Prof. Bryan Caplan
bcaplan@gmu.edu
http://www.bcaplan.com
Labor Economics

Lectures 1-2: Labor Supply and Labor Demand

I. Intro to Labor Economics
   A. Labor economics is interesting for two main reasons.
      1. The enormous total value of labor - something like 70% of national income comes from sale of labor.
      2. The strong emotional commitments people have to their beliefs about how labor markets work.
   B. Upshot: Emotional preconceptions strongly color the way we see the most important market in the world!
   C. Economics, as always, begins by putting these preconceptions aside, and trying to think about matters analytically.
   D. First pass: labor economics is simple. It's a market like any other, and can be analyzed with the same supply-and-demand tools.
   E. But: The implications of the basic supply-and-demand model are so strong that it is useful to systematically reconsider our pre-scientific views.
   F. Also, there are a number of ways labor markets actually do work in ways more complicated than S&D alone can explain.

II. Individual Labor Markets, I: Basics of Labor Supply
   A. Consider the market for barbering services, where barbers are self-employed.
   B. On the x-axis, we have the number of hours worked or "sold"; on the y-axis, we have the price of an hour of labor, generally known as the "wage."
   C. How does the supply of barbering services relate to the market wage?
      1. Number of people in the occupation.
      2. Number of hours people in the occupation work.
   D. It is clear that the number of people in the barbering occupation will increase as the market wage rises, especially over a longer time horizon.
   E. The second effect is more complicated. Economists call this the labor/leisure trade-off, with "leisure" being the amount of your time you decide NOT to sell on the market. (Note that labor might be fun and leisure might be unpleasant on this definition!)
   E. Since you have 168 hours in a week, when you pick your hours of labor L, you simultaneously pick your hours of leisure (168-L).
      1. While employers rarely let people "pick their own hours," people can choose their occupations and employers to try to match their desired labor/leisure mix.

II. Individual Labor Markets, II: More on Labor Supply

A. What determines the number of hours a barber wants to sell? If we mechanically apply the law of supply to labor, we discover that the higher the "price" of labor, the more labor people want to sell. *This is known as the* ***substitution effect****.*

B. But there is a major complication: Normally, sellers of a good consume little of their own product. Orange growers, for example, spend less than 1% of their income on oranges. However, sellers of labor consume an ENORMOUS amount of their own product; even the most extreme workaholic consumes 50% of his own hours in leisure.

C. Why is this important? An increase in the price of what you sell makes you richer, enabling you to afford more of everything. If you already consume a lot of what you sell, then as the price of your product rises, your tendency to buy more of everything (including your own product) as you get richer may overpower your tendency to sell more of your product as its price rises. *This is known as the* ***income effect.***

D. Somewhat shocking implication: For products that are a large percentage of their budget - such as their own time - suppliers **might** actually sell LESS as the price rises, not more as economists usually assume. **Individual** supply curve might be "backwards-bending."

E. Implausible? Suppose your real wage was $10 an hour. How many hours a week would you work? What about $5? $1? $.10? Almost everyone's labor supply curve will "bend backward" at some point.

F. Still, for one occupation, the effect of a higher wage on the number of people in the occupation will almost surely ensure that the labor supply curve has its usual upward slope.

III. Individual Labor Markets, III: Basics of Labor Demand

A. Continuing with the barbering example, what determines labor demand?

B. Simple: The higher the price of barbering services, the less people will buy.

C. So how does the market for barbering services work? It looks like any other commodity market, with the wage and quantity of hours fluctuating in response to supply and demand.

D. Only unusual thing to note: When demand goes up, some barbers may actually cut back their hours. Total hours sold will still go up, though, because more people will decide to become barbers.

E. Most workers are not self-employed, however. Rather, consumers buy final products from firms, and it is the firms, rather than consumers, who demand labor. For example, consumers buy oranges, and orange-growing firms hire orange-pickers to pick the oranges. How does labor demand work then?

F. Before we can analyze labor demand in this familiar sort of market, we must understand two concepts: marginal physical productivity and marginal value productivity.

G. Concept #1: How many additional oranges does one more worker-hour allow the firm to produce? This is called the *marginal* ***physical*** *product* of an hour of labor, or MPP.

H. Concept #2: What is the market price of an orange? Multiplying the price of an orange times the MPP gives us the dollar value one worker-hour adds, the *marginal* ***value*** *product*, or MVP.

I. Ex: If an additional worker produces 30 oranges in an hour, and the market price of an orange is 50 cents, then the worker's MPP=30 oranges and his MVP=$15.00.

V. Individual Labor Markets, IV: More on Labor Demand

A. Question: What determines an employer's willingness to pay for another hour of labor?

B. Put yourself in the shoes of an employer in the orange industry. You will keep buying more labor until it is no longer profitable. It is profitable to hire a worker so long as his marginal value product exceeds his wage: $MVP \geq w$. If the value a worker produces in an hour is greater than or equal to the hourly wage, he is profitable to employ!

1. Ex: If a worker's MVP=$15, then employers want to hire him if the market wage is $15 or less.

C. Imagine employers adding more and more workers to their workforce until it ceases to be profitable. They finally stop hiring more once the last worker's marginal productivity is exactly equal to his wage.

D. Amazing conclusion: labor demand is entirely determined by workers' **marginal productivity**. Using this concept we can trace out the whole labor demand curve.

E. If the product price goes up, labor demand rises. If product price falls, labor demand falls. Similarly, if workers' MPP rises (and product price stays the same), labor demand rises. If MPP falls (and product price stays the same), labor demand falls.

VI. Individual Labor Markets, V: Market Equilibrium

A. If wages are below the equilibrium level, there is a shortage of labor and wages get bid up; if wages are above the equilibrium level, there is a surplus and wages get bid down.

B. What about shifts?

C. In a single occupation, labor supply responds to changes in expected ways. Ex:

1. What happens to supply of orange-pickers if a new strain of poisonous fruit fly appears?

D. Shifts in labor demand are trickier, because you have to consider both the product market and the labor market.

E. One worker essentially has no effect on product price. So if *one* worker grows more productive, he gets paid proportionally more.
F. But if *all* workers in an industry get more productive, matters are more complex.
G. E.g. suppose all orange workers get faster. In the product market, this means that the supply of oranges increases, so the price falls. But in the labor market, does labor demand rise or fall?
H. It all depends on *demand elasticity* in the product market. If the demand curve is relatively flat (elastic), then when the quantity of oranges rises a lot, the price of oranges only falls a little. Thus, MVP rises and labor demand increases.
I. But if the demand curve is relatively steep (inelastic), then when the quantity of oranges rises a lot, the price of oranges drastically falls. Thus, MVP falls and labor demand falls!

VII. Compensating Differentials
A. Do people always choose the highest-paying occupation open to them? No. "Man does not live by bread alone."
B. Conversely, does everyone refuse to do the truly miserable jobs (like garbage man)? No.
C. Easy to analyze this using S&D: the funner the job, the more labor supply increases; the more horrible the job, the more labor supply decreases.
D. The result: Fun jobs pay less; yucky jobs pay more. Economists call this pattern "compensating differentials." (aka "equalizing differences") Wage differences **compensate** people for job-related joy and misery.
E. This only works holding everything else constant. 7-11 workers have low wages and high risk; professors have above-average wages and a lot of fun. But what are the *other* options of the people in these jobs?
F. This simple principle is amazingly general. It works for:
    1. Safety
    2. Job security
    3. On-the-job amenities (free or discounted meals)
    4. Non-wage income
    5. More!
G. This also means that if you happen to really like something that most people hate, you get more money and more fun!
    1. Ex: Economists have much better job prospects than mathematicians, even though the latter are smarter and train for more years.

VIII. What (Else) Do Employers Do?
A. A long tradition of thinkers see employers as parasites who "exploit" their workers.
B. Economists, in contrast, regard employers as "middle men" between workers and consumers.

C. Middle men in the wheat market buy wheat from farmers, package it, and then sell it to consumers. Calling is "exploitation" is folly: *middle men save farmers and consumers from the inconvenience of doing this themselves*.

D. But employers don't just buy and re-sell labor. They do much more:
   1. Labor themselves
   2. Implicit lending
   3. Implicit insurance

IX. Aggregate Labor Markets, I: Labor Supply

A. If you add up everyone's labor supply curves, and abstract from differences between workers, you can draw the Aggregate Labor Supply curve. This curve shows the total number of hours people will choose to work at given wages.

B. For a single labor market, occupational choice basically guarantees that labor supply slopes upwards. But for the labor market as a whole, that doesn't really work.

C. Exceptions probably aren't enough to reverse this conclusion:
   1. Non-workers entering the labor force
   2. Immigrants

D. Depending on the relative strength of the substitution and income effects, then, the Aggregate Labor Supply curve could be positively or negatively sloped.

E. Empirically, males in the past did sell far more hours of their time than they do today. It definitely looks like the income effect was greater than the substitution effect in their case: as real wages increased, men have worked less.

F. Women sold far fewer than they do today, but this is a clear case where fun and "leisure" are different! Big effect for women: development of machines to do household tasks leaves them with surplus time, which more and more have chosen to sell.

G. For most purposes, it is more or less reasonable to assume that the Aggregate Labor Supply is vertical.
   1. Typical hours of work have stopped falling for the past couple decades.
   2. Intuitively, how many adult males want less than a 40-hour/week job?

H. Throughout this course, then, the Aggregate Labor Supply curve will normally be drawn as vertical.

X. Aggregate Labor Markets, II: Labor Demand

A. Aggregate Labor Demand just shows the quantity of labor-hours people want to buy at a given real wage. It is just the sum of all employers' labor demand curves.

B. This takes us near complicated macro issues that are best avoided. Easy way out: Make the plausible assumption that *the central bank adjusts the money supply to keep the price level constant*.

