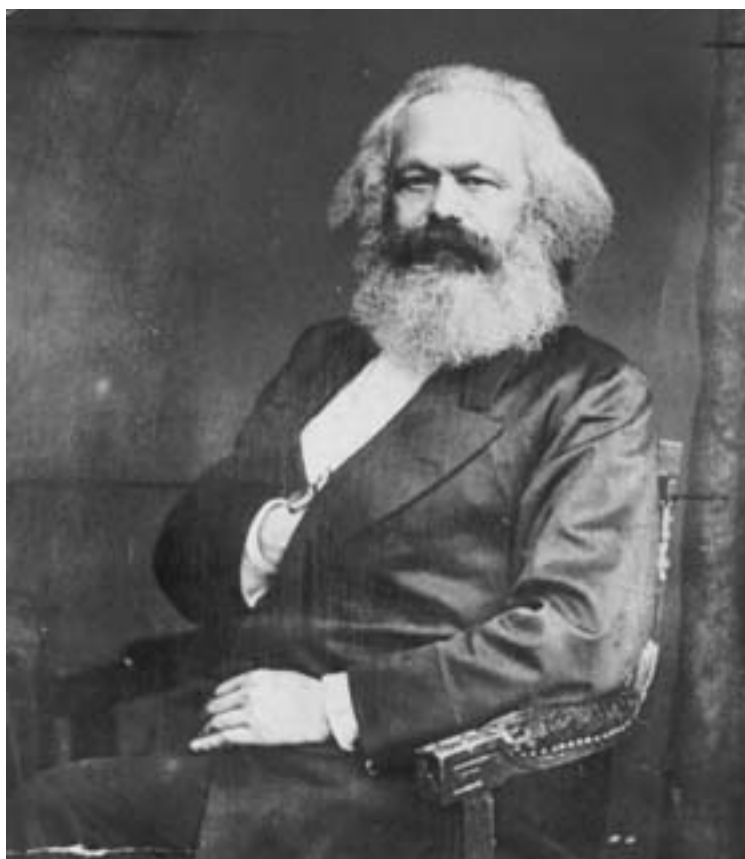# Karl Marx
1818-1883

Karl Marx

- Biographical details
  - Came from a middle class Jewish family
  - University of Berlin
  - PhD University of Jena 1841
  - Edited socialist newspapers and magazines
  - Moved to Paris 1843
  - Prussian government declared him guilty of treason 1844
  - Expelled from France 1845, went to Brussels and later to London (1849)

Karl Marx

- Biographical details
  - Supported in London by Ernest Engels
  - Began serious study of economics in 1843/44
  - *Communist Manifesto* 1848
  - *Capital* volume 1 1867
  - Volumes 2 and 3 completed by Engels
- Intellectual influences
  - Classical economics
  - Hegelian theory of history
  - Radical communist ideology

Marx's Method

- Essentialist ontology
- Phenomenal and essential forms
- Phenomenal form is what is observed
- Essential form is unobserved but more fundamental
- Markets may appear to be a matter of free contract, but in essence capitalism is a system of exploitation of labour
- Prices are a phenomenal form of the essential labour values
- Issue of transformation between essential and phenomenal levels

Marx's Economics

- Characteristics of Capitalism
  - Private ownership of the means of production
  - Labour is a commodity—bought and sold on labour markets
  - General commodity production—production for sale not use
- Commodity production
  - Production for profit
  - Not C$\rightarrow$M$\rightarrow$C'
  - But M$\rightarrow$C$\rightarrow$M' (where M'>M)
  - Difference between M and M' is profit

Marx's Value Theory

- What is the source of profit?

- How can a capitalist purchase all inputs and sell all outputs at competitive prices and yet make a profit?

- To understand this need to look at the essential level of Values

- Initially Marx assumes prices equal Values (this is an assumption he later relaxes)

Labour Theory of Value

- The Value of a commodity depends on the amount of labour time involved in its production
- The labour time must be socially necessary
- Labour time is measured in abstract homogeneous units
- Law of Value: W=L

Value Theory

- Exchange values involve comparability

- To have exchange values something must have use value, but use values are non-comparable

- What all commodities have in common is that they are the products of labour

- Exchange values based on labour time

Labour Values

- Assume everything exchanges for its value (prices = values)
- Capitalists purchase all inputs at their values
  - variable capital v (labour power)
  - Constant capital c
- Capitalists sell all outputs at their values
- For profit to exist the value of the outputs must exceed the value of the inputs
- This means that at least one input must pass on more value to the output than its own value

Labour Values and Exploitation

- $M \rightarrow C \}c$ and $v\} \rightarrow C' \rightarrow M'$
- Value of C' = c + v + s
- s is surplus value (profit)
- Surplus value is only created by "living labour"
- Labour works more hours than are embodied in the wage goods that they receive
- Labour produces v +s but is paid only v

Value of Labour Power

- The commodity that is bought and sold on labour markets is labour power
- The value of labour power is the labour time required to produce it
- The labour time embodied in the subsistence wage good bundle
- What determines subsistence wage?
- Marx rejected Malthusian population mechanism
- Wage rate kept low by the reserve of unemployed people, landless and with no means of production

Exploitation of Labour

- Surplus value is expropriated labour time
- s/v is the rate of exploitation
- $s/c+v$ is the rate of profit
- c/v is the organic composition of capital (capital to labour ratio)
- Capitalists try to increase profit by
  - Increasing length of working day
  - Reducing real wage
  - Increasing productivity

Profit and Surplus Value

- If we assume prices = values then profits = surplus value

- Profits come from the exploitation of labour

- Labour is not paid the value of its output

- This is not a matter of monopoly power but a result of the commodification of labour and its lack of ownership of means of production

