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Economic Literacy: An Introduction

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Economic Literacy

Chapter One: Introduction

1. Expect the Unexpected

We take classes to learn things we didn't know before. Otherwise, it's a waste of time…and money. To learn anything, means starting out with an **open mind**. Having an open mind doesn't mean cancelling our previous beliefs and turning our brains into blank slates. It means that when we read or hear about something we THOUGHT we knew, but now we're being told is different, that we 'suspend disbelief.' We give it a chance and see what we think, once we understand what is being said.

Keeping an open mind is one of the hardest steps to learning anything, but it is particularly hard in an area like economics, because there are so many things we THINK we know already.

You should not owe money to people.
The richest country in the world should not have such high unemployment.
Inflation is bad.
It is dangerous for governments to print a lot of money.

Gold is ‘safe.’

Let’s think about this list of common beliefs for a moment. If you never read a newspaper or listened to someone running for office, some of them might be pretty new to you. But others, like not being in debt, you may have heard from someone in your family. Regardless of how—or whether—you’ve heard these ideas before, there’s something else they have in common. They use words like ‘should’ or ‘bad’ or ‘dangerous’ or ‘safe’. Ask yourself, what do such words really mean? Do they have the same meaning for each person, in all circumstances?

Take ‘dangerous.’ We might all agree that running into traffic is dangerous—you could get injured. But if someone said to you, ‘eating butter is dangerous,’ you might argue that too much butter might be harmful, but you wouldn’t want to call butter itself, dangerous.

2. Positive Versus Normative Statements

But let’s say we agreed on what all our terms meant. Can we then say these statements are true or false? Let’s take the first statement, that you shouldn’t owe people money. Is it true or false? Could you prove it?

Or take the second statement: The richest country in the world should not have such high unemployment. Could you ever prove that a country should not have so many unemployed people?

No, you cannot prove these statements true or false, even if you agree with them. These statements are about what you feel. They are value judgments, what we call **normative** statements

(your 'norms' are your values). Compare that second statement about how much unemployment we 'should' have, with this:

The unemployment rate in America is 7%.

Could you prove this statement true or false? Well, you might want to clarify the specifics, but you could definitely look up America's unemployment rate ad find out if it were 7% or not. When we can prove a statement true or false, it's called a **positive** statement.
When we identify a statement as normative or positive, it has nothing to do with whether it's saying something good or bad, it simply refers to whether it is an expression of our norms/values, or a provable/disprovable statement. An unemployment rate of 7% may be very bad, but the statement itself is positive, i.e., provable.

In economics, we work with positive and normative statements all the time. Typically, we might start with a normative statement:
'Unemployment is too high'.

Then, in order to DO something about it, we'd search for a positive statement, like:
'Youth unemployment is twice as high as adult unemployment.'

If we discovered that this positive statement were true, then we could begin to design an economic policy to address youth unemployment.

Just because we are distinguishing between normative and positive statements, doesn't mean one kind is better than the other. Many people think that when you are doing science, you have to leave the normative statements outside the door, and

just work with positive propositions, things you can prove true or false. In economics, however, we would not have much to offer the world if we abandoned our norms. Instead, we stay very clear about what's normative and what's positive and work with them both to find something meaningful to say.

Chapter Two: Basic Economic Principles

1. Economics is the Study of the Allocation of Scarce Resources Among Competing Ends

Every discipline you might study—psychology, history, whatever--has an organizing principle, a characteristic point of view on the world. Sociologists focus on community. Political scientists emphasize consensus. Well, economists have a keyword, too: **scarcity**. Specifically, our resources in this world are scarce, limited. Economics is the science of using our scarce resources in the best possible way. For example, we are all aware that supplies of oil are limited in the world. This limited or scarce resource can be used in a variety of ways—to fuel cars, heat homes, or run factories. It's the job of economics to figure out how to use this scarce resource efficiently, which means having the correct amount allocated to the correct use.

This sounds very sensible, right? After all, we do not live in paradise, some Garden of Eden where we just pluck food from trees when we are hungry, or lay down on soft grass when we are tired. Food and shelter—like oil and minerals and other resources-- are limited, scarce. Economic analysis shows how these scarce resources can be used in the best possible way.

This way of looking at the world, as a scarcity situation, seems pretty reasonable, until you think about the REAL basics of life, air and water. Is air scarce? When was the last time someone told you to wait in line for your next breath? Is water scarce? Didn't you just take a drink from that water fountain down the hallway? If these two essential-for-human-life resources are so limitless that we don't even think before we consume them, how can economists claim that scarcity is the organizing principle of the world?

