Folklore Tracks: hGIS and Folklore Collection in 19th Century Denmark

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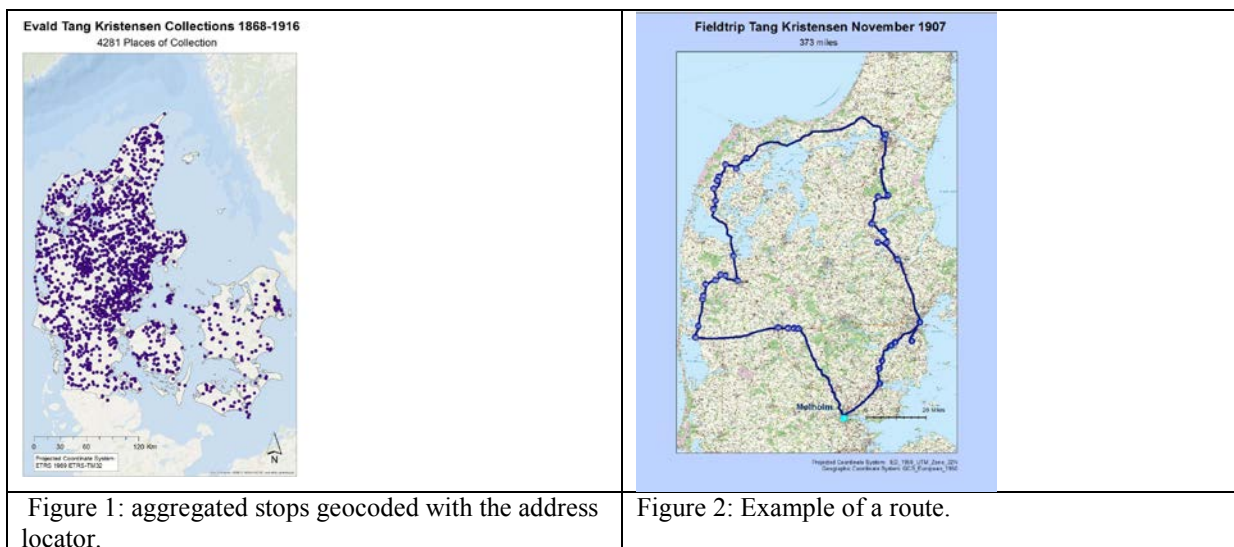tango@humnet.ucla.edu

INTRODUCTION

Folklore has played a significant role in the "imagining of the nation" since the inception of the field in the late 18th century. In Scandinavia, the "golden age" of folklore collection of the 19th century coincided with rapid changes in political, economic, and social organization. Although some later folklorists have expressed skepticism about these collections, this skepticism is often based on perceived notions of how these collections came to be, rather than a deep exploration of the actual practices of the collectors themselves. We show how techniques from GIS wedded to time tested archival research methods can reveal how a folklore collection came into being. By detailing the routes taken by a single folklore collector over the course of his fifty-year career, we trace not only his selection biases for geographic areas (and by extension, social and economic classes), but also the impact that intellectual currents, political developments and changes to transportation infrastructure have on his collecting. This work considerably extends qualitative assessments of Tang Kristensen's collecting (Christiansen 2013) and is a key contribution toward the development of the "Folklore Macroscope" (Tangherlini 2013).

Our target corpus is the folklore collections of the Dane, Evald Tang Kristensen (1843-1929) who, over the course of his sixty year career, traveled over 10,000 km, largely on foot, visiting ~4,500 storytellers in 4,281 places, recording these stories in 24,000 field diary pages. In this work, we focus on determining how and where Tang Kristensen traveled in Denmark as he created his collection. We develop detailed route maps projected onto appropriate historical base maps showing his movement through the countryside. In all, we map 267 fieldtrips, starting in 1868 and ending in 1916.

METHODS AND RESULTS

Data Extraction

When we began this work, there was no existing catalog of Tang Kristensen's field collecting routes—we had to devise this by coordinating annotations in his hand written field diaries with his four volume memoir *Minder og Oplevelser* (1923-1927). The memoir is based largely on letters he wrote home detailing all of his stops while out collecting, and includes information on means of transportation as well as travel dates. Our team began by making "proto-routes." We extracted trip start and end dates, as well as all stops and stop order for each trip by hand, and aligned these proto-routes with the field diaries (Fig. 1). In later work, we will also align field stops with our electronic catalog of informants.

| Figure 1: aggregated stops geocoded with the address locator. | Figure 2: Example of a route. |

Address Locator

Finding the locations for the stops we extracted in our "proto-routes" was a significant challenge. As with most historical data, places can be difficult to locate: some are very small, names have changed, and some places have disappeared. Contemporary gazetteers are inadequate to the task and often confound, rather than solve, queries. To address this problem, we downloaded the historical place name database developed by the Afdeling for Navneforskning, Københavns Universitet, and used it to generate a customized "Address Locator" for 19th century Denmark. We matched the stops from each fieldtrip with the address locator, generating a "best guess" for each fieldtrip. Multiple places with the same name were resolved through the "Interactive Rematch" interface. To derive the final fieldtrip stops, each trip was inspected individually.

Routes

With the stops in a provisional sequential order, we created the "most likely route" for each trip. A basic assumption was that, unless otherwise specified, Tang Kristensen would take the shortest path between two points, an assumption that aligns with the underlying "Network Analyst" algorithm in ArcMap. We used a transportation network from OpenStreetMaps pruned against the cadastral survey maps of ~1880, the highest resolution historical maps from the era. Since Tang Kristensen occasionally traveled by boat, ferry lines based on ferry schedules and close study of historical maps were also added. By feeding the provisional sequential stops to the network analyst, we were able to create the most likely routes for each trip as a single line record. These routes were then visualized as a line with sequentially numbered stops (Fig 2). Simple statistics, such as route length, as well as descriptors from our database, such as dates of collection, field diary pages, and modes of transportation augment the visualization.

Animations

Animations provide a dynamic representation of Tang Kristensen's movement through the countryside than static route maps that augment the static representations. These animations reveal, for example, the numerous times where he backtracked. To allow for sequential animations of all fieldtrips, we devised an additional "absolute order" field, and split all routes into inter-stop segments.

Travel Statistics

By splitting routes into inter-stop segments, we could develop more detailed statistics regarding segment length, speed of travel, and travel mode. More importantly, we can now aggregate segment statistics, and align this information with other data, allowing us to address a broad range of questions. For example, we can see how far he traveled when he lived in a specific place, his travel distances at different times of year, and his travel distances in different parts of the country. Furthermore, we can consider changes in average travel segment or fieldtrip distance over time. Future work will align stops with storytellers, allowing us to include story statistics with the fieldtrip statistics. Population data and transportation data will further add to this picture.

CONCLUSIONS

Our work reveals the shifting parameters of Tang Kristensen's field collecting, from his intensely local focus early on to his more expansive and confident travels at the end of his career, when his collecting was no longer aligned with Romantic nationalist goals, but more in tune with a thick descriptive approach to Jutlandic rural life. By using hGIS techniques, we can provide a degree of detail about his travels missing in earlier studies. Our approach enables a truly macroscopic approach to folklore collecting, allowing us to interrogate Tang Kristensen's field collecting at varying levels of resolution. For example, we can move from the micro-consideration of a single fieldtrip, to a meso-consideration of all trips that included a particular parish, to a macro-consideration of all his trips taken as a whole.

REFERENCES

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