INTERPRETING HISTORICAL MAPS to Reconstruct Past Landscapes in the Santa Clara Valley

Ruth Askevold

18 November 2005
Or How to Spend 18 years Putting Off Writing a Thesis

Don’t let this happen to you!
interpretation and background

theoretical framework

methods & materials

study area

results of research

conclusions & avenues for further research
while many maps appear to be scientifically objective...
they carry with them hidden and not easily answered questions...
other maps don’t even look like maps…

and require different interpretation skills…
Who commissioned the map and how did that affect the contents?
What do the symbols on the map mean?
How “accurate” is a 19th century map?
Why was this particular area depicted and not the land 2 miles away?
What world and local events influenced the contents of the map?
What features are shown? What features are left out?
Does the technology of the time — affecting the way the map was created, produced, and distributed — affect the contents?
Historical maps provide a wealth of environmental data for science-based historical ecology.

Historical maps are unlike other scientific data – no error bars, no methods paper, no controlled transsects.

Historical maps are either misused or under utilized.
Does understanding the context of a historical map improve its usability in reconstructing a past landscape?

Can historical maps be successfully used without placing them in context?

How can the use of historical maps be improved?
• all maps are subjective and not objective
• scientific neutrality does not exist in maps
• maps are politicized
• traditional cartographic concerns — of accurate or inaccurate — are false concerns
• real meaning is under surface

J. B. Harley
17th century Belgium representing world power, unity, strength
1765
West coast of Florida
Context of
person / entity
Context of time (social, political, and economic)
Context of technique used to create map and print map
**Theoretical Framework**

**Interpreting Historical Maps**

**AND LITERATURE REVIEW**

**Historical Geography**

1. \( \text{time} + \text{space} = \text{cross section} \)
   - Similar to a regional study but of a period in the past

2. \( \text{time} \) + \( \text{space} \) = \( \text{sequent occupancy} \)
   - Used to study how changes in culture affect environment

**Contributors**

- George Marsh
- Ellen Churchill Semple
- Carl Sauer
- Derwent Whittlesley
- H. C. Darby
- Wilbur Zelinsky
- Carville Earle
- Derek Gregory
- Anne Knowles
- Don Mitchell
historical ecology

- reconstructs a past landscape
- often science-based
- often a collaborative effort
- uses written and physical evidence
Scientists use inductive logic, based on direct observations, while historians tend to use deductive reasoning, in which events of the past can be used to deduce broader patterns.
Stanley W. Trimble

San Diego Creek

Historic and Hydrographic and Hydrologic Changes in the San Diego Creek Watershed, Newport Bay, California.

Journal of Historical Geography, 2003

uses written and physical evidence
Conrad Bahre


uses written and physical evidence

explorer’s journals
maps
newspapers
photographs & rephotographs

[landscape paintings, local histories, court cases, climate data, survey accounts]
methods and materials  INTERPRETING HISTORICAL MAPS

- determine study area
- acquire historical maps & archival graphics
- research the making of individual maps
- compare the maps to each other
- develop conclusions
Coyote Creek: the study area

Native Americans

landscape at this time often seen as pristine
but landscape was actively managed for acorns, salmon, shellfish, mammals
fire management practices shaped the valley
population reduced by disease brought by Spanish
Coyote Creek: the study area

Spanish Period:
1769-1821

1851 San José Mission circa 1870,
San José Pueblo map

- Pueblo and mission
- Intensive cattle grazing
- Irrigation systems: dams and ditches
- Garden crops, vineyards, orchards
Purisima mission grounds [1943]
Mission agricultural records 1824
often seen as quiet period before Gold Rush & Americans but Mexico increased foreign trade and economic activity allowed individuals to own land through the form of land grants
Coyote Creek: the study area

EARLY AMERICAN PERIOD: 1849-1930s

INTERPRETING HISTORICAL MAPS

- Water was primary transportation
- Deepwater channels, e.g., through mudflats
- Entrepreneurs established landings
- Shipped grain, fruit, vegetables, lumber
- Landings lost importance after railroads
Railroads largely replaced the bay as a transportation network…

South Pacific Coast RR built in 1877

RR built two bridges across sloughs

community of Drawbridge developed
farming for profit
crops not just cattle
wheat farming after 1870
orchards, strawberries, vineyard
Coyote Creek: the study area