C. Since Aggregate Labor Demand depends solely on the MVP of a unit of labor, and MVP=P*MPP, Aggregate Labor Demand is directly proportional to MPP.

D. Thus, at the aggregate level, higher average productivity ALWAYS translates into **higher** demand for labor, and vice versa for lower average productivity. Productivity gains are sometimes bad for workers in specific occupations, but are always good for workers in general.

XI. Aggregate Labor Markets, III: Market Equilibrium

A. Aggregate Labor Supply is determined by workers' labor/leisure trade-offs. Aggregate Labor Demand is determined by workers' productivity. So what determines average wages and employment?

B. If the wage is below the intersection of ALS and ALD, employers want to hire more workers than are willing to work. They accordingly bid up the wage.

C. If the wage is above the intersection of ALS and ALD, more workers are willing to work than employers want. Workers bid down the real wage.

D. At the intersection of ALS and ALD, the quantity of labor hours employers desire to buy and the quantity of labor hours employees desire to sell are equal.

E. What happens if...

1. Workers get stronger?
2. Someone invents a new productive technique?
3. Someone invents the dishwasher?
4. A new law bans the use of some machinery?
5. Workers slack off more on the job?

XII. Fundamental Labor Fallacies

A. Fallacy #1: Make-work. Many variants: "Reduce the work-week to create more jobs," "NAFTA costs us jobs," "New machines destroyed jobs," "Immigrants are taking our jobs."

B. The essence of the fallacy: Focusing on effort instead of result. Bastiat calls this "Sisyphism," after the legendary Sisyphus. If people figure out a way to accomplish the same result with less labor, this means that there is **more** labor to accomplish some other goal.

1. Partly, this is just a special case of the broken window fallacy, of measuring wealth by inputs rather than output. Saving one person's job may make *that* person better off, but it also means wasting valuable labor.
2. Additional confusion: a decline in labor demand only leads to involuntary unemployment if real wages cannot fall.
3. Unemployment is frequently just a symptom of *shifts* in labor demand, not a lower level. Unemployment and job search go together, and job search is vital for prosperity.

C. Fallacy #2: Subsistence wages. Many variants: "Employers pay whatever they want," "The workers are exploited," "Without unions and regulation, workers would still live in poverty."

D. The essence of the fallacy: Employers have to compete for workers; employers care about their own profits, not the profits of employers in general. If the real wage is too low, then each employer can get richer by raising wages a little bit and attracting more workers.
   1. Lenin: "The capitalists will sell you the rope you are going to use to hang them."

E. Why then were wages once low in the West, and still low in the Third World? Two words: **marginal productivity.** When workers' productivity is low, employers won't pay a lot to hire them.
   1. Immigration restrictions are also a big part of the explanation for why wages can be so much lower in some countries than in Western countries. Otherwise, many would move to get higher wages.

F. How can real wages rise for everyone? Worker productivity has to increase. Efforts to "create jobs" by restricting machinery, or union activity such as slow-downs are directly counter-productive.

Shifts in Labor Demand

Product Demand Elasticity	**MPP**	**P**	**MVP=MPP*P**	**Labor Demand**
Workers' physical productivity rises.				
relatively elastic	↑	↓ a little	↑	↑
relatively inelastic	↑	↓ a lot	↓	↓
Workers' physical productivity falls.				
relatively elastic	↓	↑ a little	↓	↓
relatively inelastic	↓	↑ a lot	↑	↑
Product demand rises.				
any	no change	↑	↑	↑
Product demand falls.				
any	no change	↓	↓	↓

Prof. Bryan Caplan
bcaplan@gmu.edu
http://www.bcaplan.com
Labor Economics

Lectures 3-4: Labor Market Regulation and Labor Unions

I. Unemployment As a Labor Surplus
   A. Intuitively, we often think of "unemployment" as a situation where people who are willing and able to work are somehow denied the chance to do so.
   B. At the equilibrium wage, there are neither labor shortages nor surpluses; unemployment is voluntary (not in the sense that it is cause for celebration, but in the sense that people do not want to work more **at the market wage** for jobs they are **able** to do).
      1. Analogy: Voluntary datelessness.
   C. So how is involuntary unemployment possible? *Only if the prevailing wage is too high!*
   D. This is no different from any other surplus good. "Surplus" means "surplus at the current price."
   E. More generally, there are only three possibilities:
      1. Market wage=equilibrium wage; the labor market clears.
      2. Market wage<equilibrium wage; there is a labor shortage.
      3. Market wage>equilibrium wage; there is a labor surplus.
   F. Note: there is no case where workers are *both* "under worked" and "underpaid." If they are under worked, they are overpaid; if they are underpaid, they are overworked.
   G. This simple application of S&D runs contrary to almost all popular beliefs about labor. But there can be little doubt that it is correct.
   H. The general solution to all involuntary unemployment boils down to: reduce the market wage until the surplus disappears.
   I. The "buy-back-the-product" fallacy. Does reducing wages "reduce demand"? Of course not. Lower wages may mean less income for employ*ees*, but also mean more income for employ*ers*.

II. Unemployment on the Free Market: Wage Fairness and Unionization
   A. Economists standardly assume that unregulated markets clear. Could this assumption be wrong in labor markets?
   B. Case 1: Wage fairness. There is good evidence that workers regard wage cuts as "unfair."
      1. Review: real versus nominal wages.
   C. Perceived unfairness hurts morale, which typically leads to lower productivity. So employers are reluctant to cut wages when labor demand decreases or labor supply increases.
   D. The result: if equilibrium wage is below prevailing wage, jobs will be "rationed." Qualified, willing labor remains unsold *because workers are overpaid.*

E. Interesting: employees seem to resist *nominal* wage cuts much more fiercely than *real* wage cuts. Nominal wage cuts hardly ever happen; real wage cuts are far more common.
F. How serious would the problem of surplus labor be under laissez-faire? It would definitely exist, but the historical record suggests that it would be fairly mild.
G. Case 2: Unionization. Unions are basically labor cartels; their goal is to push wages up by restricting competition between workers. Unions are "price-fixers."
H. The natural side effect is to create labor surpluses. Ideally (from the union's point of view), the surplus workers won't belong to the union anyway, so none of the members suffer. In practice, though, the unemployment often spills over onto union members.
I. In economic terms, what are "scabs"? They are workers who undersell the cartel. If enough scabs exist, unions have little success.
J. Assuming the government prevents violence and threats of violence, it is difficult - though not impossible - for unions to keep wages up. They succeed best when:
    1. Labor demand and labor supply are highly inelastic. Small, highly skilled craftsmen are a good example.
    2. The social stigma of "being a scab" is very high.
K. Under laissez-faire, involuntary unemployment created by unions would again exist, but not much of it. As long as employers can legally hire non-union workers, and non-union workers feel physically safe to accept such offers, market forces sharply check the power of unions.

III. Unemployment on the Free Market: Corrective Government Policy
A. Is there anything government could do about the preceding problems? In principle, yes.
B. For real wage rigidity, intervention could help by pushing wages *down*. If workers blame the government instead of the employer, presumably they don't blame the employer for being "unfair."
C. For nominal rigidity, the government has an easier solution: print more money to raise the price level until the nominal wage clears the market. If workers are clueless, they may never "see what hit them."
D. Similarly, unions might be banned, much as other cartels are illegal under the antitrust laws.

IV. Government Policy in the Real World, I: The Minimum Wage
A. In the real world, government policies bear little resemblance to the kinds of "corrections" economic theory points toward.
B. It is almost impossible to find governments that try to force wages *down*. Instead, governments around the world deliberately push wages *up* and prevent market adjustment.
C. Classic example: the minimum wage.

D. Suppose the equilibrium wage is $10/hr. If the government imposes a minimum wage of $15/hr., there will be unemployment. Employers will want to hire fewer people than want to work at the market wage.

E. Simple question for proponents: Why not $1,000,000/hour?

F. Interesting: Unions of skilled workers often support the minimum wage strongly. Altruism for unskilled workers, or masked self-interest?

G. In the U.S., the minimum wage itself is fairly low (less than 5% of the U.S. workforce earns it). In other countries like France, the minimum wage affects a large percentage of the workforce.

H. Even though most governments deliberately try to push wages up, at the same time many also try to erode real wages by inflating. (Whether they think of it in these terms is another matter).

I. Yet reducing unemployment with inflation often fails. Employed workers catch on and negotiate cost-of-living adjustments, leading to spiraling inflation.

J. In some cases, one arm of the government actively tries to undo the harm done by the other arm. One branch raises the (nominal) minimum wage, the other tries to reduce the (real) minimum wage via inflation!

