

Economics Tripos, Part IIB, Paper 14.

The German economy between the wars

Michaelmas 2009 - Wednesday 3pm.

Dr. Cristiano A. Ristuccia
(car37@cam.ac.uk)

Dr. Solomos Solomou
(ss19@cam.ac.uk)

Structure of the course

Chronological

- Lecture 1, Wednesday 14 October (Dr. Ristuccia): Hyperinflation 1
 - Lecture 2, Wednesday 21 October (Dr. Ristuccia): Hyperinflation 2
 - Lecture 3, Wednesday 28 October (Dr. Ristuccia): Hyperinflation 3
 - Lecture 4, Wednesday 4 November (Dr. Ristuccia): Late 1920s
 - Lecture 5, Wednesday 11 November (Dr. Ristuccia): The depression
 - Lecture 6, Wednesday 18 November (Dr. Ristuccia): Recovery, rearmament and war (1933-1945)
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Themes and debates

- Lecture 7, Wednesday 31 October (Dr. Solomou): Reparations
- Lecture 8, Wednesday 21 November (Dr. Solomou): Recovery

The German economy between the wars.

- **Aims**

- To emphasise the importance of political and social factors in defining and constraining economic policies;
- To understand the distributional, financial, and growth effects of the economic events that characterised the German economy in the period at issue;
- To evaluate the repercussions of German economic vicissitudes on the international economic and political situation.

- **Objectives**

- By the end of the course students should have a good appreciation of the German economic policies and conditions in a comparative context. They should have acquired a particular understanding of the following aspects of the German economic conditions between the wars:
- Financial conditions and budget policies;
- The problem of unemployment;
- Financial instability;
- Hyperinflation and stabilisation;
- The debate on reparations
- Investment cycle and changes in productivity;
- Balance of payment and exchange policies;
- Depression and recovery;
- The economy at war.

Supervisions

3 or 4 supervisions in Michaelmas.

3 or 4 supervisions in Lent

Possibly 1 in the Easter Term

My email address: car37@cam.ac.uk

Bibliography for lectures 1-3

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- Ferguson, N., 'Constraints and room for manoeuvre in the German inflation of the early 1920s', in *Economic History Review*, V. 49, No. 4, November 1996, pp. 635 - 666;
- Franco, G.H.B., *Economic Journal*, V. 100, March 1990;
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- Witt, P.-C., 'Tax policies, tax assessment and inflation: towards a sociology of Public Finances in the German inflation, 1914-23', in Peter-Christian Witt (ed.), *Wealth and taxation in Central Europe. The history and sociology of Public Finance*, Leamington Spa/Hamburg/New York: Berg Publishers Limited 1987, pp. 137 – 160.

Structure of my lectures

- **Lecture 1.** War and the onset of inflation (1914 – 1918);
- **Lecture 2.** *De-mobilization, inflation and the slide into hyperinflation (1919 – 1920);*
- **Lecture 3.** *Stabilizing the mark 1920 – 1924: facts and counterfactuals;*
- **Lecture 4.** *Investments, wages, public finances and economic growth in the late 1920s;*
- **Lecture 5.** *Depression and recovery. The Borchardt debate*
- **Lecture 6.** *Recovery, rearmament and war (1933 – 1945).*

The German economy between the wars

Lecture 1:
War and the onset of inflation (1914 – 1919).

Dr. Cristiano Ristuccia
car37@cam.ac.uk

Aims of this lecture

- Provide a comparative backdrop to the unfolding of hyperinflation in Germany;

Inflationary pressures not unique to Germany in their nature

Virulence of the German inflationary process

- Role of war and defeat in explaining the economics of the German Hyperinflation.

Virulence was due to a considerable extent to the problems accumulated during the war – inadequacies of the fiscal policies employed by war-time policymakers to tackle ever-mounting German financial troubles.

