

Adam Smith: The Division of Labor

Choice, Commerce, and Conflict
Ryan Doody



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Review

THE EVOLUTION OF TRUST

playing time: 30 min • by nicky coon, july 2017

PLAY →



Tragedy of the Commons

1. Top-down Regulations

Example: Hunting season



2. Social Norms

Example: Buffet table



3. Property Rights

Example: fences, tradable quotas



Review

- **The Tragedy of the Commons**
 - Multi-person Prisoners' Dilemma
 - Leads to the depletion of the resource
- **Property Rights**
 - Help avoid the Tragedy of the Commons
 - Internalize negative/positive externalities
- **The Evolution of Trust**

The Evolution of Trust

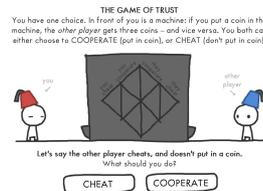
Review: The Evolution of Trust

The Evolution of Trust Activity:

Population of players playing *sequences* of Prisoners' Dilemmas against each other.

In a one-off game, the dominant strategy for each player is *cheat*.

But what if you play *many times*?



Review: The Evolution of Trust

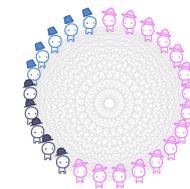
The Evolution of Trust Activity:

Which strategies do best when played against all the others?

Evolutionary Game Theory:

Different "types"

Several rounds of the game
The successful multiply, the unsuccessful are replaced.



Say we start with the following population of players: 15 Always Cooperators, 5 Always Cheats, and 5 Copycats. (We'll ignore Grudger & Detective for now)

We're going to do the tournament-eliminate-reproduce dance a dozen times or so. Let's make another bet! Who do you think will win the first tournament PLACE YOUR BETS, AGAIN:

All Cooperators

All Cheats

Copycat

(forget who's what favor buttons to see descriptions of each character)

What happens?

Review: The Evolution of Trust

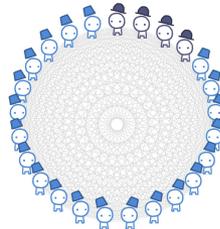
The Evolution of Trust Activity:

What happens?

“Copycat” takes over the population.

Why?

**Hint:* Consider how well each strategy will
against all of the others...



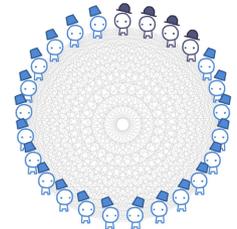
Review: The Evolution of Trust

The Evolution of Trust Activity:

Copycat vs Cheater

Copycat vs Copycat
Etc.

**Hint:* Consider how well each strategy will
against all of the others...



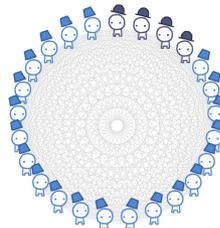
Review: The Evolution of Trust

The Evolution of Trust Activity:

Under the right conditions (which are...?):

Copycat will take over the population

**Hint:* Consider how well each strategy will
against all of the others...

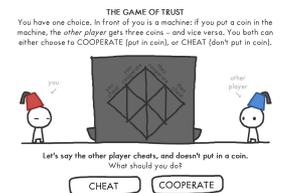


Review: The Evolution of Trust

The Evolution of Trust Activity:

What lessons can we draw about the
Tragedy of the Commons?

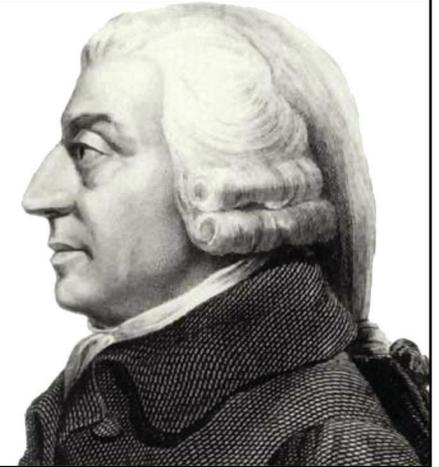
What do you think?