   1. What does the real minimum wage look like when inflation is always positive?

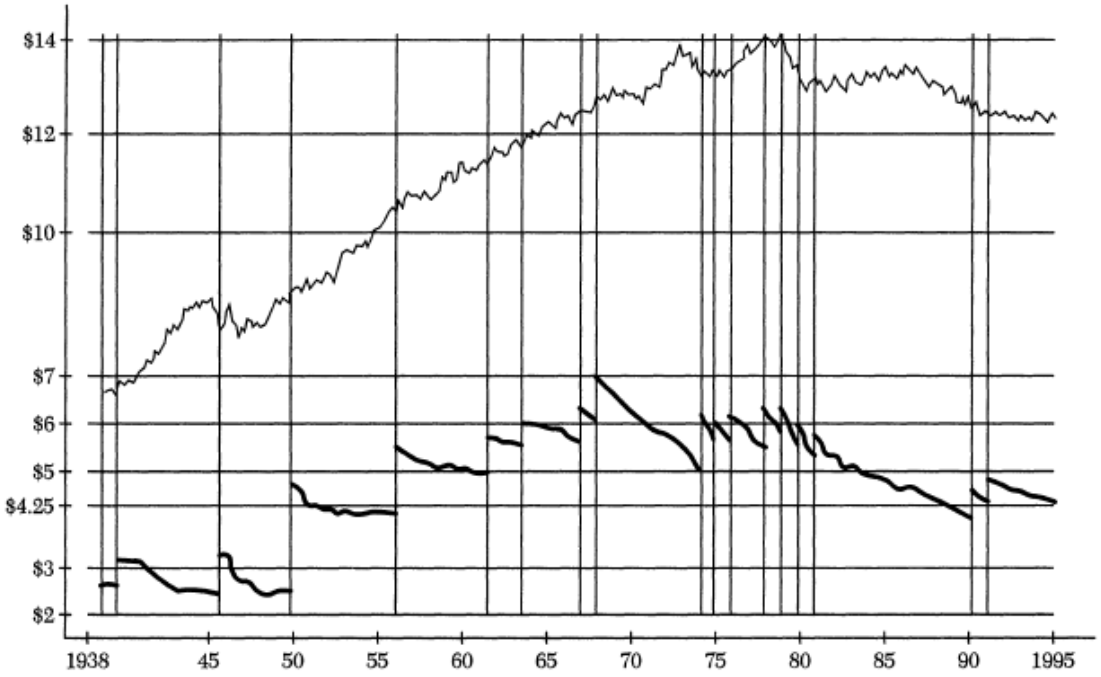


Figure 2. U.S. Real Minimum Wages and Average Wages of Manufacturing Production Workers, $1995

V. Government Policy in the Real World, II: Pro-Union Laws
   A. It is much more common for governments to encourage unionization than it is to make it illegal. Pro-union efforts by governments take a variety of forms.
   B. One of the most common is to "look the other way" in the face of union violence against strike-breakers, employer property, etc. Laws limiting union liability serve the same function.
   C. Some more explicit regulations:
      1. Require employers to "recognize" and "bargain in good faith" with any union that gains the support of a majority of workers in a firm.
      2. Making it illegal to fire workers for striking or union organizing.
      3. Banning "yellow dog" contracts, where employees are non-union as a condition of employment.
   D. When governments strictly enforce pro-union regulations, levels of unionization - and unemployment - can reach high levels.
   E. Other countries with the same laws on the books may escape most of the bad effects by weak enforcement.

VI. Additional Labor Market Regulations
   A. There are numerous other laws that work much like the minimum wage. Even if their short-run effect is to increase labor demand, the long-run effect is exactly the opposite.
   B. What happens if the government adopts the following measures, while forbidding wages to fall? (Alternately, if strong unions prevent wages from falling).
   C. Case 1: Mandated benefits. What if the government mandates new benefits (safety, health, family leave, etc.) and forbids wages to fall?
   D. Case 2: Regulations against lay-offs and firing. How will employers respond if they know that they must continue employing workers they don't need? Are bad at their job?
   E. Case 3: Plant-closing laws. What if the government penalizes firms for (or forbids) closing plants?
   F. Case 4: Employment lawsuits. What if employees can sue their employers for discrimination, harassment, unfair termination, etc.?
   G. How do these results change if wages are flexible?
   H. Related regulation: Unemployment insurance, welfare, and so on reduce the supply of labor. If they are generous enough, they can "convert" involuntary unemployment into voluntary unemployment. This in turn reduces downward pressure on wages.
      1. How can this be graphed?

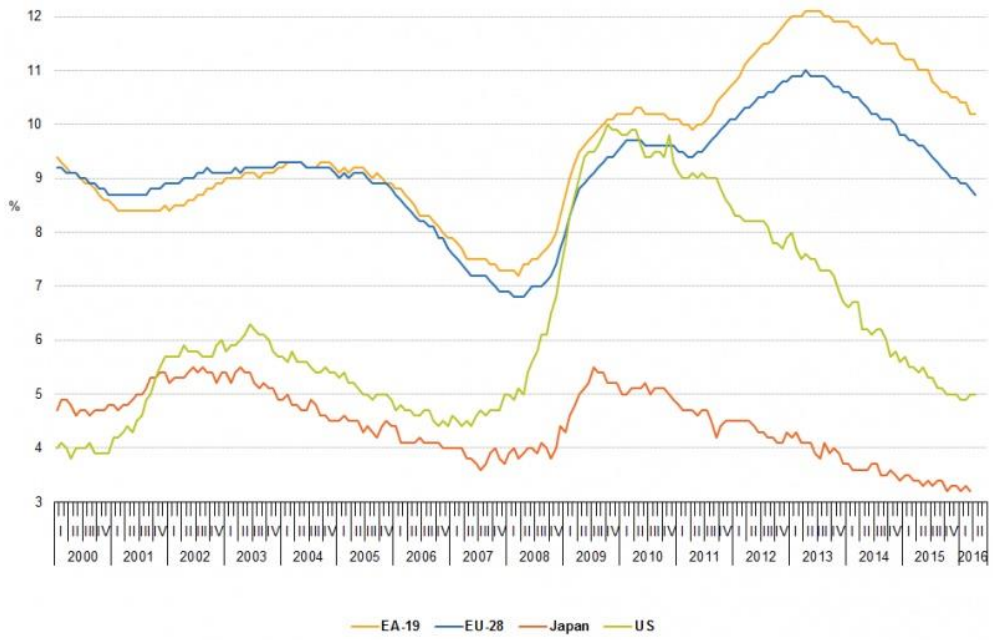
VII. Application: European Unemployment
   A. Labor market regulations in Europe are typically very strict. Over the last twenty years, the average U.S. unemployment rate has been roughly 6%, versus 9% for Europe.

B. Most economists blame European countries' stricter labor market regulations.
C. What have European labor policies been like?
    1. High legal minimum wages. (E.g. 34% of median in U.S. vs. 60% in France).
    2. High unemployment/welfare benefits with long durations.
    3. Firing/layoff regulations.
    4. Mandatory benefits (vacation, sick leave, maternity leave, etc.) (How does the interaction between mandatory benefits and nominal and real rigidity work?)
    5. High unionization rates with strong legal support for unions. (Note: In some countries like France, non-union workers still have their wages determined by union negotiations).
D. Apologists for European labor marker were quick to note that in March 2009, U.S. unemployment surpassed Europe's. But:
    1. This was only a blip. European unemployment is once again more than 2 percentage-points worse than ours.
    2. You should *expect* more flexible labor markets to respond more rapidly to negative shocks. The key question is long-run performance.

FIGURE 2
Unemployment Rate in the United States and EU-15, 1993-2009

Source: Eurostat (2009).

E. What happened since? What you'd expect. U.S. has recovered, EU has not. And European exceptions have relatively free labor markets.



VIII. Occupational Licensing

A. Most econ textbooks discuss labor unions at length, but at least in the United States, occupational licensing is much more important.
   1. Almost 30% of American workers now need a license to legally do their jobs. Only about 12% belong to unions – and more than half of them are government employees.

B. Licensing clearly raises the wages of licensed workers; they make about 15% more than you'd otherwise expect. (Roughly as big a bonus as unionized workers get).

C. People often claim that occupational licensing raises quality and protects the public, but:
   1. For many licensed occupations – barber, interior decorator, athletic trainer – this argument fails the laugh test.
   2. The average study of the effect of licensing on quality finds a moderately *negative* effect on quality. (Not so surprising: Licensing inhibits innovation).
   3. Higher quality is often not worth the extra price. Markets (or government *certification*!) let consumers decide for themselves. Licensing makes everyone pay full price.

D. Unregulated markets have simple mechanisms to ensure quality:
   1. Reputation
   2. Guarantees
   3. Lawsuits (much less important, but a useful last resort)

E. We already heavily rely on these mechanisms – see eBay and Amazon Marketplace. Why can't we rely on them in labor markets?

F. Medical licensing: Is this really such a hard case after all?
   1. Medical licensing clearly raises medical prices.

2. *Many* medical tasks now performed by doctors could easily be performed by less-trained (and cheaper) workers. The same goes for other medical professionals.
3. HMOs and insurance companies make reputation work much effective than you'd initially think.

IX. Why the Standard History of Labor Is Wrong

A. Most history books tell a story something like this:
1. In the days before the minimum wage, unions, etc., life was terrible for workers because employers paid them whatever they felt like paying them.
2. But then government became more progressive, and changed the laws.
3. Life is now better for workers because employers' greed has been tamed.

B. This makes no sense at all. Why?

C. Employers compete with other employers; they care about their own profits, not the profits of employers in general. Workers have always earned their marginal productivity.

D. Why then were workers paid less in the past? Their marginal productivity was lower! As technology progressed, the marginal productivity of workers increased, and labor demand accordingly went up.

E. Suppose government had imposed strict regulations when productivity was low? The result would have been higher wages for the lucky, but permanent unemployment (and probably starvation) for the rest.

F. The problem of workers in the Third World isn't lack of regulation, but low productivity. Of course, low productivity can be a product of a crummy political system, but you can't solve that problem with labor market regulation.

Prof. Bryan Caplan
bcaplan@gmu.edu
http://www.bcaplan.com
Labor Economics

Lectures 5-6: Immigration and Immigration Restrictions

I. Immigration and the Labor Market
   A. What happens to the Aggregate Labor Market when people from another country come here to work?
   B. Let's start with the admittedly unrealistic assumption that all workers are identical. Then immigration:
      1. Increases Aggregate Labor Supply.
      2. Has no effect on Aggregate Labor Demand. (There's no reason why immigration would affect MPP, and the central bank continues to target P, so MVP=MPP*P stays the same).
   C. Conclusion: Immigration reduces native wages.
   D. Does this mean that immigration is bad for humanity? Absolutely not. Immigrants clearly gain from immigration; otherwise they wouldn't come.
      1. If immigrants have a low standard of living here, imagine how awful it was in their country of origin.
   E. Does this mean that immigration is bad for Americans? Not for American *employers* of labor – including everyone who owns stock or a retirement stock, or who hires a nanny, housekeeper, or elder care professional.
   F. Immigration also helps anyone who owns a home or land - more people means higher housing prices.
      1. Most estimates say that if immigrants raise population in an area by 1%, housing prices go up by roughly 1%.
      2. Note: What is the nationality of almost all the owners of U.S. real estate?

