

IX: Agrarian Changes in Early Modern Europe

**D. Agriculture in Early Modern
France: 1453 – 1789 (to the French
Revolution)**

revised 8 February 2012

17. 8 February 2012

Cipolla, ch. 6, 9 (pp. 227-34), 10 (pp. 259-75); **Davis**, chs. 12, 17; then 11; **de Vries**, chs. 3-4; **Musgrave** ch. 6, 7

ET 6, 10

19

AGRICULTURE:

France:

Decline of Feudalism, Rural *Embourgeoisment*, and the Revival of the Great Estates, 1453 - 1789

French Peasant Agriculture, 16th - 18th Centuries

Agrarian Growth and Decline: 1453 - 1789

Why French Agriculture increasingly lagged behind English agriculture, 1600 - 1789 (to 1914)

Early-Modern French Agriculture

- **GOAL OF THIS LECTURE:**
- **1) To explain why early-modern France never went through an ‘agricultural revolution’ before the French Revolution – not until the 1840s (and after: see ECO 303Y)**
- **2) To show that in both demographic and economic growth, and in industrialization, France increasingly lagged behind England: from about 1600 – ever widening gap to 1900**

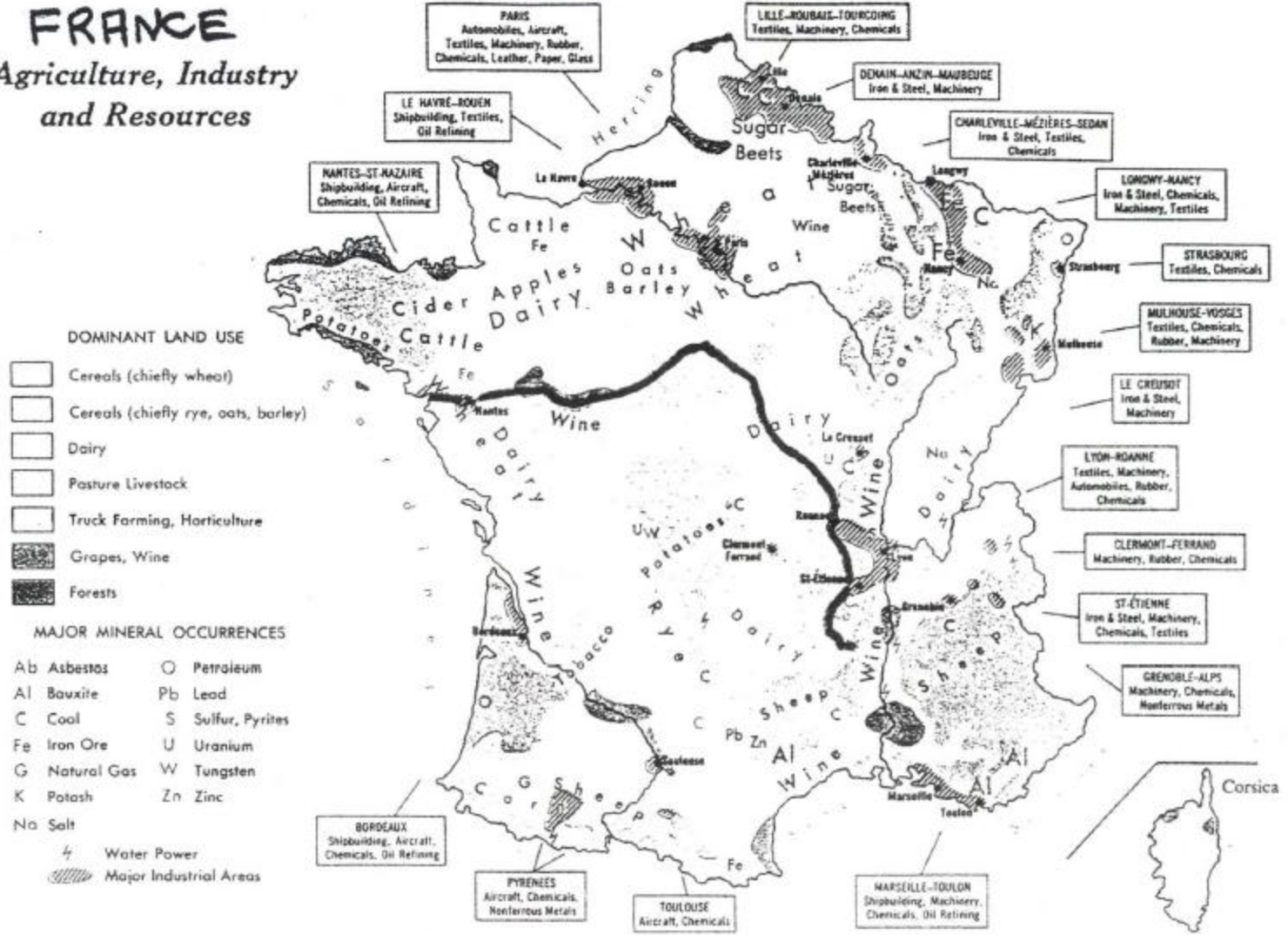
Geography & Structure of Early- Modern French Agriculture

- (1) **Geographic divisions of French Agriculture:**
- with the **Loire River** as the north-south boundary
- (2) **Two Major Contrasts: between:**
- a) **southern-Mediterranean DRY FARMING and northern WET FARMING**
- b) **southern individual hamlets (private plots) and northern manorial-communal farming systems**



FRANCE

Agriculture, Industry and Resources



Structure of Early-Modern French Agriculture: North (1)

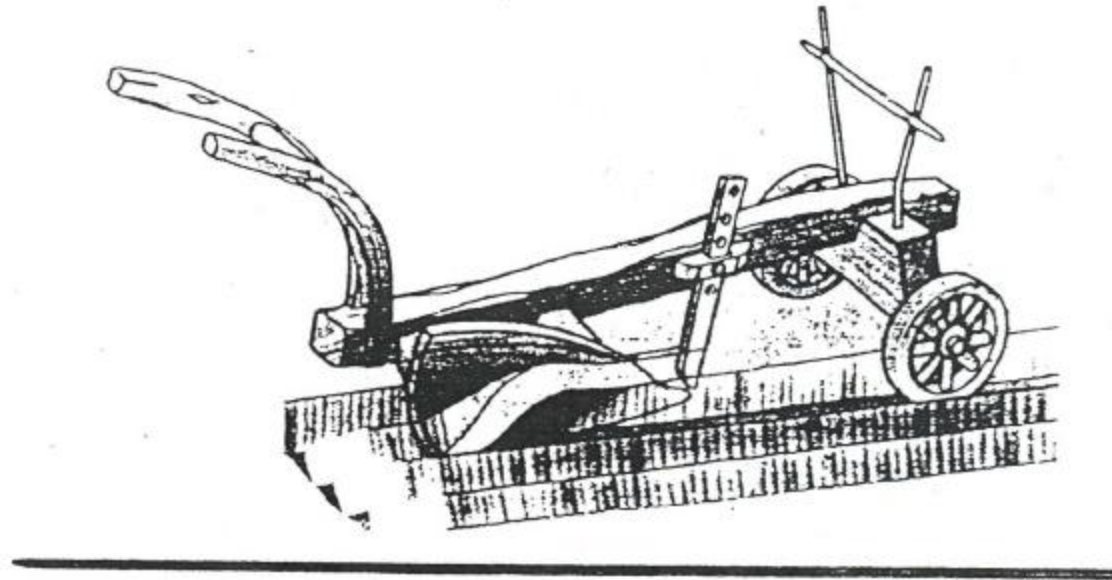
- (1) **Fundamentals of northern French agriculture: north of the Loire**
- a) **Northern Wet Farming:** with **two or three-field** crop rotations
- b) **communal farming: Open or Common Fields**
- c) **Determining Factors:**
- (i) **Feudalism, Manorialism, Serfdom:** heartland north of the Loire
- - as in England → **communal agriculture (Open Fields)**