Adam Smith

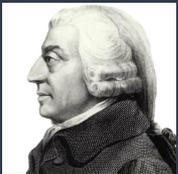
Adam Smith
(1723-1790)

Scottish philosopher



Adam Smith
(1723-1790)

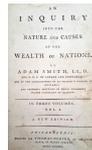
Scottish philosopher



Considered to be the founder of modern economics.

Wrote *An Inquiry into the Nature and Causes of the Wealth of Nations* in 1776.

Introduced the metaphor of the **invisible hand**.



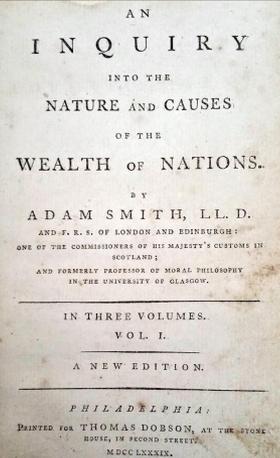
The Wealth of Nations

Central Question:

How can society coordinate the independent economic activities of large numbers of people?

Answer:

Coordination can arise spontaneously, without anyone consciously intending to create it.

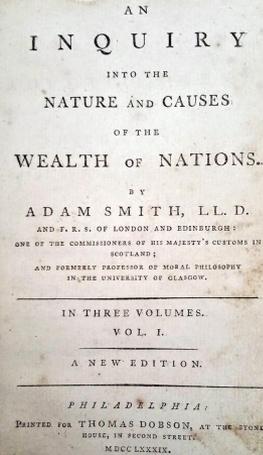


The Wealth of Nations

Much of the book is an argument *against* the economic constraints imposed by **mercantilism**.

Mercantilism:

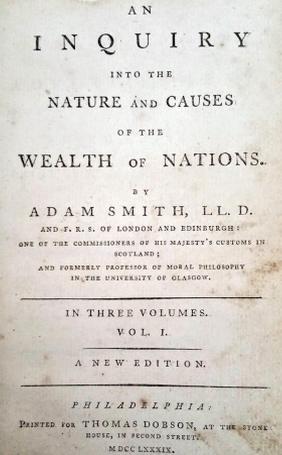
Government should regulate their national economies at the expense of rival nations.



The Wealth of Nations

Much of the book is an argument *against* the economic constraints imposed by **mercantilism**.

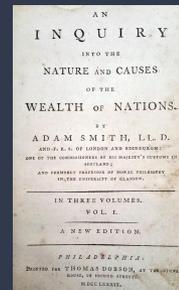
Although Smith doesn't use the term himself, his book is often considered a defense of **Capitalism**.



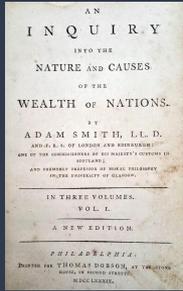
What Is Capitalism?

Capitalism

Capitalism is an economic system characterized by the following combination of institutions:



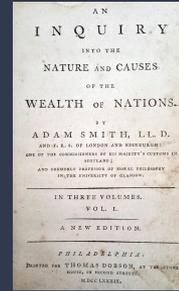
Capitalism



Capitalism is an economic system characterized by the following combination of institutions:

1. Private property

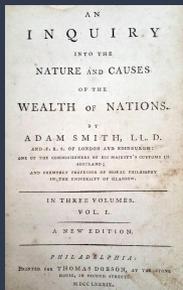
Capitalism



Capitalism is an economic system characterized by the following combination of institutions:

1. Private property
2. Markets

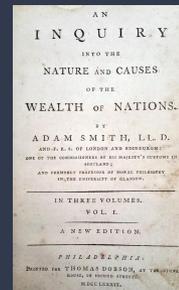
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Capitalism



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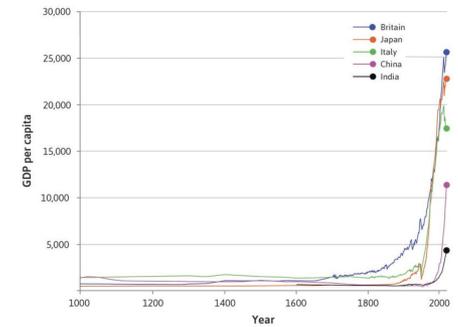


Capitalism & Growth

Capitalism & Growth

Capitalism is associated with a remarkable increase in standards of living.

