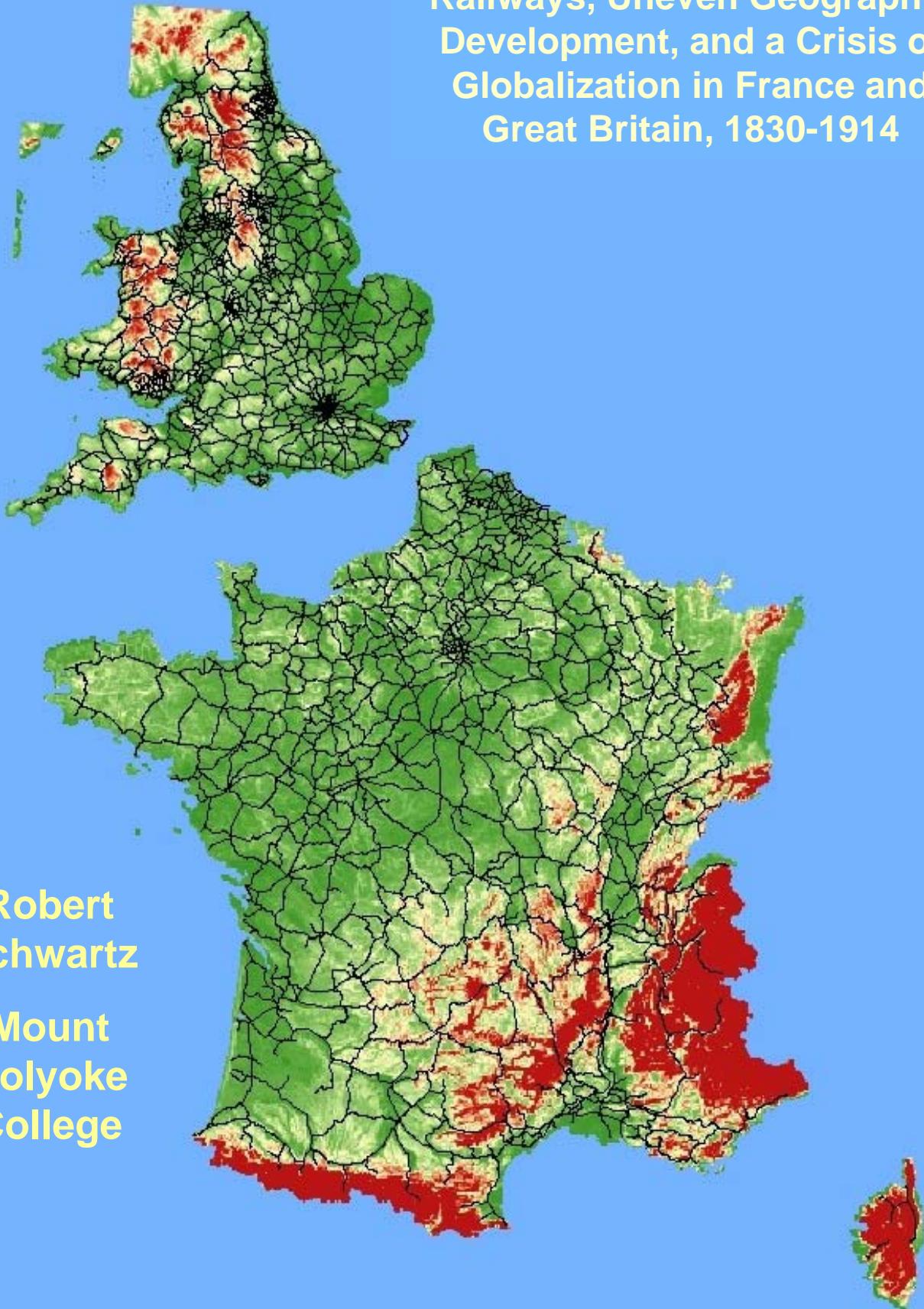


Railways, Uneven Geographic Development, and a Crisis of Globalization in France and Great Britain, 1830-1914



Robert
Schwartz
Mount
Holyoke
College

Historians take note:

Geography matters!

- Recover the blending of historical and geographical thinking.
- “Geography.” A vanished category in *The American Historical Review*’s indices.
- “Geography” and “spatial” notable by their absence.
- “Sites” and “spaces” a plenty – but serving mainly as
 - ***metaphors***
 - ***indefinite locations of discourse and cultural practice.***
- Reunite history and geography, time and space.

Comparative history of railways, uneven development, and cultural change in France and Great Britain, 1840s to 1920s

History & Geography

- Doreen Massey, *Spatial Divisions of Labour: Social Structures and the Geography of Production* 1984, 1995):
 - *geography*: the study of social relations stretched across space and through time.
 - “*places*”: not static but active and historically conditioned localities.
 - Formed by layers of past investment and the spatial division of labor that such investment produced.
 - Places —industrial, agrarian, or administrative —continue to shape and constrain their own diverse paths of development.
 - Political action can interrupt and redirect historically-conditioned spatial relations.
- *Space*: not an empty or neutral container but dynamic relationships produced through economic and social change.
 - Clusters of natural resources and sites of production continually in flux—developing, declining, & contracting in step with capital investment and level of production. (Neil Smith)
- Dynamic interconnectivity: a change in one place in the system will affect other places and regions.

- Railways and Uneven Development

Railways

- Embody and localize capital investments:
- Indicate uneven development
- Affect uneven development through stimulation of new economic and commercial opportunities.
 - Rail transport stemmed rural out migration to various degrees in different regions.

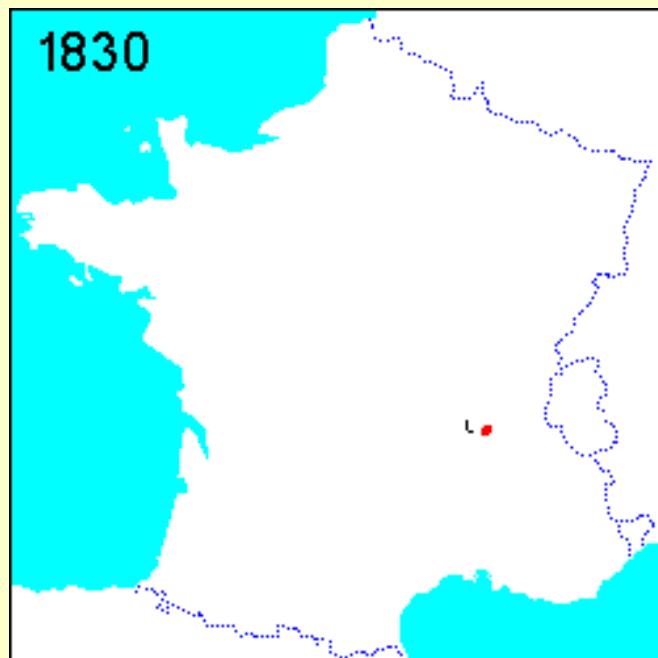
In Britain & France

- Where, when, & to what extent did railways reinforce or diminish existing regional economic disparities?
 - Diminished the disparities in agrarian growth between northern and southern France by 1910.
- Where, when, & to what extent did political will alter the outcomes?
 - Differing responses to the Agrarian Crisis during the last quarter of the 19th century (1874-1896):
 - French intervention vs. British laissez-faire