- ***High inflation:*** 10 – 50 per cent per annum
- ***Galloping inflation:*** 50 per cent per annum –
50 per cent per month
- ***Hyperinflation:*** above 50 per cent per month

Table 1. Consumer price indices 1918 = 100

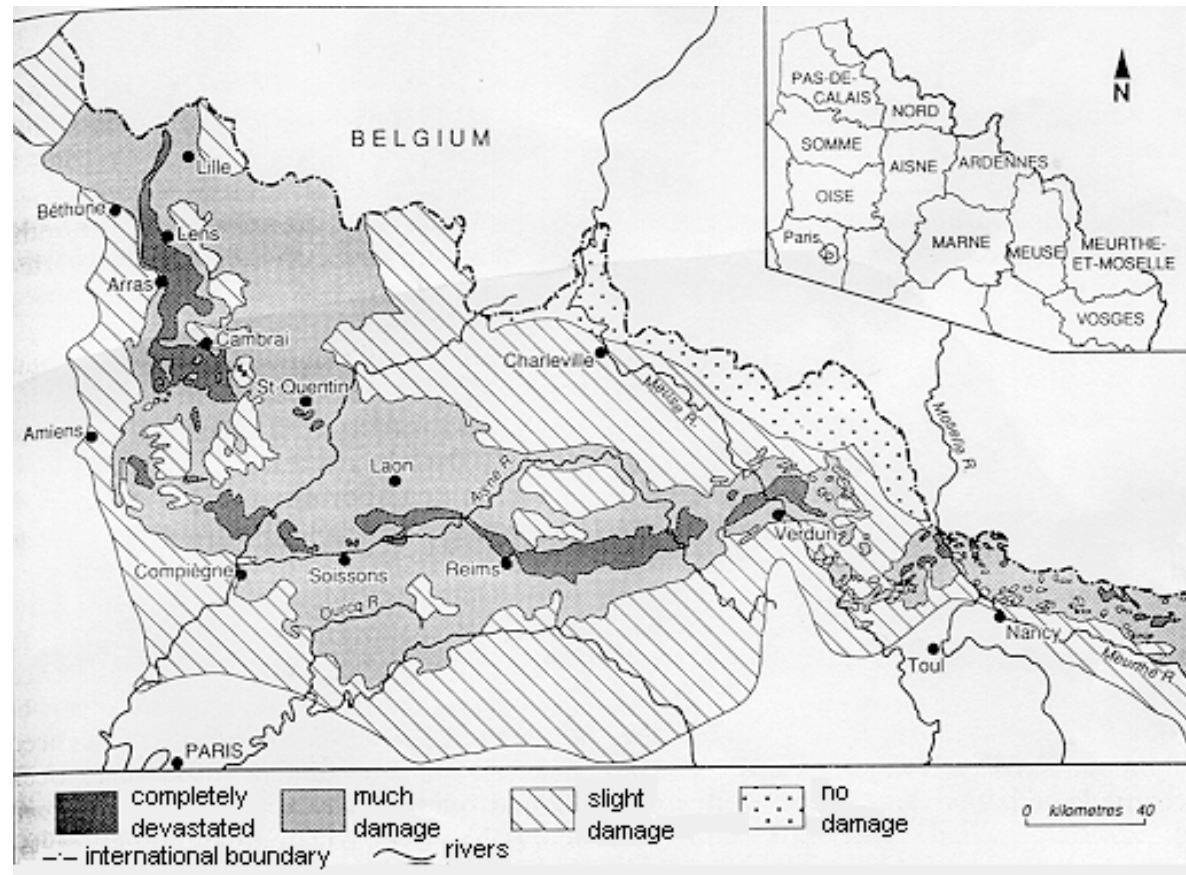
	1914	1918	1920	1922	1923	1924	1926
Austria	9	100	440	22,695		7	9
Germany	33	100	326	4,803	5,077,000,000,000	42	46
Finland	16	100	140	163		167	170
Italy	35	100	162	162		166	214
France	47	100	174	148		185	263
Norway	40	100	119	91		94	81
Sweden	46	100	123	90		79	79
Switzerland	49	100	110	80		83	79
United Kingdom	50	100	124	91		88	86
Denmark	55	100	143	110		119	101
Netherlands	62	100	120	92		90	85

Hyperinflation the result of physical destruction?

Did the mismatch between supply and demand caused by the destruction of productive assets determined explosive price dynamics?

Stationary trench-war \Rightarrow
Damage geographically concentrated.

Southern and Eastern front mountainous or scarcely inhabited agricultural areas.



Dissimilarities with WW2

- Static conflict
- European conflict
 - Physical damage to productive capacity concentrated in the Old Continent.
 - Physical damage to transport (shipping). Merchant fleets of UK and Germany – Submarine warfare and for Germany terms of the armistice - Did not constitute an inescapable bottleneck capable of producing large supply shortages.

Uneven distribution of physical damage had profoundly negative effects on the issue of the post-war solution to the financial problems created by the War. REPARATIONS.

