

Economics for the Citizen

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Economics for the Citizen – Part I

The Freeman: Ideas on Liberty, *May 2005*

Last fall semester, I didn't teach for the first time in 37 years. No, I haven't retired. It was my semester-off reward for two terms as department chairman at George Mason University. A break is well deserved after a chairmanship—a job not unlike that of herding cats.

During fall semesters, I typically teach our first-year Ph.D. microeconomics theory course. Out of a love for teaching, I decided to not completely take off but deliver a few lectures on basic economic principles to readers. We'll name the series "Economics for the Citizen."

The first lesson in economic theory is that we live in a world of scarcity. Scarcity is a situation whereby human wants exceed the means to satisfy those wants. Human wants are assumed to be limitless, or at least they don't frequently reveal their bounds. People always want more of something, be it: more cars, more food, more love, more happiness, more peace, more health care, more clean air or more charity. Our ability and resources to satisfy all human wants are indeed limited. There's only a finite amount of: land, iron, workers and years in a lifetime.

Scarcity produces several economic problems: What's to be produced, who's going to get it, how's it to be produced, and when is it to be produced? For example, many Americans, and foreigners too, would love to have a home or vacation home along the thousand miles of California, Oregon and Washington coastline. Shipping companies would like to use some of it as ports. The U.S. Defense Department would like to use it for military installations. There's simply not enough coastline to meet all the competing wants and uses. That means there's conflict over coastline ownership and its uses. If human wants were not unlimited, or the resources to satisfy those wants were limitless, there would be no economic problem and hence conflict.

Whenever there is conflict, there must be a means to resolve it. There are several methods of conflict resolution. First, there's the

market mechanism. In our land use example, the highest bidder would be the one who owns the land and decides how it will be used. Then, there's government fiat, where the government dictates who has rights to use the land for what purpose. Gifts might be the way where an owner arbitrarily chooses a recipient. Finally, violence is a way to resolve the question of who has the use rights to the coastline—let people get weapons and physically fight it out.

At this juncture, some might piously say, "Violence is no way to resolve conflict!" The heck it isn't. The decision of who had the right to use most of the Earth's surface was settled through violence (wars). Who has the right to the income I earn is partially settled through the threats of violence where our government, through the tax code, decides that farmers, businesses and poor people have rights to my income. In fact, violence is such an effective means of resolving conflict that most governments want a monopoly on its use.

Which is the best method to resolve conflict arising out the questions of what's to be produced, how and when it's produced, and who's going to get it? Is it the market mechanism, government fiat, gifts or violence? The answer is that economic theory can't answer normative questions. Normative questions are those that deal with what is better or worse. No theory can answer better or worse questions. Try asking a physics teacher which is the better or worse state: a solid, gas, liquid or plasma state. He'll probably look at you as if you're crazy; it's a nonsense question. On the other hand, if you ask your physics teacher which is the cheapest state for pounding a nail into a board, he'd probably answer that it's the solid state. It's the same with economic theory. That is, if you asked most economists which method of conflict resolution produces the greater overall wealth, they'd probably answer that the market mechanism does.

The bottom line is that economic theory is objective or non-normative and cannot make value judgments. Economic theory deals with what was, what is, and what will be. By contrast economic policy questions are normative or subjective and do make value judgments—questions such as: Should we fight unemployment or inflation, should we spend more money on education, and should the capital gains tax be 15 percent or 20 percent? Someone once said that if we took all

the economists in the world, and lined them up end-to-end, they would never reach a single conclusion. Economists are just like anyone else and as such have opinions and values. Thus, much of the disagreement among economists has to do with value judgments. By contrast, there's widespread agreement in the area of core theory.

Keeping the distinction between non-normative and normative in mind is very important, so let me elaborate a bit. Take the statement: The dimensions of this room are 30 feet by 40 feet. That's an objective statement. Why? If there's any disagreement, there are empirical facts and commonly agreed to standards to which we can appeal to settle the disagreement, namely getting out a measuring instrument. Compare that statement to: The dimensions of this room should be 20 feet by 80 feet.