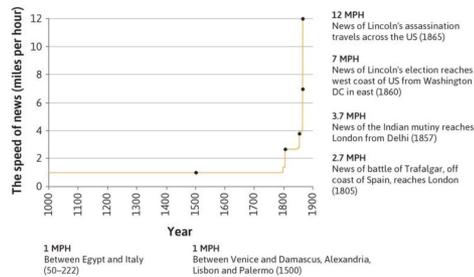
[Hockey Stick Graphs]



Capitalism & Growth

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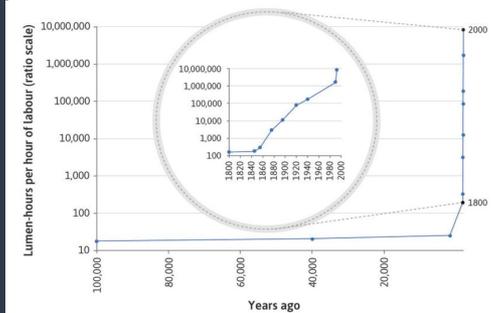
[Hockey Stick Graphs]



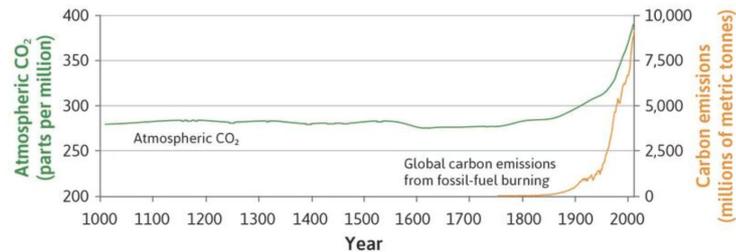
Capitalism & Growth

Capitalism is associated with a remarkable increase in standards of living.

[Hockey Stick Graphs]



Capitalism & Growth



What Explains Capitalism's Success?

Capitalism & Growth

Capitalism is associated with a remarkable increase in standards of living.

A major source of prosperity, according to Adam Smith, is **division of labor / specialization.**



Capitalism & Growth

Capitalism is associated with a remarkable increase in standards of living.

A major source of prosperity, according to Adam Smith, is **division of labor / specialization.**

... and the expansion of **markets.**



The Division of Labor

Activity: Division of Labor in Action

In groups, answer the following questions:

1. What was the most recent **product** you've purchased?
2. How **many** different **people** and **kinds of labor** went into its production?

Activity: Division of Labor in Action



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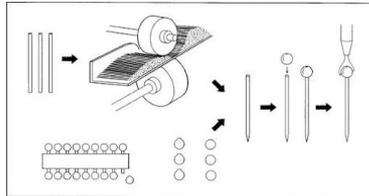
Adam Smith's Pin Factory



Smith's Pin Factory

To take an example, therefore, from a very trifling manufacture; but one in which the division of labour has been very often taken notice of, **the trade of the pin-maker**; a workman not educated to this business (which the division of labour has rendered a distinct trade), nor acquainted with the use of the machinery employed in it (to the invention of which the same division of labour has probably given occasion), could scarce, perhaps, with his utmost industry, **make one pin in a day, and certainly could not make twenty.**

One worker could probably make 1 pin in a day (certainly not 20).

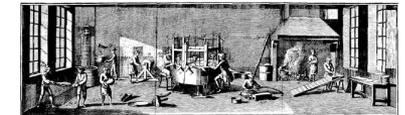


Smith's Pin Factory

But in **the way in which this business is now carried on**, not only the whole work is a peculiar trade, but it is **divided into a number of branches**, of which the greater part are likewise peculiar trades.

