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Some Basic Economic Ideas

This material is what you need for my other essays. This material is just basic mainstream economics. If you have taken economics, or done self-study, you can skip this essay. You can use this essay to review quickly and to get my point of view, and I hope you do.

I do not try to explain all action for all people in all societies in all places and times. I focus on what is most useful for seeing a modern capitalist economy. The ideas can be applied more broadly than that but I don't argue over their scope.

-The arena within which a modern capitalist economy takes place is called a "market" or "the market". A long time ago, the market was like a local fair, flea market, garage sale, farmers' market, or a market in Asia. Now it is an abstraction like "the market for laptop computers" or "the real estate market". "Market" means that people and business firms can buy and sell. They can buy and sell most things, services, and situations but not all. They cannot buy and sell people, sex, some drugs, bombs, poisons, etc. People and business firms can buy and sell labor, as with lawyers, graphic artists, teachers, and people with an MBA.

-A "free" market means people can buy and sell without many restrictions from the state (government), with no coercion, gangs, and exertion of power. "Free market" implies no restrictions from convention, custom, tradition, religion, ceremony, or society; but usually that is not the case. In the past, the state and social conventions did restrict commerce, and commerce had to free itself from them so commerce could run well in a market. Now, commerce carries on in one sphere while conventions etc. carry on in other spheres. There is some overlap, but not so much overlap as for one sphere to discredit any other sphere. I do not consider whether the rules that apply to commerce in a free market can help us see what goes on in other spheres, and vice versa. I describe a "fair" market below.

-Individual people, groups, business firms, nations, etc. almost always have some resources. If nothing else, individual people have their labor. Money is the most obvious resource. Training, skills, abilities, credit, knowledge, personal ties, power, favors, family, friends, time, energy, charm, reputation, and sex, are resources as well. I don't go into relations of power and wealth here. Resources are "what we have got" and "what we have to work with". Economists call resources "capital".

-We can't have everything. Wealth is limited. Countries have only limited wealth, even rich countries such as Rome, England, and China at the height of their empires. Particular people have only limited wealth, even multi-billionaires. Business firms have limited wealth, even Apple, Microsoft, Toyota, and Enron. Every normal person knows how limited his-her wealth is. Power is also limited.

-As a person, family, business firm, labor union, NGO, charity, or country, we have to decide what to do with what we have got.

-We desire some things. Individual people desire food, water, shelter, clothing, fun, mates, success in work, family, art, entertainment, etc. In modern capitalism, one of the biggest desires for most people is a good job. Business firms desire profit. Nations desire order, justice, and power. What we desire often is a material thing such as a car but is not limited to material things. We desire intangible things such as power and fun. We desire services such as guitar lessons. We desire situations such as a good marriage or a happy city, and we buy the things and services we need to get such situations. We desire a thing because it feels good, gives satisfaction, is good for us, or just because we desire it. A thing does not have to feel good as long as it is good for us and we desire it. A deep massage hurts but it is still good for us. Whatever people desire, and whatever they will buy, is a "good". A "good" is a physical thing (boat), service, (lessons), intangible (fun), or situation (marriage, victory, revenge).

-Economists use the term "utility" for the benefit, satisfaction, and good feelings that individual people get from goods. Economists can extend the word "utility" to the benefit, satisfaction, and good feelings that a group gets from what it wants. Often for a group, the term is "welfare". That term used that way should not be confused with the welfare programs that help poor people.

-The abundance-availability-or-scarcity of a good is the "supply" of the good. The desire in general for a good, including the willingness in general to buy the good, is the "demand" for the good.

-"Desire", "need", "wish for", "want", "demand", for a good, "importance" of a good, and "willingness to buy" a good, are all similar terms to describe almost the same idea but not exactly the same. I don't define their meanings. I follow common English while trying also to conform to technical ideas from economics. Usually I use "desire", "want", and "need". When I need to make a distinction clear, I do. In most case, take one term to imply the others.

-Only things that people desire have market value. Things that people don't desire don't have market value, such as cheap green beer outside of St. Patrick's Day or garden slugs.

-John values golf. When used for a particular person, the term "value" means the amount that a good benefits a person, how much a person wants it, the amount the good gives satisfaction, the importance of the good, or the good feelings that come with the good. The value of a good for a particular person is related to the market price of a good but the two are not always the same. Different people can value the same good differently.

-In a market, "value", "price", "cost", and "worth" all mean the same thing but express different aspects of the same thing in different arenas.

-Usually the market value (price, cost) of a good and how much people desire a good go along together fairly well. People need meat (protein), and it can be expensive. People don't need red balloons, and they are not very expensive. The price of cars goes up with their quality and features. The price of laptop computers goes up with screen size and with features such as RAM. The price of flat-screen TVs (the only kind now) goes up with screen size and features. The price of cable TV goes up depending on how many channels, and what kind of channels (premium).

-Sometimes the personal value of a good differs for people even when the good has the same market value (price) for them. To me, jewelry is not very important but to some people it is. Yet we all pay the same price. A single market value comes from the many individual values. Here I can't explain exactly how this happens but it does happen. I do explain some of how it happens below. Rather than wonder how this happens, think about what its results are.

-Sometimes, price and need don't go exactly together. The classic case in economics is diamonds and water. Diamonds are not important and we easily can do without them. Yet diamonds have a high price. Water is essential yet water has a low price. I don't explain many cases where market value and desire don't go together. Economics can account for nearly all these apparent exceptions, so they do not invalidate what I say. Figuring out how to account for apparent exceptions helped economics take a big leap forward in theory in the late 1800s and early 1900s.