Say another person disagrees and argues that it should be 50 feet by 50 feet. There are no facts and commonly agreed to standards to resolve such disagreement. Similarly, there are no facts and commonly agreed to standards to which we can appeal to resolve a disagreement over whether the capital gains tax should be 15 percent or 20 percent, or whether it's more important to fight inflation or unemployment.

The importance of knowing whether a statement is non-normative or normative is that, in the former, there are facts to settle any dispute, but in the latter, there are none. It's just a matter of opinion, and one person's opinion is just as good as another. A good clue to telling whether a statement is normative is whether it contains the words should and ought.

At the beginning of each semester, I tell students that my economic theory course will deal with positive, non-normative economic theory. I also tell them that if they hear me making a normative statement without first saying, "In my opinion," they are to raise their hands and say, "Professor Williams, we didn't take this class to be indoctrinated with your personal opinions passed off as economic theory; that's academic dishonesty." I also tell them that as soon as they hear me say, "In my opinion," they can stop taking notes because my opinion is irrelevant to the subject of the class—economic theory.

I conclude this part of my first lecture by telling the students that

by no means do I suggest that they purge their vocabulary of normative or subjective statements. Such statements are useful tools for tricking people but in the process one needn't trick himself. You tell your father that you absolutely need a cell phone and he should buy you one. There's no evidence whatsoever that you need a cell phone. After all, George Washington managed to lead our nation to defeat Great Britain, the mightiest nation on Earth at the time, without owning a cell phone.

I personally believe that economics is fun and valuable. More than anything else, economics is a way of thinking. People who say they found economics a nightmare in college just didn't have a good teacher-professor. I became a good teacher-professor as a result of tenacious mentors during my graduate study at UCLA. Professor Armen Alchian, a very distinguished economist, used to give me a hard time in class. But one day, we were having a friendly chat during our department's weekly faculty/graduate student coffee hour, and he said, "Williams, the true test of whether someone understands his subject is whether he can explain it to someone who doesn't know a darn thing about it." That's a challenge I love: Making economics fun and understandable.

The next in the series Economics for the Citizen discussion will be a bit more interesting. We'll talk about what kinds of behavior can be called economic behavior.

Economics for the Citizen – Part II

The Freeman: Ideas on Liberty, *September 2005*

There are four classes of behavior that can be called economic behavior. They are: production, consumption, exchange and specialization. Production is any behavior that creates utility, that is, raises the want satisfying capacity of something. When a mill smelts iron ore, it raises the want satisfying capacity of the material by changing its form. The metal's want satisfying capacity is raised further when it's made into steel and the steel into rails, girders and the like. Production also includes changing the spatial characteristics of a good. Navel oranges have no want satisfying capacity for Philadelphians, if the oranges are in California. The person sometimes called the middleman or wholesaler changes the spatial characteristics of the oranges by moving them from California to Philadelphia thereby raising their want satisfying capacity to Philadelphians.

Consumption is easy. Consumption is simply the reduction of utility, the want satisfying capacity of something. When I eat a hamburger, I reduce its want satisfying capacity. When I drive my car, I reduce its capacity to satisfy wants. By the way, if production is greater than consumption the result is called saving. If it's the opposite, we call it dissaving.

Exchange is a bit more complicated; misunderstanding it leads to considerable confusion and mischief. The essence of exchange is the transfer of property rights. Here's the essence of what happens when I buy a gallon of milk from my grocer. I tell him that I hold property rights to these three dollars and he holds property rights to the gallon of milk. Then I offer: If you transfer your property rights to that gallon of milk, I will transfer my property rights to these three dollars.

Whenever there's voluntary exchange the only clear conclusion that a third party can reach is that both parties, in their opinion, not yours or mine, perceived themselves as better off as a result of the exchange; otherwise, they wouldn't have exchanged. I was free to keep my three dollars and the grocer was free to keep his milk.

If you think it's obvious that both parties benefit from voluntary exchange, then why do we hear pronouncements such as worker exploitation? Say you offer me a wage of \$2 an hour. I'm free to either accept or reject your offer. So what can be concluded if I'm seen working for you at \$2 an hour? One clear conclusion is that I must have seen myself as being better off by taking your offer than my next best alternative. I must have perceived that all other alternatives were less valuable or else why would I have accepted the \$2 offer? How appropriate is it to say that you're exploiting me when you've given me my best offer? Rather than using the term exploitation, you might say you wish I had more desirable alternatives.

