

Visualising Space and Movement in a 'Hypercolony': Tianjin, 1860-1939

The Research

Questions

Through the study of this particular time and place, where several populations lived side by side and in constant tension, I hope to gain insight into how power is expressed in space and populations, how people lived in their contexts, and how we once negotiated – and continue to negotiate – *difference*, *modernity*, and *close encounters* – and the methods made possible by digital history is our way in.

Questions asked by this project are threefold: they are questions of power and access, of diversity, of mobility and the ways in which these overlap, strengthen and subvert each other.

- How strict or porous was the division between the foreign settlements themselves, and between the concessions and the Chinese city?
- Which places were pockets of 'cosmopolitanism' and diversity? Which were exclusive to specific groups?

The build environments of the varying concessions were self-consciously nationalist, imperialist, and modern. The Chinese city would later be as well.

- What meanings were associated with specific landmarks in the written records?
- What new information and avenues of analysis can be found through 'big data' text mining and visualization rather than traditional research?



View of the Beihai River from the Austro-Hungarian Concession

Prior Work

Hygienic Modernity, Ruth Rogaski

Rogaski has presented an alternative model for Chinese colonialism, epitomised by Tianjin, the 'hypercolony'. This model draws attention to the potential implications that arise when one urban space is divided among multiple imperialisms.

The Virtual Cities Project

Institut de Recherches Asiatiques, Aix-Marseilles

"The Virtual Cities Project" is an online project focused on bringing historical Chinese cities to life using spatial history and digital technologies.

"Virtual Tianjin" includes an extensive database of maps, images, and most importantly historical buildings and their addresses

"Nine Flags over Tianjin"

University of Bristol – Robert Bickers et al.

This project attempted to resolve the problem of languages by bringing together Chinese language and European language scholars together to produce 'a comparative and trans-national analysis of the identities, practices and rivalries of five of the major powers established in Tianjin'. The project's contribution to digital history stalled at visual media.

"Mapping Mobility in the Budapest Ghetto"

The Stanford Spatial History Project

The creation of a 'dynamic' map of the city to better understand how access to markets and mobility affected different experiences of victimhood during the years leading to World War II

The Project

Tianjin as a concession city lends itself remarkably well to a digital mapping and text-mining project. Not only are there a wealth of digitised maps and images already available online, but there is still room for work to bring a corpus of manuscript, published, and undigitised material together with the digitised set to recreate a *virtual, living historical city*. This project would bring together the spatial and the textual to chart onto the existing physical maps a *mental and dynamic landscape of concession-era Tianjin* – which places were frequented, spoken about, avoided, and ignored.



What a weird city I grew up in. For three or four Chinese coppers, I could ride in a rickshaw from my home, in England, to Italy, Germany, Japan, or Belgium. I walked to France for violin lessons; I had to cross the river to get to Russia, and often did, because the Russians had a beautiful wooded park with a lake in it.

John Hersey, in the New Yorker

Following China's defeat in the Opium Wars in 1860, Tianjin was opened up to foreign trade and flooded with foreign merchants, businessmen, missionaries, and diplomats and their families. The city was remarkable in that it was an ancient port city that was carved up into concessions by no fewer than eight foreign powers, including Britain, France, the United States, Japan, and Russia. The city's unique condition placed Chinese urbanites under the scrutiny and control of several foreign powers.

Through text-mining of Chinese, German, French, English, Italian and other newspapers, archived official and personal documents, printed ephemera, among others, we can map physically the mental space and routines of the inhabitants of concession-era Tianjin: which words and place-names fall next to one another, which streets are centring landmarks, which private grounds seem public, and which public grounds are hidden. This new information, remapped onto the variety of maps and images – some of them contradictory to each other – will create a *new portrait of the lived experience* in a very remarkable city that became simultaneously *modern, cosmopolitan, and segregated*, and offered the Chinese multiple models of colonialism and modernity.

Methods & Tools

Challenges

Digitising the sources

A major problem faced by this project is that very little textual data are in digitised forms

- These sources are also spread out across national or university archives of the foreign powers, or in China.