Structure of Early-Modern French Agriculture: (2)

- c) **Determining Factors:**
- (ii) **climate and topography: heavy wet alluvial clay soils**
- - with moderate to heavy rainfalls over the entire year
- (iii) **requiring a far heavier plough (Slavic carucca)**
- (iv) **more & stronger draft (draught) animals:**
- - oxen (8 per plough) and horses (2 per plough)
- d) **Exceptions: Normandy and parts of Brittany**
- Viking settlements and Celtic continuities: never fully feudalized

NORTHERN WET FARMING: CARUCCA OR SLAVIC PLOUGH

with coulter and moldboard



Horses: the horse collar



Structure of Early-Modern French Agriculture: North (3)

- (2) **Basic features of agriculture in northern France:**
- a) **far more highly oriented to grain farming than England**
- i) **cultural preferences for wheaten bread: 50% higher than English**
- - **livestock needs 5-10 times as much land as grain per 1000 calories**
- ii) **continued low agricultural productivity**
- b) **barriers to improving agricultural productivity**
- i) **institutional impediments of feudal manorial-communal agriculture (as seen last semester)**
- ii) **deeply entrenched peasant property rights (as seen last semester – and to be seen again in this lecture)**

Structure of Early-Modern French Agriculture: North (4)

- b) **barriers to improving agricultural productivity**
- iii) **population growth from 11th century (and again from 16th century): expansion of arable at expense of pasture lands → insufficient livestock products + manure → limited fertility of the arable lands**
- iv) **virtually no enclosures → thus almost no Convertible Husbandry**
- c) **low productivity of northern (and southern) French agriculture**
- i) **low levels of nutrition → periodic problems of famine**
- ii) **limited supplies of labour, food, raw materials, capital, market demand**

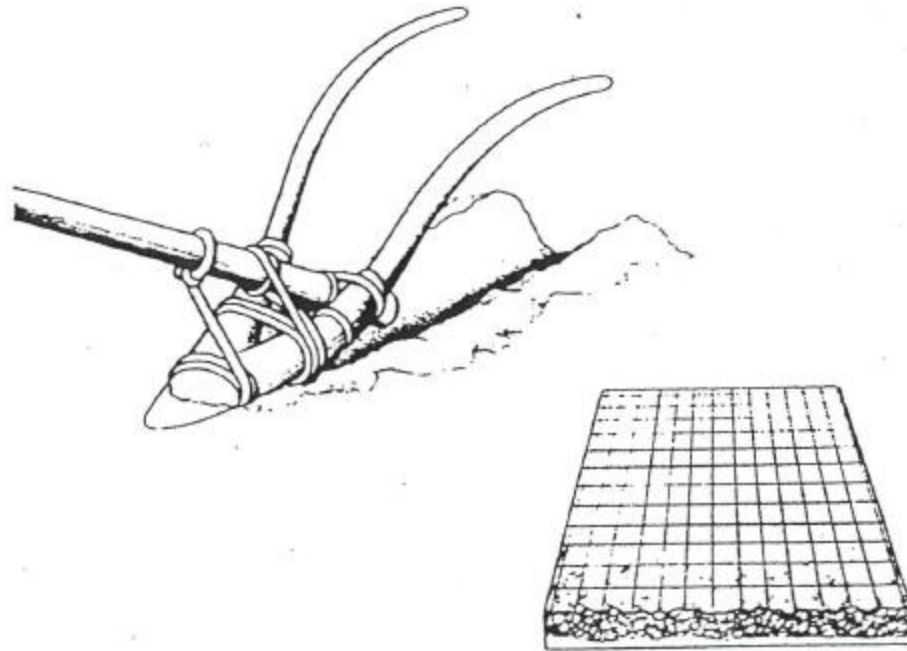
Structure of Early-Modern French Agriculture: the South (1)

- (1) **Southern Mediterranean Agriculture: features**
 - a) **Determining Factors:**
 - (i) **Strength of Roman institutions and culture:** area was never fully feudalized, nor subjected to fully developed manorialism & serfdom
 - (ii) **Hot, dry (arid) climate:** winter rains only
 - b) **Two Field System of Crop Rotation**
 - (i) **winter-sown wheat and fallow**, alternating in two year cycle
 - (ii) **insufficient moisture and soil fertility** to permit two crops in a row

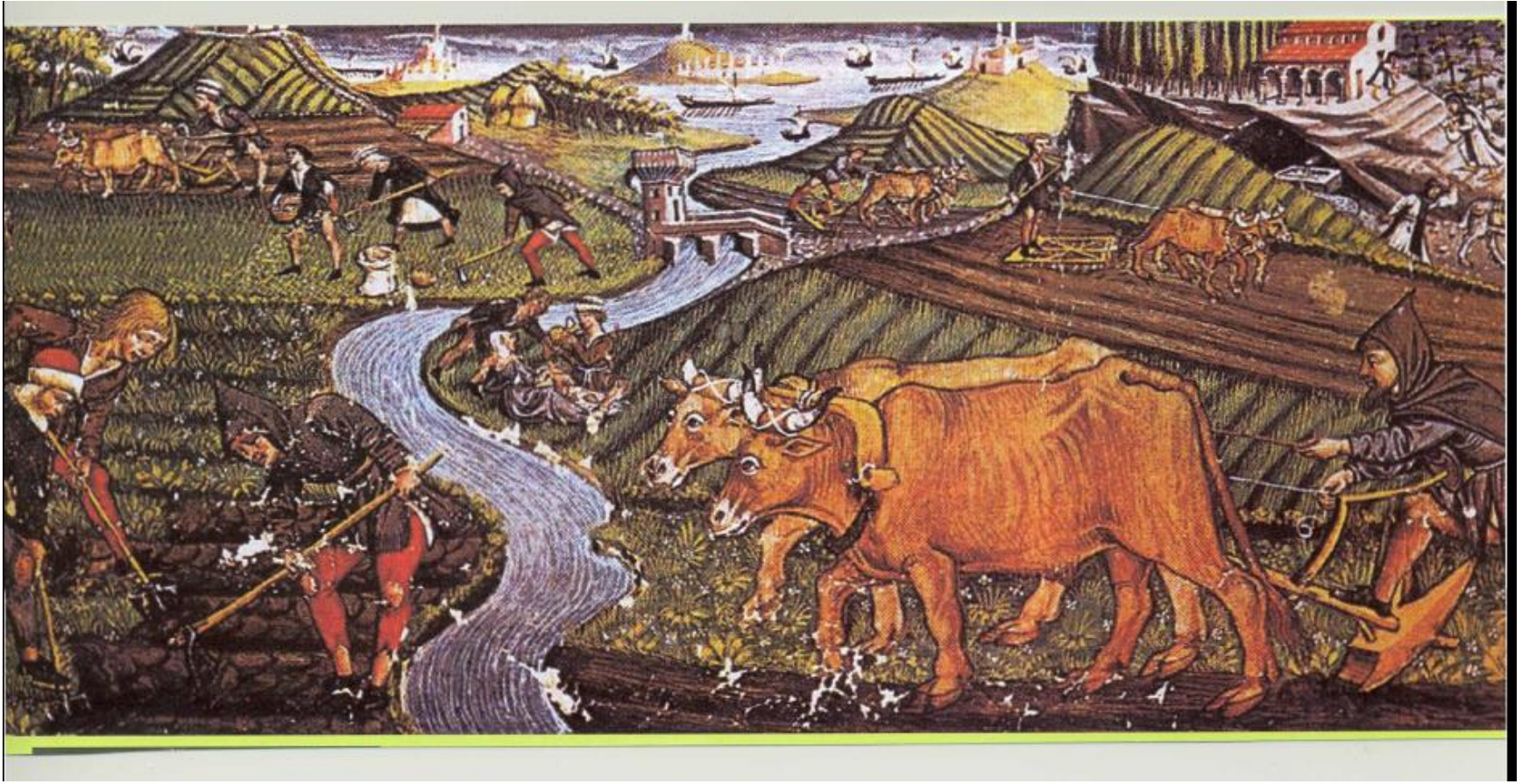
Structure of Early-Modern French Agriculture: the South (2)