While people might characterize \$2 an hour as exploitation, they wouldn't say the same about \$50 an hour. Therefore, for the most part, when people use the term exploitation in reference to voluntary exchange, they simply disagree with the price. If we equate price disagreement with exploitation, then exploitation is rife. For example, I not only disagree with my salary, I also disagree with the prices of Gulfstream private jets.

By no means do I suggest that one purge his vocabulary of the term exploitation. It's an emotionally valuable term to use to trick others but in the process of tricking others one need not trick himself. I'm reminded of charges of exploitation Mrs. Williams used to make early on in our 45-year marriage. She'd charge, "Walter, you're using me!" I'd respond by saying, "Honey, sure I'm using you. If I had no use for you, I wouldn't have married you in the first place." How many of us would marry a person for whom we had no use? As a matter of fact, the problem of the lonely hearts among us is that they can't find someone to use them.

Specialization is said to occur when people produce more of a commodity than they consume or plan to consume. Specialization can occur on an individual, regional or national basis. Here are examples of each.

Detroit assembly line workers produce more crankshafts than they consume or plan to consume. Californian citrus growers produce more navel oranges than they consume or plan to consume. Brazilian

coffee growers produce more coffee than they consume or plan to consume.

There are requirements for specialization. There must be an unequal endowment of resources and trade opportunities. The unequal endowment part means that an individual has the skills, a region or nation has a resource endowment of land, labor, capital and entrepreneurial talent whereby it can produce certain things more cheaply than can another individual, region or nation. For example, while it's possible to grow wheat and corn in Japan, it would be an expensive proposition. Why?

Because crops like wheat and corn use a lot of land and Japan is relatively land poor. That means Japanese land is relatively expensive. By contrast the U.S. is land rich hence grain production is relatively cheap. Therefore, it makes sense for the U.S. to take advantage of what it can do more cheaply—specialize in grain production, and Japan specialize in what it might produce more cheaply—say camera lenses.

In order for specialization to occur there must be trade opportunities. It wouldn't make sense for U.S. farmers to produce more grain than they consume or plan to consume if they couldn't trade it. Neither would it make sense for Japanese producers to produce more camera lenses than they consume or plan to consume if they couldn't trade. That's why trade opportunities are necessary in order for people to take advantage of wealth-enhancing specialization.

Imagine that the Japanese government imposed trade restrictions on U.S. grain imports. Japanese farmers could charge monopoly prices and enjoy higher income and Japanese consumers would pay higher prices. Would you deem it an intelligent response for the U.S. government to retaliate against Japan's trade restrictions by imposing trade restrictions on Japanese camera lenses allowing American lens producers to charge monopoly prices and American consumers suffer higher prices? Put another way, is it a smart response for the U.S. government to harm American consumers because Japan harmed its consumers?

Specialization and trade make people dependent upon one another for their everyday wants. How many of us make our own eye-

glasses, cars, houses, clothing and food? We get all those goods by specializing in what we do well, get paid, and trade with others for what they do well. Through specialization and trade, we might call it “outsourcing,” we enjoy goods as if we actually produced them. In fact, specialization is an alternative method of production. By the way, anyone calling for independence individually, regionally or nationally is asking us to be poorer. It makes no difference whether they’re calling for energy independence, clothing independence or coffee independence.

Let’s look at just a few misleading statements about international trade. The U.S. trades with Japan. Does anyone really think that it is the U.S. Congress that trades with their counterparts in the Japanese Diet? It’s really individual Americans trading with individual Japanese through intermediaries. What about fair trade? If you purchase a Japanese-made camera lens on voluntary and mutually agreeable terms, you’d probably conclude that it was a fair trade or else you would have kept your money. An American camera lens producer might call that trade unfair because he couldn’t sell you his lens at a higher price. Economic theory can’t answer a subjective question like whether it would be fairer if you had to pay a higher price; it can say that a higher price would result in your having fewer dollars for other things.

The next installment of this series will focus on one of the most important economic concepts—costs.

