Layering in GIS as a Method of Historical Deconstruction and Source Criticism

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Introduction

• 1960s-90s: quantification as a “king’s road” towards a more empirical and even “scientific” historiography

• Today’s skepticism: quantitative data frequently reproduces the perspectives of the institutions that created it: governments and businesses.

• Proposition: layering quantitative data in GIS can make limitations and one-sidedness visible – while making the large scale of data models useful for critical history.
Data layers

• Transcribed statistics of original, final and “commuted” (early purchased) homestead claims between 1863 to 1912 at 236 local federal land offices. Offices are assigned coordinates (presentation) – and land district areas (web map).

• Indigenous land cessions and reservations maps (based on US Forest Service, Claudio Saunt)

• Frontier clashes (raids, massacres, battles) involving Indigenous people (based on Gregory Michno)
How was historical data handed down?


- Spreadsheet lists only finished homestead claims, instead of the number of original filings, finished claims and early purchased (“commuted”) parcels as recorded by the U.S. General Land Office

- Gives data on the state level, instead of the smaller land districts

- Inflates all the data for 1906 and onwards by including early purchased (“commuted”) lands as finished homesteads, which are counted in a separate category for the previous years.

- Conflates fiscal years and calendar years. (Fiscal years started on July 1 of the previous calendar year.)
“Indian land cessions”
How was historical data generated (1)?

- Atlas of Indigenous land cessions and reservations created by Charles Royce for the Smithsonian Institution in 1902; digitized in 2018 by U.S. Forest Service and historian Claudio Saunt.

- Uses treaties to draw a mosaic of (largely) non-overlapping Indigenous land claims that were “ceded” unambiguously to U.S. at specific dates.

- Simplifies the reality of forced cessions:
  - treaties were notorious for deceptive wording
  - often only accepted parts of Indigenous nations
  - frequently land was ceded several times
  - some leaders never signed on. (1871ff: “Indigenous land cessions” were based on unilateral declarations by U.S. President.)

- Native land uses overlapped frequently
“Frontier clashes”
How was historical data generated (2)?

• Mapped clashes between Indigenous people and U.S. Army and/or civilians extracted from two books by Gregory Michno.

• Reduction of fights to datapoints of casualty figures and nations involved
  - Radical decontextualization
  - Suggests understanding displacement wars as a contest between equals
  - Reduces very different events to similar datapoints (e.g. genocidal massacres and successful counterattacks against army)

• Based on U.S. Army reports
  - Played-up or reduced casualty figures for self-serving purposes
  - Virtually no input from Indigenous side
“Original homesteads”

fiscal year 1863
“Indian land cessions”
“Frontier clashes”
Layering land cessions and frontier clashes

Fiscal Year 1862
Layering homesteads and Indigenous land cessions
Outlook

- Layered visualizations are no finished histories.
- But layering quantitative source data in GIS can make ambiguity and complexity visible.
- Further source-based research allows fleshing out and finding narrations suggested by modeled data.
- Layered sources serve to contextualize deep drillings.
- Not equally applicable to historical questions:
  - Importance of spatial dimension varies.
  - Availability of historical spatial datasets is (still) spotty.
Thank you!
Literature