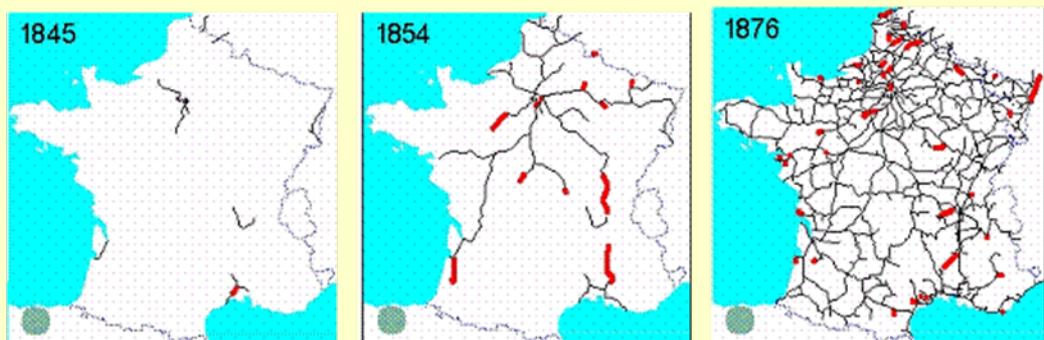
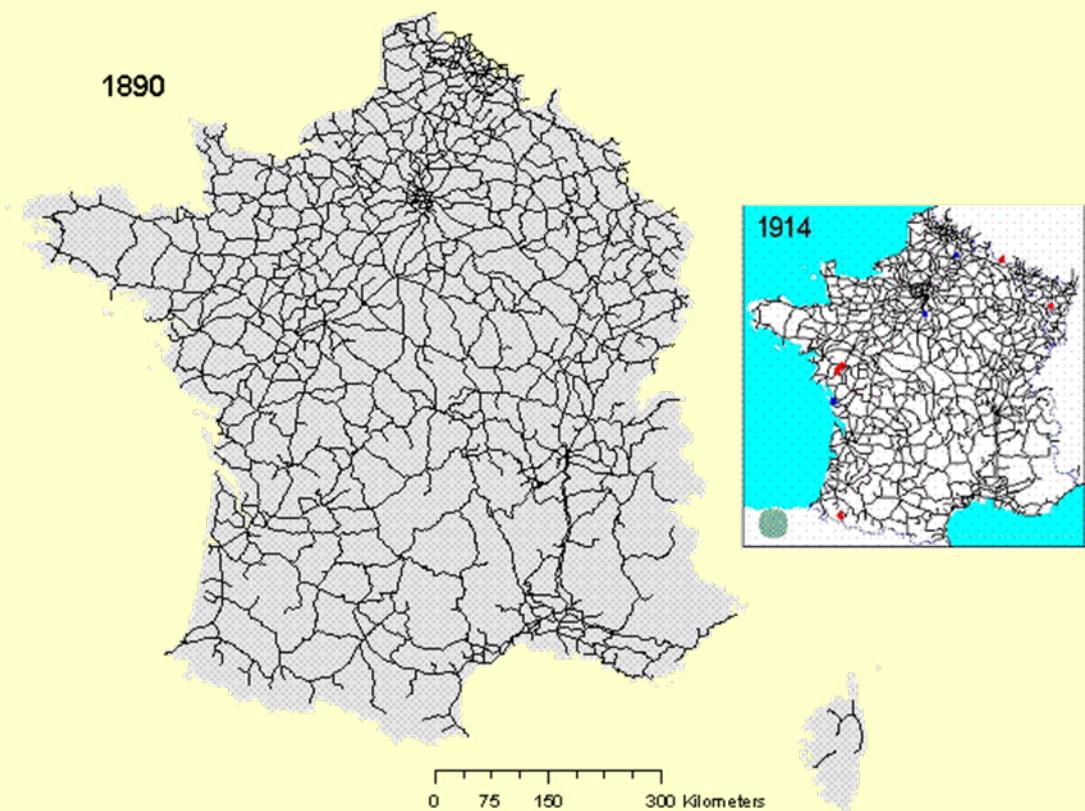
Change at the local scale: Thenissey

(France)—revitalization, crisis, & adaptation

Change over time and space: the growth of French railways, 1830-1914



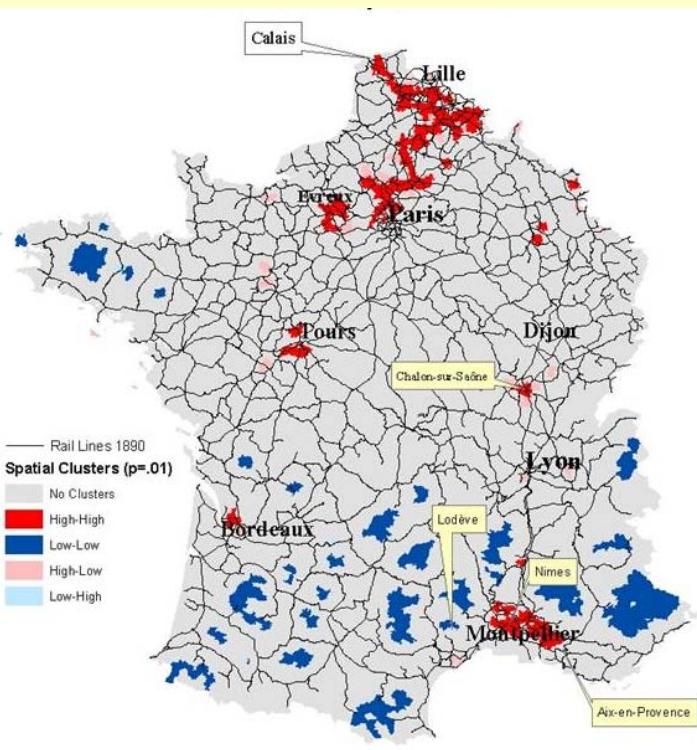
Stop Motion: The Growth of the rail network in France 1827-1914



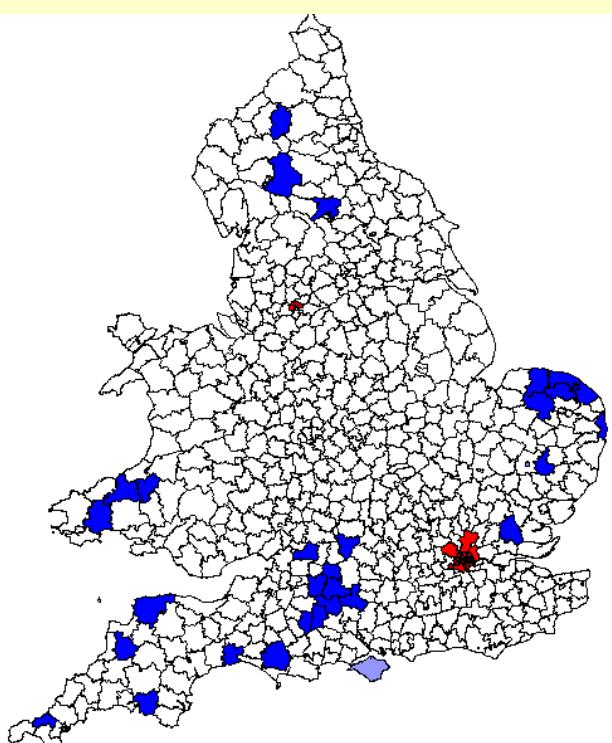
Uneven Development: Regional Disparities in Rail Transport: France vs. Britain