Human capital losses

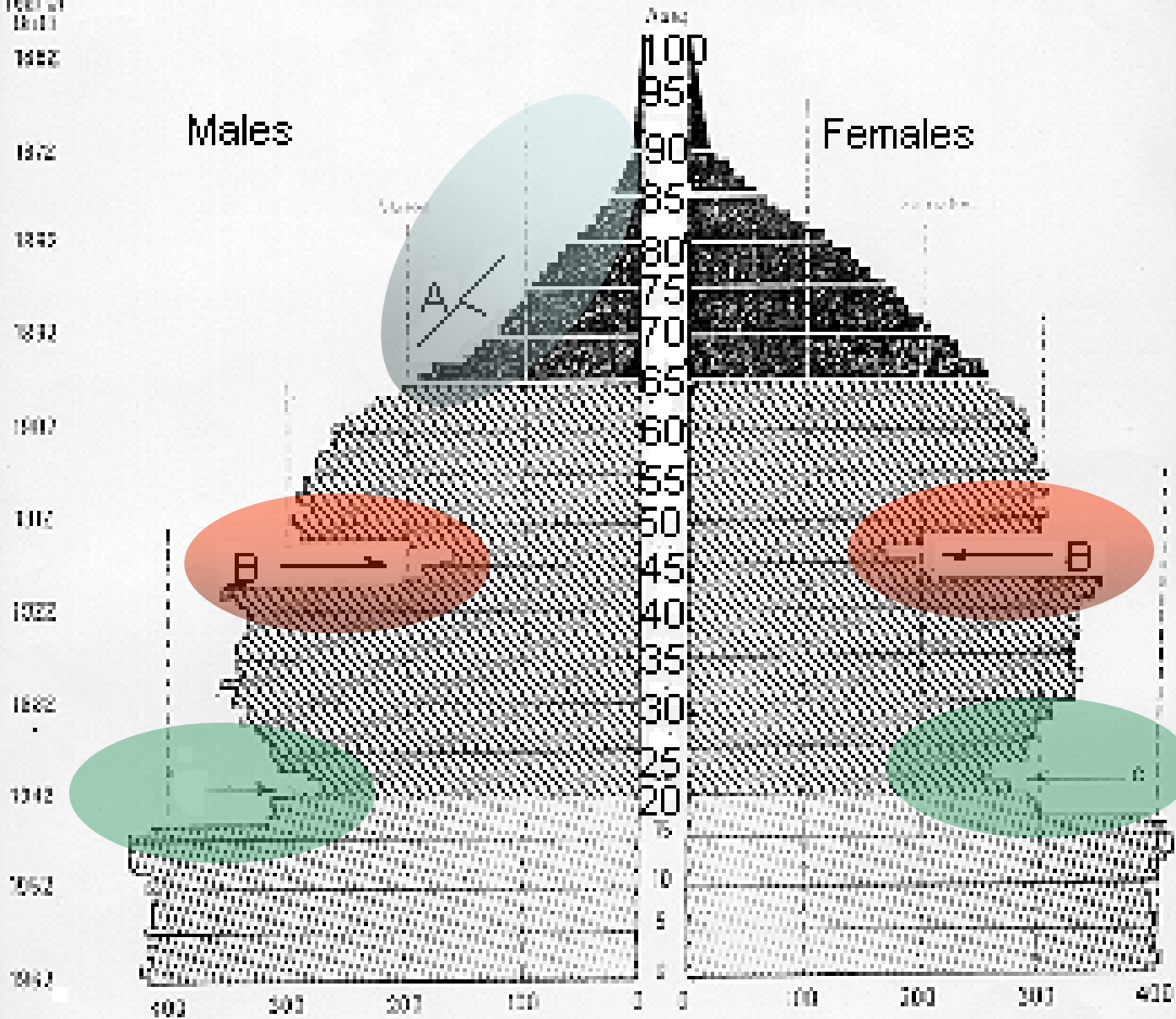


Fig. 33. Age-pyramid as at 1st January 1963 (numbers in thousands).

A. Military Losses 1914-1918.

B. Age classes reduced by the war.

French age pyramid in 1963

Financing total war

In 1955 Woytinsky and Woytinsky calculated that the direct cost of the First World War at constant prices equalled five times the consolidated worldwide national debt in 1914.