AMERICAN PERIOD: 1940s-present

INTERPRETING HISTORICAL MAPS
Results of research

Interpreting Historical Maps

Berryessa Land Grant Map (Diseño), circa 1838
USCS Tsheet 676, 1854
Thompson and West atlas page, 1876

1920 mechanized leveling
Diseño of Rincon de los Esteros, circa 1838

**Diagram Description**

The diseño was used to establish land tenure through a complex system of petitions and approvals. Boundaries were loosely defined, and sometimes the edge of one rancho overlapped another. These differences were easily resolved where land was plentiful but became more difficult to settle as land values grew. Designs were often considered inaccurate, misleading, and probably contrived by American surveyors (Murphy 1984:53).

**Technology: Pen and Ink Copies**
Diseños were hand-drawn and not printed. When more than one map was needed, pen and ink copies were drawn, though the duplicates might vary in features, placement, and coloring. Above, the copy contains mostly the same features but color is not applied as it has been to the map to the right.

**Social Context**
After United States took control of the area, former Mexican citizens who had been granted land were required to prove their ownership by presenting the Land Commission with all documents associated with their original land grant, including the diseño that was created when the land was originally petitioned. The typewritten note affixed to the original map identifies it as part of the "Francisco Barreya et al. Case" for the "Rincon de los Esteros" in "Santa Clara County." The copy, top right, affirms the identifying note on the opposite side of the map, probably to prevent covering up the Candelaria River. The Land Commission kept copies of all material, now archived at the University of California Bancroft Library.

**Technology: Symbols**
Diseños represent the world as both a plan view, as if looking down from above, and in profile, where objects are seen from the side. The land grant maps employ pictographs—images that have a likeness to the original object such as the trees and house. Pictographs are in contrast to symbols on maps, in which a legend is needed to interpret the signs; the symbol is selected arbitrarily and does not resemble the original object (Cassidy 2002:143).

**Social Context & Technology: Words**
Features are identified with handwritten descriptions, place names, and notations identifying the owners of specific houses.
• Diseños were part of Mexican land grant system
• US required that the land grantees prove their claims were legitimate before a Lands Commission.

• Berryessa family grant: 4500 acres between Guadalupe River and Coyote Creek
• Northern boundary – marked by a series of ponds marked ‘esteros’ a problem
• US courts allotted only 1800 acres
Results of research: Interpreting Historical Maps

Diseño: Technology [map-making]

difficult to reconcile with modern maps
• no scale
• no legend
• no title
made by individuals

made to satisfy the requirements of a complex real estate transaction

freehand drawings, probably made by

1. author standing at a central point and sketching in the features seen in all directions, or

2. the boundary was measured by two men on horseback; both holding one pole connected by a rope fifty varas long (about 137.5 feet)
Diseño: Technology [map-making]

Results of research

Poco más o menos
[a little more or less]

Vara = 33 inches
Vara = 33.5 inches?
Vara = ?

Land measured by a fanega
FIGURE 7.1-A. U.S. COAST SURVEY TOPOGRAPHIC MAP SHEET NO. 676, 1857

TECHNOLOGY: MAPPING
The dot within a circle marked as 'East Bear' depicts a primary baseline corner, used to establish accurate distances and locations on the map. In a larger sense, it ties together the other sheets in the series and ultimately to the triangulation baselines connecting the entire continent.

TECHNOLOGY: MAPPING
The Coast Survey's topographic sheets often contained detailed information about non-tidal features. Shown here is the early residential landscape, with rudimentary roads, fields, fences, houses, and outbuildings. The Coast Survey's symbology used to depict these features—hatches, dashed lines, and solid rectangles—was not yet consistent and varies from map to map.

SOCIAL CONTEXT
The surveyors have summarized their work in a Table of Areas, noting various totals for surveyed miles of shoreline, creeks, ponds, and the miles of roads surveyed.

SOCIAL CONTEXT
The survey of 1856 depicts the intricate relationships between various wetland features, including the bays, sloughs, and channels. Small sinuous channels, mud banks representing low tides, pannes, and tidal marshes were often portrayed in great detail.

TECHNOLOGY: ENGRAVING AND PRINTING
Coast Survey maps were printed from engraved copperplates. Each letter form was engraved separately, resulting in slight variations, as can be seen in the two letter 'C's' selected here.