Local Moran analysis of rail density by canton/district

France 1890



England & Wales 1876

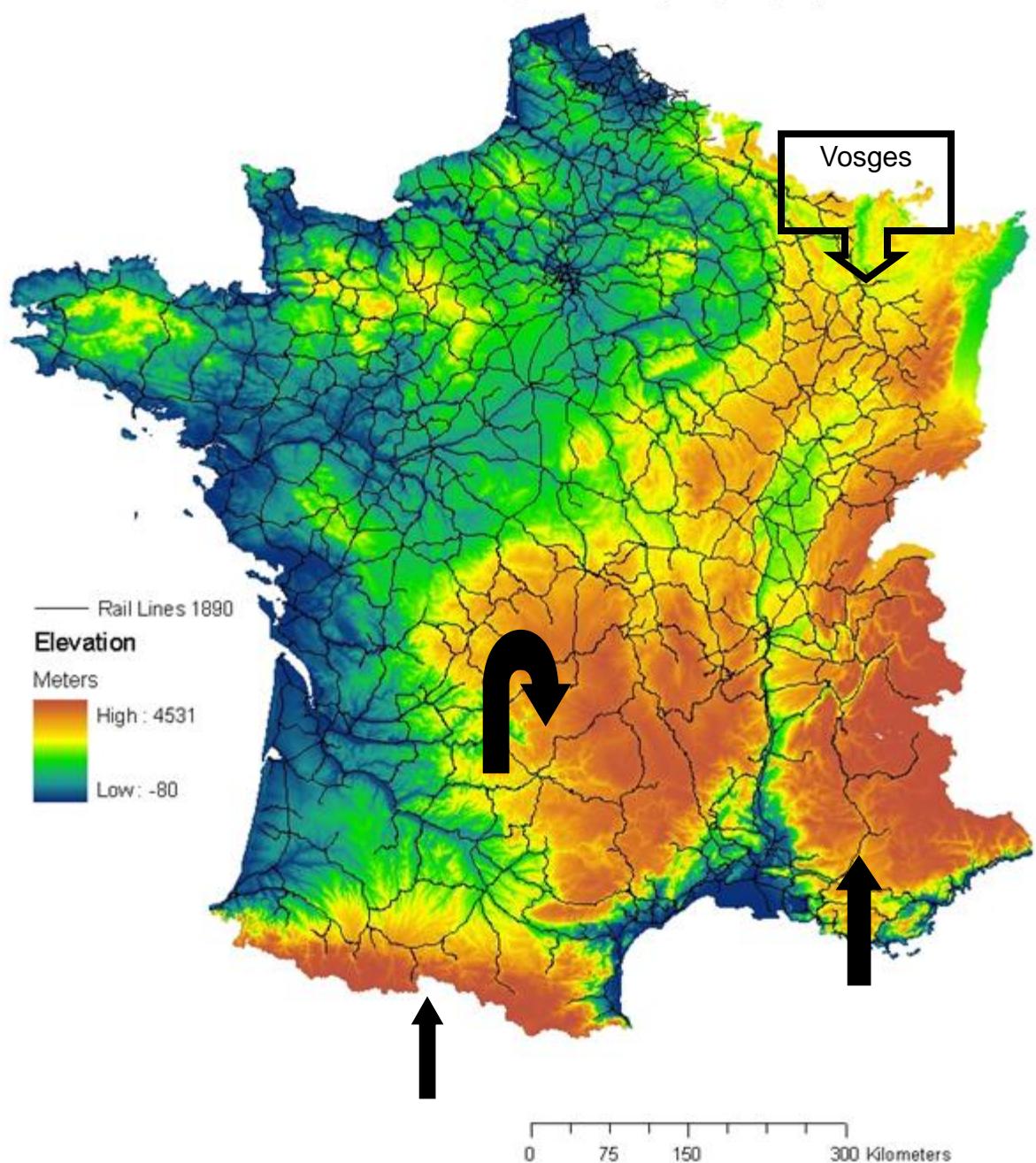


Red = clusters of high rail density

Blue = clusters of low or negligible rail density

Digital Terrain Model: the influence of topography on regional differences in the accessibility of rail transport, 1890

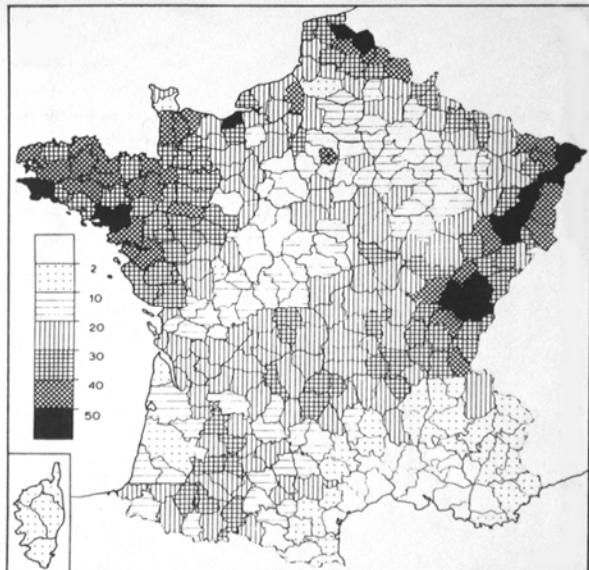
The Rail System in 1890
and the Challenge of Topography



Spatial Reorganization

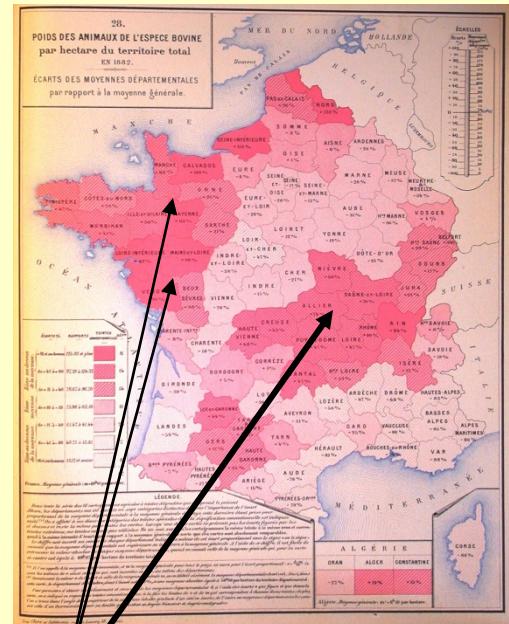
Intensifying regional specialization in animal husbandry by density of cattle in 1837 and 1882

Hugh Clout, Agriculture in France on the Eve of the Railway Age, (Totowa, NJ, 1980), p.179.



Density of Cattle per 10 Ha

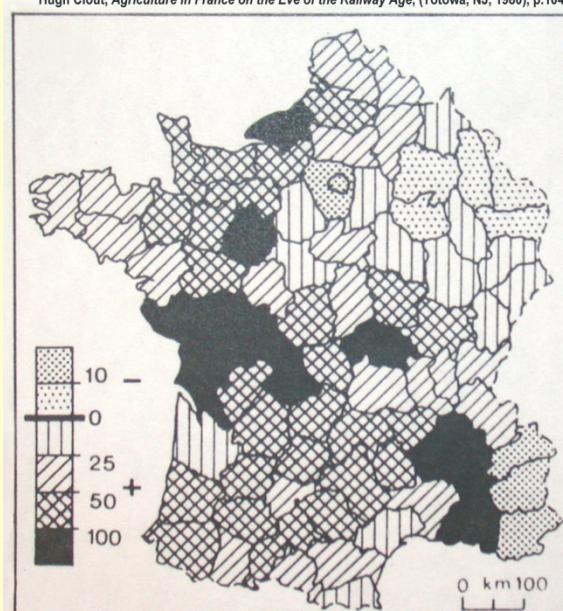
1837



1882

expansion

Hugh Clout, Agriculture in France on the Eve of the Railway Age, (Totowa, NJ, 1980), p.104.