- **increase taxation;**
“[o]verall the major belligerent countries finance less than a third of current expenditure out of taxes”. Eichengreen Golden fetters (p. 75).
- **increase State debt;**
- **increase the speed of the money printing machines (inflation).**
- **Sale of foreign assets**

Table 3.1. Government Budget Surpluses or Deficits as Shares of Expenditures, 1914-18

	U.K.	France	Germany	Italy	U.S.
1914	-61.3	-54.8	-73.5	-6.1	-0.1
1915	-79.8	-79.4	-94.4	-45.3	-8.4
1916	-75.0	-86.6	-92.7	-64.9	6.7
1917	-76.1	-86.1	-90.8	-69.6	-43.7
1918	-69.2	-80.0	-93.8	-70.2	-71.2

Notes: Negative numbers denote deficits, positive numbers denote surpluses.

Source: Computed from Balderston (1989) for U.K. and Germany, Young (1925b) for France and Italy, and U.S. Department of Commerce (1976) for the United States.

Limits to taxation – role of indirect taxation and its limits in war conditions.

- Antiquated fiscal systems (consumption taxes and duties)- Fall in revenue.
- The problems with introducing direct taxes.
- The case of **France** is a good example. **Less than 20% of expenditure came from taxation and falling.** Direct taxes were voted in 1915 but implemented only in 1918 and in that year covered only 5% of expenditure.
- in **Germany** in 1918 **83% of the expenditure came out of deficit spending**
- Also **US** were the standard income tax rates were doubled during the war 1/3 war expenditure paid with taxes

How did Germany do when it came to financing the war?

- Traditional reliance on indirect taxation.
- Direct taxation. Federal government (payments) – States (revenues)