II. Immigration and Comparative Advantage
   A. In the real world, native workers and immigrant workers are *far* from identical.
      1. Most obvious difference: Current immigrants tend to be either low-skilled or high-skilled compared to Americans. Potential immigrants tend to be very low-skilled compared to Americans.
      2. Slightly less obvious difference: Holding overall skill constant, natives usually speak much better English.
   B. These facts imply that immigration can actually raise American wages. Why? Comparative advantage: People with different skills produce more *total* output if they specialize and trade.
   C. Simple example: Many highly educated American women stay home with their kids because it is so expensive to hire a nanny.

Many women in Mexico know how to take care of children, but have little education.

D. Suppose that in a day, American and Mexican women can produce:

	American Woman	Mexican Woman
Computer Programs Written	4	.1
Children Cared For	2	2

E. Both sides can increase production by immigration and specialization! Have ten Mexican women switch from writing computer programs to childcare (-1 program, +20 childcares), and one American woman switch from childcare to computer programs (+4 programs, -2 childcares). The world is richer by 3 programs and 18 childcares.

F. How can we show this in an Aggregate Labor Market diagram? Thanks to comparative advantage, trade effectively raises MPP. Suppose that post-immigration, computer programs and childcare have equal prices. Then immigration effectively changes the productivity table to:

	American Woman	Mexican Woman
Computer Programs Written	4	2 (by trading childcare for programs)
Children Cared For	4 (by trading programs for childcare)	2

G. Implication: immigration increases *both* ALS and ALD. Therefore:
   1. The effect on average native wages is now ambiguous.
   2. The effect on world living standards is clearly positive.

III. The Distributional Effects of Immigration on Native Wages

A. Since workers aren't identical, some natives can lose even if most gain, and some natives can gain even if most lose.

B. Natives tend to lose when they're *selling* the same skills that immigrants are selling. Natives tend to gain when they're *buying* the same skills that immigrants are selling.
   1. People often claim that economics professors favor immigration because we don't have to worry about foreign economists coming here to "take our jobs." True or false?

C. In recent decades, the United States has had two main kinds of immigration:
   1. Legal high-skilled immigration.
   2. Illegal low-skilled immigration.

D. Economists have estimated the effects of this immigration on native wages. Let's look at two sets of estimates:
   1. Borjas and Katz, for Mexican immigration from 1980-2000.
   2. Ottaviano and Peri, for 1990-2006.

E. Borjas and Katz break workers into four educational/skill categories. Key assumption: Natives and immigrants with the

same education level are identical. Estimates of the *total* effect of immigration on native wages:

Worker Type	**Short-Run**	**Long-Run**
High school dropouts	-8.4%	-4.8%
High school graduates	-2.2%	+1.2%
Some college	-2.7%	+0.7%
College graduates	-3.9%	-0.5%
All native workers	*-3.4%*	*0.0%*

F. Borjas is probably the most respected critic of immigration in the world. But his estimates are shockingly positive compared to what normal people think. Even dropouts only lose 4.8% total (not per year).

G. Ottaviano and Peri assume that native and foreign labor are different, even if they have the same level of education. Natives have a comparative advantage in language skills, foreigners have a comparative advantage in non-language skills. Estimates of the *total* effect of immigration on native wages:

Worker Type	**Short-Run**	**Long-Run**
High school dropouts	-0.7%	+0.3%
High school graduates	-0.6%	+0.4%
Some college	0.0%	+0.9%
College graduates	-0.5%	+0.5%
All native workers	*-0.4%*	*+0.6%*

H. Notice: On Ottaviano and Peri's more reasonable assumptions, native workers enjoy long-run gains from immigration. Even native drop-outs slightly gain.

1. The only workers who lose from immigration are earlier immigrants. They suffer quite a bit materially, but don't forget that immigrants are often eager to reunite their families.

IV. Immigration Restrictions and Their Effects

A. Wages are very low in many populous Third World nations. Tens of millions of people would be overjoyed to come to the U.S. and take what Americans see as "bad jobs."

B. Why don't they come? Because it is:

1. Virtually impossible for low-skilled workers to come here legally (unless they already have close family members in the U.S.).
2. Very expensive for low-skilled workers to come here illegally. Smugglers ("coyotes") charge rural Mexicans two *years* income (about $3000) to take them across the border. Fees for more distant countries are vastly higher.

C. Immigration restrictions probably have more effect on labor markets than *all other government policies combined*. They clearly "work" in the sense that they drastically reduce immigration.

D. What are the other effects of immigration restrictions?

E. Effect #1: Drastically reducing world output. Immigration laws prevent workers from moving to the most productive locations in the world to do whatever they do best. Rough estimates say that world output would DOUBLE under open borders.

F. Effect #2: Drastically increasing world poverty. Merely moving from a Third World country massively increases workers' income. People from the poorest countries typically gain 1000% or more. One immigrant can keep a large extended family alive back home.

G. Effect #3: Reducing average American income. Low-skilled Americans who don't own a home or other assets may gain from immigration restrictions, but only a small minority of Americans are in this category.

H. Effect #4: Shielding American eyes from the sight of severe poverty. Conditions in many populous Third World countries are awful, so we should expect immigrants to keep coming here even if their living standards seem very low to us. Open borders would drastically reduce global poverty, but make remaining poverty much more visible.

V. Arguments for Immigration Restrictions

A. All First World countries severely restrict immigration. Economically, however, these policies are a disaster. Why would anyone favor them?

B. Argument #1: Immigration restrictions prevent American poverty.

C. Response: The net effect of immigration on Americans' standard of living is probably positive. (See above).

D. Argument #2: Immigration restrictions protect American taxpayers.

E. Response: Immigrants don't just collect benefits; they also pay taxes. Estimates of the net fiscal effect of immigration vary, but no major study finds a large negative effect on American taxpayers.

F. Implausible? Remember:

1. A lot of government spending – like the military and interest on the national debt – is "non-rival." Immigration means we can average these expenses over a larger number of taxpayers.
2. Government spends far more on the old than the poor. Immigrants tend to be young, so even the low-skilled collect a lot less than you'd think.
3. Adult immigrants' own governments have already paid for most of their education, so our taxpayers don't have to.

G. Argument #3: Immigration restrictions protect American culture.

H. Response: Markets provide strong incentives to learn English. The vast majority of second-generation immigrants are fluent. And America's cultural centers have unusually high foreign-born populations.

I. Argument #4: Immigration restrictions protect American liberty.

J. Response: Immigrants are no more than modestly less pro-liberty than natives – and they have low voter turnout. Immigrants also probably reduce native support for the welfare state, because people don't like paying taxes to help out-groups.

VI. Alternatives to Immigration Restrictions
- A. Even if the preceding complaints are valid, there are certainly cheaper, more humane solutions than immigration restrictions.
- B. Immigration and American poverty: If immigrants are reducing the living standards of low-skilled Americans, there's no need to reduce immigration. We could simply charge immigrants an admission fee or extra taxes, then use the revenue to compensate low-skilled Americans.
- C. Immigration and American taxpayers: If immigrants aren't paying their way, we could restrict immigrants' eligibility for various government benefits.
- D. Immigration and American culture: If immigrants aren't learning our language and/or culture, we could make passing grades on language or "cultural literacy" tests a condition of entry.
- E. Immigration and American liberty: If immigrants are bad voters, we could restrict their right to vote.
- F. If any of these alternatives to immigration restrictions seem unfair, they're clearly *less* unfair than preventing people from coming at all.

VII. Why the Standard Story of Immigration Is Wrong
- A. The standard story of immigration: In earlier times, when America was underpopulated, free immigration was a good idea. Once the economy matured, however, immigration restrictions became necessary. Without these restrictions, our economy and our society would collapse.
- B. This story makes little sense.
- C. Most of the United States remains virtually empty, so why aren't we still "underpopulated"? Wages are much higher now than they were in the 19th-century, so economically speaking we're more underpopulated than ever.
- D. Immigration restrictions weren't imposed because the "economy matured." They were imposed because of racial and ethnic prejudice: first against the Chinese and Japanese, then against Southern and Eastern Europeans.
- E. At the time, most Americans favored immigration restrictions because they were convinced that these unpopular racial and ethnic groups were "inferior" and would remain so. But most Americans were wrong.
  1. Chinese, Japanese, and Southern and Eastern Europeans have been at least as successful as the rest of the population.
  2. Even if most Americans were right, there was no reason to restrict immigration. Comparative advantage implies

mutually beneficial trade even when one side is worse at everything.

F. Open borders would not lead to "economic collapse." In fact, there are strong reasons to expect open borders to lead to the most rapid economic growth in human history.

G. There's no good reason to think that open borders would lead to "social collapse" either.
   1. Immigration would probably improve our fiscal outlook by attracting large numbers of young taxpayers to help support our growing retired population.
   2. Immigrants would have a strong incentive to learn English, and make our culture more innovative.
   3. Even if immigrants wanted to vote, few would vote to "kill the goose that lays the golden eggs."

H. Open borders would however lead to massive economic and social *changes*.
   1. World poverty and inequality would plummet, but we'd have to actually see a lot of the poverty and inequality that remain.
   2. There would be a massive expansion of housing and industries. New cities would spring up almost overnight – like in China today.
   3. At least initially, immigrants would live in very crowded housing and work in jobs we consider awful.
   4. Low-skilled labor would be so cheap that many American natives would hire household servants, drivers, nannies, etc.