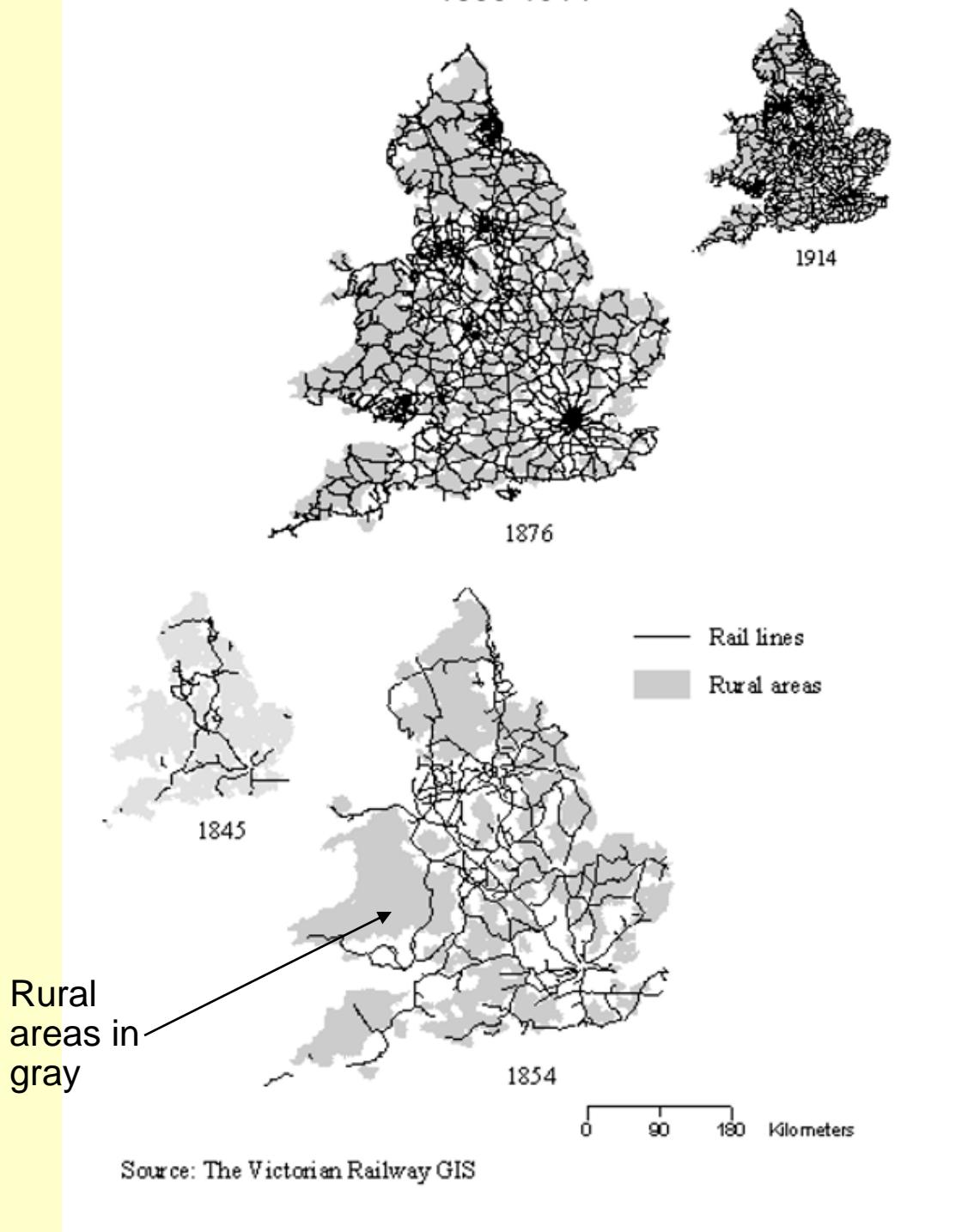
Percentage Change in Cattle, 1837 - 1912.

Percentage change, on 1837-1914

The Growth of rail network in England and Wales, 1845-1914

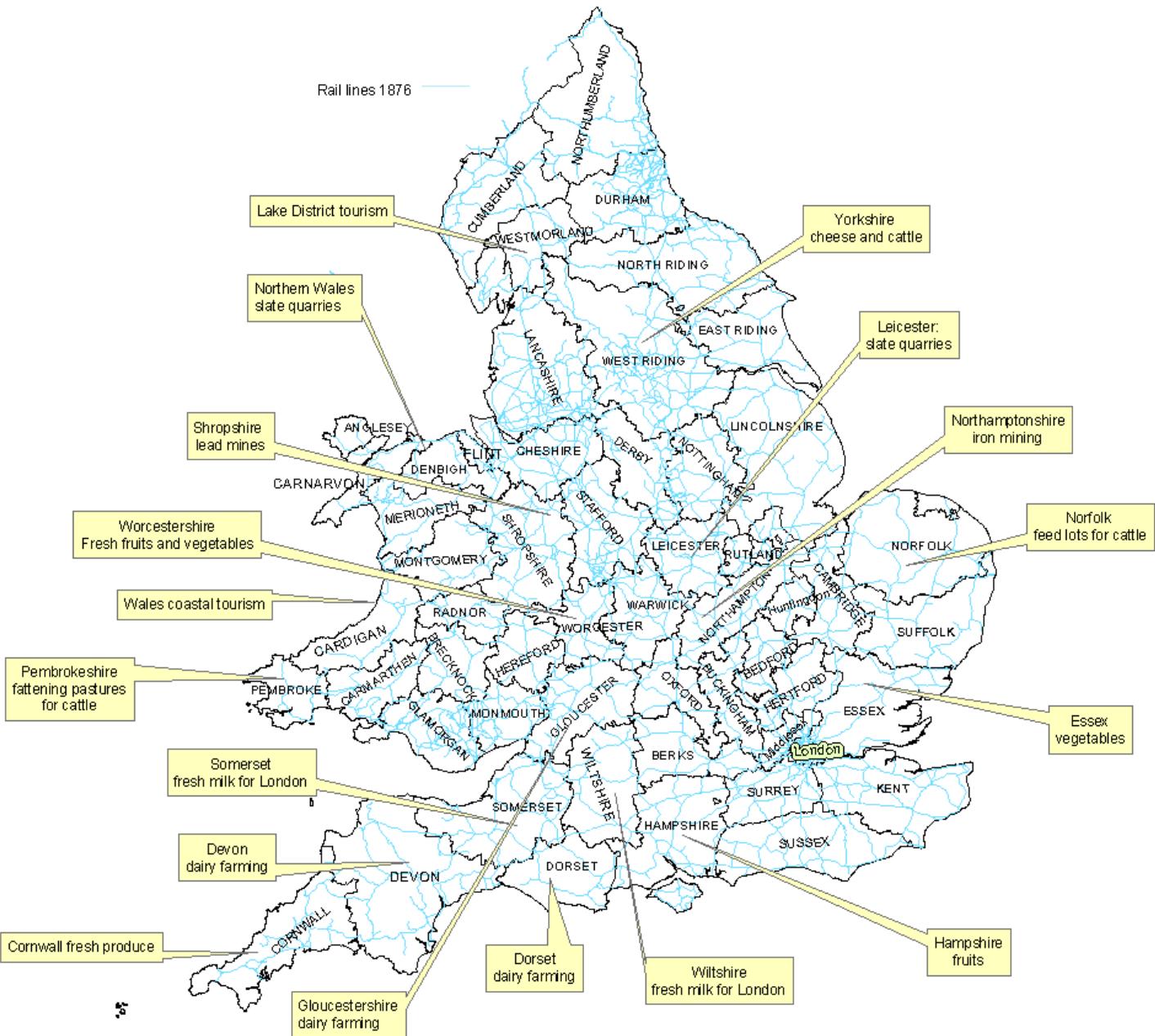
By what period did the railways reach rural areas?

