Visualizing the Geography of Disease: *The Diseases of China, 1870s-1920s*

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Outline

I  The Chinese Geographic Imagination
II  European Mapping Precedents, 1792-1875
III  Initial Mapping of the Diseases of China, 1877-1903
IV  The Diseases of China, including Formosa and Korea, 1910
V  Maps of the Manchurian Plague epidemic, 1910-11
VI  The North Manchurian Plague Prevention Service Reports, 1918-1928
Conclusion  The Diseases of China, including Formosa and Korea, second edition 1928
Shilin guangji
事林廣記
Broad-ranging Record on Many Matters

by Chen Yuanjing
陳元靚 (1137–81)

Yuan dynasty
(1278-1368)

Zhishun edition
(r. 1330-1333)
Shilin guangji

Broad-ranging Record on Many Matters

by Chen Yuanjing

陳元靓（1137–1181）

Ming dynasty (1368-1644)

1498 edition
"天傾西北"  Heaven is collapsed in the northwest

"地不滿東南"  Earth is incomplete in the southeast

Immortal Rabbit of the Moon

Black Crow of the Sun
圖掌指泉在天司

Palm lines =
Rivers flowing from
lower right (northwest) to
upper left (southeast)

東 EAST

南 SOUTH

西 WEST

北 NORTH

天 HEAVEN

地 EARTH

Figure 7
張介賓，《類經圖翼》‘指掌圖’
1782 四庫全書刻本。
新刻天如張先生精選石渠萬寶全書
Wanbao quanshu (10,000 Treasures), 1641
Bodleian Sinica 105
新鐙四民便用不求人萬斛明珠
10,000 Treasures, Xu Xinlu ed. 徐心魯, 1662
Bodleian Sinica 119
陳子性藏本
Chen Zixing’s Collected Books, 1684
增补万宝全书  Zengbu Wanbao quanshu
10,000 Treasures, 1749
Cambridge East Asian Collection FC.31.183
European Mapping Precedents, 1792-1875

Part II
Leonhard Ludwig Finke,
der Arzney-Gelahrteit Doctor und Professor zu Lingen,

Versuch
einer allgemeinen medicinisch-praktischen

Geographie,
worin
der historische Theil der einheimischen
Völker- und Staaten-Arzneykunde
vorgetragen wird.

Erster Band,
welcher die Länder enthält, die sich vom 45ten Grade, so wohl
nördlicher als südlicher Breite, bis zur Linie erstrecken.

Leipzig,
in der Weidmannschen Buchhandlung, 1792.
Figure 3.10a  Brigham’s world map of the progress of cholera in 1832. The hand-drawn line represents cholera’s progress around the world, the lines closely following existing trade routes.
Figure 3.10b  Black-and-white detail of Brigham’s world map of the progress of cholera in 1832. The hand-drawn line represents cholera’s progress with dates of outbreaks beside individual towns.
Evidence for argument that the origin was the pump and the cause contaminated water
Figure 3.11a  A. K. Johnston’s map, *The Geographical Distribution of Health and Disease in Connection Chiefly with Natural Phenomena*, 1856.
Figure 7.1  A British map of the international diffusion of cholera beginning in 1865 included in the U.S. Congressional report by J. M. Woodworth, 1875.

Source: Rare Books and Special Collections, University of British Columbia Library. Woodworth (1875).
Initial Mapping of the Diseases of China, 1878-1903

PART III
Maps from the
Medical Reports of the Imperial Maritime Customs Service,
1878-1898
"Notes on the Plague in Yunnan"

"Dr. Manson’s Report on the Health of Amoy for the Half-year ended 31st March 1878"

First map of the course of an epidemic in China

Maps the 1871-72 plague epidemics in Yunnan.
General Track of Epidemics in Eastern Asia.

Compiled by D. B. Simonds, M.D.
SKETCH MAP INDICATING THE GEOGRAPHICAL DISTRIBUTION OF BERIBERI.
MAP SHOWING
The Course of The Epidemics of 1877 & 1879 in JAPAN, and the Severity of the Epidemic of 1879.
Compiled by D. E. Simmons M.D.
W.J. Simpson, *Report on the Causes and Continuance of Plague in Hong Kong and Suggestions as to Remedial Measures*

London: Waterlow and Sons, 1903
Maps of the incidence of plague in Hong Kong 1894
THE NUMBER IN THE CIRCLE OR SQUARE REFERS TO THE WEEK IN WHICH THE CASE OCCURRED.
□ HUMAN PLAGUE.
○ RAT PLAGUE.

THE NUMBER IN THE CIRCLE OR SQUARE REFERS TO THE WEEK IN WHICH THE CASE OCCURRED.
HUMAN PLAGUE.
RAT PLAGUE.

THE NUMBER IN THE CIRCLE OR SQUARE REFERS TO THE WEEK IN WHICH THE CASE OCCURRED.
□ HUMAN PLAGUE.
〇 RAT PLAGUE.