SOCIAL CONTEXT
Though the U.S. Coast Survey's primary mission was to map navigable waterways, landings such as Alviso were so integrated into the surrounding tidal wetlands that they were often portrayed in great detail.

THE AGENCY
The title area identifies not only the agency responsible for the map but also the superintendent of the Coast Survey, the area mapped, identifying sheet numbers, scale, and date.

THE CARTOGRAPHER
The signatures of the surveyors who measured the sloughs and marshlands in 1857—August Rodgers and David Kerr—of the U.S.C.S.—are barely legible.
U.S. Coast Survey: Context of the Agency and Individuals

- agency established in 1807 for safe navigation
- Congress was ambivalent in funding CS
- Coast Survey employees were scientists
- individuals had impact on final product
1835 establishing a baseline

- USCS took into account the shape of the earth
- geodetic survey uses a horizontal datum
  and all other positions are tied to a single point
- used plane table mapping
- means adjacent surveys can fit together
results of research

- U.S. Coast Survey: Technology [Geodesy and Plane Table Mapping]
Example of plane table mapping. The surveyor would place the plane table directly over a triangulation station (A) and locate the second triangulation station through the alidade (A to B). From station A, the surveyor would use the alidade to draw lines to the features to be mapped (such as the hill, house, and tree, above). Then, moving to station B, the surveyor would draw lines to the same features, creating a triangle. Triangulation operates on knowing the length of one side of a triangle—the distance between A and B). The angles of the other sides of the triangle are measured, and then the lengths of the other sides are computed.
results of research

U.S. Coast Survey: Technology [Geodesy and Plane Table Mapping]
U.S. Coast Survey Technology [Printing Processes]

- printed on printing presses
- map-making and printing jobs separate
- Coast Survey controlled entire process
- engraved on copper plates
  - use sharp tools to incise the surface of the plate
  - coat surface of plate with ink
  - place damp printing paper on top
  - run it through the press (rollers)
- next print? start all over...
In order to secure the largest result in field work practicable within the season, a second party was organized by Sub-Assistant Rodgers, and placed in charge of Mr. David Kerr, who had served as aid for several years in the topographical party, and previously the triangulation party engaged in the work on San Francisco Bay.

(U.S. Coast Survey Annual Report 1857).
**Figure 8.1-a. Map Number Two, from Thompson and West Santa Clara Atlas, 1876**

**Results of Research**

Thompson and West, atlas page, 1876

**Technology: Mapping**

Thompson and West county atlases borrowed heavily from existing cadastral surveys to build their maps. The ownership lines on these maps were probably copied from the plat maps created by the county surveyors, though natural features were probably sketched in as an agent for Thompson and West traded in a buggy from place to place (council and, if necessary, preface).

**Technology: Hand Coloring**

The maps were engraved on lithographic stones but the color was applied by hand (Kensinger 2003). Darker red wash separates the county wards—San Jose, Milpitas, etc.—while the broader colors indicate land grant boundaries.

**Social Context:**

The maps turn us back on the tidal marshes which frame the top of the map but do not intrude on the largely agricultural activities of the valley south of the bay. All too soon that land has already come and gone, and the railroad crossing the map now moves agricultural products to San Francisco for shipping.

Owning land in Europe signified power and wealth. Land was plentiful in the United States, though much of the prime land in the area was already taken through the Mexican land grants. By 1860, most of the original Mexican landowners had sold their land to speculators and squatters. The resulting pattern of ownership is imposed on top the land grants, shown in contrasting colors with the land grant name in capital letters.
Thompson and West: Context of the Entity

- early 1800s: county wall maps
- 1860s: wall maps repackaged
- changed the way we saw land
- Thompson [engineer]; West [historian]
- left midwest for California
- published in CA from 1876-1892
Changing pattern of land ownership

Average size of farm in 1880 was 213 acres; Mexican land grants were one sq. league (4,500) acres.