-Jobs and wages are like most market goods. In almost all cases, the market value of a job (wages) goes along with: the value of the job (value of its products) to people in general, what contribution the job makes to what people desire, and what difference that particular job makes in providing what people desire. This tie too is not always so but we don't have to look much at exceptions. I explain more below and in the essay on wages.

-The market value of any good arises from both: (1) the abundance (scarcity) of the good (supply) and (2) how much people in general want the good (demand). Value is set by supply and demand together. Value is not set by abundance (scarcity) alone. Value is not set by desire alone. Exactly how abundance (scarcity) works with desire to set market price is too much to explain in detail. How abundance and desire go together to make sure the market value of a good usually is in line with the importance of the good also is too much to go into in detail here. You will get a sense of both topics. See below and see other essays.

-The value of a job, the wages of the job, also is set both by the abundance-or-scarcity of the people who do the job and the desire of people who want what the job holders do. The wages of carpenters depends on how many well-trained carpenters there are and how much people want their skills (their products). The wages of lawyers depends on how many lawyers there are and on how many and how much people can use such skills. The wages of janitors are set the same way; janitors are low-skilled, fairly abundant, and people can get along without their services. The topic of exactly how supply and demand work together to make sure that wages usually go along with the importance of a job is too much to go into here. See below and see other essays.

-People, business firms, groups, nations, etc. go after goods. In economic jargon, they “pursue” goods. Going to the grocery store to buy hamburger meat is just as much pursuing a good as wandering in the forest stalking squirrels for stew.

-Almost every good has attendant costs, not only in the good itself but in the pursuit too. We have to pay for cell phones and guitar lessons. To get a spouse, we have to search, and, after we find him-her, we have to deal with his-her quirks. To get a car, we have to search, and we have to pay for it. To get power, we have to wheel and deal. To get a good job, we have to spend effort and time in school; and somebody has to pay for the school.

-The use of resources to get a good is a cost. We use up our resources to get goods. Economists say we “spend” or “expend” resources. The most obvious case is where we use money to buy goods. Money is a resource that we spend to get goods.

-In the past, people used resources such as wood, metal, time, and skill to make goods such as tables, chairs, and ploughs. People got a good sense of how they expended resources to make goods. Today we don’t do that. We use our resources to make money, and spend money on buying goods that we consume. So we are out of touch with the sense that it takes resources to make goods, we have to expend resources to get goods, and there is a limit on how much resources we have. Sometimes it is a good idea to backtrack on what you are obviously doing (spending money to get consumer goods) to think about how it all happens and what that means. Economics can help us to do the backtracking and get a better sense of how things work.

-Economists assume that individuals and groups of individuals want to maximize the satisfaction (utility) that individuals etc. get from goods. To maximize utility, individuals and groups should maximize benefit (utility) while minimizing cost. To explain action, economists talk of “maximizing” and “minimizing”, and “cost” and “benefit”, but I don’t use the terms much here.

-Economists assume individuals can always decide adeptly what to do with their resources as long as an individual has to consider only him-herself. Individuals can always prioritize goals, assess costs, and allocate their resources in the right order, in the right amounts, to get the most satisfaction (utility), at least cost. Individuals are astute at assessing costs and benefits, and allocating resources, so they get the most benefit for the least cost. Individuals are adept at pursuing goods. Individuals are adept at maximizing benefits while minimizing costs. In real life, individuals are not perfectly adept but they are adept enough so we can accept the economic point of view. Other ways to say all this about individuals is that individuals are “strategic” or “rational”.

-Economists assume individuals seek their own self interests rather than the welfare of other people, of groups, or society as a whole, and people pursue their own self interests more often than they blindly follow social rules. Usually when economists say this, non-economists get upset because they think economists condone selfish greed and anti-social mayhem. Not true. Economists seek ways in which

self interest serves general interest. Rather than debate, I simply say that individuals do pursue their own self interest most of the time, this pursuit usually is not greedy and selfish, and it usually leads to the greater good in the right situations. I say a bit more about this point below.

-When we jump from individuals to groups, it is harder to prioritize goals, assess the benefits that come from various goals, assess costs, allocate resources, and maximize goals. Even so, it is still useful to treat groups as if they were big individuals, assume groups have resources, want goods, face costs, and act rationally in assessing cost and benefit, pursuing, expending, minimizing, and maximizing. Examples are traditional farm families and family owned small business firms. Economists have developed methods for assessing how groups work, or fail, as a collection of individuals. I do not go into these issues here.

-Economists often use money as a stand-in for utility. If one TV costs \$200 and another costs \$300, most people will get more utility from the \$300 TV, and will get about (but not exactly) 1.5 times as much. If a church decides to splurge and spend \$2000 on new furnishings instead of \$1000, it hopes to get roughly twice as much benefit for the church.

-This is a reasonable tactic in most cases but not in all cases, especially when trying to figure out what groups do and when advising groups what they should do. It helps to know that a proposed nature park in the city would provide less total revenue than a proposed amusement park but, in this case, money might not be a good measure of utility. The nature park might be better than the amusement park if we could devise means to assess "better" and "utility" other than money. I do not describe these cases. If I use money as a guide to utility, I do it in a context that is not too far off-base.

