

Railroads and American Politics

Agenda for Topic 5: The Nature of Railroad Competition

- 1. The Basics of Railroad Competition**
- 2. Price Discrimination by the Railroads**
- 3. The Perversity of Railroad Competition**
- 4. “Morganization” of Bankrupt Railroads**
- 5. The Macroeconomic Effects of Railroad Price Discrimination**

The Basics of Railroad Competition

A. Railroad competition in the 19th Century was structured by three basic facts:

- 1. Railroads owned the highway *and* all the vehicles on the highway**
- 2. Railroads had High Fixed Costs**
- 3. Railroads, for political and *economic* reasons, were not allowed to be Liquidated**

B. The Railroad's Pricing Problem – The decisions of railroad managers in setting or administering their prices reflected two basic conditions:

1. The pressure of high fixed costs. Costs that did not vary with traffic volume were about *two-thirds of the cost of running the railroad!*

a. Interest on invested capital, salaries, insurance, and taxes were all pure fixed costs.

b. Movement expenses were pure variable costs.

c. Repair and maintenance of roadbed, buildings, bridges, etc., and station expenses were partly fixed and partly variable.

2. The existence of unused capacity.

C. *These high fixed costs created an inexorable pressure to attract traffic.*

D. The typical railroad often had *no competition for local, short-haul freight*. However, almost all large cities were served by several railroads.

E. The consequence of points B) and C) was that railroads had considerable flexibility in setting their rates. Unlike most other economic actors, the *railroads tended to set prices in relation to cost rather than demand*.

F. *This inexorably led the railroads into setting rates that discriminated against persons, places, and types of traffic.*

Basic Problem With High Fixed Costs

1. With a *High* Freight Rate you cannot get enough business to fill the cars.
2. With a *Low* Freight Rate you can fill the cars but you do not make a Profit.

Solution: **Multiple Freight Rates based upon the value of the product being shipped.**

Price Discrimination by the Railroads

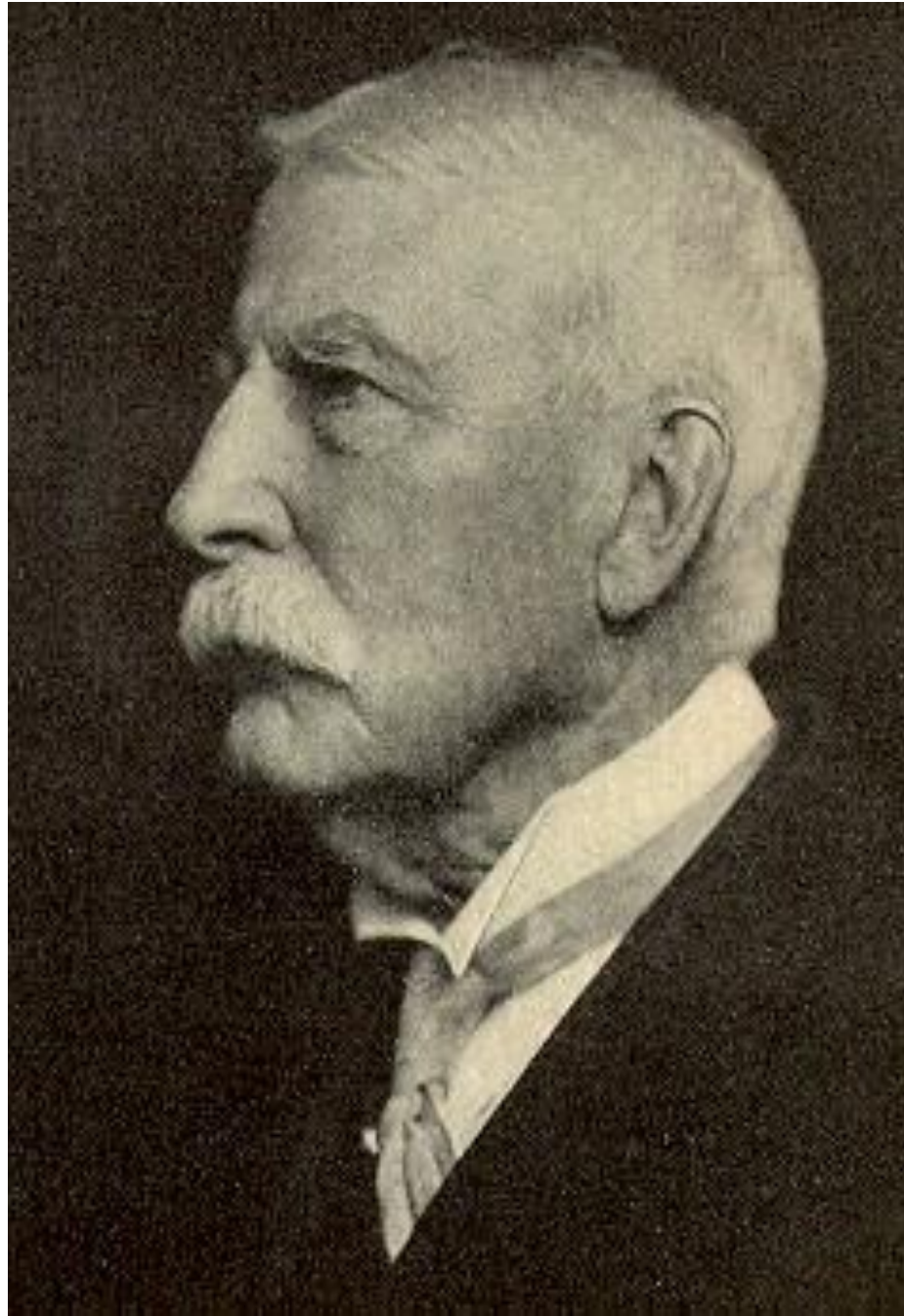
A. Discrimination against types of traffic; examples