Rincon de los Esteros land grant was 4,427 acres. By 1876, 40 farms occupy the same land.
results of research

Thompson and West: Social, Political, and Economic Context

Changing transportation: scows and railroads
Thompson and West: technology [compilers not map-makers]
Thompson and West: technology [map-making]

T&W county map process:
- T&W field surveyors would copy county plat maps
- create a basemap of cultural & natural features
- T&W would add ownership info
- T&W visit area on horseback to sketch in details
Thompson and West: technology [map-making]

and how were the ownership map lines created?
compass traverse rather than plane table survey
- locate & mark corner
- connect all corners with compass direction
- measure lines, calculate acres
Lithography vs copperplate

Lithography was cheaper and easier to print from. Copperplate required the image be incised backwards onto the plate but new advances in lithography allowed the image to be drawn directly…

This advancement “was as profound a development at that time as the Xerox copying process of today.”

(Robinson, 1975)
Harley suggests comparing and contrasting maps to maps from both the same and different:

- era
- theme
- space
comparisons: map to map

INTERPRETING HISTORICAL MAPS
1857 emphasis on tidal marsh and network of sloughs, with the landing of Alviso shown

1897 mapping effort now includes the upland: crops, roadways, freshwater creeks, farm houses, windmills, towns
Multiple sources can confirm the existence of a feature or bring it into question...
Schumm et al. suggest

- sinuosity increased due to rapid land subsidence between Tully and Story Roads
- topographic maps from 1895 (USGS) were compared to maps from 1961 (USGS)
- found that sinuosity increased where there was a “marked steepening of gradient”
## Context

<table>
<thead>
<tr>
<th>Title of map as used in this chapter and responsible agency</th>
<th>Summary of social, political, and economic context</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diseño de Rincon de los Esteros (Mexican government)</td>
<td>When Mexico took control of area from Spain, Mexico allowed individuals to own land, which was a radical departure from Spain’s ownership solely by the state and church; the short-lived system of Mexican ownership was replaced by the U.S. system, which required scientific-based surveying methods (in the form of confirmation surveys) for the establishment of land ownership; the diseños—with their symbolic portrayal of the landscape—were in conflict with the U.S. courts and system of land ownership, but also provide a unique view of the landscape</td>
</tr>
<tr>
<td>T-sheet 676 (U.S. Coast Survey)</td>
<td>The Bay Area was in transition between several cultures (Native American, Spanish, Mexican, American) when T-sheet 676 was created; T-sheet 676 represents an interest in a water-based method of transporting goods; the Gold Rush made the survey of the West Coast an immediate priority for safety and commerce</td>
</tr>
<tr>
<td>T&amp;W Map Sheet Two (Thompson and West)</td>
<td>Thompson and West atlases represent a changing economic focus, with a land-based transportation network and a profit-driven agricultural-cultural community; the pattern of ownership had changed radically from a few land grants supporting cattle grazing to smaller land owners and farming for profit; the water-based economy of T-sheet 676, dependent on navigable sloughs and quick bay transport, was largely replaced by railroads</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Title of map as used in this chapter and responsible agency</th>
<th>Summary of context of agency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diseño de Rincon de los Esteros (Mexican government)</td>
<td>Generated by individuals to satisfy requirements of state (Mexico) in a real estate transaction; the diseño was a sketch rather than a formal map, and was only one part of a number of documents required; maps were usually created by individuals not trained in scientific cartography, and show relationships rather than carefully defined boundaries</td>
</tr>
<tr>
<td>T-sheet 676 (U.S. Coast Survey)</td>
<td>Agency established because of urgent need for coastal maps for safe navigation and defense; commerce and new economy drove funding, but agency regarded science and scientific mapping methods as their primary reason for existence; individuals within agency had significant impact on final product, despite attempts to standardize; agency was active in exploring and promoting highly exact mapping methods and standards</td>
</tr>
<tr>
<td>T&amp;W Map Sheet Two (Thompson and West)</td>
<td>Atlases developed for profit through commercial sale; connected to early wall maps of individual counties and gazetteers; Thompson and West took advantage of a growing Western U.S. market; sold subscriptions to individual farmers and land owners; atlas maps were compilations of existing maps, updated to please subscribers; profit was motivating factor</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Title of map as used in this chapter and responsible agency</th>
<th>Summary of mapping and printing technology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diseño de Rincon de los Esteros (Mexican government)</td>
<td>The diseños were created without specialized survey equipment; a diseño is a sketch rather than a formalized map and usually has no scale, legend, or title; features are often represented by pictographs rather than symbols; locations are not exact, but represent the relationship between features; sketch was created by either standing at a central point in the property and filling in features or by riding the perimeter on horseback, measuring varas with ropes; the measurement unit was not standardized; maps are letter-size, done in black ink, with occasional color added; the diseños were not printed—if additional copies were needed (such as for the U.S. court system) they were made by copying the original</td>
</tr>
<tr>
<td>T-sheet 676 (U.S. Coast Survey)</td>
<td>The Coast Survey utilized some of the most advanced scientific mapping methods available; T-sheet 676 used geodetic measurements to account for the shape of the earth and plane table surveying to precisely map features; T-sheets were mapped at 1:10,000 scale and match up with features that are still persistent; Coast Survey developed innovative and precise printing methods, continuing to use copperplate engraving even after the less precise lithographic technology was available but also experimented with photo-engraving techniques</td>
</tr>
<tr>
<td>T&amp;W Map Sheet Two (Thompson and West)</td>
<td>The atlas maps were created by compiling existing maps, gathered by Thompson and West employees, who would create base maps from county and city maps; the base maps were updated in the field by sketching in features and correcting ownership information</td>
</tr>
<tr>
<td>Map and year</td>
<td>Original purpose</td>
</tr>
<tr>
<td>-----------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Diseño of Rincon de los Esteros, circa 1838</td>
<td>To establish ownership boundaries and to satisfy requirements of a real estate transaction between an individual and the state</td>
</tr>
<tr>
<td>Table 10.6, continued. Map and year</td>
<td></td>
</tr>
<tr>
<td>T-sheet 676, 1857</td>
<td>To survey and S.F. Bay, sloughs, and channels for safe navigation; secondary purpose to advance scientific mapping methods</td>
</tr>
<tr>
<td>T&amp;W Map Sheet Two, 1876</td>
<td>To create atlases showing land ownership that would appeal to local farmers and business people</td>
</tr>
<tr>
<td>U.S.G.S. Palo Alto quadrangle, 1899</td>
<td>Objective of agency was initially to map geology; however, this was expanded to include topography, and the 1899 Palo Alto quadrangle is one of the agency’s early topographic maps; maps show natural and cultural features including elevation contours, bays, sloughs, upland creeks, towns, roads, and railroads</td>
</tr>
<tr>
<td>Bird’s Eye View, San José, 1864</td>
<td>Commercial print for sale to the public; for profit venture; to create a compelling and attractive image that would appeal to residents</td>
</tr>
</tbody>
</table>
Interpreting Historical Maps