Economics for the Citizen – Part III

The Freeman: Ideas on Liberty, *December 2005*

Someone might have made you a gift of Ideas on Liberty. Does that mean reading this article is free? The answer is a big fat no. If you weren't reading the article, you might have watched television, talked to your wife, or worked on your homework. The costs of having or doing anything is what had to be sacrificed. While reading this article might have a zero price, if it was a gift, it most assuredly doesn't have a zero cost.

To reinforce the idea that price is not the full measure of cost, imagine that you live in St. Louis. The barber who cuts your hair charges \$20. Suppose I told you that a barber in Charleston, S.C. would charge you \$5 for an identical haircut, would you consider the Charleston haircut cheaper? While it has a lower price, it has a much greater cost. You'd have to sacrifice much more in terms of time, travel and other expenses in order to get the Charleston haircut.

People often erroneously think of costs as only material things but that which is sacrificed when a particular choice is made can include clean air, leisure, morality, tranquility, domestic bliss, safety or any other thing of value. For example, a possible cost of a night out with the boys might be the sacrifice of domestic bliss.

Costs affect our choices in many ways and for the purposes of this discussion we're going to assume that all of the costs associated with a given choice are borne by the chooser.

Just about the most important generalization that we can make about human behavior is that the higher the cost of a particular choice the less of it will be chosen and the lower the cost the more of it will be chosen. This generalization underlies the law of demand. For simplicity let's assume price measures cost while we hold everything else influencing choice constant. The law of demand can be expressed several ways: the lower the price of something, the more will be taken; and the opposite is true the higher price. We can also say, there exists a price whereby one can be induced to take more or

less of something. Finally, there's an inverse (reverse) relationship between the price of a good and the quantity demanded.

Why do people behave this way? The answer, in a word or two is that people try to be as happy as they can. For example, if, when the price of oil rises, people simply ignored the price increase, they'd have less to spend on other things and be less happy. If they sought substitutes for the higher priced oil, they'd have more money left over and they'd be happier. That's why higher oil prices give people incentive to purchase more insulation, buy better windows, wear sweaters and maybe move to a warmer climate. These choices, and many more, are substitutes for heating oil allowing you to use less oil.

When people say a certain amount of one thing or other is an absolute must, that's like saying the law of demand doesn't exist and there are no substitutes. That's untrue—consider a diabetic. Can he do without 50 units of insulin a day? The law of demand says that at some price, say at a \$1,000 a unit, he can. There's always at least one substitute for any good and that's doing without the good all together. In the diabetic's case no insulin. While going without insulin has unpleasant consequences, it's a likely substitute at \$1,000 a unit. You say, "Williams, that kind of economic analysis is cruel!" It's no more cruel than the law of gravity that predicts that if you jump off a skyscraper you're going to die. Both outcomes are unattractive but it's reality. Indeed, tragically millions of our fellow men around the globe are forced to endure the unpleasant substitute for insulin.

There's a complexity to the law of demand that states: The lower price the more people will take of something and the higher the price less will be taken. It's crucial to recognize that it's relative prices that determine choices not absolute prices. Relative price is one price in terms of another price. Here's an example; actually it's a trick I pull on freshman students. Suppose your company offered to double your salary if you'd relocate to their Fairbanks, Alaska office. Would you consider it a good deal and accept the offer? Some students thoughtlessly answer yes. Then I ask what if upon arrival you find out that rents are more than double what you're paying now and the prices of food, clothing, gasoline and other items are three and four times more

expensive. The end result is that while your absolute salary has doubled, your salary, relative to other prices, has fallen.

A bit trickier example of how it's relative prices, not absolute prices, that influence behavior comes with the observation that married couples, with young children who can't be left alone, tend to choose more expensive dates than married couples without children. The couple's income and tastes have little to do with their decision; it's relative prices. Keeping the numbers small, say an expensive date, dinner and concert, has a \$50 price tag and a cheap date, a movie, \$20. The choice of the \$50 dinner and concert date requires that the married couple without children sacrifice two and a half movies that they could have otherwise enjoyed.