-Business firms offer goods to people in exchange for money (usually) and other goods (sometimes). That is how firms "do what they do" and pursue profit. True, people work in the business firm to get money and don't always care how the firm gets money to pay them. But the firm could not get money to give employees and stockholders unless it offered goods for sale to people, for which people pay with money. Firms can also pursue profit through other means such as by getting favors from state officials or by getting a firm relation with the state. I don't consider those means here. See other essays.

-The people who buy goods from business firms, and buy goods in general from whatever source, are called "consumers". The firms that supply goods are called "producers".

-A business firms nowadays usually is a big group. Even so, business firms are unusually adept at acting as a coherent whole in pursuit of their goals.

-The biggest single overriding good (goal) for a business firm, by which we can understand its pursuit of all other goods (goals), understand its stock of resources, use of resources, costs, production, sales, and all other actions, is profit. Business firms use resources efficiently, while minimizing costs, in pursuit of most profit. Business firms are amazingly efficiently adept at pursuing most profit.

-For business firms to pursue profit as their highest goal is not necessarily morally evil; it is not usually a sin. Very often the pursuit of profit results in general benefit. Offering goods to people in exchange for money usually results in general benefit. The pursuit of profit by offering goods to people is far more often good than bad, and can be a great good sometimes.

-It is up to the people and the state (government) to guide business when its pursuit of profit does not result in general benefit. We need appropriate regulation for the economy in general and business firms in particular. Unfortunately, the people and the state have not been adept at doing this, for reasons I do not go into here. We have not been good at regulation. We sometimes over-regulate and sometimes under-regulate.

-Just as it is not useful to berate business firms for seeking profit, so it is not useful to berate people for seeking their own self interest, their own satisfaction (utility). There can be a difference between "self interest" and "greed", and greed can cause harm, but there is not much point in dwelling on that issue here. Just as business firms by pursuing profit usually lead to much good, so individuals by pursuing self interest usually do also. I don't show how this happens but economists have shown it. One founder of economics, Adam Smith, argued that more real good indirectly comes of individuals and business firms rationally pursuing their own self interest (utility and profit) than all the good that comes together of all projects aimed directly at doing good such as charities and state action. He is almost certainly correct. This insight does not mean we should stop charity work. It does mean we should not rush to judge self interest and the pursuit of profit.

-Individual people, and even business firms, sometimes do forsake self interest and act directly in the best welfare of somebody else or the community. This kind of action is called "altruism". We hope it happens more often than it really does. When it happens, it is beautiful. But it is not enough on which to found government an economy. We are better off thinking how to shape society and institutions so that self interest serves general interest.

-In capitalism under a free fair market with little built-in distortion, self interest serves general interest about as well as it ever has under any system.

-For convenience, we can think of money as a summary of what resources we have with which to pursue utility or profit. We talk of "spending money wisely" and "a penny saved is a penny earned".

-We think of the cost of something in terms of its obvious market price such as that the cost of apples is \$1.35 per pound. The true full cost of something can include more than its market price, such as, with apples, in addition to the price at the store, the cost of gas to go to the store, time spent at the store, aggravation while there, and not doing other things while at the store. Still, we think largely in terms of immediate money price, and that is usually how I deal with cost here.

-We use cost to help us allocate resources so we can maximize utility and minimize cost. If apples cost \$1.35 per pound while peaches cost \$2 per pound, we use that information to decide how many apples

to buy and how many peaches to buy. To repeat: economists assume people always act rationally and adeptly in making these decisions, to maximize benefit (utility) while minimizing costs.

-One particular kind of cost is so interesting and important that it deserves special mention; it is called "opportunity cost". If you ever study economics, you need to understand opportunity cost so you can see how an economy forms a system.

Suppose you go to the grocery store where you buy apples for \$1.35 per pound and then see peaches for sale at \$2 per pound. That is alright because you are happy with the ratio of benefit-to-cost that you got from apples (you got good value for your dollar). You could not have gotten more benefit-to-cost if you had bought peaches. Then you walk outside, and see a family across the street selling cherries out of their truck for \$1.25 per pound. Now you are annoyed because you spent your money on apples and can't afford cherries. At \$1.25 per pound, cherries give a much better benefit-to-cost ratio than apples at \$1.35 per pound. Although you gained when you bought apples, you lost in comparison because you did not buy cherries. Every bargain hunter has had this disappointment. Suppose you go see the movie "Blockbuster Action" at the Cineplex during the matinee at the low price of \$5. Then, when you get out, you see a poster for a one-time only special showing of "Casablanca" on a big screen at the local artsy cinema, which was scheduled at the same time as "Blockbuster Action", also for \$5. Now the show of "Casablanca" is over and gone. You gained some fun at the Cineplex but lost overall because you did not spend your \$5 where it would have done more good. Economists say you "suffered an opportunity cost". Consumers not only have to minimize obvious costs such as money price and time spent, they also have to minimize (or avoid) opportunity cost. You have to make sure you get not only a good deal but get the best deal. If not, then effectively you lost out.

-Just as consumers pursue the most utility (satisfaction) for their money, so business firms pursue the most profit for their money. Business firms do not only pursue some profit, they pursue the most profit. When business firms do not get the most profit but only some profit, and so suffer an opportunity cost, they get annoyed too. If Acme Cars gets a good deal on plastic parts from Jones Bones but then found it could have gotten a better deal on the same parts from Smith Trinkets, then Acme Cars lost a chance (opportunity) to make more profit. If one firm is adept at pursuing the most profit while another firm gets some profit but not the most profit, the first firm thrives while the second withers.