- The market of free labour disguises the fact it is exploited

Schemes of Reproduction

- Two "Departments": I Capital Goods producing industries, II Consumption goods producing industries

- Simple Reproduction
  - I: 4000c +1000v + 1000s = 6000
  - II: 2000c + 500v + 500s = 3000

- All the v and s in both departments is spent on consumption goods, and the c of both is replaced by the output of the capital goods industries

- Exchange between departments: 2000 in capital goods from I to II in exchange for 2000 in consumption goods from II to I

Schemes of Reproduction

- Accumulation and production on an expanded scale

- Some surplus value is accumulated as additional c and v, the additional c being part of the output of Dept I and the additional v being a money fund that is provided by sales but not spent on consumption

- Problem of balanced growth in the two Departments—can easily get malajustments

Schemes of Reproduction

- I: 4000c+1000v+1000s=6000

  II: 1500c+750v+750s=3000

- 500s in I is accumulated, 400c and 100v to pay for more labour power

- The 6000 output of I can only all be sold if Dept II also accumulates and purchases an additional 100 from Dept I

- That means Dept II must accumulate 150, 100c and 50v to pay for more labour power

- The 3000 output of Dept II is consumed
  1000+500+100+750+600+50

Schemes of Reproduction

- Begin next period with:

  I: 4,400c+1,100c+1,100s=6,600

  II: 1,600c+800v+800s=3200

- Again accumulate half of the surplus value in I = 550, 440c and 110v

- Dept II must purchase 1760c in order for Dept I to sell its 6,600 output

- Dept II has to accumulate 160c+80v

- Dept II output goes to 1,100+110+550+800+80+560=3,200

- Begin next period with:

  I: 4,840c+1,210c+1,210s=7,260

  II: 1,760c+880v+880s=3,520

Transformation Problem

- So far have assumed prices = values

- Marx was aware that there was a problem with this assumption

- If prices equal values and
  - Competition between capitalists equalizes profit rates (s/c+v) in all industries
  - Labour mobility equalizes rates of exploitation (s/v) in all industries
  - Then c/v will have to be the same in all industries, which it is not

Transformation Problem

- Put another way
  - If prices equal values
  - And s/v is the same in all industries
  - Then labour intensive industries will make higher profits than capital intensive ones
- Marx's "solution" (in Volume 3 of Capital) is to allow prices to diverge from values in a systematic way
- He determines prices by applying an average rate of profit to cost of production (c+v)
- Given that he uses the average profit rate, total profit = total surplus value

Transformation Problem

- In labour intensive industries prices < values and profits < surplus value

- In capital intensive industries prices > values and profits > surplus value

- Deviations cancel out

- The competitive market equalizes profit rates and disguises the source of profit in surplus value or exploitation of labour.

Transformation Problem: An Example

	c	v	s	value	profit
I	80	20	20	120	20%
II	70	30	30	130	30%
III	60	40	40	140	40%

	c+v	av%	price	dev	
I	100	30%	130	+10	
II	100	30%	130	0	
III	100	30%	130	-10	

Transformation Problem

- Marx's solution attempts to maintain equality of profit and surplus value at the aggregate level

- But Marx does not transform cost of constant capital from values into prices

- Marx applies an average of the rate of profit worked out on values, but capitalists would be interested in money rates of profit on money costs

- Transformation can be done correctly but key equalities cannot be maintained

Laws of Motion of Capitalism

- Capitalism contains within it certain "contradictions" that provide a "limit to capital"
- The rate of profit will tend to fall due to labour saving technological change (c/v rises so with a given s/v, $s/c+v$ falls)
- Offset to this in terms of increases in the rate of exploitation--s/v will increase due to increased productivity
- Marx argued that there were limits on how large s could become but no limits to size of c, therefore $s/c+v$ would eventually fall

Laws of Motion of Capitalism

- Impoverishment of the working class in terms of relative living standards
- Note that s/v can increase with increased productivity while real wages also increase—a lower v can represent more goods
- alienating conditions of work—deskilling of labour
- Reserve army of the unemployed would tend to grow again due to labour saving technological change
- Crises and cycles due to imbalances (problems of maintaining steady growth) which tend to become wider over time

Laws of Motion of Capitalism

- Concentration of capital and the gradual elimination of the small capitalist (as a result of crises)
- Two classes one propertied the other not, and with no stake in the system
- Class consciousness and the role of the Communist party
- Possibility of a revolutionary overthrow of capitalism
- Problems with these Marxian "laws"

Marx and Economics

- Marx's vision of capitalism as exploitative and historically limited has been extremely influential
- Technical contributions to economic theory in areas of growth theory
- "Surplus approach" still has adherents (working from Sraffa)
- Did Marx's use of the labour theory of value help lead to marginal utility theory?
- Did Marx's view that labour was not paid the value of its output help the end of the wage fund/subsistence theory of wages and the rise of marginal productivity theory?

The Demise of Classical Economics

- Problems with labor or cost of production theories of prices
- Mill already using demand and supply explanations—not just cost side
- Wage fund/subsistence theory of wages under attack. Mill's recantation. Later, a desire to answer Marx.
- Economic issues shifting away from Classical issues of economic growth, population, and food supply, to issues of industrial organization, firms, trade unions, business cycles.

The Demise of Classical Economics

- In many respects Classical economics was the economics of the transformation from pre-industrial to industrial society

- However, many lasting contributions

- Theories of the market mechanism, international trade, and economic growth carried through into neoclassical economics

- Classical theories of value and distribution were replaced with marginal utility and marginal productivity theory

- Econ 338 picks up the story with this "marginal revolution" in the 1870s