The answer is probably obvious to any student who comes from a village in the developing world or from a neighborhood around a major bus depot. The UN estimates that some 780 million people in the world do not have access to clean water. It is estimated that some 11 million American children live in areas with such high air pollution that they are at significant health risk from asthma and worse diseases. So, if we go back to that scarcity question and redefine our resources as 'clean air' and 'drinkable water,' we CAN agree that these, too, are scarce—and vital—resources. People in some parts of the world spend most of their working day going to a place with clean water and bringing it back home. Battles over access to diverted rivers cause wars between countries, not to mention legal battles in the American southwest. In America, disputes over where to build transportation depots or garbage transfer stations (both of which create enormous air quality problems) have fueled whole political campaigns. Clean air is a scarce and vital resource. Clean water is a scarce and vital resource. And yes, economics has a lot to say about how they are allocated in this world.

2. **People Prefer More to Less**

If you asked a random person on the street what economists believe, they might say something like, "Economists think everything comes down to money, that people are greedy."

Now, that's an interesting pair of thoughts. The first thought is that economists believe money is at the core of most issues, a characterization of how economists analyze things. The second part, about greed, is more of a statement about human nature.

So, do economists believe that 'everything comes down to money'? Yes and no. Economists would say that there are many things in this world that are NOT about money—your personal faith, your love for certain people or things, your kindness, your anger, etc. Should you become a Buddhist or a Catholic? Are you really in love with that person you just met? These are not economic matters, so economists have little to offer. Perhaps a theologian or a psychologist might have insights on these issues, but the economist has nothing to offer. On the other hand, there are many issues in this world that CAN be analyzed by economists—the relative advantages of different jobs, cost-efficient ways to handle different types of pollution, the value of patent protection, to name a few. If there is an identifiable economic motive in an issue, economic analysis has a lot to offer.

So, economists do not believe that EVERYTHING in this world boils down to money, but for matters that DO involve economic goods, they certainly have a lot of analysis to offer.

Do economists believe that people are basically greedy? When Gordon Gekko said "Greed… is good" in the film, *Wall Street*, was he speaking for the economics profession? Ah, but greed is such a nasty little word, isn't it?

Economists like to put it differently. We say that '**people prefer more to less.**' If someone offered you $10 in one hand and $20 in the other hand, you'd take the $20, right? As obvious as it might seem, that a person would always prefer having more to having less, this IS one of the basic principles of economics.

But as obvious as this principle seems, it is not *entirely* true. There are people in this world who prefer to have less. Certain monks and nuns or other religious people willingly take oaths of poverty, swearing to give up worldly goods. *They* prefer less to more. Even ordinary people may prefer less to more. Have you ever met one of those people who say they're trying to 'leave a smaller footprint' on earth? They want to consume less, not more. They feel that the less they use up during their lifetimes, the more is left for future generations.

You may think that religious folks and ecologists are pretty minor exceptions to the rule, but our next principle has some serious problems.

3**. People act rationally to maximize their satisfaction, given their resources.**

Does this even need to be said? And wait—what does rational *mean* in this context? When we say rational here, we are saying that people act in a deliberate, systematic way to achieve their objectives. In other words, if they are hungry, they don't just flip a coin and see if lunch will be on the table, they go the fridge and fix a sandwich, or get on the phone and call for some take-out.

Indeed, they will decide, given their resources (money, ingredients on hand, their skills) whether preparing the food themselves or calling a restaurant would maximize their satisfaction or happiness. **Rational people buy the goods or services that maximize their happiness, given the resources at their disposal.**

But is this true? Do we have a way to prove or disprove it? In the language we used previously, is this proposition normative or positive? Let's try some examples. If you buy some music that I don't like at all, I have no problem accepting that you bought that dreadful noise because it maximized *your* satisfaction. If you used your scarce resources to buy something that actually harmed you, like cigarettes, I might still agree that you were maximizing your satisfaction, given your resources. Perhaps your 'given resources' did not include the information that this was a harmful product. Or, more likely, satisfying your addiction maximized your present satisfaction, which was more valuable to you than your future satisfaction from prolonging your lifespan.