The Growth of the Rail System in England and Wales
1830-1914

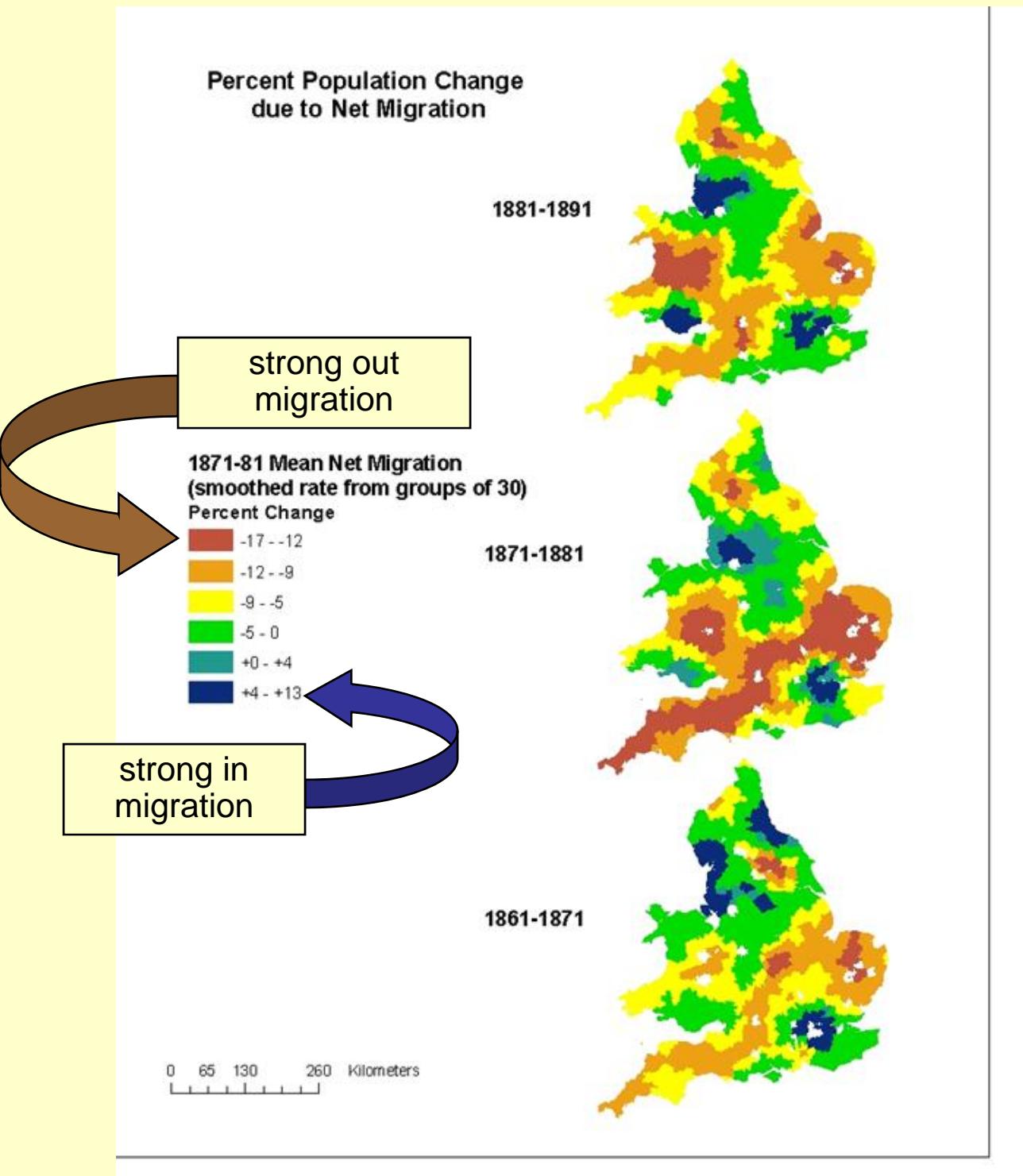


Railways Foster Economic Development in Rural England and Wales, 1860-1890

Examples: geographic restructuring of cattle farming & meat trade, dairy farming and fresh milk trade



England and the Wales: Population Change because of net migration, 1861-91



net migration = change in population between census years - change from natural increase (births-deaths) during the same period

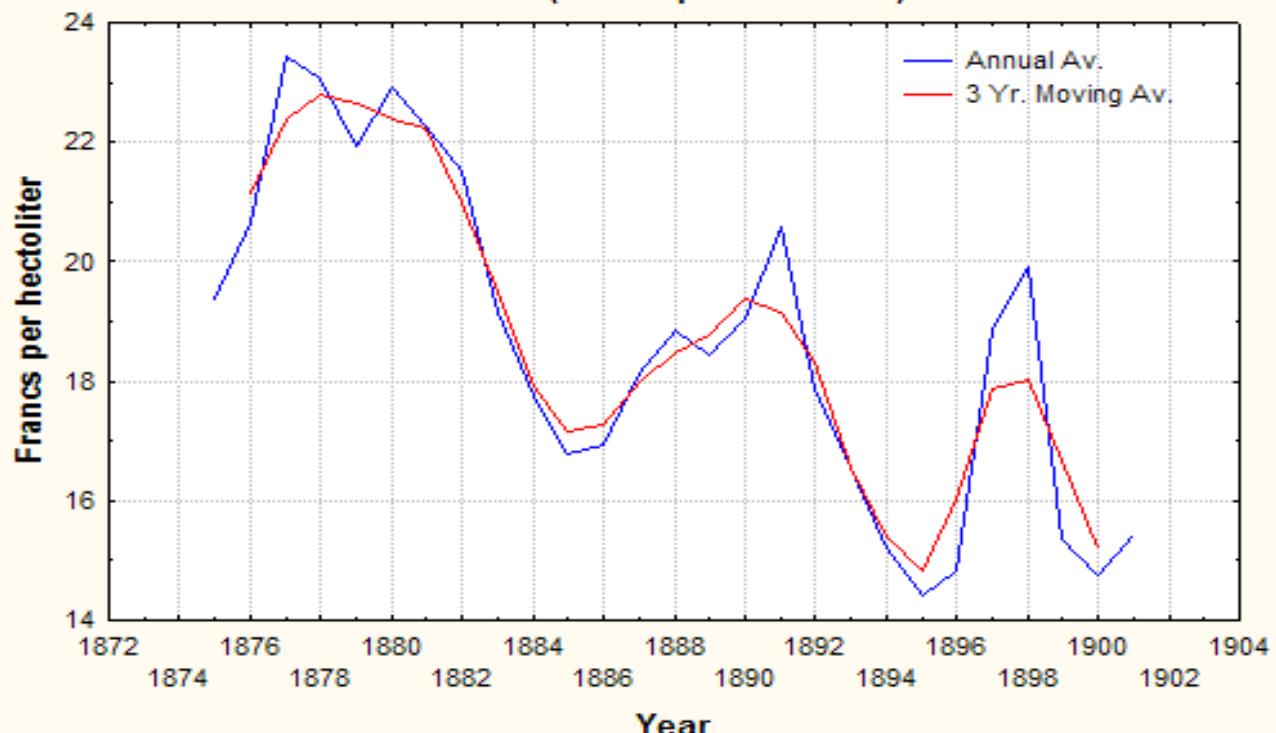
Railways, Political Economy & Globalization

British and French Responses to the Agrarian Crisis (1873-1896)

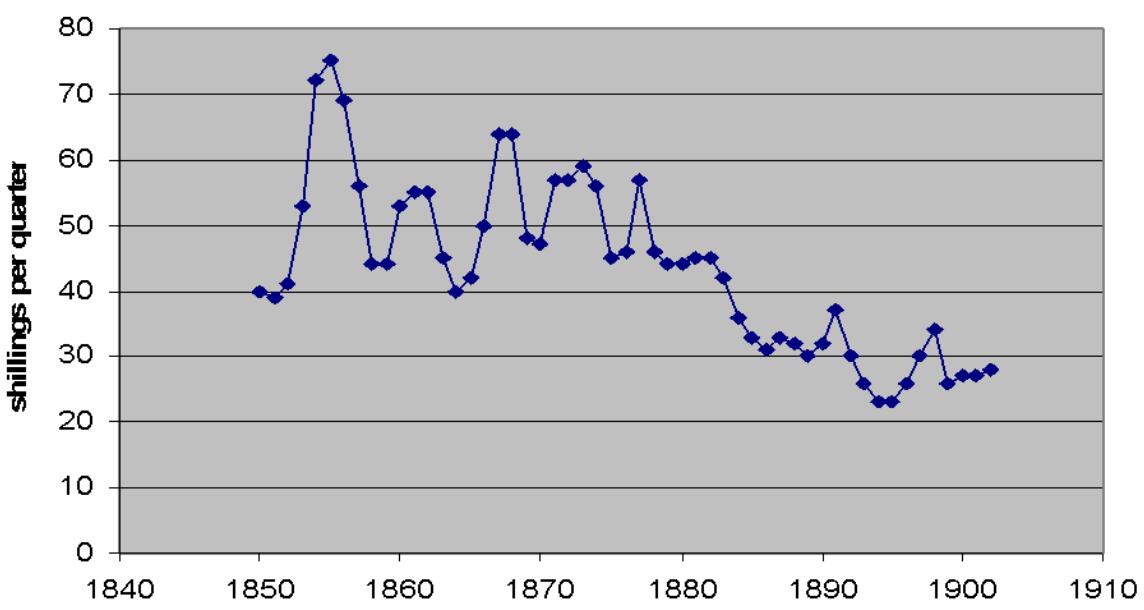
England & Wales	France
Private companies	Private & state companies
Privately financed	Privately & state financed, including state guarantees of private investments in rail
Success = profitability	Success = profitability & public utility
Government regulation	Government regulation & design of network
Liberal trade policy	Limited liberal trade policy
Rural/agrarian population relatively small & declining	Rural/agrarian population relatively vast, peaked in 1870s
After 1850, imports of food rise	1881 protective tariffs limit imports of food