-Just as pursuing some profit is not necessarily evil and usually does a lot of good, pursuing the most profit, not just some profit, is not necessarily evil and usually does a lot of good. It can seem creepy sometimes to relentlessly pursue the most profit, but, as long as it is done fairly within the rules, it is most often worthwhile.

-Prices can appear mysterious. It is not always clear why something costs what it does, why it has the price it does. We need to know more about prices to know more about other important aspects of the economy. For example, the price of a beef roast is the same to a rich person as to a poor person and his-her children but likely the value (utility) is much more to the poor person. The price of a ruby is the same for rich and poor but likely the utility is more to the rich than the poor. The benefit of a job to a

job holder is the salary. The same salary is also a cost-price to his-her employer. To know more about wages, we need to know more about the costs-prices and benefits to the employer of hiring someone.

-Prices also help tie together an economy. When everybody knows the prices, and the prices are about the same for everybody, private individuals and business firms can act rationally, buy efficiently, sell correctly, and allocate their resources well. The whole economy is efficient and it produces the most utility for its resources. Consumers know how much in total of any good they wish to buy; consumers know how many apples to buy. Business firms know how much in total for the whole United States that consumers wish of apples and automobiles. When business firms know prices, they know what to make, how much to make, how to make it, and how much will sell. With a stable system of prices, business firms can make just as much as consumers wish to buy, and consumers can buy just as much as business firms wish to make. Banks know how much interest to charge on loans and to give on accounts. People (consumers) know how much to spend and how much to save. Business firms know how much to invest in case they want to stay the same size, expand, or even contract. Innovators know how to develop new goods. Some economists see the price system almost as the whole economy, and they are not far off.

-Suppose the satisfaction that people get from apples stays steady. In that case, if the amount of apples available increases, supply increases, the price of apples goes down. Usually, other factors held steady, the more of a thing, the more supply, the lower the price is. In the same way but opposite direction, other factors held steady, usually the less of a thing, the less supply, the higher the price is. If apple farms get hit by an early frost so there are fewer apples this year, the price of apples goes up. If the number of nail salons in a city was cut by two-thirds, the price of manicures would go up. If the number of masseurs rose by two, then the price of a massage would go down.

-Suppose the satisfaction that people get from a particular good stays steady and supply holds steady. If people want the good more, demand goes up, then price rises. If people want the good less, demand goes down, then the price falls. The price of some kids' toys goes up during the year-end holiday season and goes down during the middle of summer.

-What people desire changes when the price changes. This effect is so familiar that I don't have to give details. If the price of apples is 50 cents per pound, people buy a lot. If the price is \$2.50 per pound, people buy few.

-Business firms respond to price in the opposite direction from consumers. If the price of the good that they make goes down, business firms make (supply) less, and some firms get out of the business. If the price goes up, business firms make more, and some other firms get into the business. If the price of a manicure doubles, so does the number of nail salons. If the price of a manicure goes down by one-half, nearly all the nail salon owners get out of the business. If the price of computers goes up, existing firms make more, and other firms get into the market, as in the 1980s. If the price of computers goes down, existing firms make less or get out of the market, as in the 1990s.

-Consumers and producers respond in opposite ways to supply, demand, and price. They have to find a way to match supply, demand, and price so they all get along.

-Look at the market for toy trucks. At a high price, business firms supply a lot of trucks but consumers want few. Business firms supply more than consumers want. At a low price, business firms supply few toy trucks but consumers want many. Somewhere in the middle is a price so that business firms supply just the number of trucks that consumers want and consumers want just the number of trucks that firms supply. This result is not magic, but it can seem like magic. Economists say there is a price at which a particular market “clears”.

-When business firms act like consumers to buy resources, they respond like consumers to price. If the price of steel goes down, auto makers use more of it in their cars. If the price of steel goes up, auto makers use less steel and more plastic.

-The same is true not only for “final” consumer goods such as toy trucks but for all resources. What is a resource-to-expend from one view is a good-to-buy from another view. Resources are just a good at another level. Iron is a good for a business firm when it buys iron so that it can use iron to make toy trucks. Fertilizer is a good for a farmer when he-she buys it to raise corn. There is a price such that the total amount of iron supplied by mines and mills equals the total amount of iron needed by toy truck makers, car makers, railroads, toaster makers, etc. There is a price at which the total amount of iron demanded by truck makers, car makers, railroads, toaster makers, etc. just equals the amount that is supplied by mines and mills.

-Jane likes apples more than pears while Jill likes pears more than apples yet the prices of pears is the same for Jane and Jill and the price of apples is the same for Jane and Jill. The price system does not directly track the specific utility of each particular individual. The price system develops a public price out of the many different desires of a lot of individuals.

-Then individuals respond to the public price system that they made. In responding to the public price system that they made, they remake the system. The system that they remake is almost the same as the system they made to start the process. (Sometimes the remakes vary when conditions vary such as a new technology arises or blight hits the coffee zone.)

-Economists explain these ideas about prices and amounts using the notorious “supply and demand” diagrams with “supply” and “demand” lines (“curves” or “schedules”). I do not use them here. If you get the idea already using words, the diagrams really are not hard, so you might want to look at the opening chapters of a textbook. Don’t be afraid of diagrams.

-I do not try to justify the following idea or explain it much. Economists can prove that, under the right conditions, there is a set of prices for all goods, such that all markets for all goods clear, including final consumer goods and intermediate resources. The whole set of all markets clears. The whole economy clears. The whole economy makes itself and remakes itself. This situation is “general equilibrium” (GE).