- Fiscal framework better in Britain and in the US (large-scale direct taxation introduced before the war).

- **increase taxation;**
- **increase State debt;**
- **increase the speed of the money printing machines (inflation).**
- **Sale of foreign assets**

The cost of placing the debt (in terms of interest rates offered) was inversely proportional to the government's **fiscal credibility**. This in turn depended on:

- a. on the fiscal leverage of the state (so more modern fiscal systems enhanced the credibility of the government's promise to repay a certain amount at given date in the future);
- b. on the amount of debt already placed;
- c. on the military prospects of the country

Internal debt as a ratio of national product in 1920

- **F 1.64** (it became almost three times the size of the French GDP by 1923 and 10 to 15 times the state revenues in the same year)
- **UK 1.26**
- **US 0.27**

How did Germany do when it came to financing the war?

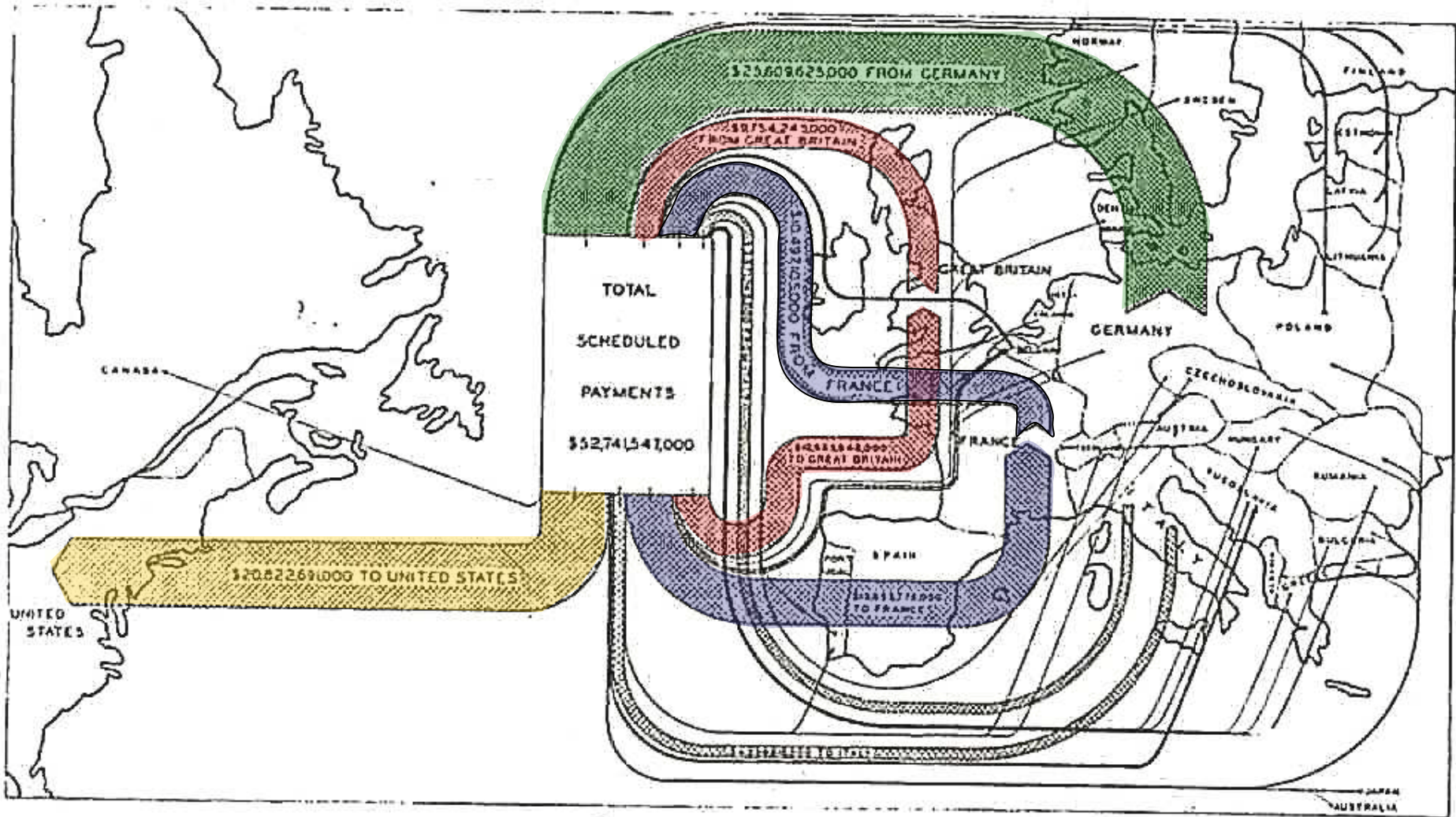
- Traditional reliance on indirect taxation.
- Direct taxation. Federal government (payments) – States (revenues). One should remember that: “In 1913 the total burden of *all* taxes in Germany amounted to 8 per cent of National income” (H. James, *The German Slump* 1986, p. 2).
- Domestic debt — **credibility** (linked to expected revenues – linked to military events) – after 1916 and particularly after the failure on the last generalised German offensive in 1917.
- Structure of debt – shortening of maturities – increased proportion of floating debt