1. Value Based Pricing –
2. Asymmetric Traffic – $P_{AB} < P_{BA}$
3. Volume Discounts

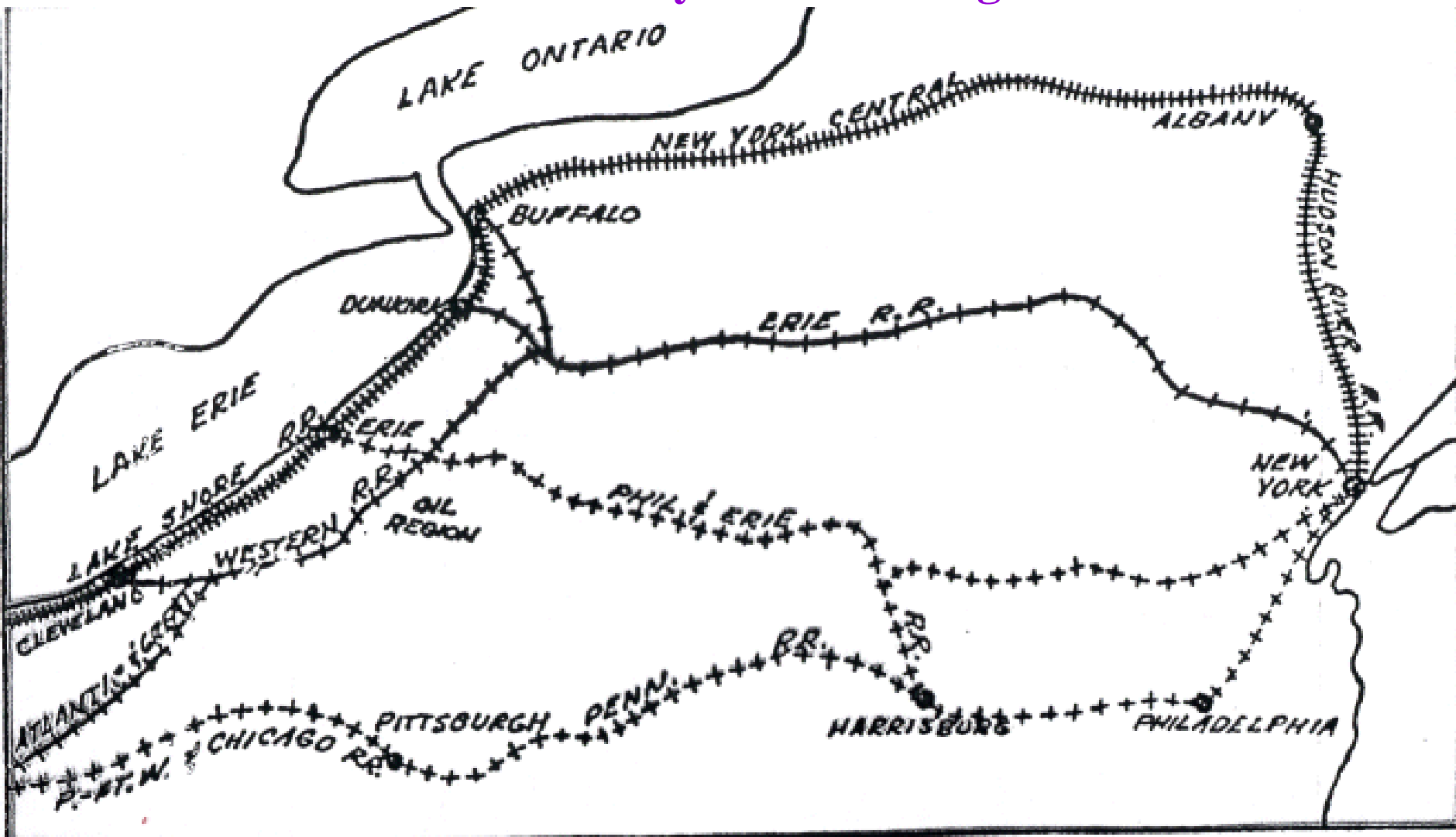
B. Discrimination against Places. Given 4 cities, A, B, C, D, in order along a Railroad line, it was *often* the case that $P_{AD} + P_{DC} < P_{AC}$