When I learned economics, I found GE fascinating. Understanding GE can help us see how an economy works as a whole system or fails as a whole system, especially to see when an economy is fair or unfair, and when an economy helps nature or hurts it. Unfortunately, the study of GE is not easy, so I don't go into it more.

-Labor is a market. Labor is many markets all tied together. In conditions that lead to GE, everybody who wants a job can get one at fair wages, and every firm that wants to hire employees can get all the employees it wants at fair wages. I do not define "fair wages" here.

-Does the economy really reach this level of smooth operation? Does the economy really reach general equilibrium? The simple answer: Almost. The economy often reaches 90% or more of GE in the United States. The economy fails to reach perfect success by 10% or less. That achievement is pretty good but not good enough because it leaves some people unemployed and poorly employed, people who would be willing to work if they were trained and could find work. As I say in other essays, George H.W. Bush lost the Presidency in 1992 when America had 8% official unemployment and he said we should focus on the 92% of people who had jobs rather than the 8% of people who did not. For more on this topic, see my essays on employment.

-Most people have heard of the "law of diminishing returns". In economics, it goes along with the price system to help us see the strategies of individuals and business firms and help us see how the economy ties together as a whole.

Suppose you eat six apples in a row. You get a lot of utility (satisfaction) from the first apple but less with each additional apple (called the "marginal" apple). The first apple might have been worth \$5 per pound to you but the sixth apple might be worth only 25 cents per pound. When we consider all the people everywhere who want apples, the price of \$1.35 is a kind-of average that arises when all the people together consider how many apples they usually eat. Tommy's Toy Trucks has to paint all the trucks. The prettier the paint job, the better the price, but the higher the final cost of the trucks. If Tommy applies \$1 worth of paint to a toy truck, he can get more than a \$1 increase in price. If Tommy applies \$10 worth of paint, he can increase the price only \$6. The effectiveness of paint declines with each additional application. Somewhere in between, Tommy decides on the correct amount of paint that allows him to add the most price to the truck for the cost of the paint. The addition in price to the truck always has to cover the cost of additional paint. The strategies of all the toy truck makers, and all the users of all that kind of paint, lead to a price for that kind of paint in the market. For reasons that I can't go into here, diminishing returns is part of ideas called "marginality theory". "Marginal" refers to "additional applications" such as one more apple or a little more paint. I more often refer to marginality theory than to diminishing returns.

The important things to remember: (1) added "applications" (apples, paint) leads to less effectiveness, and (2) we can use the diminishing effectiveness to better see the price system.

-One particular use of marginality theory is important to most people because it explains how much people get paid on a job.

Imagine you are eating apples. Each apple makes a difference in how much benefit (satisfaction, utility) you get but not every apple makes the same difference. The first apple makes the most difference. Each apple makes less difference. If this were not so then there would be no “diminishing returns”. The price of apples is like an average of the differences that are made by the usual number of apples eaten in a particular period of time, say a week. Now you are painting trucks. Each application of paint makes a difference but not every application of paint makes the same difference. Differences diminish with each application of paint. In the end, the amount of paint actually applied, and the price of paint, is a kind of average of the differences made.

Consider apples and peaches by the pound with, at first, no thought of price. For most people, one pound of peaches makes more difference in satisfaction (utility, benefit) than one pound of apples. Now consider price. If peaches and apples both miraculously cost \$1.35 per pound, we can say peaches make more difference per dollar than apples. How much more difference do peaches make than apples? For reasons that I don't go into, economists don't like to address this question when talking about utility but will address this question if we allow using prices as an approximation of how important a good is.

-Optional section: Prices can allow for estimates of how much difference something makes compared to alternatives, how important something is compared to alternatives. In using prices to make estimates, we have to be careful of some problems in economic theory that you will meet if you study economics but that we don't worry about here.

If one pound of apples usually costs \$1.35 while one pound of peaches usually costs \$2, then peaches make more difference than apples, per pound. The amount of difference is reflected, closely but not exactly, in the ratio of prices. Here the ratio is $200/135$, or $40/27$. Peaches are $40/27$ more effective per pound (make more difference to utility per pound) than apples. Price gives a fairly reliable estimate of how much difference a unit of something makes. This is why prices help consumers and business firms efficiently use their resources.

-Prices measure what difference something makes. The price of a car depends on what difference it makes for a family. The price of a book depends on what difference it makes in your education and your pleasure. The price of a doctor depends on what difference he-she makes in your life and health.

We can use prices to compare roughly differences that different goods make. If a house costs \$300,000 while a car costs \$30,000, then a house makes about ten times as much difference in the life of a family as does a car. If a college education costs about \$100,000, then it makes about as much difference as one-third of a house (I said these measures were only approximations).

-When the price system works well, the ratio “price” per “amount of stuff” for each good works out so that the ratio is about equal for all goods. At \$1.35 per pound for apples and \$2 per pound for peaches,

the value per dollar is about the same for peaches and apples. If you bought \$1 worth of apples and \$1 worth of peaches, you would get about the same utility from each; if you bought \$2 of apples and \$2 of peaches, you would get about the same utility from each; if you bought \$3 of apples and \$3 of peaches, you would get about the same utility from each. \$1 worth of apples is about 11 ounce of apples while \$1 worth of peaches is 8 ounces of peaches, so you get about the same utility from 11 ounces of apples as you do from 8 ounces of peaches; \$2 of apples is about 22 ounces of apples while \$2 of peaches is 16 ounces of peaches; \$3 of apples is about 33 ounces of apples while \$3 of peaches is about 24 ounces of peaches. The price system tells us how much of one good gives about as much utility as how much of any other good. When the price system works well, we tend to get about the same benefit per dollar for most small goods. When the price system works well, most small goods give about the same difference in benefit. This is one way the price system ties the economy into one system and leads to GE. With adjustments, we can say similar things about large goods too but I do not to explain how.