I. Something to think about: Getting rid of immigration restrictions is a lot like getting rid of Jim Crow laws.
   1. Like Jim Crow, immigration restrictions deprive vast numbers of people of their basic right to sell their labor to any willing buyer.
   2. Ending immigration restrictions, like ending Jim Crow, will lead to massive economic and social changes.
   3. The friends of Jim Crow predicted the collapse of civilization if these laws were repealed. Friends of immigration restrictions predict the same if we open our borders today.
   4. The doomsayers were wrong then, and they're wrong now. The end of Jim Crow ultimately led to a richer and better world. There's every reason to think that the end of immigration restrictions will have the same effect on a far larger scale.

Prof. Bryan Caplan
bcaplan@gmu.edu
http://www.bcaplan.com
Labor Economics

Lecture 7: Redistribution

I. The Leaky Bucket: The Deadweight Costs of Taxes and Redistribution
   A. Taxes and redistribution take wealth from some people and give it to other people. That's pretty obvious, and there's no need to study economics to appreciate it.
   B. What's not obvious: The **deadweight costs** of taxation and redistribution. In addition to transferring wealth, they also destroy some wealth in the process.
   C. The leaky bucket: in the process of transferring wealth, some "slips out," benefiting no one. (Ice cream in the desert analogy makes the same point).
   D. Landsburg on "Why Taxes Are Bad"
   E. How can wealth simply be destroyed? Many ways.
      1. The effort of preparing tax forms, along with accountants, tax lawyers, etc.
      2. Production foregone because of taxes
      3. Production foregone because of redistribution
      4. Diversion of effort into less productive - but less taxed - lines of work
      5. Producing things people value less (like medicine) instead of things they value more (like vacations).
   F. Basic idea: A tax that can't be avoided ("lump-sum taxes" or "head taxes") merely transfers income. A tax that can be avoided will have deadweight costs because people change behavior to do so.

II. Rationales for Redistribution
   A. Rationale #1: Redistribution as a return on investment. For the largest program, SS, people supposedly get money because they previously contributed to the program. They are just being paid a "return on their investment."
   B. Problems:
      1. If people really want to invest, they can do it on their own.
      2. Actual returns don't match contributions very well. The first recipients of SS got a windfall; present recipients get a below-market return.
   C. Rationale #2: Redistribution as insurance. Another story is that these are "insurance" programs. People may not actually benefit from them, but they are assured that if they get sick, lose their job, etc., they will be cared for.
   D. Problems:
      1. If people really want insurance, they can buy it on their own.

2. Premiums and benefits rarely adjust for risk like a real insurance policy. The rich, for example, are extremely unlikely to go on welfare, but pay more to support these programs than the poor.

E. Rationale #3: Egalitarian redistribution. A third account is that redistribution deliberately aims to make poor people better off by making rich people share with them.

F. Problems:
   1. Programs that benefit the elderly actually don't do this. Why? Because the rich live longer than the poor on average, so they wind up collecting more money from SS and Medicare.
   2. More importantly, if this were the real reason for redistribution, none of it would be spent on the *relatively* poor people in the U.S. It would go to *absolutely* poor people in other countries.

G. Rationale #4: Externalities. Redistribution reduces crime, begging, and so on.

H. Problems:
   1. Are the elasticities even close to high enough to make this a good idea?
   2. Will the elderly turn to crime?

III. Programs Big and Small: The Old Versus the Poor

A. Most redistribution focuses on the elderly: SS and Medicare amount to 35% of the budget. The American poor get about 13% of the budget.

B. Egalitarian arguments cut against old-age programs for demographic reasons: the wealthy on average out-live the poor by over a decade.

C. Moreover, if people wanted to make investments or buy insurance, they could do so on their own.

D. The real argument for old-age programs is mostly *paternalism*: "People aren't rational enough to save for their retirement, so we must force them for their own good." But:
   1. Why force foresighted people who *are* planning for their future to participate?
   2. Isn't lack of foresight in large part a product of paternalism itself? Spencer quote.

E. Egalitarian arguments also cut against real-world poverty programs, since they help relatively poor Americans, not absolutely poor foreigners.

F. Both kinds of programs have important incentive effects.
   1. Old-age programs distort retirement decisions.
   2. Poverty programs affect not only work incentives, but are also probably the key to high teen pregnancy.

G. Much of the money spent on the old and poor is for health care, which probably does little to benefit them considering the cost.
H. This is particularly clear for the old: Health care for the elderly is very expensive, but at best slightly lengthens what are probably the worst years of your life.
I. The same basic argument works for the poor. They value health care less than the rich because they have more pressing priorities. Imagine: If you were earning $10,000/year, how much would you want to spend on health care?

IV. Redistribution in Reverse: Immigration Restrictions
A. Actual redistribution looks more like "tribalism": it's not about helping the poor, but "taking care of your own" even if it means harming foreigners.
B. Probably the best example: many favor immigration restrictions because people are "coming here to collect welfare."
1. A simple compromise would be to give immigrants "second-class citizen" status: eligible to work but not collect welfare.
C. Some frankly complain that immigration should be stopped because it hurts wages for low-skilled Americans.
D. Either way, the idea is to help *relatively* poor Americans at the expense of *absolutely* poor foreigners.

V. Why the Standard View of the Welfare State Is Wrong
A. The "standard view" of the welfare state: there is a trade-off between compassion and efficiency. The most compassionate policies would fully take care of the poor, but these would have severe efficiency costs. Real-world policies try to strike a reasonable balance. Life was terrible back in the 19th century before the welfare state existed; only "mean," and "uncaring" people could prefer it to what we have now.
B. This is wrong on several levels.
C. First, most of the welfare state is about helping the old, not the poor.
D. Second, the help for the poor goes to *relatively* poor Americans who are already quite fortunate by global standards.
E. Third, the goal of "helping the (American) poor" is probably the main justification for immigration restrictions that greatly harm poor foreigners.
F. In the 19th century, people had to fend for themselves, but anyone was free to move to the U.S. and try their luck. Policy was far more "compassionate" then than it is now, all things considered.

Prof. Bryan Caplan
bcaplan@gmu.edu
http://www.bcaplan.com
Labor Economics

Lectures 8-9: Information Economics and Labor

I. Probability
   A. Everyone is familiar with probability to some degree, from rolling dice, playing cards, and so on.
   B. Basic postulate of probability theory: events range from impossible (probability=0) to certain (probability=1).
   C. Probability language allows us to **quantify uncertainty**.
   D. Even though people rarely put a precise number on each event, they almost always have some probabilities in the back of their minds.
   E. When people are asked difficult questions, they often say "I don't know." But what if they HAD to guess? Note: in real life, you have to guess all of the time.
   F. Common sophism: "No one can 'know' X."
      1. If this means "No one can know X **with certainty**," then it's obvious but uninteresting.
      2. If this means "No one has any idea at all about X," then it is clearly false.

II. Search Theory
   A. Must economists assume "perfect information"? Not at all: there is an extremely general theory of economic action under uncertainty, known as "search theory."
   B. Basic assumptions of search theory:
      1. More time and effort spent "searching" increase your probability of successful discovery.
      2. Searching ability differs between people.
      3. People can make a reasonable guess about the probabilities of different events and their ability to influence those probabilities.
   C. Main conclusion: People search so that the marginal cost of searching equals the <u>expected</u> marginal gain of searching.
      1. Qualification: You may need to adjust for a searcher's degree of risk-aversion if they are gambling a lot of their wealth.
   D. The (endless) applications:
      1. Prospecting for gold.
      2. Searching for a job.
      3. Dating.
      4. Rational amnesia.
   E. Main conclusion: If the economics of perfect information doesn't make sense, try search theory. It explains almost everything else.

III. Search Theory and Unemployment

A. In spite of the insight it offers, the supply-and-demand model of labor markets oversimplifies. It assumes that employer and worker characteristics are perfectly known to all.

B. In reality, people have to search for good "matches," where the skills of the worker fit the requirements of the job. These "requirements" are not always easy to quantify; and even when they *can* be quantified, people may pretend (or convince themselves) that they have more skills than they actually do.

C. Such search takes time: interviewing, comparing options, reading the want ads, and even re-locating.

D. Such search can be a frustrating experience for both workers and employers: workers don't have a job, face rejection, etc.; employers spend work hours going over applications, interviewing candidates, don't get their first choice, etc.

E. While S&D captures much of what goes on in labor markets, you need search theory to explain why "finding a job" seems **harder** than "buying a loaf of bread." Matching people to jobs is a tricky business fraught with uncertainty; matching people to loaves of bread is not.

F. What positive function then does job search serve? The better the "fit" between jobs and talents, the greater productivity is. (Imagine randomly assigning people to different jobs!)

G. How much should a worker search? You trade-off between the lost wages of searching, and the potentially higher wage you will earn if you find a good match. Employers make the same trade-off.

H. Insofar as unemployed workers are engaged in useful search activities for unknown opportunities, it makes sense to view them as voluntarily unemployed.

I. It is a much bigger puzzle if workers' best match is obvious, but unemployment persists. With flexible wages, this wouldn't happen - unemployed workers would bid wages down.

IV. Job Security: Insurance as a Normal Good

A. One important aspect of jobs is their "security." The more secure a job is, the less likely you are to lose it.

1. Note the close connection to imperfect information.

B. Why do some people have more job security than others? We can understand this using our standard notion of "compensating differentials."

C. Job security is basically a form of insurance that employers offer employees in exchange for lower wages.

D. Better-paid jobs are more pleasant in most ways (as are jobs in richer countries). Simple explanation: Benefits are a normal good; the richer people are, the more they want.

E. Does this work for job security? Yes! Empirically, high-income people have much more job-security than low-income people.

F. Can you make people better-off by legally giving them more job security? In general, no. This just forces them to spend more on job security than they want.