Agrarian Distress: Annual Price of Wheat Prices in France and Britain, 1849-1904

Annual Average Price of Wheat in France
1875-1901 (Francs per hectoliter)



Average Wheat Prices in the U.K.
from Collins (2000)



Responses to the Agrarian Crisis ca. 1873-1896

Britain

- Parliamentary hand-wringing
- Held to free trade in foodstuffs
- Legislative initiatives encourage expansion into under-served areas, e.g., The Light Railway Bill, 1893

France

- 1881, tariffs on foodstuffs enacted, after pressure from agrarian interests
- Freycenet Program of rail expansion 1878
 - Expansion of main network
 - Creation of new network of lines of local interest, with private, state, and local financing
- Political aims: strengthen loyalties to the new regime of 3rd Republic
- Economic: modernize the vast agrarian sector with relatively large rural population

Rail Transport and Change at the Local Scale

Thenissey: a narrative of place

Tonnage of goods traffic on French railways in 1879 and Village of Thenissey in Burgundy



Thenissey in transformation 1849-1871

- Building and opening of PLM rail line, 1849-51
- Occupational shift from agriculture to artisanal trades & commerce.
 - Household heads in trades & commerce
 - 1830s: 20 %
 - 1860s: 33 %
 - Five women in dry goods
 - Timber merchant and long sawyers
 - Black smiths
 - Cartwrights (no trains stop in Thenissey: closest station five miles away)
- Schooling: increased enrollments; adult classes begun
- Population: decline from 1801 stabilizes in 1850s
 - Out migration of young men and women stabilizes
- **In sum: a period of revitalization**

Thenissey: crisis, decline, and adaptation 1870s-1890s

- Village economy of mixed farming and vine growing hit by increasing competition
 - Competition from wines in the South of France (Languedoc and Roussillon)
 - Competition from grain imported from North America from the 1870s
- And then disease: Phylloxera destroyed much of the village vines
- Shift to expanded animal husbandry:
 - larger herds of sheep, dairy cows, pigs
 - conversion of arable to meadow land
 - sugar beets for animal food
- The population drops sharply in the 1870s
 - Out migration rate lower for young women than young women up to 1890s, possibly reflecting increase in jobs for women in dairying
- Some grain farmers and winegrowers change to stock raising—more profitable because of a) the rising demand for meat in cities b) the lower costs of production—not as much labor needed

Political Response: the campaign for village station and improved rail transport 1876-1890

Required village financing

- Loan from the village notable, Marquis de Villefranche (after being elected mayor)
- Additional financing through tax increases, loans, and state subsidies
- Opens in 1890



Recovery and adaptation

- 1892: production of cheese, butter, wool up from decade earlier
- Smaller population remains relatively stable

•Conclusion: Change over time and space

- National and regional patterns of rail accessibility/regional disparities in rail transport.
 - Incorporation of rural communities in national rail networks
 - Diminished regional disparities in economic growth in France. (Britain—to be discovered).
- National differences in the spatial political economy of rail transport and rural development: responses to the agrarian crisis
 - Britain: private railways and free trade.
 - France: state & private railways, state subsidies to create non-profitable lines, protective tariffs.
- Local scale: revitalization, crisis, and adaptation
- Geo-temporal data & GIS help identify the changing effects of rail policy and rail expansion in rural communities.

•Conclusion

Geography mattered

So did politics

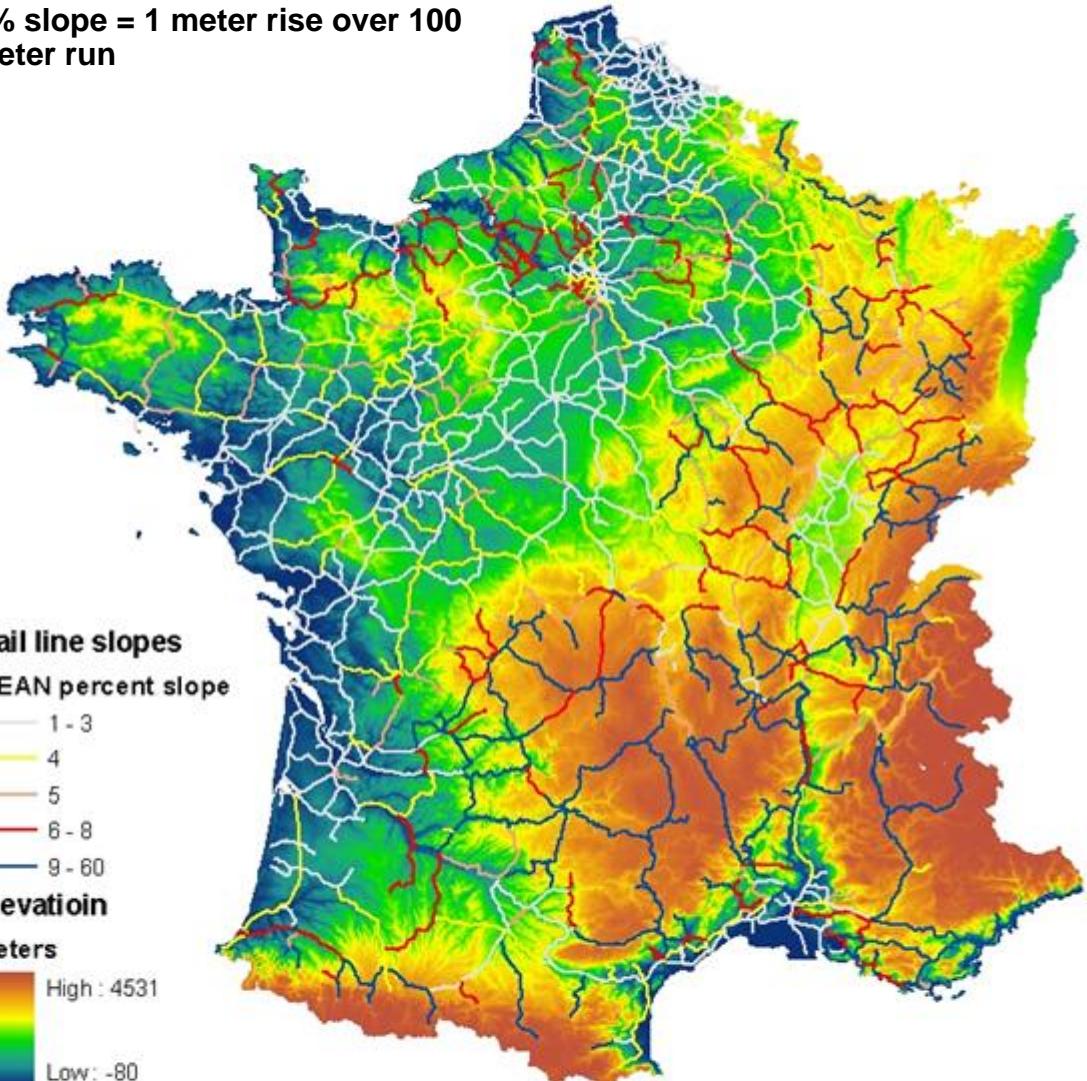
In France, state intervention, aimed at binding loyalties and modernizing a vast agrarian economy, resulted in expanded rail networks to reach remote, less profitable, destinations

Slopes of railway corridors

(in percentages)