- c) **Ploughs and Draft Animals:**
 - (i) **Aratrum:** cheap, light plough drawn by one ox (Roman origins)
 - (ii) **Plough criss-crosses the soil**, not cutting deeply (protect water table)
 - (iii) **Oxen fed on natural grasslands:** system not produce fodder crops
 - (iv) **insufficient supplies of livestock:** compared to the north (even if the need for draught animals was less than in the north)
- d) **no integration and symbiosis of livestock & arable**, as in the North: with transhumance grazing (cf Spain)

MEDITERRANEAN DRY FARMING: THE ARATRUM



Medieval Ploughs: Mediterranean



Structure of Early-Modern French Agriculture: South (3)

- 2) **Layout of southern, Mediterranean farmlands:**
 - **in the form of scattered hamlets**, with individual, separated holdings, by free peasants (paying rent):
 - **very little communal farming** (as in the north)
- 3) **Productivity in southern French arable agriculture:**
 - **even lower than in the north** (despite general thesis about individual, non-communal forms of agriculture)
- 4) **chief agricultural products of the south**
 - a) **grains:** chiefly wheat (as in north)
 - b) **vineyards (wine) and olive groves (oil)**

Structure of Early-Modern French Agriculture: South (4)

- 5) **Métayage or share-cropping:** copied from Italian *mezzadria* (from later Middle Ages)
- a) **non-communal:** chiefly south of the Loire
- b) **found in capital intensive types of agriculture:** with vineyards, olive groves, and cattle ranching (not integrated with the arable)
- c) **basic system:** landlord provides landless labour with both land and capital (fixed + working) to undertake these enterprises-
 - **in return for half of the harvest** - as combined rent and interest

Structure of Early-Modern French Agriculture: South (5)

- d) **advantages for landlord: most of whom were Urban (bourgeois) merchants**
 - (1) **protected them against ravages of inflation** – with coinage debasements in 14th & 15th centuries in particular
 - (2) **obviated 'shirking' costs of direct supervision & monitoring:** share-cropper tenants had incentive to work harder to increase their incomes
- e) **advantages for peasant tenants as share-croppers:**
 - (1) **obtained both land + capital**, retaining freedom
 - (2) **protected against vagaries** of climate, harvest, market prices



WINE REGIONS



Structure of Early-Modern French Agriculture: North & South (1)

- (1) **Why Early-Modern France had few enclosures before French Revolution**
- a) **Feudalism in Northern France:**
- - i) **strength of peasant property rights** in seigniorial communal agriculture
- - ii) **leaseholds in form of demesne strips interspersed with tenancy strips**
- -iii) **relative lack of interest + inability of French landlords** to engage in enclosures:
- - nothing compared to the sheep-oriented English enclosures (French cloth trade was unimportant)

Structure of Early-Modern French Agriculture: North & South (2)

- - b) **Role of Parlement de Paris: the Marc Bloch thesis (as seen before)**
- -i) **from time of Philip II Augustus (1180-1223) French kings sought to extend their powers from Paris** - in opposition to the feudal aristocracy
- - **used Parlement de Paris (royal courts) to undermine judicial and economic powers of the feudal aristocracy:**
- -ii) **by hearing legal appeals on cases involving peasant property rights:** invariably supporting the peasantry

Structure of Early-Modern French Agriculture: North & South (3)

- - but as map indicates, the writ of Parlement de Paris did not pertain to Normandy, Brittany, Burgundy (north), or Gascony, Languedoc, Provence (in south)
- -iii) just the same, by 15th century, most French seigniorial lords found it difficult or even impossible to evict their tenants
- → so that Enclosures were virtually impossible before the French Revolution (1789) – except in Normandy (north) & Provence (south)

Jurisdiction of Parlement de Paris





Structure of Early-Modern French Agriculture: North & South (3)

- (6) **Why Early-Modern France had few enclosures**
- c) **métayage in southern France (south of the Loire)**
- i) **peasants under métayage had no property rights:** landlords could easily have confiscated their lands (or cancelled leases)
- ii) **but many or most landlords were bourgeois (urban merchants)** with other economic interests, chiefly in their towns:
 - - rural holdings were treated chiefly as sources of investment income for bourgeois landowners
- iii) **their rural holdings were far too distant and too scattered to permit consolidate estate management,** as in enclosures

Structure of Early-Modern French

Agriculture: North & South - 4

- d) enclosures found only where landlords had the ability, interest and economic motivation to replace communal agriculture
- - but also had the legal and institutional means to do so: to engage in enclosure
- - and to operate consolidated enclosed farms under unified, single management
- - with the rare ability to adopt Convertible Husbandry (almost unknown in France)
- - enclosures found only in Normandy & Provence

Early-Modern French Peasantry - 1

- **Classes of French Peasantry, 1500 – 1789:**
- 1) **Allodial Freehold peasants:** too few to bother discussing here (far fewer than in England or the Low Countries)
- 2) **Peasants within feudal-seigniorial system:**
- - a) **most were peasants of servile origin:**
villeins: i.e., whose ancestors had been bound to the feudal estate (manor – seigneurie), subjected to arbitrary labour + fiscal exactions

Early-Modern French Peasantry - 2

- - b) **other servile exactions:**
- - ***banalités***: compulsory use and fees for lord's capital installation (water-mills, bakeries, etc.)
- - ***corvées***: arbitrary though periodic labour services on the lord's estates: repairing roads, fence (different from labour services on the arable lands)
- - c) **Conversion of almost all servile obligations and dues to annual cash rents by the 16th century: →**
- **virtual disappearance of serfdom in the south,**
- **but NOT to be compared with English peasant 'copyholders', whose property rights were far less secure than French counterparts (as already seen)**

Early-Modern French Peasantry - 3

- 2) **Peasants within feudal-seigniorial system, cont'd:**
- d) **by far the most numerous** class of French peasants
- e) **categories of northern seigniorial peasants:**
- (1) ***labourers***: peasants who owned ploughs and livestock and hired labour (kulak-type peasants)
- (2) ***manoeuvriers***: peasants without plough-teams and sufficient land → who supplemented incomes as agricultural wage earners
- (3) ***mainmortables***: peasants whose lands reverted to landlords when they left no male heirs

