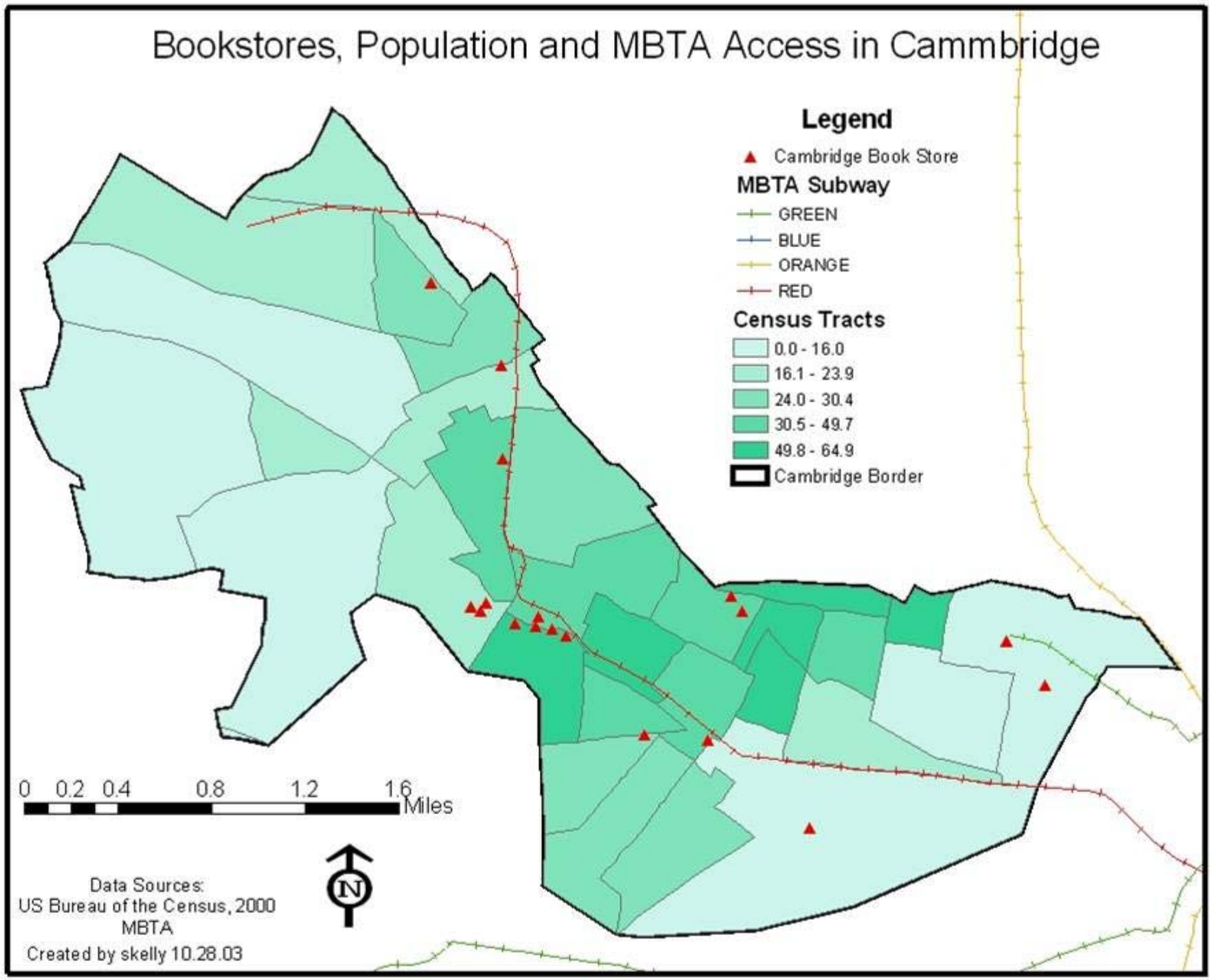


Sean Sacks


Cambridge Overview
Legend
Cambridge Border
Cambridge Border
Cambridge Book Stores
Cambridge Book Stores
Mass MBTA Lines
BLUE
GREEN
ORANGE
RED
Cambridge Tracts
No. of People Per Acre
0.0 - 16.0
16.1 - 23.9
24.0 - 30.4
30.5 - 49.7
49.8 - 64.9
N
W
E
S
0 0.25 0.5 1 1.5 2
Miles
Data Sources:
US Bureau of the Census, 2000
MBTA
Created by Sean Sacks (SSACKS)
on October 28, 2003

Anne Herbst


Cambridge Overview
N
W
E
S
Population Density
(Persons per acre)
0 - 16
17 - 24
25 - 30
31 - 50
51 - 65
MBTA Subway Lines
BLUE
GREEN
ORANGE
RED
Book Stores
0 0.2 0.4 0.8 1.2 1.6
Miles
Sources:
US Bureau of the Census, 2000
MBTA
Created by:
Anne Herbst 10/23/03


Bookstores, Population and MBTA Access in Cammbridge
Legend
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MBTA Subway
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Miles
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Data Sources:
US Bureau of the Census, 2000
MBTA
Created by skelly 10.28.03