A multilingual dataset

Due to the diversity of populations, the dataset is also multilingual, and whatever tools required to parse this corpus must be able to take into account varied vocabularies and

Tools

OCR

such as Google's open-source Tesseract, can digitise printed material in good condition

Crowdsourcing

mobilisation of large numbers of volunteers to transcribe manuscripts and low-quality printed material into digital formats for analysis

Zooniverse.org is largest online platform for collaborative volunteer research

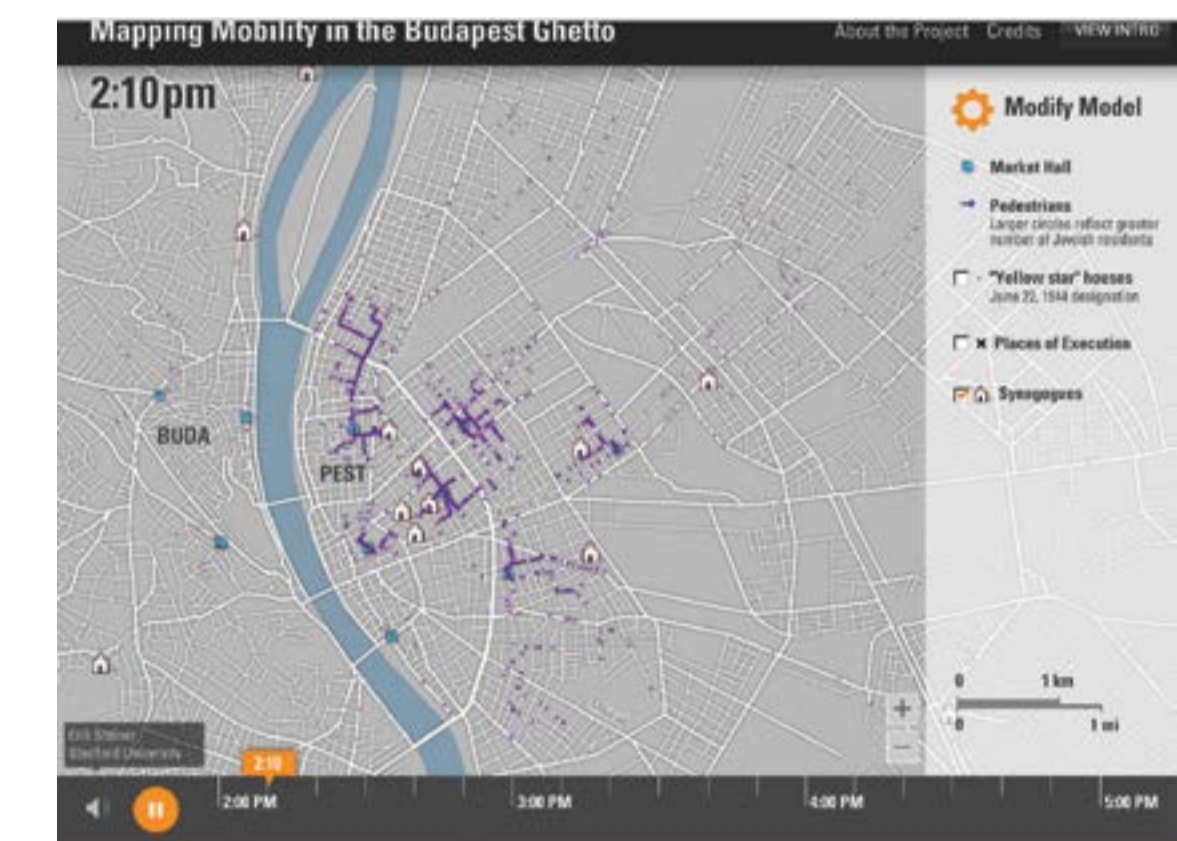
Geographic Information Systems (GIS)

Stores, displays and analyses data based on location -- crucial for a spatial history

Text mining:

Geo-parsing: converts free-text descriptors of places into an unambiguous location

Sentiment analysis: determine attitudes surrounding specific mentioned places



Wider Visions

While the majority of this digital project depends heavily on a deep digital analysis of a large and diverse corpus of texts and images, the end goal is the final visualisation – an interactive and dynamic urban plane onto which the archive and the analytics can be mapped and contextualised.

A more useful source: the dynamic map

Maps are static and show a certain place at a certain time. A mobility map humanizes the landscape and shows in real time that the environment was one that humans trespassed, interacted with, and was limited by.

Public digital tools, public digital cities

Create an analytical and visualization framework for a larger digital cities analysis and visualizations, to be used to better understand other historical and contemporary urban lived environments

Cities are the producers of some of the largest amounts of text, longstanding or ephemeral, imaginative or administrative. A case has been made, persuasively, that modern cities are 'read' rather than simply walked through.

The visualizations and analytical tools from this project can be made public, so that after data collection and digitisation, other urban historians or researchers can use these visualisations for their cities. A fully realised and adaptable 'Virtual Cities' project would be a boon for contemporary cities as well.