The married couple with children must pay a babysitter \$10 whether they go on the expensive or cheap date. With the cost of the babysitter figured in, the dinner and concert will cost them \$60 and the movie \$30. In choosing the dinner and concert date, they sacrifice only two movies. The dinner and concert date is relatively cheaper for the married couple with children since they sacrifice only two movies compared to the married couple with children's two and a half. Since it's cheaper we can expect to observe married couples with children to take more expensive dates when they go out. It doesn't take economic analysis to come up with this. A husband might suggest, "Honey, let's hire a babysitter and take in a movie." The wife explains, "That doesn't make sense. Since we have to pay \$10 for a babysitter, whether we go on a cheap or expensive date, why not get our money's worth and take in a dinner and concert!"

How about another example of relative prices? Suppose today's coffee price is \$1 a pound and you typically purchase two pounds per week. You hear news that a freeze in Brazil destroyed much of its coffee crop and coffee prices are expected to soon rise. What would you do and why? I'm guessing you'd make larger coffee purchases now, but why? The average person would answer, to save money. That's an okay answer but it doesn't tell the whole story. Once again it's the law of demand working. If coffee prices are expected to rise next week, that means coffee prices this week have fallen relative to those next week and the law of demand says that when a price of a

good falls people will take a larger quantity. It works in reverse as well. If coffee prices are expected to fall next week, you'd buy less coffee this week. Why? Coffee prices have risen this week relative to next week.

You might be tempted to ho-hum this coffee analysis as oversimplification but it is the basic principle underlying the complexities of futures markets such as the Chicago Mercantile Exchange where people, as speculators, become rich, sometimes poorer, guessing about the future prices of commodities.

Our next lecture will see what the law of demand says about discrimination and other choices we make.

Economics for the Citizen – Part IV

The Freeman: Ideas on Liberty, *April 2006*

There's a reggae song that advises "If you want to be happy for the rest of your life, never make a pretty woman your wife." Mechanics have been accused of charging women higher prices for emergency road repairs. Airlines charge business travelers higher prices than tourists. Car rental companies and hotels often charge cheaper rates on weekends.

Transportation companies often give senior citizen and student discounts. Prostitutes charge servicemen higher prices than their indigenous clientele. Gasoline stations on interstate highways charge higher prices than those off the interstate. What are we to make of all of this discrimination? Should somebody notify the U.S. attorney general?

The fact that sellers charge people different prices for what often appears to be similar products is related to a concept known as elasticity of demand, but we won't get bogged down with economic jargon. Think about substitutes. Take the reggae song's advice about not taking a pretty woman as a wife. Pretty women are desired and sought after by many men. An attractive woman has many substitutes for you, and as such, she can place many demands on you. A homely woman has far fewer substitutes for you and can less easily replace you. Hence, she might be nicer to you, making what economists call "compensating differences."

It's all a matter of substitutes for the good or service in question and the buyer's willingness to pay a higher price. Business travelers have less flexibility in their air-travel choices than tourists. Women generally see themselves as having fewer alternatives for emergency auto repairs. A man might have more knowledge about making the repair or be more willing to risk hitchhiking or walking. A prostitute might see a sailor on shore leave as having fewer substitutes, not to mention pent-up demand, for her services than the area's residents.

Motorists traveling from city to city are less likely to have information about cheaper gasoline prices than local residents.

Politicians seem to ignore the idea of substitutability, namely, when the price of something changes people respond by seeking cheaper substitutes. New York City raised cigarette taxes, thereby making a pack of cigarettes \$7. What happened? A flourishing cigarette black market emerged.

In 1990, when Congress imposed a luxury tax on yachts, private airplanes and expensive automobiles, Senator Ted Kennedy and then-Senate Majority Leader George Mitchell crowed publicly about how the rich would finally be paying their fair share of taxes. But yacht retailers reported a 77 percent drop in sales, and boat builders laid off an estimated 25,000 workers. What happened? Kennedy and Mitchell simply assumed that the rich would behave the same way after the imposition of the luxury tax as they did before and the only difference would be more money in government coffers. They had a zero-elasticity vision of the world, namely that people do not respond to price changes. People always respond, and the only debatable issue is how much and over what period.

This elasticity concept is not restricted to what are generally seen as economic matters; it applies to virtually all human behavior. When a parent asks his child, "How many of your privileges must I take away to get you to behave?," that's really an elasticity question. In other words, how great must the punishment be for the child to misbehave less? It's easy to see how the elasticity concept applies to law enforcement as well. What must be done to the certainty of prosecution and punishment to get criminals to commit less crime?