Early-Modern French Peasantry - 4

- - 3) **Leasehold peasants: feudal & non-feudal**
- - a) **held lands by contractual leases** for specified terms of years: short and long term leases
- - b) **most carved out of seigniorial demesnes** in late Middle Ages
- - c) **former *villein* peasants** were the chief leaseholders
- - d) **some leases were in form of interspersed demesne strips** – so that other demesne strips were thus ploughed by peasant tenants:
- - e) **that system of leasing** also made enclosures difficult (as noted above)

Early-Modern French Peasantry - 5

- - 4) ***Métayers* or sharecroppers:** chiefly found south of Loire
- - a) **already discussed above:** with its advantages
- - b) **nevertheless, despite the advantages offered + personal freedom,** many French métayers remained poor, and fell into debt slavery
- - c) **as a non-feudal land tenure:** it was untouched by 1789 French Revolution
- - d) **finally abolished with the next Revolution:** in 1848

Agrarian Changes in Early Modern France: to the Revolution - 1

- Trends in Distributions of Landed Properties: 1453 – 1789 → towards the large estates
- 1) late-medieval contractions of seigniorial demesnes
- → consequent erosions of serfdom (in northern, feudal France):
- -a) far more complete transition from *Gutsherrschaft* (estate) to *Grundherrschaft* (peasant rentals) than in England
- -b) French feudal, noble landlords far less interested in estate management than English landlords (many of whom had become gentry)

Agrarian Changes in Early Modern France: to the Revolution - 2

- - i) **most French landed nobles** were far more absorbed with feudal military and court obligations – and luxurious living!
- - ii) **note also: the lack of similar economic incentives**, as the English wool & then woollen cloth trades had provided to English landlords
- - c) **by later 15th century: very few demesne lands left** - and those that remained were generally interspersed with tenancy strips

Agrarian Changes in Early Modern France: to the Revolution - 3

- 2) **The Seigniorial Reaction: reconstitution of large estates, 16th- 18th centuries**
- - a) ***embourgeoisement* of French feudal lands** (as in the English 'Rise of the Gentry' debate)
- - i) **many French merchants, lawyers, royal officials, etc. increasingly bought lands from impoverished aristocrats, from the 16th century**
- - ii) **many also were rewarded with or bought titles of minor nobility (from the king) – and sought rural estates to go with their 'noble' titles**
- - iii) **distinction between them as *noblesse de robe* vs. *noblesse d'épée* (i.e., the original cavalry knights)**

Agrarian Changes in Early Modern France: to the Revolution - 4

- 2) **The Seigniorial Reaction: reconstitution of large estates**
 - - b) **The Inflation problem (cf: Tawney's 'Rise of Gentry')**
 - - **the Price Revolution, with long, sustained inflation from 1520s to 1650s: impoverished many aristocratic landowners**
 - - **those whose rents and feudal dues did not rise or keep pace with inflation & their steeply rising costs**
 - - **Inflation even worse in France – with coinage debasements**
 - - c) **Marc Bloch's thesis** (cf also Tawney's 'Rise of Gentry' thesis)
 - - **argued that the new bourgeois land owners of former feudal lands were more market-oriented, profit-driven**
 - - **and better able to manage their new properties for superior economic advantages**

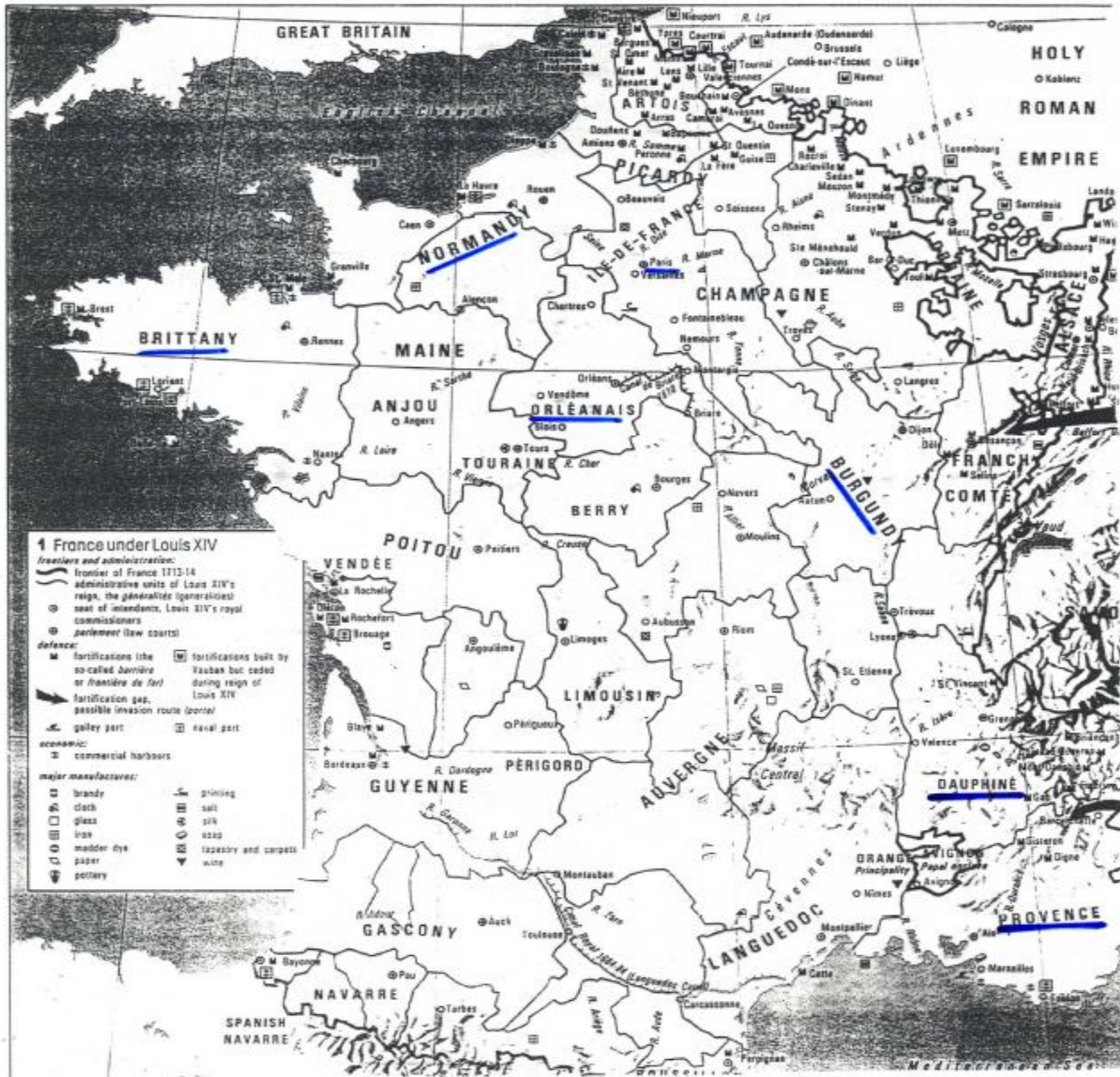
Agrarian Changes in Early Modern France: to the Revolution - 5