-The price we are willing to pay for a house painter is what difference he-she makes in the additional satisfaction (from adding paint) that we get from our house. The price we are willing to pay for a part-time landscape person depends on what difference he-she makes to the additional satisfaction we get from adding greenery to our house. We pay the neighbor kid not very much to mow the lawn and we pay a professional landscaper a lot. Wages measure the difference that a person makes on a job. More exactly, the typical wages for a particular kind of job measure the additional difference that kind of job makes to the hirer. The hirer can be an individual person (when we pay a dentist or a lawyer) or the hirer can be a business firm (as when Google pays another computer programmer). The typical wages for a new truck driver measure the additional difference that the new truck driver makes in the ability of the firm to make revenue; the new wages measure the added difference in revenue of the driver for the firm. The typical wages for a tenured social science professor measure the added difference in revenue (via fame, donations, grants, research programs, etc.) that the professor makes to the university. The same is true of a typical engineering professor but usually the engineer makes more of a difference and so gets a higher salary.

-People who typically make a big difference typically make a lot of money, such as corporate lawyers. People who don't make much difference typically make little money, such as the bag person at the local super market. Education, natural ability, and effort can change how much difference a person typically makes and so change wages. I go into this topic more in my essays on wages. Think if you can apply this idea to the two kinds of professors (social science versus engineering) and to high-paid athletes. How do athletes make a big difference in revenue to the people who pay them?

-When the demand for a particular skill is high, while the number of people who can do the job (supply) remains the same, wages are high. When the demand for a particular skill is low, while the number of people who can do the job (supply) remains the same, wages are low. When many people can do a job, while demand remains the same, wages are low. When few people can do a job, while demand remains the same, wages are high. If demand increases while supply remains the same, wages increase. If demand decreases while supply remains the same, wages decrease. If supply increases while demand remains the same, wages decrease. If supply decreases while demand remains the same, wages

increase. In between are many interesting situations. These rules should be enough to see into most situations. For example, when many people became lawyers, the wages for beginning lawyers fell, and law firms expected more work for the same salary.

-We want markets to be “free” and “fair”. Above, I defined a free market as one that was free from state intervention and too many restrictions due to social rules. A “fair” market arises when no one buyer or seller can influence price or influence supply much. Together all the buyers and all the sellers make the public price and the supply, but no one of them, or any small group, alone can have much influence on price or supply. Everyone faces the same public prices. There is no cheating, colluding, or coercion. Usually buyers can’t control a market and cannot collude to control it so I leave out those cases. Amazingly, many real markets meet these conditions well enough to be almost fair.

-Ordinarily, there must be at least six sellers in the market for each good (at least six different major auto makers), and no one seller can control more than 25% of the market (not GM, Ford, Toyota, or VW has more than 25% of the market for small cars).

-A free fair market leads to: the same price for everyone (public price); price reflects satisfaction; price reflects cost of resources; price reflects the difference that a person, good, or resource makes; price goes up with scarcity; price goes down with abundance; price goes up with increasing demand; price goes down with decreasing demand; any one buyer can buy all he-she wants of a good at prevailing prices (one person could be one apple or a ton of apples); one seller can sell all he-she wants at public prices (Tommy could sell 100 trucks or 1,000,000 trucks); no particular buyer can dominate the amount and price of a good; no particular seller can dominate the amount and price of a good; people and firms know a fair amount about the prices of all the goods that they care about; it does not cost too much to get information (it is alright if information costs a little as when we look on the Internet for cars for sale); all particular markets clear; and all markets altogether clear.

-Some markets do not meet these conditions well enough, and problems ensue. I can’t go into all the variations. A market that does not meet these conditions is called “structured”. Among the kinds of structured markets are: (1) monopolies, one big dominant seller; (2) oligopolies, a few big dominant sellers who often collude; and (3) “niche” monopoly. Niche monopoly arises when a brand name controls a large part of a market and there are also many small sellers who do not control the rest of the market. Sometimes two big sellers control their own portions of a market. In the portion of the market that it controls, the name brand acts like a monopolist. For example, Coke and Pepsi have strong brand loyalty and they consistently control large portions of the drink market. There are many small soft drink makers but they don’t have nearly as much power as Coke or Pepsi and they don’t do nearly as much in sales. Ford, GM, and Chrysler-Dodge used to control the American car market in this way but not since the American car market has become fairer from foreign car makers entering the market.

-In a structured market, the price is higher than it should be and the quantity of goods is not as much as in a fair market. The sellers that control a structured market make more profit than they would make in a fair market. The sellers can make profit consistently while the firms in a fair market face fluctuation in

profit. Structured markets result in goods and resources being used less than they would be used in a free market. The economy is not as efficient or as large. Structured markets result in the economy not being in general equilibrium so that all particular markets and all markets clear. How far the economy deviates from GE depends on the particulars of market structuring, and measuring the deviation is a matter of contention among economists.

-Annoyingly, few markets in modern capitalism, in the whole world, are free. Nearly all are structured in some ways for some reasons. As a result, the entire economy is distorted away from GE and the entire economy underuses resources, use resources inefficiently, has prices that are too high, has shortages of goods, and does not clear. Not everyone can find work, so there some unemployment. The extent of deviation depends on the particular market and nation. As I said above, I would guess the US suffers about 10% overall distortion. This level is not a lot. The economy can get along well with this amount of distortion except for its effects on employment.