Rail Line Slopes in 1860

1% slope = 1 meter rise over 100 meter run



0 75 150 300 Kilometers

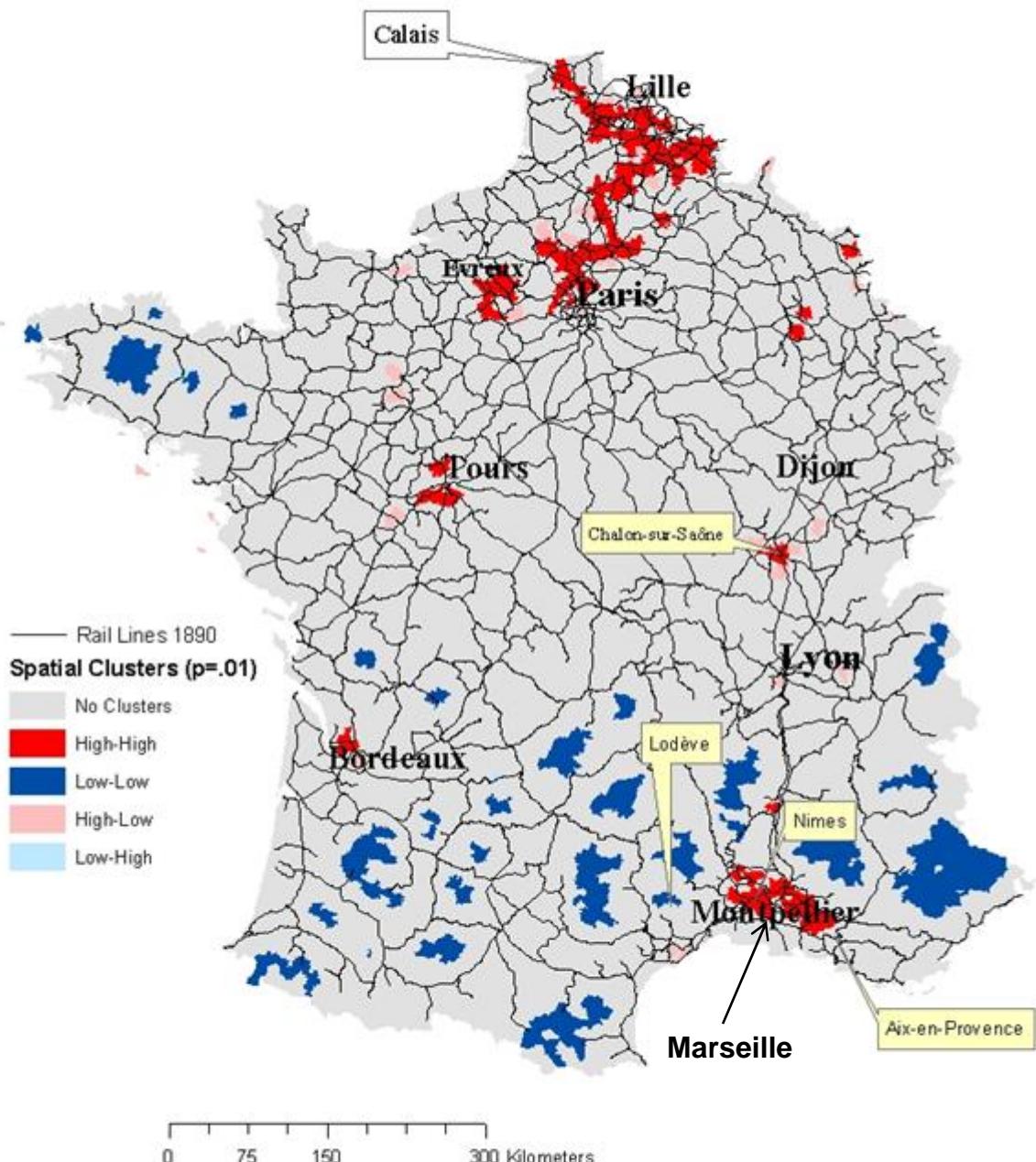
Agrarian Crisis and Transition 1870-1900

Why re-examine Kautsky's *The Agrarian Question* (1899)?

- “The Farm Problem” is still with us. Half of the world’s population engaged in agriculture.
- Economic historians re-interpret and diminish the agrarian depression/crisis of 1880s and 1890s.
- Pursue the relationship between railways and the crisis
- Opportunity to study the interconnectivity of geographic scales: global, national, regional, and local.

Railways and Uneven Development

Uneven Development: Geographic Clustering of Rail Transport in 1890



red = clusters of high rail density

blue = clusters of low or negligible rail density

Responses to the Agrarian Crisis ca. 1873-1896

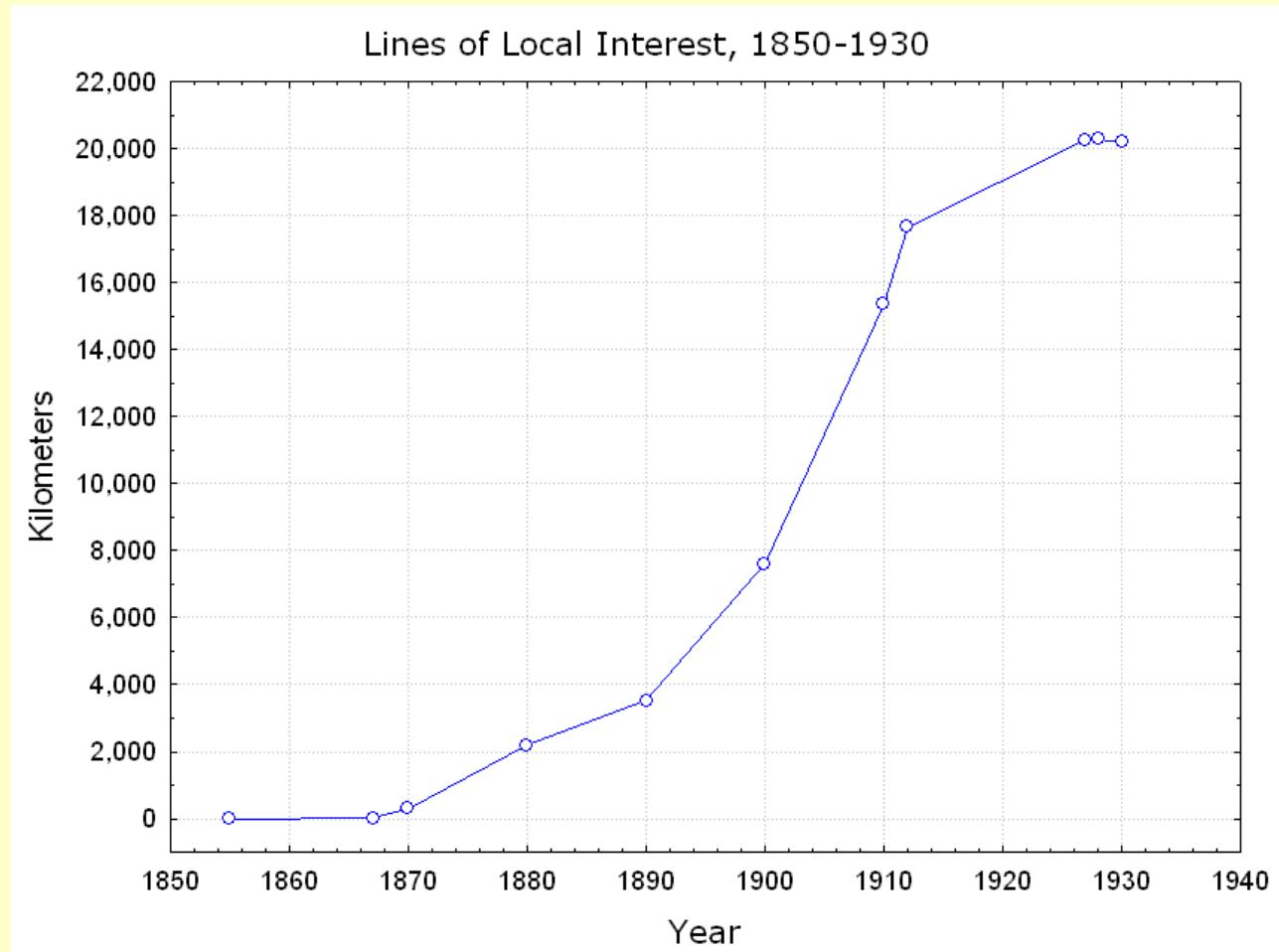
Britain

- Parliamentary hand-wringing
- Held to free trade in foodstuffs
- Legislative initiatives encourage expansion into under-served areas, e.g., The Light Railway Bill, 1893

France

- 1881, tariffs on foodstuffs enacted, after pressure from agrarian interests
- Freycenet Program of rail expansion 1878
 - Expansion of main network
 - Creation of new network of lines of local interest, with private, state, and local financing
- Political aims: strengthen loyalties to the new regime of 3rd Republic
- Economic:

Figure 4. The Growth of the French Secondary Rail Network



Source: Ministère des Travaux Publics, *Statistique centrale des chemins de ferres français au 31 décembre 1932. France, voies ferrées d'intérêt local, tramways, services subventionnés d'automobiles* (Paris: Imprimerie Nationale, 1935), p. 5.

cultural change



The city in the country



1905: A group of Dijonnais bourgeois arrives at St Saine l' Abbaye by the narrow gauge railway running from Dijon to Châtillons-sur-Seine.