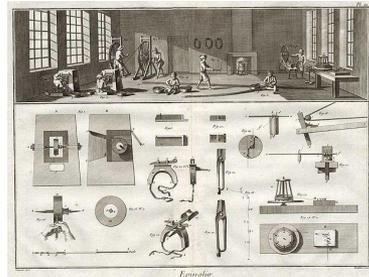
One man draws out the wire, another straightens it, a third cuts it, a fourth points it, a fifth grinds it at the top for receiving the head; to make the head requires two or three distinct operations; to put it on, is a peculiar business, to whiten the pins is another; ...

... it is even a trade by itself to put them into the paper; and the important business of **making a pin is**, in this manner, **divided into about eighteen distinct operations**, which, in some manufactories, are **all performed by distinct hands**, though in others the same man will sometimes perform two or three of them.



Smith's Pin Factory

I have seen a small manufactory of this kind where **ten men** only were employed, and where some of them consequently performed two or three distinct operations. But though they were very poor, and therefore but indifferently accommodated with the necessary machinery, **they could**, when they exerted themselves, **make among them about twelve pounds of pins in a day.**



Smith's Pin Factory

There are **in a pound upwards of four thousand pins** of a middling size. Those ten persons, therefore, could make among them upwards of **forty-eight thousand pins in a day.**

Each person, therefore, making a tenth part of forty-eight thousand pins, **might be considered as making four thousand eight hundred pins in a day.**

One worker might be considered as making **4,800 pins** in a day.



Smith's Pin Factory

But if they had all wrought separately and independently, and without any of them having been educated to this peculiar business, they certainly **could not each of them have made twenty, perhaps not one pin in a day**; that is, certainly, not the two hundred and fortieth, perhaps not the four thousand eight hundredth part of what they are at present capable of performing, in consequence of a proper **division** and **combination** of their **different operations**.

One worker might be considered as making **4,800 pins** in a day.

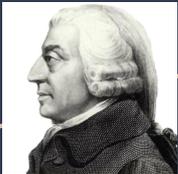


How does the division of labor work?

The Division of Labor

We become better at producing things when we each focus on a limited range of activities.

Why?



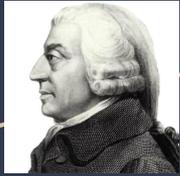
The Division of Labor

We become better at producing things when we each focus on a limited range of activities.

- **Learning By Doing:**
We acquire skills as we do things.



The Division of Labor



We become better at producing things when we each focus on a limited range of activities.

- **Learning By Doing:**
We acquire skills as we do things.
- **Saves Time:**
Avoid the time wasted in switching from one task to the next.

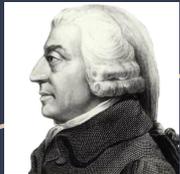
The Division of Labor



We become better at producing things when we each focus on a limited range of activities.

- **Learning By Doing:**
We acquire skills as we do things.
- **Saves Time:**
Avoid the time wasted in switching from one task to the next.
- **Innovation:**
Focused workers will invent better ways to do the task

The Division of Labor



We become better at producing things when we each focus on a limited range of activities.

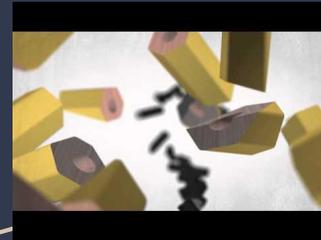
Why?

- **Learning By Doing**
- **Saves Time**
- **Innovation**

What else?



The Division of Labor



We become better at producing things when we each focus on a limited range of activities.

The Division of Labor (plus expanding markets) allows significant growth in productivity.



Capitalism

Capitalism is an economic system characterized by the following combination of institutions:

1. Private property
2. Markets
3. Firms



Markets

You can not specialize unless you have a way to acquire the other goods that you need.

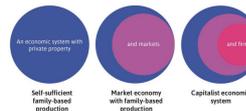
Expanding markets allows for greater specialization; specialization results in more opportunities for trade.