C. Discrimination against Persons – Rebates and Drawbacks

Henry Flagler (1830 - 1913)



Railroads in the Pennsylvania Oil Regions 1865-73

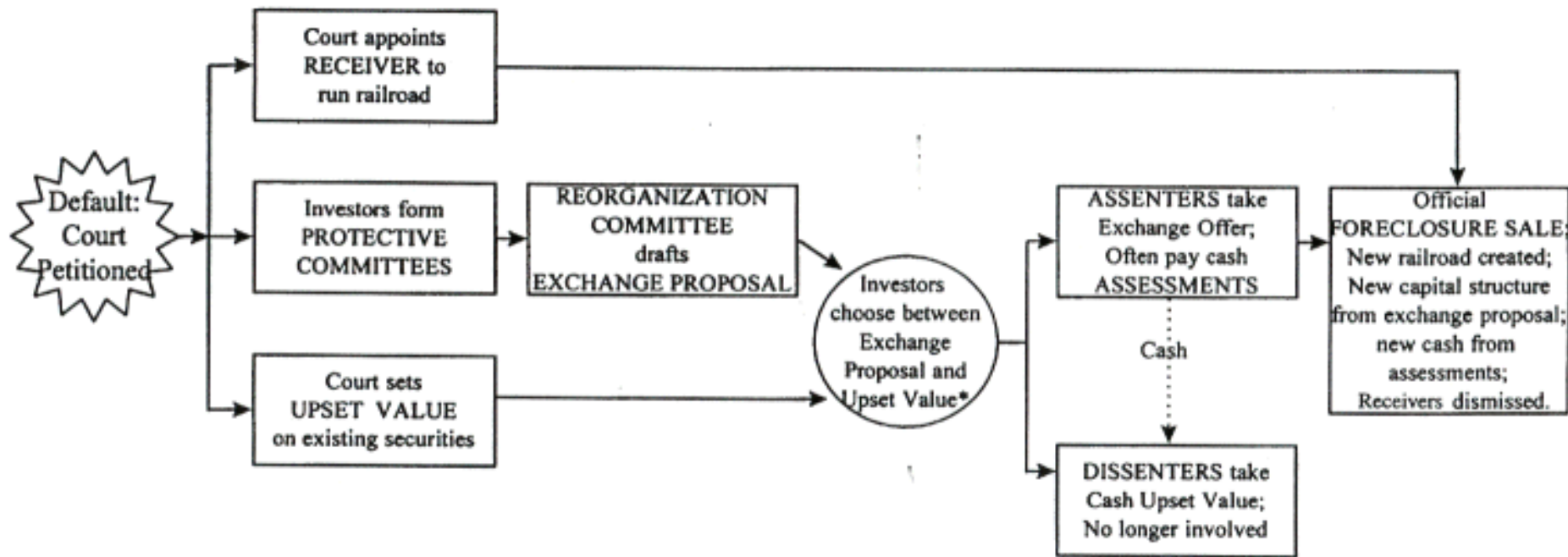


From R. H. Maybee, *Railroad Competition and the Oil Trade, 1865-1873*.