-It is easy to see structuring when one big firm controls a market. I cannot give real examples or I will be sued. It is harder to see that structuring and distortion can happen as the result of many little decisions and little forces coming together. I focus on one case, how the pursuit of security leads to structuring, especially in the job market.

On TV, especially during the summer, I see messages from the certified electrical contractors of Alabama warning people, especially old people, to beware of people claiming to be able to do electrical work but not having certification. The ads point out that most house fires are caused by electrical problems. The problem with all this well-advised safety is that certified electricians cost more and there are not many of them. The same is true of certified air conditioner repair people, dentists, dental hygienists, lawyers, doctors, and teachers. We are willing to pay extra for some security. As a result we get less. If we removed all certification, we would get more people offering services as dentists, lawyers, electricians, air conditioner repairers, and doctors. We would also have more bad experiences. If we removed all certification, would the reduction in price and the increase in people offering services more than make up for the few bad experiences? Are extra security, long waits, and limited choices worth any increase in security? Some economists have argued that we would be better off with less security, lower prices, less waiting, and more options. While that result might be true for the general public, it is not true for the particular people whose houses burn down, teeth fall out, or whose children get sick. In general, over the decades, people in affluent economies have chosen more security and higher prices over lower prices, more options, and less waiting.

It is easy to see this effect in the case of electricians. It is not so easy to see it in the case of many other occupations. Yet the effect is still there. Business firms cannot hire just any applicant off the street, not even for simple jobs such as office clean up. Firms demand education and the right personality, and they demand certification for education and personality. The training and certification take money and time. As a result, almost every job has fewer people in it than would have been in it if the firm had not been fussy, and the job likely pays less. Nearly all job markets are slightly structured, resulting in fewer jobs and less pay than if they were entirely free. In effect, the people who have jobs get security in their

jobs by pushing unemployment and insecurity off onto people who can't get jobs. Secure employment for the majority is bought at the price of some unemployment for a minority.

How much are job markets structured, and what are the effects on total employment and pay? It is not clear, and I have not been able to see for sure from the data I have found. As a guess, in the United States, the overall job market is structured by about 5% to 10%, resulting in chronic unemployment of about 5% to 10% even among people who are willing to work.

-This analysis is the basis for my claim that the United States has chronic (structural) unemployment at a rate of from 5% to 10% even among people who genuinely want to work. This situation is one big basis for bad employment ("crappy jobs") but that topic is best left to its own essay.

-Here, I cannot justify the following assertion or explain it very well, but I do make it, and I can argue my case based on solid economic logic. In an ideal economy, with full employment, operating very close to general equilibrium, most business firms would make no sustained profit. They would make enough revenue to pay employees and to give the owners a salary as managers – they would not fail – but they would not make more than that. They would not make what business people think of as profit. Long term profit tends toward zero.

Firms that pioneered innovations would make profit while the innovation spread through the economy. Firms that supported the pioneers would share in their profits. For example, if electric cars catch on, the Tesla Company likely will make a big profit, and the firms that make its batteries likely will make a lot of money as well. This profit does not mean that all firms make profit. Most firms cannot expect to make sustained profit out of somebody else's innovation.

Likely the biggest source of sustained profit is from structured distorted markets. How much firms can share in market structuring and resulting profit depends on the particular market and on specifics of history.

How firms make profit, and how much they make, tells us much about how the economy as a whole works. It tells us how close the economy is to general equilibrium or how far away. Usually, the higher the rates of expected sustained profits, the farther the economy is from GE. The source and magnitude of profits tells us how much unemployment and bad employment to expect. Generally, the higher the rates of expected sustained profits, the more unemployment and bad employment, although the relation is not direct (linear). In the United States, firms expect to make about 10% profit. This amount of sustained profit is in line with a chronic rate of unemployment of about 5% to 10%.

It is important to know that sustained profit, and its effects on GE and employment, do not mean that business firms and business people cheat. Usually the structuring and sustained profits result from what appear to be normal operations of the market, even desirable effects such as security. Structuring, sustained profits, and bad effects such as unemployment do not result from exploiting workers as in Marxist theory (correct Marxist theory also does not rely cheating but that is an issue that I cannot take

up here). We will be seriously misled if we see these results in terms of deviation and moral fault. We have to see them in terms of how we see the rest of the economy, in terms of general theories such as marginality and structured markets.

-Suppose John buys apples at the market and John also gives to charity. Suppose John avoids the local park at night because of the drug users and John also does not abuse petty cash at his workplace even though he could not possibly get caught. It makes sense to look at John's first actions in each case as a rational strategy to maximize satisfaction but it makes less sense to look at the second actions in those terms. Some people think it is bizarre to look at the second actions in those terms at all, and they insist we have to look at the second actions in moral terms and only moral terms. Morality is not a matter of strategy and so cannot be analyzed in economic terms. Economists know of these issues. Some economists have done good work by re-interpreting seemingly irrational non-strategic action in moral terms. I don't go into the issues more except for two notes below. The point here is not to brush aside all economic analysis of human actions just because of this problem of morality and other seemingly non-strategic actions. Don't throw out the baby with the bathwater.