- 3) **The Seigniorial Reaction: cont'd**
- d) **methods of reconstituting demesne lands**
 - - (1) **by purchase** and/or coercion
 - - (2) **by terminating leasehold** contracts on expiry
 - - (3) **by allowing peasant tenancy rentals to lapse** for many years – up to 50 years,
 - - and then demanding that tenants pay up, or lose their lands on default of rental payments
 - - (4) ***mainmortable* lands**: legally defaulted to landlords on the death of tenants without male heirs

Agrarian Changes in Early Modern France: to the Revolution - 6

- 4) **Status of Large Estates on Eve of French Revolution (1789)**
- - a) **process of reconstituting large demesne estates brought to a halt by the Revolution** - which did not, however, impose fundamental changes
- - b) **extent of large demesne estates far greater than commonly thought** - if much less extensive than in England or East Germany (Prussia)
- - c) **ranged from : by regions**
- - **40%** in the **Orléannais** region south of Paris
- - **35%** in **Burgundy** (east-central France)
- - **12%** or less in **Dauphiné** in S.E. France





Marc Bloch, *French Rural History: Its Basic Characteristics* (1931)

- **If we can imagine the [French] Revolution breaking out around the year 1480**, which is of course absurd, we should find that land relieved of seigneurial charges would have been reallocated almost without exception to a host of small [peasant] occupiers.
- **But the three centuries between 1480 and 1789 saw the rehabilitation of the large estate.** It was not, as in England and Eastern Germany, all-embracing. Large tracts of land, in total larger perhaps than those covered by the great estates, were still left under peasant proprietorship. But the victory was a sizeable one, though its completeness varied noticeably with the region.
- **The Revolution was to leave the large estate relatively unimpaired.**
- **The picture presented by the rural France of our own day [1931]** -- which is not, as is sometimes said, a land of petty proprietors, but rather a land where large and small properties coexist in proportions which vary considerably from province to province -- is to be explained by its evolution between the fifteenth and eighteenth centuries.

French Agriculture in the 19th Century

Distribution of Farm Lands by the 1881 Survey

Category	Number of Farms by Area	Percentage of Total Farms	Area in Hectares (2.47 acres)	Percentage of Total Area
under 5 hectares	1,866,000	53.3%	5,600,000	11.5%
5 - 20 hectares	1,200,000	34.2%	12,300,000	25.3%
20 - 40 hectares	296,000	8.5%	8,400,000	17.3%
over 40 hectares (100 acres)	142,000	4.1%	22,300,000	45.9%
TOTAL	3,504,000	100.0%	48,600,000	100.0%
over 20 hectares	438,000	12.5%	30,700,000	63.2%

Agrarian Changes in Early Modern France: to the Revolution - 7

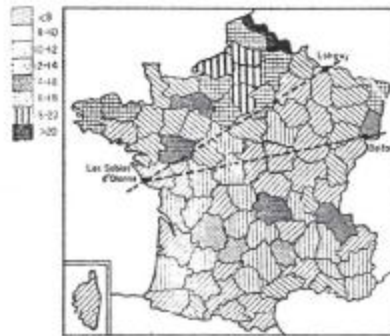
- 5) **Growth, Change, Stagnation in French Agriculture, 1453 – 1789**
- a) **problem: enormous regional variations**
- - see Morineau map for France in 1840
- - **regions in Paris basin and bordering Low Countries had high productivity**
- - **many other regions of low productivity, especially in the south & south-east**

FRENCH AGRICULTURE IN THE 19TH CENTURY

The Agricultural Census of 1840

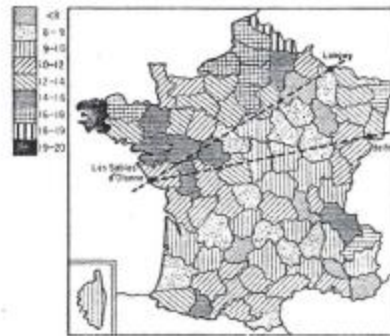
(after Michel Morineau)

MAP 1
Wheat Yield
(hectoliters per hectare)



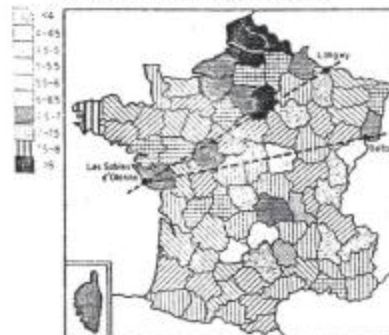
Census of 1840.

MAP 3
Rye Yield
(hectoliters per hectare)



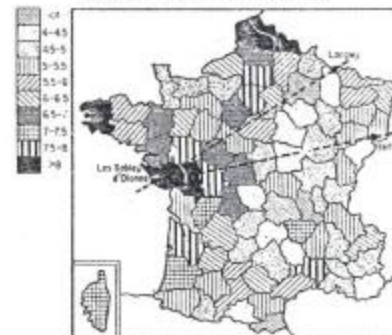
Census of 1840.

MAP 2
Ratio of Wheat Yield to Seed



Census of 1840.

MAP 4
Ratio of Rye Yield to Seed



Census of 1840.

Agrarian Changes in Early Modern France: to the Revolution - 8

- b) Philip Hoffman (UCLA): most recent survey of changes from 1450 to 1815
 - - i) uses Total Factor Productivity estimates (of land, labour, and capital as inputs)
 - - ii) very negative impact of continuous wars: 16th to 18th centuries
 - - (1) evidence of substantial growth for much of the 16th century, but only up to:
 - - (2) the Wars of Religion (1584-1598): disastrous effect
 - - (3) Then recovery: 1598 up to 1618
 - - (4) the Thirty Years War, 1618-1648, and Fronde Revolts, 1648-1653: marked by serious retrogressions

Agrarian Changes in Early Modern France: to the Revolution – 9

- - (5) **Some recovery in later 17th century**, but with wide regional variations
- - iii) **18th Century: most surprising features of Hoffman's TFP estimates:**
- - **serious decline from the 1740s** – thus well before the Revolution
- - iv) **Hoffman's final conclusions on TFP estimates:**
- - **output per worker in French agriculture** rose only 27%: from 1500 to 1800
- - **growth rate in 18th century:** only 10% or less: far less than in English agriculture

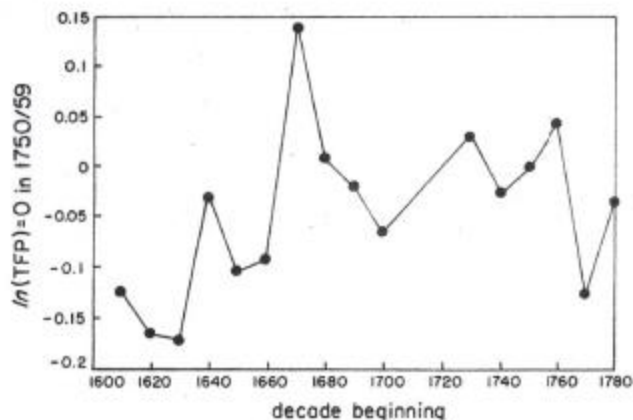


Figure 4.4 Ln(TFP) by Decade near Amiens: Thirty-four Farms. Ln(TFP) is calculated with standard shares and prices and is corrected for taxes. It is normalized to equal 0 in 1750-59 for each farm.