Spatial Regression Analysis

England and Wales compared with France

Model

$$\text{Rail Density} = 1) \text{ population density} + 2) \text{ ruggedness of terrain} + 3) \text{ Rurality}$$

Country	The Statistical Significance of population density at p.001	R-square of regression	N. of Districts
England & Wales	Significant	.60	616
France	Significant	.38	2,356

Other parameters significant at p= .001

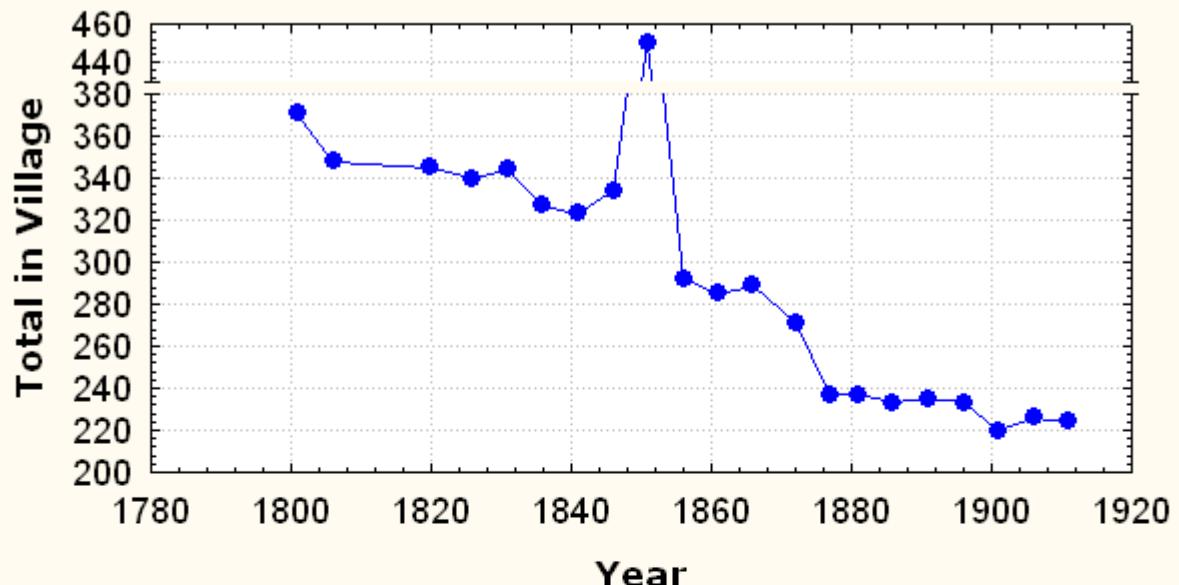
Britain: rurality

France: ruggedness of terrain, rurality

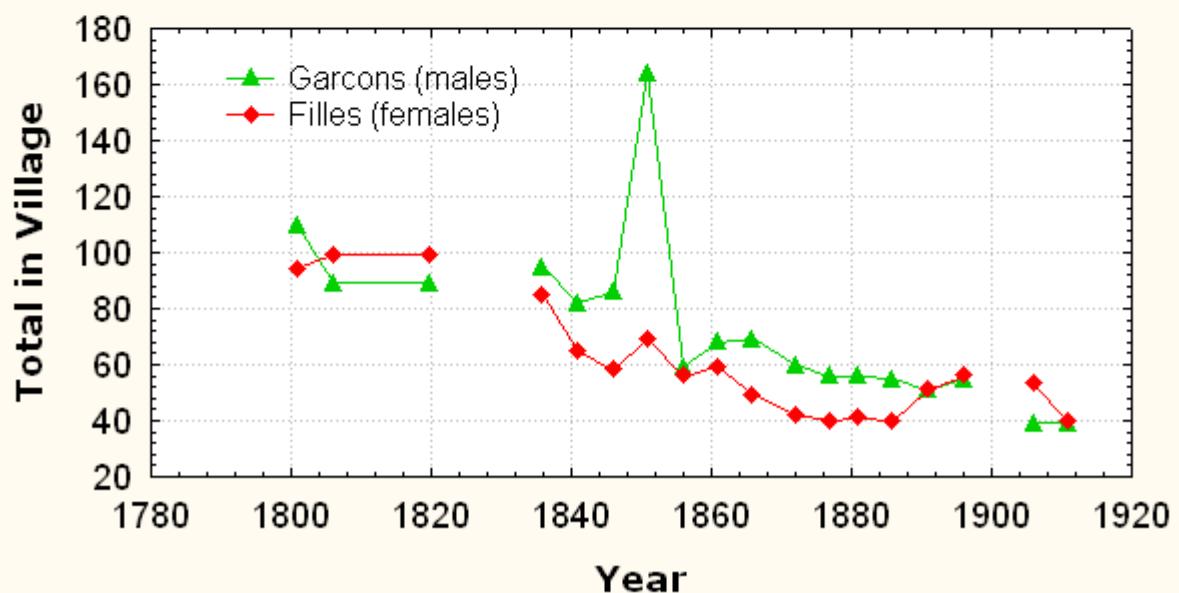
Parameters significant at p <= .05

Britain: ruggedness of terrain

Total Population of Thenissey



Unmarried Males and Females

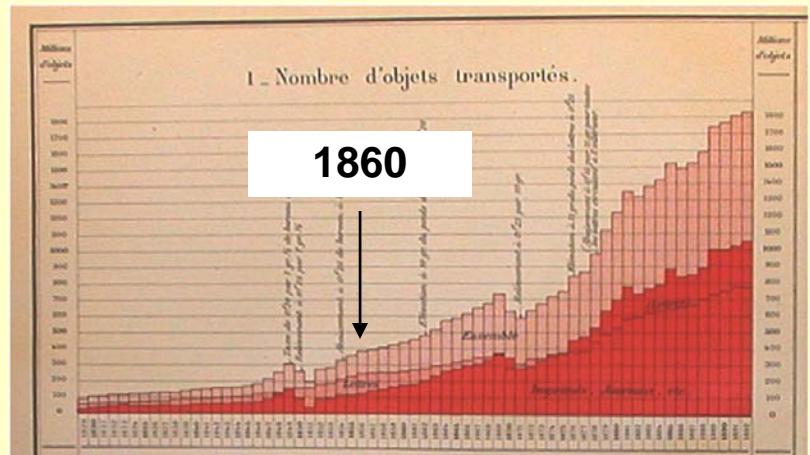


Significant change

- A cycle of renovation, decline, adaptation
- Rail transport in the village:
 - promoted economic expansion
 - then brought intense competition
- Transformation of the agrarian landscape: from polyculture to specialization in animal husbandry
- Improved communications

Postal service

Newspapers,
catalogues



Number of letters and packages
transported by rail, 1830-1894

Conclusion

- The spatial and temporal effects of railways on the rural economy (society, culture)
- Agrarian crisis and transition need to be studied at the regional and local level, but within the broader context of national and transnational patterns
 - Addresses the issue of representativeness (Thenissey awaits its regional and national context)
 - Integrates levels of spatial and temporal change; changes at the macro scale, effects at the regional and local scale, responses from men and women in specific places.