So we accept that incomplete information or different present-versus-future evaluations might make one person's rational decision look irrational to someone else. But the economist has a stronger way to defend the presumption of rational, satisfaction-maximizing behavior. Instead of trying to evaluate your tastes and how well you are shopping to satisfy your tastes, we slip on a metaphorical blindfold and turn-the-tables on you! We say that *if* you bought that music or that meal or that pack of cigarettes, it was because it gave you more satisfaction than any other use of your resources. The technical term for this is '**revealed preference**.' By making this purchase, you revealed your preference for this item. After all, no one put a gun to your head and forced you to make this

purchase, so if you bought it, it must be because it gave you more pleasure than any alternative purchase. In economics, we use this kind of after-the-fact reasoning a lot, especially when we examine the benefits of free world trade.

While revealed preference solves a lot of problems with this rationality principle, it does not solve *all* of them. In recent years, a new field of 'behavioral economics' has been developing, focused on field-testing our economic behavior with actual experiments.
For example, if we pass a table with a bowl labeled 'free candy'—how many would we take? If the same bowl were labeled 'candy--$1 each'—would we buy more or less candies than we took when they were free? From the rationality discussion we just had, you might predict that we would take more of the free candy than the $1 candy, since the $1 candy uses up our scarce resources.

Not so! When researchers have tried different versions of this experiment, they have found that we act very differently—perhaps irrationally-- in response to the word 'free.' In many experiments people took fewer candies when they were free, and bought more when they were actually paying. Maybe they were embarrassed to take too many free candies. Maybe the whole set-up encouraged them to feel considerate of others.

In other experiments, people preferred a higher-priced version of a medication to a cheaper one. They said they believed the higher price tag indicated that it was better, even though it was identical. Sometimes, when a series of purchase options are set out (buy a 1-year print subscription for $20, 2-years print and digital for $45, or 5-years of both for $90) we tend to pick the middle option, simply because it is positioned in the middle. There is nothing rational about always choosing the

middle option, but it's been proven that we often decide that way.

Here's another of our irrational decision-making habits: a company advertises an item—an elliptical exercise machine, for example—by first telling us it retails for $899. Then they tell us that *they're* selling this machine for only $299! If we had no idea what such machines normally cost, and they just presented us with a $299 price-tag, we might have ignored the ad altogether, thinking that $299 was a lot to pay for a machine we would never use. But when we are given information on what something *might* cost, before being shown our 'special' price, that earlier price quote *anchors* our price expectations. Suddenly, it looks like a bargain!

What these behavioral economists have found, is that we are more **irrational** in our economic decision-making than economists have assumed. This is not big news to the folks in marketing—they've been researching our irrationality for a long time. But it's only recently that economists are exploring the impact of irrationality on conventional economic analysis.

4. Rational Economic Decisions are Made at the Margin.

The margin is not important in many disciplines, but it is key to decision-making in economics. The idea here is something like how you act at a restaurant, when you finish your main course and the waiter asks if you'd like to order dessert. After you've eaten a couple of courses, you're probably full; dessert would be a little extra, a marginal choice. When it's final exam time, we make a number of marginal decisions. We don't decide to spend zero time studying for our economics exam and 100% of our time studying for the sociology exam. No, what we're

usually deciding is how to spend the extra hour we have, that marginal hour. Should we study a little more economics or a little more sociology? If we're trying to lose weight, we don't decide never to eat food again. We decide which marginal foods—late-night snacks, desserts, carbs—we can give up.

We use the same logic when we analyze market behavior in economics. A market price indicates how much the marginal buyer is willing to pay for an item, and the amount the marginal seller is willing to sell this good for. The economist's marginal approach is key to understanding how the economist explains the famous diamond-water paradox.

Here's the paradox. Water is vital to human life. According to the famous 'rule of threes,' you can survive three minutes without air, three days without water, and three weeks without food. Diamonds, on the other hand, while they are terribly pretty and even industrially useful, are not essential to human life. You can survive a whole lifetime without owning a single diamond. But water, which is totally essential to human survival, may be totally free at the water fountain down the hall, or sold fairly cheaply at most stores. Many cities have laws that require restaurants to offer customers free tap water with their meals. Diamonds, on the other hand, are very expensive. Why is water cheap but diamonds costly?

There are many sensible answers to this question. You might point out that it's very expensive to mine and to process diamonds. You might want argue that diamonds, like champagne and caviar, are luxury goods, so they *ought* to be expensive. And what makes an item a luxury good? Perhaps it is more tasty than other foods, like lobster or caviar, or more alluring than other jewelry, like diamonds? But perhaps it goes back to that initial conversation we had, about scarcity. One

might argue that daisies and orchids are equally beautiful to different people, but orchids are more expensive because they are more rare, more scarce.