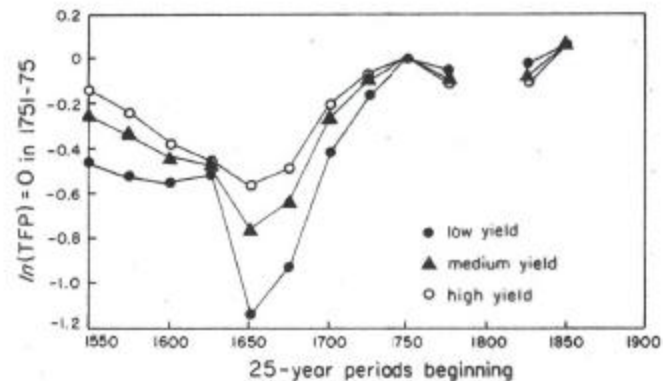


Figure 4.5 Ln(TFP) on Gagnages in Lorraine. Shares differ by yield assumption.

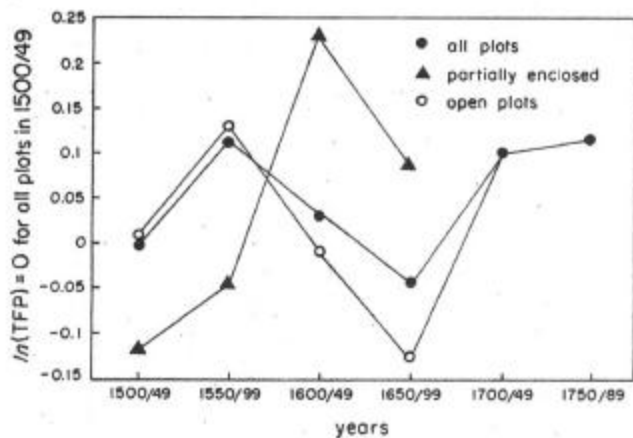


Figure 4.6 Ln(TFP) in Bretteville-l'Orgueilleuse: Open and Partially Enclosed Plots. Partially enclosed plots are at least 50 percent enclosed. Open plots have no enclosure at all.

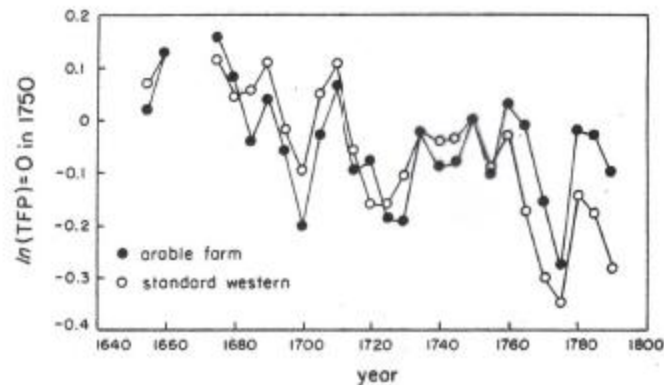


Figure 4.8 Ln(TFP) on the Farm of Chavais: Arable Shares versus Western Shares. Ln(TFP) is calculated with the standard western shares and with shares from the Moriceau-Postel-Vinay arable farm. The same prices and price averages are used in both cases. Neither calculation involves a correction for taxes.

Philip T. Hoffman, *Growth in a Traditional Society: the French Countryside, 1450 - 1815* (Princeton: Princeton University Press, 1996).

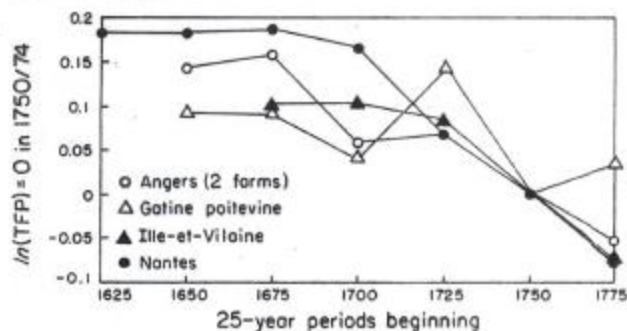


Figure 4.7A Ln(TFP) in the West: Twenty-five-Year Averages for Selected Sites. Ln(TFP) is corrected for taxes, calculated with standard shares and prices, and, for each site, normalized to be 0 in 1750–74. The sites are the two properties near Angers, the properties in the Gâtine Poitevine, those in the Ile-et-Vilaine, and those near Nantes.

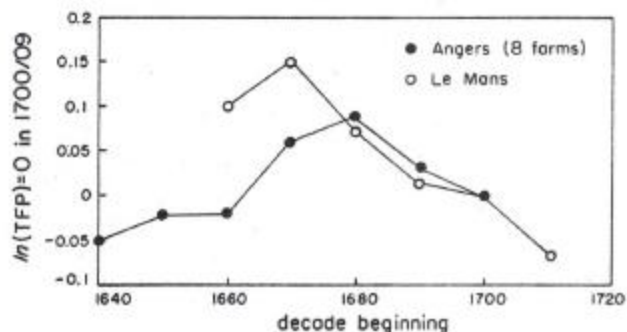


Figure 4.7B Ln(TFP) in the West: Decennial Averages for Selected Sites. Ln(TFP) is corrected for taxes, calculated with standard shares and prices, and, for each site, normalized to be 0 in 1700–1709. The sites are the eight farms of the Hospital of Angers and the farms near Le Mans.

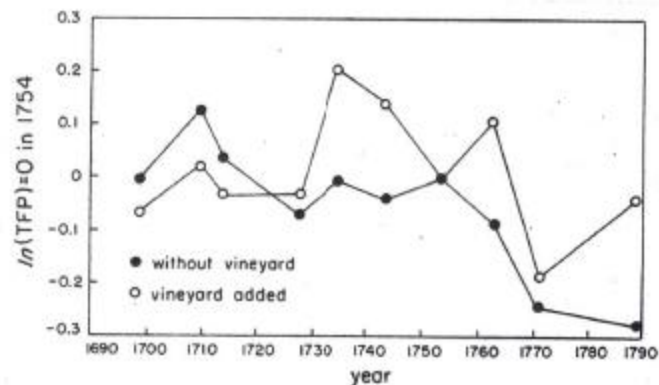


Figure 4.9 Ln(TFP) on the Métairie of La Chapelle-aux-Moines near Nantes: With and without Vineyard. The standard western shares are used to compute Ln(TFP) without the vineyard, and they are modified to include the costs and revenue from the vineyard. There is no tax correction.

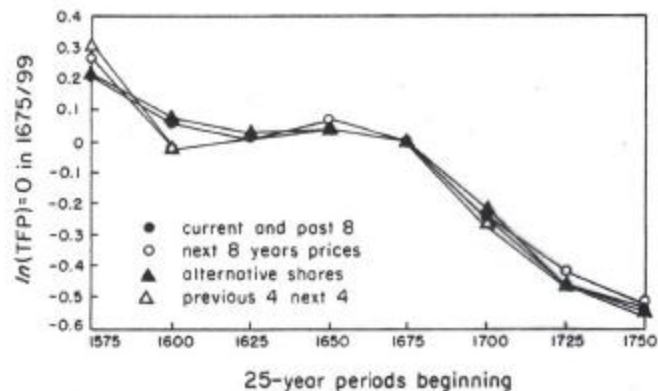


Figure 4.11 Ln(TFP) near Béziers in Languedoc: Twenty-five-Year Averages for Six Farms. Ln(TFP) has been calculated with alternative shares and price averages. The price averages include the current year and the previous eight years; the current year and the next eight; and the previous four years, the current year, and the next four years. Because landlords paid taxes, there is no tax correction.