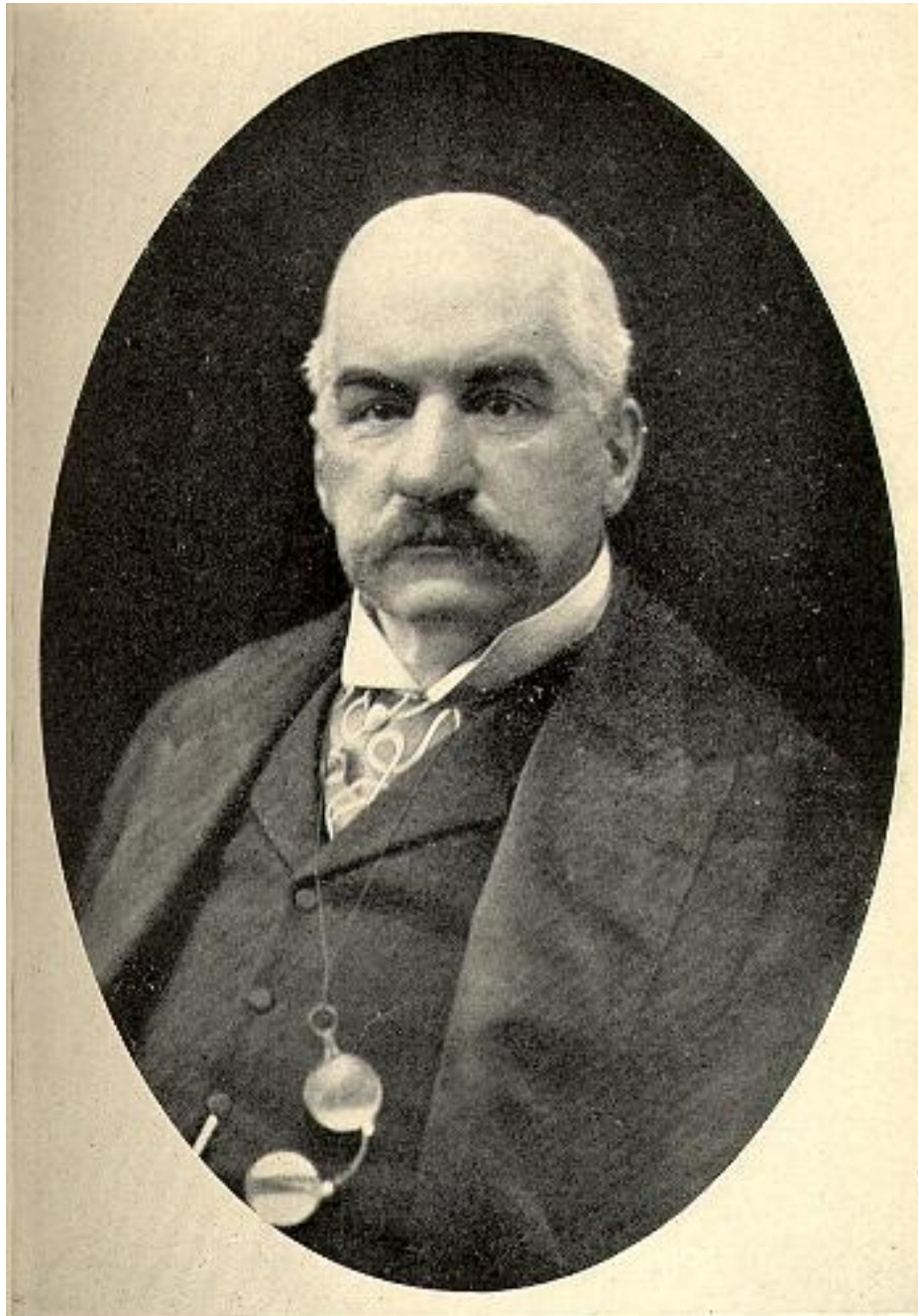
William H. Vanderbilt (1821 - 1885)