Capitalism

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Firms

In a firm, owners/managers direct the actions of their employees.

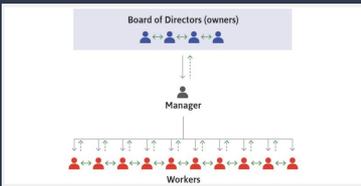
Hierarchically-structured organizations with centralized decision-making authority.





In a firm, owners/managers direct the actions of their employees.

Firms can produce goods more efficiently through specialization of the workforce.



The Productive Benefits of the Division of Labor

By specializing on a sub-task, a worker can contribute more than were they to try to manufacture the entire product themselves.

- Requires **less training** per worker.
- No time is wasted **switching** between tasks.
- Increasingly **skilled** in area that fits one's ability.
- Encourages **automation**.



The Division of Labor



Increases the efficiency of labor



Helps to expand the market



Leads to further specialization



Incentivizes international trade/specialization

Worries about Alienation?

Both Smith and Marx worried about the **psychological** and **social** effects of increased specialization.



Questions?

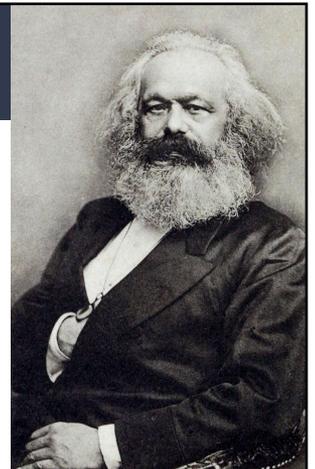
Marx's Alienation Critique

Discussion Question:
What's the worst job
you've ever had? (And
what made it so bad?)

Marx's Alienation Critique

The worker becomes all the poorer the more wealth he produces, the more his production increases in power and size. The worker becomes an ever cheaper commodity the more commodities he creates. The *devaluation* of the world of men is in direct proportion to the *increasing value* of the world of things. Labor produces not only commodities; it produces itself and the worker as a *commodity* – and this at the same rate at which it produces commodities in general.

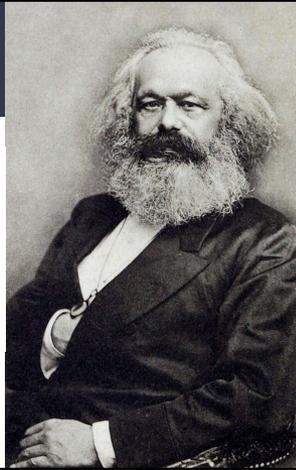
Karl Marx, *Estranged Labor*, XXII (1844)



Marx's Alienation Critique

All these consequences are implied in the statement that the worker is related to the *product of labor* as to an *alien* object. For on this premise it is clear that the more the worker spends himself, the more powerful becomes the alien world of objects which he creates over and against himself, the poorer he himself – his inner world – becomes, the less belongs to him as his own. It is the same in religion.

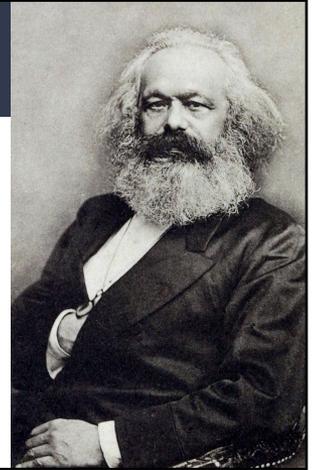
Karl Marx, *Estranged Labor*, XXII (1844)



Marx's Alienation Critique

Four Kinds of Alienation:

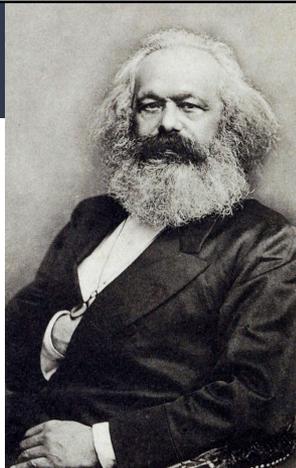
1. Alienation from the **product**.
2. Alienation from the **productive activity**.
3. Alienation from **each other**.
4. Alienation from our **creative nature as human beings**.