<table>
<thead>
<tr>
<th>Map and year</th>
<th>Certainty</th>
<th>Interpretation of feature</th>
<th>Size of feature</th>
<th>Location of feature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diseño of Rincon de los Esteros, circa 1838</td>
<td>Low</td>
<td>Low</td>
<td>Low</td>
<td>Low</td>
</tr>
<tr>
<td>T-sheet 676, 1857</td>
<td>High</td>
<td>High</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>T&amp;W Map Sheet Two, 1876</td>
<td>Medium</td>
<td>Medium</td>
<td>Medium</td>
<td>Medium</td>
</tr>
<tr>
<td>U.S.G.S. Palo Alto quadrangle, 1899</td>
<td>High</td>
<td>Medium</td>
<td>Medium</td>
<td>Medium</td>
</tr>
<tr>
<td>Bird’s Eye View, San José, 1864</td>
<td>Low</td>
<td>Low</td>
<td>Low</td>
<td>Low</td>
</tr>
<tr>
<td>Wallace confirmation survey, 1859</td>
<td>Low</td>
<td>High</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>Reed confirmation survey, 1862</td>
<td>Low</td>
<td>High</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>Herrmann Coyote Creek survey, 1874</td>
<td>High</td>
<td>High</td>
<td>Medium</td>
<td>Medium</td>
</tr>
<tr>
<td>AAA aerial photographs, 1939</td>
<td>High</td>
<td>High</td>
<td>High</td>
<td>High</td>
</tr>
</tbody>
</table>
### Summary Table