Agrarian Changes in Early Modern France: to the Revolution – 10

- 6) **Reasons for superiority of English over French Agriculture after 1500: Patrick O'Brien, Tony Wrigley, and others**
- a) **England had far better ratios of both capital and labour to land:** English farmers (on average) had much more land, livestock and other forms of capital at their disposal
 - b) **vital importance of livestock (as seen before): chief form of capital in agriculture**
 - i) **power** (haulage) before mechanization
 - ii) **fertilizers:** greater manure supplies
 - iii) **industrial raw materials:** wools, hides (leather), bone
 - iv) **better nutrition from food products:** meat, butter, cheese

Agrarian Changes in Early Modern France: to the Revolution – 11

c) England had far more enclosures than did France before French Revolution:

- i) thus far, far greater resort to Convertible Husbandry than in France

- ii) enclosures in general promoted higher productivity in both arable and pastoral farming (and permitted selective breeding)

- iii) importance of enclosures for raising capital: through mortgages

**Proportions of Total Populations Engaged in
Agriculture: in England and France, 1500 - 1800**

Year	ENGLAND	FRANCE
1500	76%	73%
1600	70%	69%
1700	55%	63%
1750	46%	61%
1800	36%	55%
1850	22%	52%
1900	7%	43%

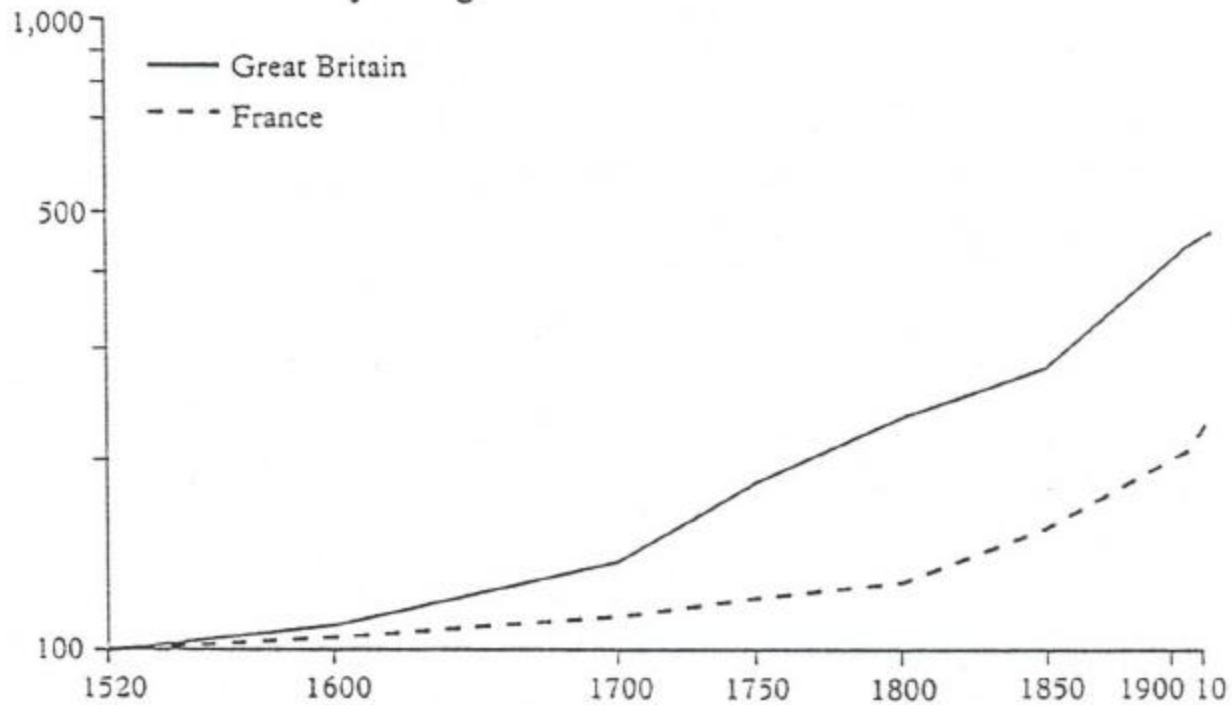


Figure 1. *Conjectural growth rates of labour productivity in British and French agriculture, 1520-1910*

Note: The vertical scale is logarithmic.

Agrarian Changes in Early Modern France: to the Revolution - 12

- 6) Reasons for superiority of English over French Agriculture: cont'd
 - d) **Patrick O'Brien: 'path dependency' thesis**
 - i) **that structural economic changes in France were 'predetermined' by combination of physical endowments + historically embedded system of property rights:**
 - **feudal communal agriculture in the north + the métayage system in the south, with absentee landlords (urban merchants) – not agrarian capitalists**

Agrarian Changes in Early Modern France: to the Revolution - 13

- ii) **'path dependency'**:
 - **that long-established, pre-existing institutional, legal, social, cultural, political, as well as economic factors will determine paths of economic progress, despite contrary attempts of economic agents, who were prevented from allocating resources according to principles of free markets (etc.)**
- iii) **results in 1910 (in tables and graph)**:
 - (1) **British farms had twice as much land per worker:**
 - (2) **English labour productivity grew 4.7 fold (from 1500), while French grew only 2.4 times**

Agrarian Changes in Early Modern France: to the Revolution - 14

- d) **Patrick O'Brien: 'path dependency' thesis**
- - iv) **importance of livestock differences:**
- - (I) **O'Brien reiterates a key point made in this course (and in ECO 303Y):**
- that 'agricultural development depended upon the accumulation of ever increasing numbers of animals per unit of cultivated land': **in the context of northern mixed husbandry.**

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- - (II) **consider again the Jared Diamond thesis on the crucial role of large domestic animals**
- - (III) **O'Brien also focuses on all the previously discussed reasons for France's livestock limitations**
- - (IV) **for southern France: note the absence of symbiotic relationship between pastoral & arable farming, as in the north or especially in England**
- - (V) **note also that vineyards and olive groves could not recycle crop residues as livestock fertilizers**

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- d) **Patrick O'Brien: 'path dependency' thesis, continued**
- v) **Livestock statistics for 1910: England & France**
- -- (1) **Share of livestock products in total agricultural outputs:** 75% in England , 50% in France
- -- (2) **manure supplies:** about 3 times greater in England than in France
- - (3) **draught animals:** in l.s. units per hectare:
- - 156 units in England vs. only 36 units in France

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- vi) **Agricultural work force in 1910** as percentage of total employment: 41% in France, vs. 8% in Britain.
- e) **Role of demographic changes**: see following table and graphs indicating England's growing demographic advantages
- f) **In mid-18th century: on eve of Industrial Revolution**, England had achieved far greater success in escaping bondage of agrarian past.