Now, if we add marginal analysis to the scarcity principle, we may have an answer to the diamonds-water paradox. If people asked me how much one extra unit of water was worth to me, I'd tell them a price close to zero. I am already well-hydrated. An extra unit of water—a marginal unit—is worth very little to me. How much is an extra unit of diamonds worth to me? Since I own no diamonds, an additional unit—a nice pair of earrings—would be quite valuable to me. If I had bags full of diamonds, that extra pair of earrings might also be worth very little. Likewise, if you were out in the desert and had NO water at all, and an economist came up to you and offered you a bottle of water or a pair of diamond earrings, you'd definitely take the bottle of water. This shows you the power of marginal analysis: *at the margin*, an extra unit of water might very well be less valuable than an extra unit of diamonds. It all depends on how many units you already have.

In our daily lives, we rarely find ourselves having to put a value on an extra sip of water. But marginal pricing surrounds us. When we get on an airplane, we know that our fellow passengers have all paid different prices for their tickets. Much of the difference is due to marginal pricing. Passengers who purchased seats two-weeks in advance will often pay less than last-minute ticket-buyers—airlines figure their 'willingness to pay' must be greater, as they have fewer options once they are at the airport. On the other hand, empty seats mean lost revenue to airlines, so they may institute cheaper pricing for 'stand-by' customers, people who have made it clear that they are indifferent to when they leave. Not all decisions are made

at the margin—but a surprising number *are*, once you understand the principle.

5. Economic Incentives Can Alter Our Behavior

An incentive is anything that encourages us to do—or not do—something. Biologists believe that things that help the organism survive—food, warmth, sex—are important behavioral incentives. Sociologists have their own lists of key incentives—need for companionship, respect, etc. And so economists focus on those key incentives that cause us to act in different ways, the primary one being money. If an item becomes cheaper, we have an incentive to buy more. If it becomes more expensive, we buy less. This is one reason why policy-makers often put a tax on something they want to discourage us from buying, like cigarettes. When 'bad' things are taxed, they become more expensive and we buy less of them.

Sometimes, economic incentives are added to a situation where other types of incentives have failed to stimulate us to action. For instance, we all know that it is great to donate blood to a blood drive. We are told all the time about the lives we can save doing this good deed. But sometimes blood donation organizations, like the Red Cross, run low on supplies. Since the Red Cross can not actually pay for blood used in transfusions, local groups sponsoring blood drives may occasionally offer another type of economic incentive, like a free Starbuck's card to every blood donor.

Economists are not arguing that economic incentives are the *only* incentives that will move people to act. But we believe that money can be a powerful incentive in many situations.

6. Ceteris Paribus (pronounced kā'tə-rĭs pâr'ə-bəs)

This is a Latin phrase that translates roughly to "with all other factors remaining the same," or "holding other things constant." Economists and other social scientists rely on this concept when analyzing the impact of some change on a situation. We might be analyzing the impact of increasing the tax on beer, ceteris paribus, holding other things constant. What other things? Perhaps we think that wine is a good substitute for beer. When beer is taxed more, it becomes more expensive. Some people would switch to buying wine, so—ceteris paribus—beer sales would decline with a tax increase. But if all other things were *not* held constant—let's say the tax on wine was *also* increased—then we wouldn't expect beer sales to decline after all.

We don't really believe that there is any way in the world that when one thing is changed, that nothing else is affected. We know that our decisions on most things are interconnected, and that nothing in the real world ever "stays the same," or "stays constant." Yet, when we work with economic models, we find it useful to imagine that nothing else is changing but the one thing we are trying to study. Once we see what that isolated change might look like, we *then* go on to analyze how realistic our ceteris paribus assumption has been. Have we ignored something huge, like the probability that another type of liquor is also being taxed? Or have we ignored something irrelevant, like changes in the price of tea?

If our ceteris paribus assumption means we have ignored something important, we don't just throw up our hands and give up! No, we just take the model a step further, by considering the impact of this other change on our original

model. In general, our model will be stronger—more robust, more useful—the more we have considered and reconsidered the realism of our ceteris paribus assumptions.

Conclusion

Any economist might add or subtract various principles to this list. Still, we have enough here to get started, so let's put them to work.