Economic theory is broadly applicable. However, a society's property rights structure influences how the theory will manifest itself. It's the same with the theory of gravity. While it, too, is broadly applicable, attaching a parachute to a falling object affects how the law of gravity manifests itself. The parachute doesn't nullify the law of gravity. Likewise, the property rights structure doesn't nullify the laws of demand and supply.

Property rights refer to who has exclusive authority to determine how a resource is used. Property rights are said to be communal when

government owns and determines the use of a resource. Property rights are private when it's an individual who owns and has the exclusive right to determine how a resource is used. Private property rights also confer upon the owner the right to keep, acquire, sell and exclude from use of property deemed his.

Property rights might be well defined or ill defined. They might be cheaply enforceable or costly to enforce. These and other factors play a significant role in the outcomes we observe. Let's look at a few of them. A homeowner has a greater stake in the house's future value than a renter. Even though he won't be around 50 or 100 years from now, the house's future housing services figure into its current selling price. Thus, homeowners tend to have a greater concern for the care and maintenance of a house than a renter. One of the ways homeowners get renters to share some of the interests of owners is to require security deposits.

Here's a property-rights test question. Which economic entity is more likely to pay greater attention to wishes of its clientele and seek the most efficient methods of production? Is it an entity whose decision makers are allowed to keep for themselves the monetary gain from pleasing clientele and seeking efficient production methods or, is it entities whose decision makers have no claim to those monetary rewards? If you said it is the former, a for-profit entity, go to the head of the class.

While there are systemic differences between for-profit and non-profit entities, decision makers in both try to maximize returns. A decision maker for a non-profit will more likely seek in-kind gains such as plush carpets, leisurely work hours, long vacations and clientele favoritism. Why? Unlike his for-profit counterpart, the monetary gains from efficient behavior are not his property. Also, since a non-profit decision maker can't capture for himself the gains and doesn't suffer losses, there's reduced pressure to please clientele and seek least-cost production methods.

You say, "Professor Williams, for-profit entities sometimes have plush carpets, have juicy expense accounts and behave in ways not unlike non-profits." You're right, and again, it's a property-rights issue. Taxes change the property rights structure of earnings. If there's a tax

on profits, then taking profits in a money form becomes more costly. It becomes relatively less costly to take some of the gains in non-monetary forms.

It's not just businessmen who behave this way. Say you're on a business trip. Under which scenario would you more likely stay at a \$50-a-night hotel and eat at Burger King? The first scenario is where your employer gives you \$1,000 and tells you to keep what's left over. The second is where he tells you to turn in an itemized list of your expenses and he'll reimburse you up to \$1,000. In the first case, you capture for yourself the gains from finding the cheapest way of conducting the trip, and in the second, you don't.

These examples are merely the tip of the effect that property rights structure has on resource allocation. It's one of the most important topics in the relatively new discipline of law and economics.

Economics for the Citizen – Part V

The Freeman: Ideas on Liberty, July 2006

We're all grossly ignorant about most things that we use and encounter in our daily lives, but each of us is knowledgeable about tiny, relatively inconsequential, things. For example, a baker might be the best baker in town, but he's grossly ignorant about virtually all the inputs that allow him to be the best baker. What is he likely to know about what goes into the processing of the natural gas that fuels his oven? For that matter, what does he know about the metallurgy involved in oven manufacture? Then, there are all the ingredients he uses—flour, sugar, yeast, vanilla and milk. Is he likely to know how to grow wheat and sugar and how to protect the crop from diseases and pests? What is he likely to know about vanilla extraction and yeast production? Just as important is the question how do all the people who produce and deliver all these items know what he needs and when he needs them? There are literally millions of people cooperating anonymously with one another to ensure that the baker has all the necessary inputs.

It's the miracle of the market and prices that gets the job done so efficiently. What's called the market is simply a collection of millions upon millions of independent decision makers not only in America but around the world. Who or what coordinates the activities of all these people? Rest assured it's not a bakery czar.