Comparative Statistics on French and British Agriculture in 1910:

A. Demography and Agricultural Employment:

Year	FRANCE	FRANCE	FRANCE	BRITAIN	BRITAIN	BRITAIN
	Population in millions	Agricultural Workforce	Percent of Total	Population	Agricultural Workforce	Percent of Total
1700	22.50	4.30	19.11	5.42	1.50	27.67
1790	27.00	5.75	21.30	8.29	n.a.	n.a.
1850	35.80	7.50	20.95	17.92	2.00	11.16
1910	39.60	8.50	21.46	36.10	1.60	4.43

B. Agricultural Income in 1910:

Agricultural Statistics	FRANCE	GREAT BRITAIN
Agricultural Employment and Related Occupations as Percent of Total Employment	41%	8%
Agricultural Income as Percent of NNI	35%	5%

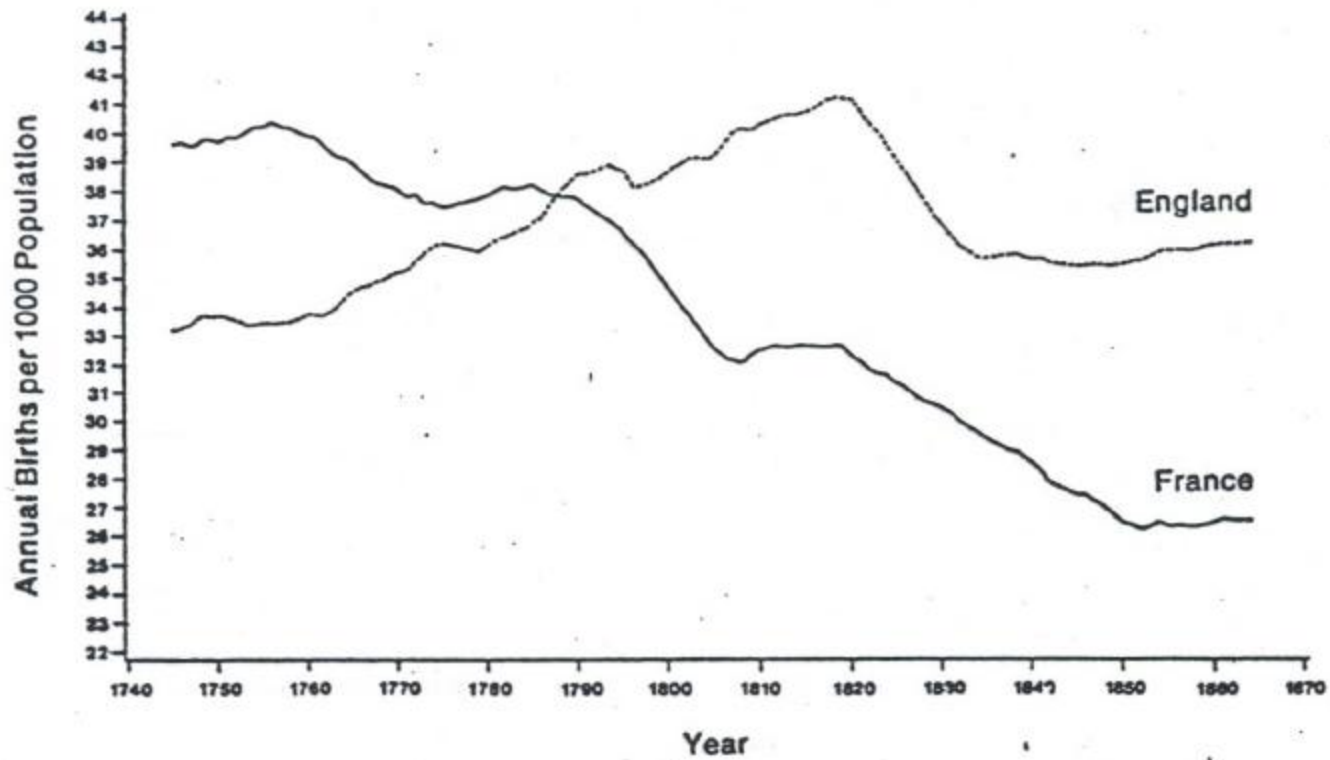


FIGURE 2
CRUDE BIRTH RATES IN FRANCE AND ENGLAND, 1740-1869

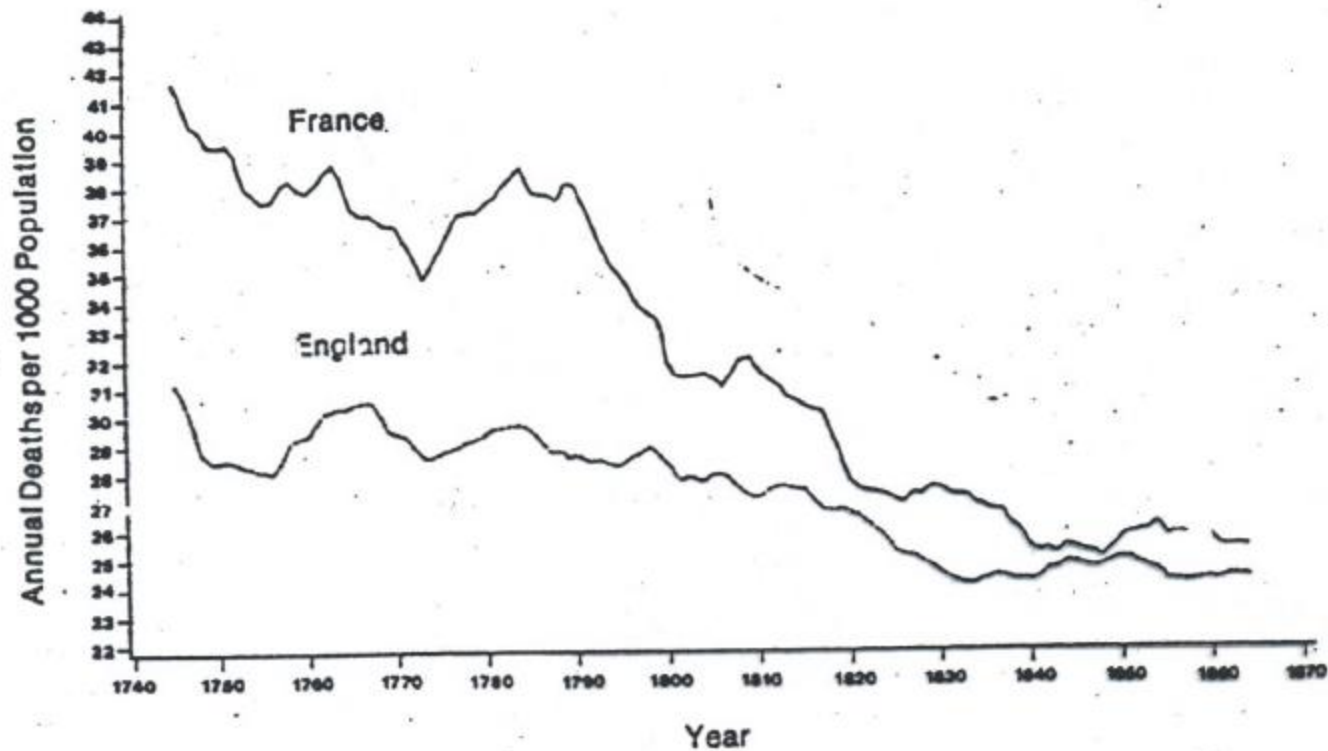


FIGURE 3
CRUDE DEATH RATES IN FRANCE AND ENGLAND, 1740-1869

Note: Data points are centered 11-year moving averages.
Source: See text.