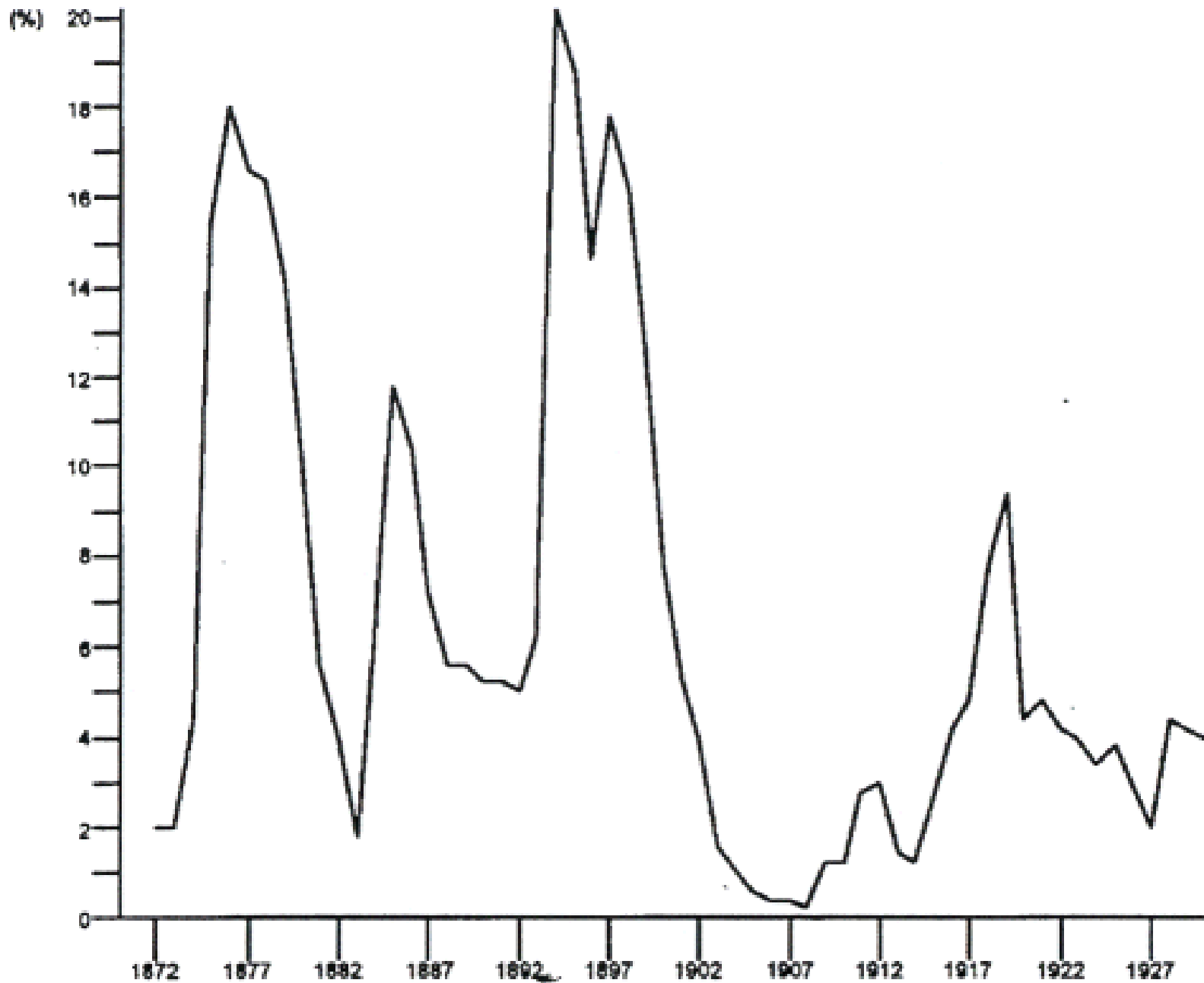
The Mechanics of “Equity Receivership”



John Pierpont Morgan (1837 - 1913)



Percent Railroad Mileage in Bankruptcy



Morganization: How Bankrupt Railroads were Reorganized

1. American Railroads usually were financed with first mortgage bonds with a gold clause that **guaranteed the payment of principal and interest in gold.**
2. These bonds were **fully negotiable** and were backed by a *lien* upon the land under the Railroad -- the *real* estate -- and any improvements upon it -- roadbed, rails, bridges, etc.
3. The owners had the right to foreclose -- that is, go into court and seek to protect their rights under the lien including seizure of the physical assets.
4. The Railroads had to kept running, so **Equity Receivership** had to be used. *Liquidation was out of the question.*

Solution: Reorganization (Morganization)

- 1. New Securities were exchanged for the old to bring the debt down to a level such that operating revenue was sufficient to pay the dividends.**
- 2. The Railroad was reorganized by Morgan's Lawyers and skilled Railroad Managers.**
- 3. A *Voting Trust* was set up to control the Railroad.** The owners of stock with voting rights in the reorganized company had to place their shares in a trust that gave Morgan's associates voting control of the Board of Directors of the Railroad. In effect, J. P. Morgan staked his name and reputation on the solvency of the Railroad and this made it attractive to outside investors.