Table 2.1 The German public budget during the First World War
(in billions of marks)

Fiscal Year ¹	Expenditures	Taxes	Deficits covered by short-term borrowing	Deficits covered by long-term borrowing	Taxes over expenditures
1914	9.7	2.4	1.4	5.9	0.24
1915	26.7	1.8	2.7	22.2	0.06
1916	28.8	2.0	4.2	22.6	0.07
1917	53.3	7.7	16.2	29.4	0.14
1918	45.5	6.8	11.3	27.4	0.15

Note: 1 From April 1 to March 31.

Source: Computations from Graham (1930) and Mitchell (1975).

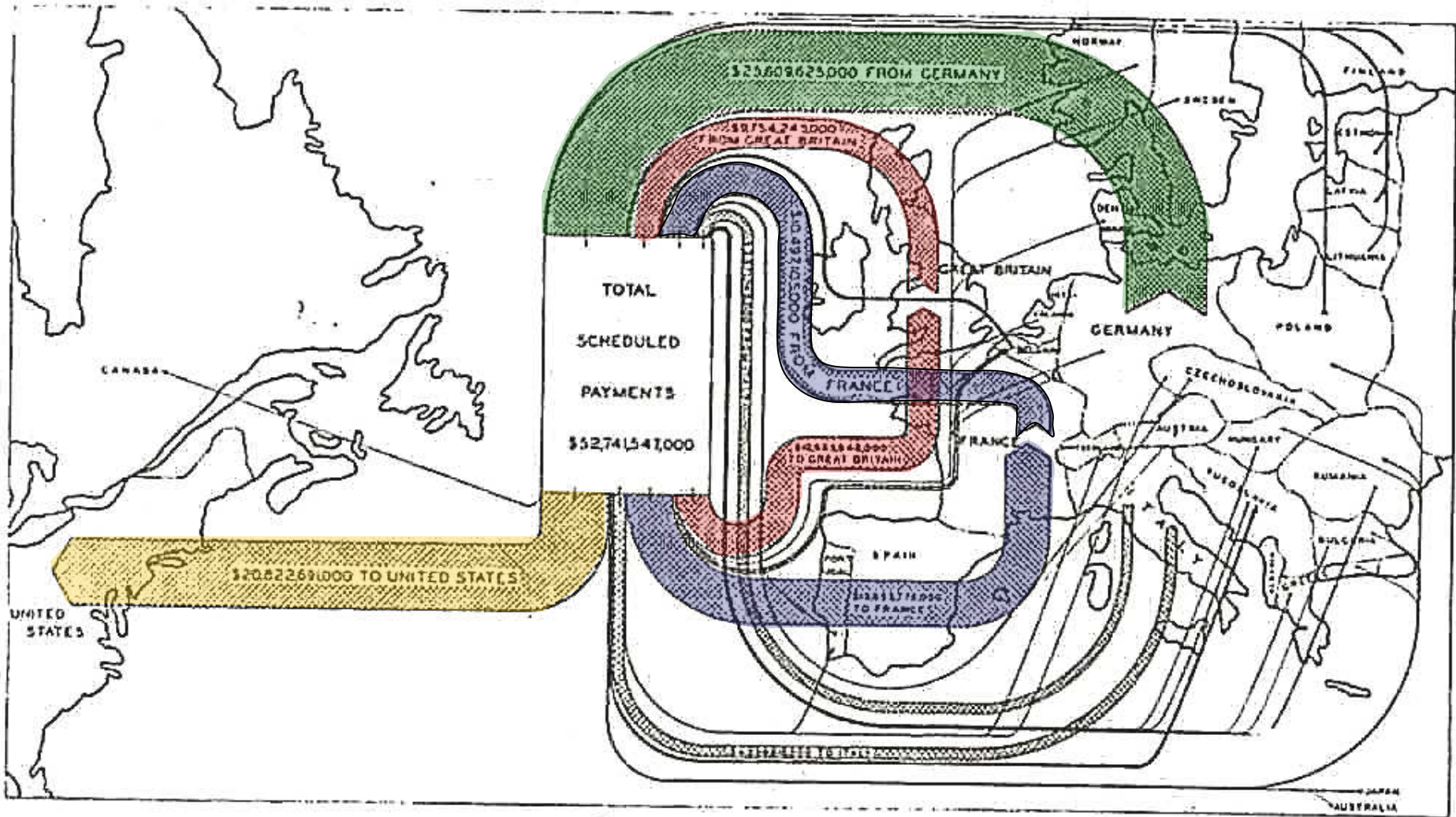


THE FLOW OF WEALTH INVOLVED IN WAR DEBT PAYMENTS
 (Situation as of July 1, 1931)

- The US were a net foreign debtor for \$6 billion in 1913 by 1918 they were net creditors for \$11 billion. This constitutes a massive shift of \$17 billion.

Printing presses.

- Crypto-inflation (black market – price management – rations, subsidies etc.)



THE FLOW OF WEALTH INVOLVED IN WAR DEBT PAYMENTS
 (Situation as of July 1, 1931)

Defeat and reparations

- **Article 231 of Treaty of Versailles – German responsibility for war**
- **Treaty of Versailles:**
 - **1. Germany lost 10% of its population;**
 - **2. 1/8 of its territory;**
 - **3. 43.5 % pig iron capacity;**
 - **4. 38.3 % of steel capacity;**
 - **5. liable for occupation costs;**
 - **6. 20 billion gold marks before May 1921;**
 - **7. 25 % of pharmaceutical production;**
 - **8. 25-40 million tons of coal;**
 - **9. 100 billion gold marks bonds (minus receipt from alienation of merchant fleet and railroad stock under armistice agreements)**
- **Territory + colonies, gold reserves, ships, rail-stock, coal, pharmaceuticals;**
- **Prior to May 1921 Germany paid 8 billion gold marks = 20% of German national income in 1921.**

Reparations

- Initial recommendation 225 billion gold marks then scaled down to **132 billion gold marks (1921 London schedule of payments)** of which:
 - 50 billions immediately (over the period 1921 – 1933) = 125% of German national product in 1921. With transfers of 4 billion each year (including interests and occupation costs) = **10% of German national product per year (at 1921 values)**.
 - The other 82 billion later when she could pay.

Could Germany pay?

- External surplus = 80 % of German exports in 1921 – 1922
- Massive increase in exports but:
 - massive increase in imports
 - substantial fall in **living standards**
 - would the allied have been willing to absorb this flood of German exports in direct competition?

German trade after the war

- Loss of Alsace Lorraine to France;
- Temporary loss of Saar coalmines;
- Disruption of traditional commercial relationships;
- Loss of tonnage
- Unwillingness of foreign customers to buy German good (the price of hatred).