Marx's Alienation Critique

Four Kinds of Alienation:

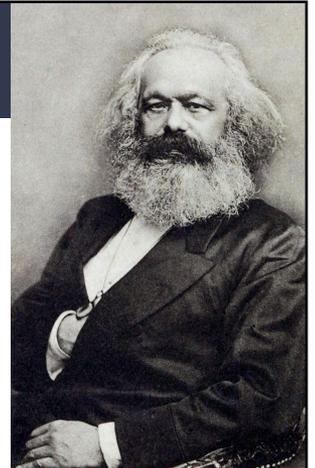
1. Alienation from the **product**.
 - In specialized economies, the worker plays a role in a larger production process over which she has no ownership.
 - The value that you create (the product) does not belong to you.



Marx's Alienation Critique

Four Kinds of Alienation:

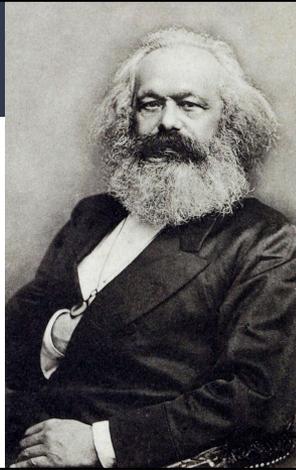
1. Alienation from the **product**.
2. Alienation from the **productive activity**.
 - You sees work as a means to a wage that allows you to subsist.
 - At work, you are inherently unfree.
 - Work becomes something to avoid.



Marx's Alienation Critique

Four Kinds of Alienation:

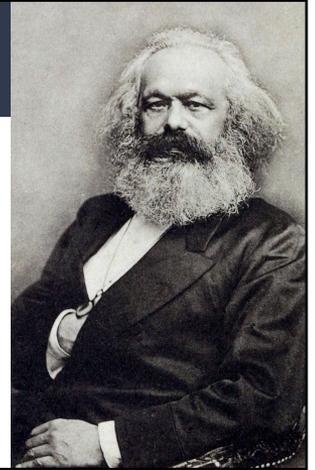
1. Alienation from the **product**.
2. Alienation from the **productive activity**.
3. Alienation from **each other**.
 - The work of others is invisible.
 - Competition with other workers.



Marx's Alienation Critique

Four Kinds of Alienation:

1. Alienation from the **product**.
2. Alienation from the **productive activity**.
3. Alienation from **each other**.
4. Alienation from our **creative nature as human beings**.
 - Does not engage creativity at work.

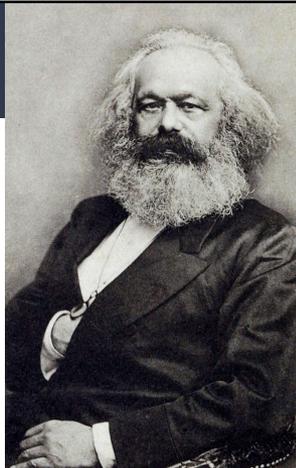


Marx's Alienation Critique

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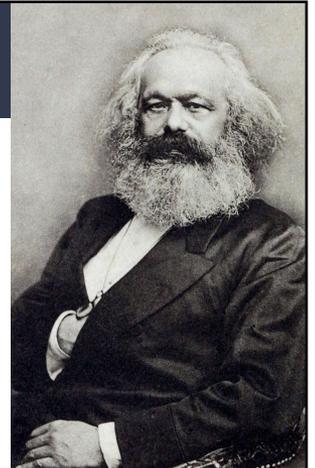
Workers are only one step removed from work that would be done by a machine.

The worker is a replaceable **cog in a gigantic machine**.