THE NUMBER IN THE CIRCLE OR SQUARE REFERS TO THE WEEK IN WHICH THE CASE OCCURRED.
A Humorous Diplomatic Atlas of Europe and Asia, 1904

By Kisaburo Ohara at the beginning of the Russo-Japanese War (1904-5)
The Diseases of China, Including Formosa and Korea, 1910

PART IV
The Diseases of China, Including Formosa and Korea, 1910

By Drs. Hamilton W/ Jefferys and James L. Maxwell
MAP I.

Noso-geographical Divisions of China.

1. North. 2. Central. 3. South. 4. Northwest. 5. Central-west. 6. Southwest. 7. Area of prolonged foreign contact. + Chief centres from which reports have been received.
It may be taken as a starting-point that, as in our past experience in other land, the distribution of disease in China will be largely governed by climatic conditions [bold lettering is original]; and if we add to this factor that of the influence of lines of travel, and especially of foreign contact with the formerly for centuries undisturbed China, we have named the two points which will have the most influence on any diagrammatic representation of the subject that we may attempt (Diseases of China, 1910 p. 30).
MAP II.
PLAGUE.

<table>
<thead>
<tr>
<th>Endemic</th>
<th>Epidemic</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Endemic and Epidemic. ◯ Plague-free. □ Rat Epizootic.

Note.—These reports must be understood as covering the last ten years only.
MAP III.

Cholera.

+ Epidemic reported during the last thirty years.  # Repeated Epidemics.

NOTE.—The cities and dates of the epidemics are recorded.
Map of the Manchurian Plague Epidemic, 1910-11

Russian Source

PART V
Figure 1.17 Russian plague map of Harbin. Location of cases and deaths from plague in the railway and port city of Harbin, Manchuria, 1911-12. Also mapped are the positions of various plague control facilities. Source: Khmara-Borschhevskii (1912).
Map of the Manchurian Plague Epidemic, 1910-11

English Language Sources
Part V
"Plague in Manchuria,” Reginald Farrar
"Report of the International Plague Conference Held at Mukden, April 1911"
Manila, Bureau of Printing, 1912. R.P. Strong, Editor. Plate XIV
"Report of the International Plague Conference Held at Mukden, April 1911"
Manila, Bureau of Printing, 1912. R.P. Strong, Editor. Plate XV
Wu Lien-teh 伍连德 (1879-1960)  
Penang, Malayan-Chinese
Maps from the North Manchurian Plague Prevention Service Reports, 1918-1928

PART VI
MAP OF PLAGUE REGION, MANCHURIA, 1921.

Dates after names indicate first cases recorded; arrows indicate first invasion of plague 1920.
Plague Fighter: The Autobiography of a Modern Chinese Physician (1959)

Office in the New Laboratory, Harbin completed in 1920, with steam-heating and running water supplied from artesian well. Working under such conditions during both winter and summer was much pleasanter.
Map of North Eastern Asia showing important Plague Centres.
GUIDE TO MAP.

1a. Benghazi, Tripolitania
1b. Morocco
2a. Victoria Nyanza
2b. Mauritius and Reunion
3. Assyry
4. Khurdistan
5. Kumaon and Gurwhal
6. Yunnan
7a. Transbaikalia
7b. Outer Mongolia
8. Inner Mongolia
9. Thibet
10a. Chinese Turkestan
10b. Semiretchinsk
10c. Russian Turkestan
11. Persia
11a. Khorassan.
11b. Seistan.
Plague: 
A Manual for Medical and Public Health Workers, 1936

Weishengshu, Shanghai Station: National Quarantine Service
Plate XXXVI

BUBONIC
PLAGUE

Fig. 89: Propaganda poster of bubonic plague
(Designed by Dr. Wu Liu-teh)

Divided into six sections: 1. geographical distribution in (a) the world and (b) China; 2. causation; 3. mode of transmission; 4. signs and symptoms; 5. preventive measures (inoculation, rat-proofing, etc.); 6. treatment.
BUBONIC PLAGUE

Symptoms:

Geog. Distribution

China

Cause:

Transmission:

Mice, rats, etc.

Birds, rodents, etc.

Humans

Mode of Transmission
Earliest example of mapping disease in China in Chinese and intended for ordinary Chinese

Propaganda poster of bubonic plague 腺疫宣傳圖解 Xianyi xuanchuan tujie

Detail of the Geographical distribution in a) the world and b) China
Fig. 90: Propaganda poster of pneumonic plague.
(Designed by Dr. W. Lien-teh)

Comprising as usual six sections. Among the more prominent features may be seen the part played by the tarabagan (Siberian marmot), underground habitation, direct coughing from patient to contact, use of cotton masks for protection and a model plague ward having glass partition between medical attendant and patient.
PNEUMONIC PLAGUE

China

The World

Geog. Distribution [China]

Causation
Earliest example of mapping disease in China in Chinese and intended for ordinary Chinese

Propaganda poster of pneumonic plague 肺疫宣传图解 Feiyi xuanchuan tujie

Detail of the Geographical distribution in a) the world and b) China
Figure 11. Poster designed by Dr. Wu Lien-teh, director of the Manchurian Plague Prevention Service (Harbin, 1928). There are six series of pictures showing the causal factors of spread, symptoms, prophylaxis, and treatment of cholera.
CHOLERA

China

The World