-First added point: People who like economic justification for capitalism also tend to believe traditional religions. They use economic logic to argue for ending social programs and forcing lazy people back to work. Yet they insist that religion and morality cannot be understood in strategic terms. This duality can get strange. Stephen Colbert use to make fun of them on "The Colbert Report" when he would say "the market has spoken" even on social issues such as guns, but then his character would revert to a fundamentalist religious stance ("cost and benefit don't apply") on issues such as the military. One fun academic school is called "the market place of religions". In it, students of religion explain the choices that people make about which church to go to, which religion to follow, and changes in their church and religion, in the same terms that economists use to explain markets: satisfaction, supply, demand, etc. The model works out surprisingly well. Yet the same right-wing people that support economic analysis applied to cars, TV, or social issues such as abortion, welfare, and nature, hate when economic analysis is applied to religion. They hate "market place of religions" theory.

-Second added point: Can we understand love of spouse, children, siblings, parents, etc. in strategic economic terms? Some economists and biologists say "yes" while most people insist on "no". As with the market place of religions, it turns out that people do act strategically in relations, even the relations that are supposed to be based entirely and only on love. People do not choose spouses at random but manage to fall in love with people who suit them well – just the spouse their parents would have chosen for them; see the teen beach classic movie "Gidget". In fact, parents don't love all their children equally. Siblings don't love all their siblings equally. I don't go into this topic more here but bring it up so you are aware of it and you might look into it.

-We have seen that Jane likes apples better than pears while Jill likes pears better than apples but they both face the same public prices for apples and pears. What if Bill likes apples A LOT, even more than Jane while Bob likes pears A LOT, even more than Jill. Is there any way we can compare the satisfactions (utilities) that Jane, Jill, Bill, and Bob get? If we knew those, maybe we could tell farmers how many

pears and apples to grow so as to give the most overall satisfaction. Economics is contentious on this point but the generally accepted answer is “no”. Economists say there are no valid “inter-subjective measures of utility”. We cannot directly compare the utility that Jane gets from eating an apple with the utility that Bill gets from eating a similar apple. We cannot measure what is in their heads or hearts.

The closest we can come is through public prices. We can see that apples cost \$1.35 per pound while pears cost \$1.65 per pound and guess that people in general like pears more than apples.

With apples and pears nobody cares much and we are content to let the public price system work out differences in personal utility as best it can. That is not always the case. Suppose the city owns some riverside land and has to decide what to do with it. The city can leave it alone as marshland, develop it into a walking park with some marshland zones left intact, or develop it into a sports zone with water sports such as swimming mixed with “land” sports such as soccer. Clearly some people will gain more utility from some uses and less from other uses. We might be able to guess how many people prefer one use to another, as when we hold a referendum on what to do. But does that prove that the most popular use of the land is the best use of the land, the use that would provide the greatest utility? No, it does not. There are a lot of ball fields, but the few people who gain utility from keeping the area semi-wild might gain so much more amount of utility from that use than the greater number gain utility from ball parks, so the total utility from semi-wild is greater than the total utility from ballparks.

This is not an academic exercise. Dodger Stadium in Los Angeles was built by destroying a long-standing Hispanic neighborhood that, apparently, was a happy place for its former residents, and the destruction left them nowhere to go. The City of Los Angeles argued that the total utility gained from the ballpark was much more than the total utility that the residents and all their descendants gained now and in the future. We are killing forests to make money now and are almost certainly destroying far more utility in the future than we gain from the money now. The same is true of the oceans.

Economists are developing methods to deal with these issues but there are no clear-cut methods that I can describe here. The methods are complicated and not always convincing. You should try to find out about these issues on your own in the future.

-At least since the 1950s, politicians and parents have suggested giving lunch to all children school, for various good reasons that I don't repeat here. When I was in grade school, either we did get lunch for free or it cost a quarter. Parents and politicians knew that lunch had to be paid for from taxes but some advocates called it the “free lunch”. In the 1950s, that was a good term.

Later the term was used to deride any benefit given by the state without cost to recipients and for which advocates did not think through where funds would come from to pay for the benefit. Critics of social programs said that advocates of social programs did not think through in terms of cost and benefit and in terms of the ability of tax payers in general to afford the program. Advocates did not think through why state funds should be spent on this use rather than on other uses. Critics of social programs said “there is no free lunch”.

We usually think of the term for social programs such as welfare but the term applies to any good (or service) in any economic system. It applies to guns, soldiers, war planes, ships, low tax commerce zones, business parks, highways, byways, dams, reservoirs, state parks, regulation, anti-regulation, espionage, tax breaks, etc. Resources are limited, so there is no free anything. All goods have to be paid for. When we get some goods, we have to give up others. When we have more of one good, we must have less of others. Critics of all kinds of spending should say “there is no free lunch” and apply it to all programs.

This limit on resources and spending applies to individuals, families, groups, business firms, and all levels of government. Just because the state gives something does not mean the thing is free. Even the state has to pay. Even the state has to decide for one good at the expense of other goods, or for getting more of one good though getting less of others. When the state goes into deficit spending, it is still bound by this limit over the long run.

Rightists use the term to make fun of lefties but, at least since President Reagan, rightists have abused the “free lunch” at least as much as lefties. We have spent on the military, tax breaks for rich people, tax breaks for business firms, and “pork” projects as much as on social programs such as welfare. We have gone into debt for them. We have not considered how to pay for them. This is as much a “free lunch” as a real free school lunch for poor children, as far less well thought-out than were free lunch programs of the 1950s and 1960s.

-I do not talk about issues such as resource us, pollution, conservation, money, etc. here.