V. Signaling and Education
   A. Sometimes, schools teach skills that people eventually use on the job, like reading and writing. In other words, some kinds of schooling make workers more **productive** or "build human capital."
   B. But much of what schools teach seems pretty useless, at least from employers' perspective. ("What does this have to do with real life?") Why should they care if you studied Aristotle?
   C. And yet, employers do on average pay you more for completing these apparently useless classes. How is this possible?
   D. Maybe the point of school isn't to acquire skills, but to show, or **signal**, your pre-existing attributes. Signaling explanations of apparently wasteful behavior have become increasingly popular within economics.
   E. Signaling models build on three key assumptions:
      1. There are different "types" of people and firms: able and unable, smart and dumb, honest and dishonest, hard-working and lazy...
      2. It is difficult to observe "types" directly.
      3. However: different types (may) have different costs (lower disutility) of performing the same *observable* activity.
   F. So why then would employers pay more to workers who complete useless schoolwork?
      1. Employers want people who are smart, hard-working and/or conform to "the rules."
      2. People who are smart, hard-working and/or conform to "the rules" find it easier/cheaper to get through school.
   G. School doesn't improve them; rather, their ability to finish school shows *they were good all along!*
      1. Similarly, people who are dumb, lazy, and or non-conformist have trouble finishing school. They find it too painful to finish, so they don't.

VI. The Signs of Signaling
   A. The ubiquity of useless education.
   B. The handsome rewards of useless education.
   C. In case you're not convinced:
      1. Sheepskin effect
      2. Malemployment and credential inflation
      3. Speed of employer learning
      4. Education premium: personal vs. national
   D. You might be signaling if…
      1. You bother to enroll or pay tuition.
      2. You worry about failing the final exam, but not subsequently forgetting what you learned.

3. You don't think cheating is "only cheating yourself."
4. You seek out "easy A's."
5. You rejoice when teachers cancel class.

VII. Criticisms and Replies
- A. "We'd just do IQ tests instead."
  1. Reply: Education signals a *package* of traits employers desire: intelligence, work ethic, and conformity.
- B. "Employers know true productivity after a few months."
  1. Reply: Researchers find otherwise. In any case, firing aversion and "dehiring" undermine employer learning.
- C. "Learning how to learn."
  1. Reply: Educational psychologists find this is mostly wishful thinking.
- D. "Character formation."
  1. Reply: Plausible, at least for K-12. But work must be even better, and the experience premium is only 2-3% per year.
- E. "There has to be a cheaper way."
  1. Reply: Signaling *has* to be expensive to be an effective. Otherwise everyone would do it.
- F. Punchline: Signaling explains some otherwise very puzzling facts, and the a priori objections only apply to the most simple-minded versions of the theory.

VIII. Signaling and Education Subsidies
- A. I have already critiqued arguments that education has positive externalities and is under-provided.
- B. They look pretty weak. But one point I didn't make at the time was that these arguments assume that education is **productive**.
- C. If education is - in part - **signaling**, then the argument for subsidies gets even weaker. The signaling argument suggests that the externalities of education are actually *negative*!
- D. Why?
  1. If education is mere signaling, then average worker productivity is independent of education.
  2. If employers pay workers for productivity, then, increases in education can't raise worker income.
  3. How then can education raise one worker's income? By decreasing the income of other workers by the same amount!
- E. This means that insofar as education is signaling, it has negative externalities.
- F. Why? If education is pure signaling, then at least at the margin, the ***social*** *benefit of education is zero*. Gains to workers who get more are balanced by losses to workers who don't. If productivity stays the same, employers and consumers aren't better off either.
  1. I say "at the margin" because there are clear social benefits of better job matching. **Some** signaling serves a useful

social function. But once people are already matched to their jobs, raising education levels further has no additional social benefit.

G. Signaling models provide some formal structure for complaints about "credentialism." As education levels rise, employers tighten job requirements. So what is the point of increasing funding for education?

H. Support for education subsidies probably stems from a "fallacy of composition." If you got rid of subsidies for education, you might not be able to *afford* a four-year degree, but you would also not *need* such a degree to get ahead.

I. If education were 100% signaling, there would be a strong economic case for **taxing** it. We could all have the same relative rank, but spend less time and money on schooling.

J. Because real-world education is a mix of job-training and signaling, putting special taxes on education is probably not such a good idea. But the case for taxes is much stronger than the case for subsidies of the sort we currently have.

Prof. Bryan Caplan
bcaplan@gmu.edu
http://www.bcaplan.com
Labor Economics

Lectures 10-11: Discrimination

I. Wage *Differences* versus Wage *Discrimination*

A. People don't earn the same income, and neither do groups. There are, on average, large wage differences.

B. From the NLSY (1992 data): Average annual labor income was $17,100. Compared to white males, what did members of other groups earn on average?

Group	Labor Income Gap
Black	-$6200
Other Non-White	-$3700
Female	-$12,000

C. No one disputes that there are large wage differences. The debate, rather, is about *why*. Are these gaps partly or wholly explained by the fact that groups differ in average characteristics relevant to marginal productivity?

D. Two kinds of characteristics: the ones we measure (or "observe") like education and IQ, and the ones we don't, like culture and creativity. Can wage differences be explained by differences in observable characteristics?

E. Let's start with an easy one. What if we control for marital status and number of children? A lot of women have no labor income because they don't work and/or don't work as much because they take care of kids.

F. Suppose we compare never-married, childless males and females? The -$12,000 gap shrinks to a mere -$1,100 gap! It's not even "statistically significant" as econometricians say.

G. Now let's move to something harder. Is there any way to account for racial income differences? Let's start by controlling only for education and experience. What then?

H. The "other non-white" gap essentially disappears, but the white-black gap only mildly shrinks.

Group	Labor Income Gap
Black	-$5300
Other Non-White	-$700

I. What if, following up on earlier discussions, we also control for measured intelligence? (The NLSY administered extensive intelligence tests to people surveyed).

J. Other non-whites actually earn *more* than observably identical whites; the white-black gap drastically shrinks.

Group	Labor Income Gap
Black	-$2300

Other Non-White	+$1100

K. Many scholars who have studied black poverty have put some blame on differences in family structure. On average, blacks are much less likely to marry and remain married; yet blacks on average have more children. What if we add in controls for family variables?

L. Remaining black-white gap shrinks still further, becoming statistically insignificant. Other non-whites look even better off than before.

Group	**Labor Income Gap**
Black	-$900
Other Non-White	+$1700

M. There are definitely large differences in labor earnings, and they match the popular stereotypes about which groups the market treats "unfairly."

N. But it is wrong to infer discrimination from inequality. You must control for real group differences first.

O. Once you do so, there is little evidence of discrimination. (And some of it cuts the wrong way!) Labor income differs between groups because - on average - groups differ in education, intelligence, family structure, etc.

II. Discrimination as a Preference

A. We have seen that the empirical case for discrimination is weak.

B. Interestingly, many economists doubted - on *theoretical* grounds - that discrimination had much effect long before much data was available.

C. Why? Let us begin by defining "discrimination" more precisely. In economic terms, we can think of pure dislike or hatred for others as a *taste for discrimination*, a willingness to pay to avoid people you don't like.

D. For example, suppose a Serbian employer hates Croatians. But how much is he willing to pay for this? Would he give up $1,000,000 to avoid hiring a Croatian? Probably not. There is some amount of money sufficient to make the Serbian hire the Croatian in spite of his discriminatory taste.

E. Similarly, how much in wages would an Israeli worker be willing to give up to work at a firm with no Palestinians?

F. Or, how much extra would a Romanian consumer pay to shop at a Romanian-owned store rather than a Turkish-owned store?

III. Discrimination by Employers

A. Once we understand this notion of the "taste for discrimination," we can use it to analyze a variety of cases. Let us begin with employer-on-worker discrimination.

B. Assumptions:

1. Most employers have a taste for discrimination against Asians. Their willingness to pay to satisfy this taste ranges

from $2/hour/worker to $0/hour/worker, with an average of $1/hour/worker.

2. No one else has discriminatory tastes.
3. Asian and non-Asian workers are equally productive.
4. Labor markets are competitive and there are no anti-discrimination laws.

C. What happens? Labor demand for Asians is lower and they earn lower wages - at first.

D. Who hires them? The **least-discriminatory** employers! If the wage gap is $1.00, then employers who value discrimination by less than $1.00 hire only Asians.

E. More racism thus means lower profits. Less racist employers hire cheaper Asian labor, while more racist employers higher more expensive non-Asian labor.

F. Thus, over time the most racially tolerant employers become a larger and larger part of the market, and racist employers are driven out of business.

G. This shifts employers' distribution of discriminatory tastes in the direction of tolerance - raising the demand for Asian labor and reducing the demand for non-Asian labor. So the wage gap falls.

H. As long as there are enough employers who care solely about money, not race, the ultimate effect is that racist employers are driven from the market, and equally-productive labor earns the same wage.

I. Even if most people are racist, selective pressure favors non-racist employers. Businesspeople are competing to make money; any goals other than making money - good or bad - hold them back.

J. In other words, more greedy, less racist employers tend to drive less greedy, more racist employers out of business.

K. Corollary 1: Government regulation is necessary to **sustain** discrimination by profit-seeking employers.

L. Corollary 2: Discrimination is much more likely to appear in the *non-profit* sector.

IV. Discrimination by Workers

A. We now turn to worker-on-worker discrimination.

B. Assumptions:

1. All non-Asian workers have a taste for discrimination against Asians.
2. No one else - including employers - has discriminatory tastes.
3. Asian and non-Asian workers are equally productive.
4. Labor markets are competitive and there are no anti-discrimination laws.

C. Employers who make non-Asians work with Asians will have to pay the non-Asians a compensating differential. This reduces demand for Asian labor.

D. Simple solution: segregated workplaces. If non-Asian workers don't like Asians, employers can save money by setting up all-Asian plants.
E. Given the assumptions, this leads to full segregation and equal wages for both types of employees. Racism doesn't disappear, but it doesn't have any impact on wages.