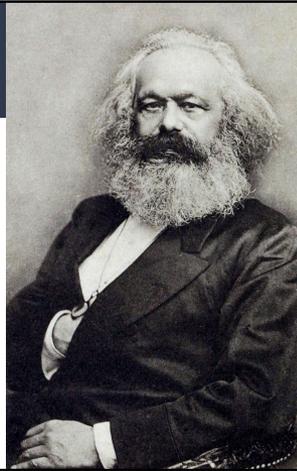
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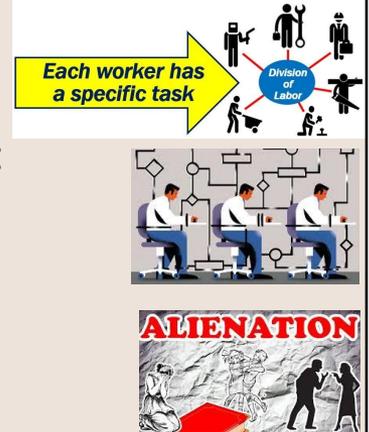


Marx's Alienation Critique

Four Kinds of Alienation:



Discussion Question:
Does specialization
necessarily lead to
alienation?



Smith on the Effects of Specialization on the Worker

Review: Marx's Worry

First, the fact that labor is *external* to the worker, i.e., it does not belong to his intrinsic nature; that in his work, therefore, he does not affirm himself but denies himself, does not feel content but unhappy, does not develop freely his physical and mental energy but mortifies his body and ruins his mind. The worker therefore only feels himself outside his work, and in his work feels outside himself. He feels at home when he is not working, and when he is working he does not feel at home. His labor is therefore not voluntary, but coerced; it is *forced labor*. It is therefore not the satisfaction of a need; it is merely a *means* to satisfy needs external to it. Its alien character emerges clearly in the fact that as soon as no physical or other compulsion exists, labor is shunned like the plague. External labor, labor in which man alienates

Adam Smith: What Will Become of the Workers?

In the progress of the division of labour, the employment of the far greater part of those who live by labour, that is, of the great body of the people, comes to be confined to a few very simple operations, frequently to one or two.



Adam Smith: What Will Become of the Workers?

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The man whose whole life is spent in performing a few simple operations, of which the effects are perhaps always the same, or very nearly the same, has no occasion to exert his understanding or to exercise his invention in finding out expedients for removing difficulties which never occur. He naturally loses, therefore, the habit of such exertion, and generally becomes as stupid and ignorant as it is possible for a human creature to become.



Adam Smith: What Will Become of the Workers?

The torpor of his mind renders him not only incapable of relishing or bearing a part in any rational conversation, but of conceiving any generous, noble, or tender sentiment, and consequently of forming any just judgment concerning many even of the ordinary duties of private life. Of the great and extensive interests of his country he is altogether incapable of judging, and unless very particular pains have been taken to render him otherwise, he is equally incapable of defending his country in war. The uniformity of his stationary life naturally corrupts the courage of his mind, and makes him regard with abhorrence the irregular, uncertain, and adventurous life of a soldier. It corrupts even the activity of his body, and renders him incapable of exerting his strength with vigour and perseverance in any other employment than that to which he has been bred. His dexterity at his own particular trade seems, in this manner, to be acquired at the expence of his intellectual, social, and martial virtues. But in every improved and civilized society this is the state into which the labouring poor, that is, the great body of the people, must necessarily fall, unless government takes some pains to prevent it.

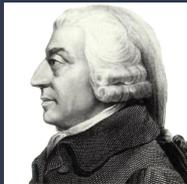
Adam Smith: What Will Become of the Workers?

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**What is Smith's worry? Do you agree?
Why is this a worry?**



What Can Be Done to Prevent the Corruption of the Worker's Mind?



Adam Smith: Public Education

Karl Marx: Abolition of private property

What Can Be Done to Prevent the Corruption of the Worker's Mind?



Adam Smith: Public Education

Karl Marx: Abolition of private property

You: Other ideas?

Discussion Question:
What Do We Want From Work? (If you were independently wealthy, what would you do with your time?)



The Future of Work: Automation

What If Most Work Disappears?

What if we only worked 2-3 days a week?

What if we didn't work at all?



Questions?