Finding Past Places in Present Time: Locating Japanese Pre-Modern Villages

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Background

• Historian
  – Japan: ca 1580 – 1900
  – Social, local (Hokuriku)
Key Research Concerns

• Conditions determining levels of land taxation, ca. 1600 – 1868 (what factors did domains consider?)

• Institutions of corporate (village) control of arable land

• Tie to natural surroundings & conditions
  – Non-Agricultural considerations in setting land tax (fish, forestry; distance from castle town & administrative headquarters)
  – Propensity to flooding/landslides linked to corporate landholding
Implications for a GIS Study

• Concern for many cases
  – Tax data for Kaga domain
• Broad Area Coverage
  - Hydrological conditions that bear on particular locations
Challenges of Numbers Further Compounded

• Units of Taxation & Land Organization (Villages) “disappear” with appearance of first modern government (1868 – 1912)
  – Amalgamation into large political units

• Remaining traces
  – Station names
  – Bus stops
  – Etc.

• How to recover large numbers of locations?
  – Central point
  – Boundaries
Early Scientific Mapping in Japan

- 1:50,000 series, early 20th century
Some “settlement” data from 1:50000 maps

Are there alternate sources of location for research involving many places?
Comparison NLA data with Modern Maps & Local Knowledge

Niigata

Central Niigata (Nagaoka, Yoshikawa)
Direct Comparison early 20\textsuperscript{th} century 1:50k, late 20\textsuperscript{th} century 1:25k Maps further discouraging
Still some promise in Modern data

- National land agency publishes digital place names (natural features, customary names, parks, public facilities, etc.) on CD.
- Does this hold promise of providing, through maintenance of roster of customary names, etc., accurate location data for mid-19th century settlements?
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<th>町村名</th>
<th>注記番号</th>
<th>大分類</th>
<th>中分類</th>
<th>小分類</th>
<th>注記事項</th>
<th>注記事項の読み</th>
<th>大コード</th>
<th>文字数</th>
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</table>
Are these points good center point estimates?

- Compare 4 dozen points with locations based on local informants
- Hand-held GPS measures vs. NLA data
- Done all in one afternoon, down and dirty
Yoshikawa area I: NLA data = Green, GPS Data = Red
Yoshikawa area II: NLA data = Green, GPS Data = Red
Potential for Boundary location? Ministry of Ag. Data
Conclusions

• Contemporary data for Japan has potential to assist locating center point and boundary data for pre-modern (19th century) settlements in large numbers
  – Not complete (name changes)
  – Not perfect (boundary changes)
  – But a start

• Is this finding generalizable?
  – Open question, but suggests value of investigation
  – Value of thinking flexibly, not just about agencies which have primary responsibility for mapping