V. Discrimination by Consumers
A. Last case - suppose consumers don't like Asians. What then?
B. Profit-maximizing solution: move Asian workers out of the public eye - essentially, another form of segregation.
C. This does mean lower demand for Asian labor, and lower Asian wages, but the effect is probably small. People rarely know anything about 95% of the people who worked to produce their groceries.
D. Still, markets are less likely to weed out discrimination by consumers than any other form of discrimination.

VI. Occupational Discrimination and Economies of Scale
A. The effects of worker-on-worker discrimination become more severe in industries with large economies of scale.
B. Why? If there are few economies of scale, then any disliked group of workers can get a "firm of their own" to avoid hostile co-workers.
C. As economies of scale rise, this becomes less feasible. You can't have an all-Albanian auto plant in the U.S.
D. Similarly, if there are very few people of a disliked group in an industry, it will be hard for them to have a "firm of their own."
E. This can conceivably be a self-reinforcing situation. Auto firms won't hire blacks; there aren't enough black autoworkers to set up their own firm; and since auto firms won't hire blacks, blacks don't learn how to become autoworkers.
F. In practice, though, people worked through cracks in the system. Some firms' workers are less racist than others. Minority workers who wanted to enter a non-traditional occupation sought them out and got their start there.

VII. Stereotypes and Information Economics
A. Gathering more information takes time, and time is foregone income. Thus, people inevitably - and sensibly - quit gathering information once they think their understanding is "good *enough*."
B. Of course, "mistakes will be made." People are choosing between two evils - wrong judgments and lost time.
C. This is the essence of stereotyping: Generalizing in a useful but fallible way based on limited information.
D. What would your day be like if you used no stereotypes? You use stereotypes about traffic patterns to choose your route to school. You use stereotypes about campus police to decide whether to illegally park. You use stereotypes about couples to guess whether two people are married.

E. Many people think stereotypes are plainly false. But it's an empirical question. This is a huge topic, but there is a lot of evidence that most stereotypes are right on average most of the time.

F. Moreover, people who don't like stereotypes still use them. "Police are bigots" is a stereotype. "White people make more money than black people" is a stereotype. Both may be true on average, but they are stereotypes nevertheless.

VIII. Statistical Discrimination

A. Suppose employers rely on a stereotype to make employment decisions, and that stereotype is true on average.

B. Is that "discrimination"? In a sense, yes - you are being judged for your group, not yourself. But in another sense, no - the group differences are real, and people don't *dislike* your group as such. Economists call this *statistical discrimination*.

C. A good example: gender and auto insurance premiums.

D. Another example: who cabbies will pick up late at night.

E. Unlike taste-based discrimination, statistical discrimination can survive and thrive in markets. If group differences are real, and it is costly to judge case-by-case, then people who *don't* discriminate lose money.

F. Important point: Statistical discrimination does **not** reduce *mean* group income. It just narrows the distribution. People who exceed their group stereotype's performance level are under-paid; people who fall short of their group stereotype's performance level are over-paid.

IX. The Effect of Discrimination Laws

A. Suppose, once again, that discrimination is a pure taste. What do anti-discrimination laws accomplish?

B. If they correctly identify discrimination, then very little. Markets already severely punish employers who pay more for workers than necessary.

1. They might however exacerbate worker-on-worker discrimination by forbidding segregation.

C. However, if "discrimination" laws blur the line between "difference" and "discrimination," effects can be severe. The law then effectively requires employers to pay workers of different ability levels the same; employers respond by preferring the more productive group, making life even harder for the less productive group.

D. In other words, discrimination laws act as a price control, requiring equal wages in two labor markets where the market clears at different wage levels.

E. To some extent, though, discrimination laws might be seen as quantity restrictions (hire x workers of group y or else!). The short-

run effect of this on group y can be positive; but in the longer-run employers figure out ways to avoid this burden.
    1. E.g. Relocate the firm to states with small "protected" populations.
F. For statistical discrimination, discrimination laws have the same negative effects. Groups are really different on average, but the law says employers must treat them the same. Firms then do their best to avoid paying people more than they're worth.
G. Ex: How might unregulated markets induce cab-drivers to pick up late at night in dangerous areas?

X. Discrimination Laws In Practice
A. Under the discrimination laws, aggrieved individuals can sue employers for discriminating against them.
B. Employers can defend themselves by showing that the worker was judged on the basis of individual performance.
C. Still, the defense always labors under the equivocation between difference and discrimination.
D. Interestingly, most discrimination suits come from workers who say their current employer mistreated them, **not** from workers who say they were not hired in the first place.
    1. The irony is that an employer who was actually racist, or simply wanted to avoid legal headaches, is probably less likely to be sued than someone who gives individuals a chance.
E. If employers practice statistical discrimination, why would they want to fire a worker after hiring him? Only if he is below his group mean!
F. Discrimination laws have also severely curtailed the use of IQ tests, even though these are probably the best predictors of job performance available.
G. Interestingly, early developers of IQ tests often saw them as a way to judge people on their merits as individuals. But now they have fallen out of favor.
H. Question: If you really wanted to stop discrimination, which would make more sense to ban: IQ tests or face-to-face interviews?

XI. Why the Standard History of Discrimination Is Wrong
A. The standard story: White males arbitrarily discriminated against everyone else out of pure malice. Then activists "raised awareness" and discrimination laws were passed to open up opportunities for people other than white males. While a strong legacy of racism and sexism persists, these laws have created the progress that disadvantaged groups have enjoyed since 1965.
B. Why it's wrong:
    1. Even if average levels of malice were high, employers are among the least racist people around. They are selected to care about profits, not skin color.

2. White males have earned more money on average, but most or all of that difference disappears controlling for characteristics.
3. Blacks and other groups were enjoying rapid economic progress long before any civil rights acts were passed. Asians already equaled or exceeded white income - even Japanese-Americans, who lost most of their wealth during WWII internment.
4. Lower-earning groups enjoyed progress before the civil rights laws in large part because their average characteristics were changing. Blacks were acquiring more education and skills, immigrants were acquiring language fluency, women were changing their family plans, and so on.
5. Most of the progress that non-white-males have enjoyed has been inevitable. On net, civil rights laws may have impeded their progress by making employers reluctant to hire people who might potentially sue them. There may have been some small effect; but as in other cases, there are probably negative long-run effects as well as positive short-run effects.

Prof. Bryan Caplan
bcaplan@gmu.edu
http://www.bcaplan.com
Labor Economics

Lectures 12-13: Economics of the Family and Population

I. The Market for Mates, I
   A. Most people today probably marry for love, but few regard all attributes as equally lovable.
   B. Instead, most people are looking for a partner with desirable traits, such as:
      1. Looks
      2. Income potential
      3. Positive attitude
      4. Conscientiousness
      5. Shared interests
      6. Shared religion
      7. Similar views on desired family size
   C. Normally people with a lot of desirable traits find it easy to get someone else with a lot of desirable traits to marry them. "She's out of your league."
   D. When there is a wide difference in perceived "mate quality," people wonder "What does she see in *him*?"
   E. This suggests that we can look at dating/love/marriage as a special kind of market.
   F. Two interesting things.
      1. It is usually a barter market, where a given level of "male mate value" enables you to "buy" a given level of "female mate value." (Exception: dowries, bride-prices).
      2. The S of men in the market for male mates is the same as the D for women in the market for female mates.
   G. This market works more or less like others: If a lot of men die in a major war, the price of men increases (and the price of women therefore decreases).
   H. Trickle-down economics in the market for mates: What happens when men's income rises? When women's income rises?
   I. Another interesting application: Polygamy. Demand for women is higher under polygamy.
   J. How does the fraction of gay men and women affect the market for heterosexual marriage?

II. The Market for Mates, II
   A. There are some attributes that most people agree are good: looks, income potential, etc. On traits like these, we should expect to see (and do) "assortative matching." People with "good" attributes date/love/marry other people who also have "good" attributes; if

someone is weak on one good attribute, we expect them to be especially strong on some other good attribute.

B. This sparks competitive pressure to acquire these near-universally desired traits, and - to some degree - increases their quantity.

C. For other attributes, people disagree. For example, Jews prefer to marry other Jews, but Gentiles prefer Gentiles. Backpackers like to marry each other. There is far less competition on this margin, because each niche has a mix of advantages and disadvantages.

D. Standard truism from evolutionary psychology: Men are naturally polygamous, women are naturally "hypergamous." Oversimplified slogan: Men desire every fertile woman, women desire the one best man. Effects in the market for mates:
   1. More desirable men get more partners
   2. More desirable women get *better* partners

E. Additional effects: As stigma against premarital sex falls and women's income goes up, the demand for high-status men rises a lot, and the demand for low-status men actually falls.

III. Household Production and the Theory of Household Labor Supply

A. So far we've categorized time as either "labor" or "leisure." Now let's sub-divide "leisure" further into "household production" and "fun."

B. If both husband and wife are equally good at household production, what is the obvious way to decide who will do most of it? The person with the lowest market wage! The family sells its high-value time in the labor market, saving low-value time for household production.
   1. Alternative: Have both husband and wife work, and pay someone else to do their household production. But for this to make sense the wife's wage must be fairly high (tax law reinforces this).

C. Two factors reinforce this point:
   1. If the lower-wage labor is actually better at household production.
   2. There are fixed costs of working - like commuting time.

D. When needs for household production are large, there is a firm economic rationale for the traditional family, where the male earns almost all of the income and the female does almost all of the household production. The rationale in a nutshell:
   1. The family needs one person to do household production and another to hold down a job.
   2. If both are equally able to do household production, it makes sense for the higher-paid person to work outside the home. (Moreover, if women are actually better at household production, this decision is even clearer).

3. Because child-bearing interrupts careers, the lower-earning person will normally be the woman. If women anticipate this, they invest less human capital, making the wage gap larger.
4. With fixed costs of working, it makes little sense to work only a couple hours per week.

E. But: The need for household production is not fixed. It depends critically on both *technology* and the *number of children*.