<table>
<thead>
<tr>
<th>Map and year</th>
<th>Date of publication</th>
<th>Continuous spatial coverage</th>
<th>Scale and spatial precision</th>
<th>Descriptive detail</th>
<th>Score of how close contemporary use is to original purpose</th>
<th>Interpretation of feature</th>
<th>Size of feature</th>
<th>Location of feature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diseño of Rincon de los Esteros, circa 1838</td>
<td>very early</td>
<td>portion only</td>
<td>small scale; imprecise</td>
<td>many</td>
<td>distant</td>
<td>Low</td>
<td>Low</td>
<td>Low</td>
</tr>
<tr>
<td>T-sheet 676, 1857</td>
<td>very early</td>
<td>portion only</td>
<td>large scale; very precise</td>
<td>some</td>
<td>very close</td>
<td>High</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>T&amp;W Map Sheet Two, 1876</td>
<td>early</td>
<td>entire area</td>
<td>medium scale; precise</td>
<td>many</td>
<td>close</td>
<td>Medium</td>
<td>Medium</td>
<td>Medium</td>
</tr>
<tr>
<td>U.S.G.S. Palo Alto quadrangle, 1899</td>
<td>early</td>
<td>entire area</td>
<td>medium scale; precise</td>
<td>many</td>
<td>very close</td>
<td>High</td>
<td>Medium</td>
<td>Medium</td>
</tr>
<tr>
<td>Bird’s Eye View, San José, 1864</td>
<td>very early</td>
<td>portion only</td>
<td>medium scale; imprecise</td>
<td>many</td>
<td>distant</td>
<td>Low</td>
<td>Low</td>
<td>Low</td>
</tr>
<tr>
<td>Wallace confirmation survey, 1859</td>
<td>very early</td>
<td>portion only</td>
<td>large scale; precise</td>
<td>few</td>
<td>close</td>
<td>Low</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>Reed confirmation survey, 1862</td>
<td>very early</td>
<td>portion only</td>
<td>large scale; precise</td>
<td>few</td>
<td>close</td>
<td>Low</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>Herrmann Coyote Creek survey, 1874</td>
<td>very early</td>
<td>portion only</td>
<td>large scale; precise</td>
<td>some</td>
<td>very close</td>
<td>High</td>
<td>High</td>
<td>Medium</td>
</tr>
<tr>
<td>AAA aerial photographs, 1939</td>
<td>recent</td>
<td>entire area</td>
<td>large scale; precise</td>
<td>none</td>
<td>close</td>
<td>High</td>
<td>High</td>
<td>High</td>
</tr>
</tbody>
</table>
Comparing historical maps is key.

Harley: comparisons are key
multiple sources can confirm the existence of a feature or bring it into question
independent sources can calibrate the past landscape synthesis
Information collected about maps becomes synergistic.

Knowledge of one map informs the use of the others.

One map leads to another.

Multi-layered effort.
Geographic Information Systems are a logical (but not the only) tool for synthesizing historical maps.

GIS used as a tool along with other sources:
- explorer journals
- court transcripts
- newspaper accounts
- pioneer diaries
- landscape photographs
- and paintings
- oral histories
Using historical maps in historical ecology requires specialization

Multi-disciplinary approach

GIS SPECIALIST
LIBRARIAN
ARCHIVIST
ECOLOGIST
GEOGRAPHER
HISTORIAN
TIME TRAVELLER
MAP HISTORIAN
GRAPHIC DESIGNER
• how can certainty codes in GIS be used more effectively?

• what other tools are effective? [timelines, rephotography]

• research / field methods in urban vs rural landscapes?

• how can the results be presented effectively? [web-based, multimedia]

• how do the potential sources of error [insufficient selection of maps, misinterpretation of maps, misinterpretation of context] affect the outcome?
Does understanding the context of a historical map improve its usability in reconstructing a past landscape?

Can historical maps be successfully used without placing them in context?

How can the use of historical maps be improved?

Increases understanding of Harley’s theoretical framework through application to a new domain

Creates a “certainty level” table for integrating historical maps

Series of tables summarizing contextual events, placing maps in social, technical, and site-specific context

Development of an integrated approach for use of historical maps
TECHNICAL CONTEXT:

8.5 by 11 inches
pencil
not reproduced
legend with symbols rather than pictographs
minimal cartographic training or skill

Ruth Askevold, age 8

SOCIAL and ECONOMIC CONTEXT:
fashioned after older brother’s map
demonstrates imperialist leaning to dominate the landscape

CONTEXT OF INDIVIDUAL:
limited education
culdn’t spell
shows uncertainty in work — pencil rather than ink
thank you

- everyone here, but especially
  
  Nancy Wilkinson
  
  Jerry Davis
  
  Robin Grossinger
  
  Mary Phillips