F. Both factors slashed the need for household production during the 20th century.
1. Technology for household production drastically improved - dishwashers, vacuum cleaners, washing machines, etc.
2. Average number of children has drastically fallen.

G. As time allocated to household production has fallen, women with children have become increasingly likely to remain in the job market - some in part-time work, others in full-time.

H. We are also seeing the rise of an even less traditional household structure, where women earn *more* than men, and largely support their children (if any) by themselves.

IV. Why the Standard History of Gender is Wrong

A. My take on the standard history of gender: Throughout human history, males arbitrarily forced women into a subordinate role. At long last, feminist thinkers began "raising awareness" of the plight of women. Through great struggle, women are at last - like men - able to pursue their dreams and ambitions, though of course full equality is still a long way off.

B. Why it's wrong:
1. The dating and marriage market has always been competitive.
2. Yes, women used to have very hard lives. But so did men!
3. The traditional family structure was technologically necessary for most of human history *assuming* women wanted to have children. An overwhelming majority did.
4. Family structure changed because technology reduced the burden of household production, and because families decided to reduce their number of children.
5. Technology also narrowed the male-female ability gap by de-emphasizing physical strength.
6. This for the first time made it feasible for women to have both careers and children.
7. Women broke into the business world quite rapidly considering the size of the change. Supposed "discrimination" reflected and continues to reflect real group *differences*.
8. Except for women who forego child-bearing, differences will persist until reproductive technology radically changes.

9. Women probably do face some *statistical discrimination*, but in the absence of regulatory burdens, women could contract around these.
10. Feminist norms function as price controls in the marriage and dating market. "Raising awareness" has often been counter-productive insofar as it matters at all.

C. Note: We may be moving to a world where women are noticeably more successful than men. Productivity and competition provide better explanations than “reverse sexism.”

V. The Economics of Family Size

A. While there is some element of chance, to a large extent families control the number of children they have.

B. We should expect the demand curve for children to have the usual negative slope. The cheaper it is to have kids, the more kids people have.

C. One big part of the expense is the mother's foregone labor earnings. The more income a mother can earn, the fewer kids we expect her to have. This is precisely what we see - high-income women have fewer kids, and family sizes are smaller in rich countries than in poor countries.

D. However, this argument is not air-tight. As wealth increases, demand for all goods - including kids - rises.

E. What we can say with confidence is that holding wealth constant, demand for kids is negatively sloped. Thus, changes in costs of childcare, free grandparent assistant, free schooling, and per-child tax deductions all increase family size.

F. Similarly, if children contribute to the family by working or doing chores, or eventually provide retirement income, family size will be greater than it otherwise would be.

G. Application: When children are expensive and/or single women are very poor, you see few non-marital births. In the pre-modern period, a husband's support was often crucial just to keep a child alive.

H. As incomes rise, it becomes more feasible for unmarried women to have children even without government help.

I. In the U.S., non-marital childbearing has risen for all social classes, but is much higher for poorer women. For poor women, extra welfare plausibly makes a big difference.

J. If higher income makes unmarried women more inclined to have children, why do the richest women have the fewest? Probably because on average they have higher "mate value" - when they want to have children, it is relatively easy to find a suitable husband. Lower-income women may face a choice between having a child without a husband or having no child at all.

VI. Family Size and the Quality-Quantity Trade-Off

A. Richer people and countries have fewer kids. The simple conclusion to draw is that kids, like potatoes, are "inferior goods."
B. However, richer people and countries also spend more time and money on *each kid*.
C. Most economists conclude that kids are a normal good after all. Its just that richer people care more about the *quality* of their kids than the quantity. They prefer one or two exceptionally healthy, smart, and ambitious kids to a three or four average kids.
D. The underlying idea is that there's a *quality-quantity trade-off*. You can improve your kids with investments of time and money. The more kids you have, the less time and money you've got per child – and the worse their outcomes.
E. Both economists and laymen take this quality-quantity trade-off for granted. But should they?

VII. The Lessons of Behavioral Genetics
A. It's tempting to simply point to the fact that success runs in families and say "Yes." But this pattern could just as easily result from heredity!
B. A huge field known as "behavioral genetics" studies twins and adoptees to actually measure the effect of family environment on adult outcomes.
    1. How adoption studies work
    2. How twin studies work
C. Big lessons: the quality-quantity trade-off is vastly overrated. The long-run effect of parenting on kids' outcomes usually ranges from small to zero.
D. In *Selfish Reasons to Have More Kids*, I propose a "Parental Wish List" – the main traits parents hope to foster. Then I track down *all* the relevant twin and adoption research in medicine, psychology, economics, sociology, and beyond.
E. The Parental Wish List:
    1. Health
    2. Intelligence
    3. Happiness
    4. Success [education, income, crime]
    5. Character
    6. Values
    7. Appreciation
F. Main results: Nurture/upbringing/parenting has little or no effect on health, intelligence, happiness, success, character, or fundamental values.
G. Parenting has a moderate effect on appreciation, and a big effect on superficial values (especially what religion and political party you *say* you belong to).

H. Key caveat: What you find depends on where you look. Behavioral geneticists focus on vaguely normal families in First World countries.
I. Upshot: Parents' may think they're substantially increasing their kids' quality by restricting their quantity. But they're wrong. Much parental "investment" yields roughly zero return.
J. In fact, if parental "investment" hurts the parent-child relationship, the return could easily be negative.
    1. *Ask the Children*: Kids' main complaint isn't that their parents don't spend enough time with them. Their main complaint is that their parents are too tired, stressed, and angry!
K. Big life lesson: Behavioral genetics reveals a free lunch for parents and potential parents. You can get the kids of the quality you want for a fraction of the price the typical parent pays!
    1. Graphs

VIII. What's the Optimal Number of People?
A. People often worry about "overpopulation" or "underpopulation." What does this mean in economic terms?
B. It's tempting to say "optimal population"="population with maximum GDP per capita." But:
    1. Anyone who has a baby rejects this at the household level. When my wife and I had twins, our family's per-capita income fell by 50% as a matter of pure arithmetic.
    2. By this standard, the existence of life-loving but below-average people is "suboptimal."
C. Even by the "maximize per capita GDP" standard, though, the world still might be underpopulated. Consider: Over the last two centuries, both population and per capita GDP have massively increased.
D. Furthermore, over the last 150 years, the real prices of food, fuel, and minerals have fallen by about 1%/year. The main commodity that keeps getting more expensive: labor. If we're "running out" of anything, it's people.
E. In any case, economists' real standard for over- or underpopulation is whether *the marginal baby born has (on net) negative or positive externalities*.
F. Slogan: "You don't have to raise the average to pull your weight."

IX. Negative Externalities of Population
A. Many people, notes Landsburg, think that each child born gets a 1/7 billion share of world resources - implying negative externalities.
B. This isn't how the world really works. Instead, when a family has one more child, each child in that family gets a *lot* less, with little effect on anyone else.
C. This is especially clear from bequests. Picture a simple agricultural economy where kids always divide their parents' landholdings equally. If everyone but you has lots of kids, your kid inherits just

as much land – and his land will actually be worth more due to higher demand.

D. Lesson: With private property, parents who care about their kids automatically internalize any "poverty externality." Under socialism, in contrast, the poverty externality is very real. You can have an many kids as you like without reducing your family's consumption at all.

E. Poverty aside, people also often worry about the negative *environmental* externalities of population.

F. Key economic point: Limiting population to reduce environmental externalities is using a sword to kill a mosquito. Why not just raise the price of environmental damage with e.g. pollution taxes?

G. The same applies to congestion externalities. If the roads are crowded at rush hour, rush hour tolls are a much cheaper and humane solution than preventing people from existing.

X. Positive Externalities of Population

A. Does population have any *positive* externalities? Yes!

B. Existence externality: Most people are happy to be alive, but parents can't charge you for the privilege of existing.

1. In Singapore, though, you are financially responsible for your elderly parents.

C. Idea externality: Progress depends largely on ideas, and ideas come from people.

1. Historically, almost all progress comes from populous, connected regions of the world – especially Eurasia.
2. Historically, isolated areas with low populations have low, zero, or negative progress. See Tasmania.

D. Notice: Technology has now connected the whole world. A great idea anywhere quickly becomes a great idea everywhere.

E. Population increases both the supply and demand for new ideas. This is most obvious for languages, but works in all areas of idea creation.

1. Imagine deleting half the names in your music collection, or half the Nobel prize-winners.

F. Choice externality: More population means more choices. See NYC vs. Hays, Kansas. The fact that urban rents are higher than rural rents shows that people prefer (people + the indirect effects of people) to splendid isolation.

1. Question: Why don't people who complain about overpopulation move to the middle of nowhere?

G. Retirement externality: Government old-age programs are pyramid schemes. With lots of kids, low taxes can sustain high benefits. Low birth rates are a major reason why Social Security and Medicare are going to be in big trouble.

1. What if government benefits for the elderly depended on your number of kids?

XI. Why the Standard Story of Parenting Is Wrong

A. Standard story: People used to have lots of kids to help them run their farms. In the modern world, though, large families are no longer practical. To compete in today's competitive world, kids require massive parental investment. The only way parents can keep their lives halfway livable is to limit themselves to one or two kids. And we should be thankful they do, because overpopulation is a major world problem.

B. Why it's wrong:

1. Kids have *always* been bad investments from a purely financial point of view. Pre-modern farmers had lots of kids because they liked having lots of kids.
2. Behavioral genetics shows that parenting has little effect on kids' life outcomes. Parents make heavy sacrifices to help their kids, but these are largely waste, not "investment."
3. Parents are *slightly* less happy than otherwise identical non-parents. But their happiness gap is largely self-imposed. They could adopt a much more enjoyable parenting style without hurting their kids. Or have more kids and more fun at the same time.
4. The world remains underpopulated. Population and prosperity have been growing together for over two hundred years, and its no coincidence. Large populations are more creative, and creativity is the main cause of economic growth.