There are a number of ways to allocate goods and services—deciding the who, what, how and when of production and consumption. They include: first-come-first-served, gifts, violence, dictatorship or lotteries. When it's the price mechanism that performs the allocation function, we realize efficiency gains absent in other methods. The price mechanism serves as a signaling function. Prices rise and fall, reflecting scarcities and surpluses. When prices rise as a result of higher demand, this acts as a signal to suppliers to expand output. They do so because whenever the price exceeds the costs of produc-

tion, they stand to gain. They ship the goods to those with the highest willingness to pay.

Let's look at just one of the baker's needs—flour. How does the wheat farmer know whether there's a surge in demand for bakery products? The short answer is that he doesn't. All he knows is that millers are willing to pay higher wheat prices, so he's willing to put more land under cultivation or reduce his wheat inventory. In other words, prices serve the crucial role of conveying information. Moreover, prices minimize the amount of information that any particular agent involved in the process of getting flour to the baker needs in order to cooperate.

What if politicians thought that flour prices were too high and enacted flour price controls in the wake of a surge in demand for bakery products? Would wheat farmers put more land under cultivation? Would millers work overtime to produce more flour? The answer is a big fat no because what would be in it for them? The result would be flour shortages, but the story doesn't stop there because mankind is ingenious about getting around government interference. If there were flour price controls, we'd see black markets emerging—people buying and selling flour at illegal prices. That's always one effect of price controls. Another would be the corruption of public officials who know about the illegal activity but for a price look the other way.

In 302, the Roman emperor Diocletian decreed “there should be cheapness,” declaring, “Unprincipled greed appears wherever our armies . . . march . . . Our law shall fix a measure and a limit to this greed.” The predictable result of Diocletian's food price controls were black markets, hunger and food confiscation by his soldiers. Despite the disastrous history of price controls, politicians never manage to resist tampering with prices—that's not a flattering observation of their learning abilities.

In five short articles, there's no way to even scratch the surface of economic knowledge. I'll simply end the series highlighting a few popular sentiments that have high emotional worth but make little economic sense. I use some of these sentiments as a teaching tool in my undergraduate classes.

Here's one that has considerable popular appeal: "It's wrong to profit from the misfortune of others." I ask my students whether they'd support a law against doing so. But I caution them with some examples. An orthopedist profits from your misfortune of having broken your leg skiing. When there's news of a pending ice storm, I doubt whether it saddens the hearts of those in the collision repair business. I also tell my students that I profit from their misfortune—their ignorance of economic theory.

Then, there's the claim that this or that price is unreasonable. I used to have conversations about this claim with Mrs. Williams early on in our 46-year marriage. She'd return from shopping complaining that stores were charging unreasonable prices. Having aired her complaints, she'd ask me to go out and unload a car trunk loaded with groceries and other items. Having completed the chore, I'd resume our conversation, saying, "Honey, I thought you said the prices were unreasonable. Are you an unreasonable person? Only an unreasonable person would pay unreasonable prices."

The long and short of it is that the conversation never went over well, and we both ceased discussions of reasonable or unreasonable prices. The point is that whatever price a transaction is made, it represents a meeting of the minds of both buyer and seller. Both viewed themselves as being better off than the next alternative—not making the transaction. That's not to say that the seller wouldn't have found a higher price more pleasing or the buyer wouldn't have been pleased with a lower price.

How about your parents' admonition that "Whatever's worth doing is worth doing as well as possible."? Taken at face-value, that's not a wise admonition. I tell my students, often to their surprise, that it might not be worth it to try to get the best grade possible in economics. Let's look at it. Say they have biology, physics, English and economics classes. They work their butts off in economics, earning an A, but spending so much time studying economics takes time away from other classes, and they wind up earning an F in biology, a C in physics and a D in English. That makes for a semester grade point average of 1.75. They'd be better off, in terms of grade point average, if they spent less time studying economics, maybe earning a C, and

allocating more time to biology and English and thereby earning a C grade in all their subjects. They'd have a higher grade point average (2.0) and wouldn't be on academic probation.

Another example: You ask your wife to have the house as neat and clean as possible when you return from work. You return, and the house is immaculate. You compliment her, saying, "That's a great job, honey. What's for dinner, and where are the kids?" She responds, "I don't know where the kids are, and there's no dinner prepared, but the house is immaculate." Just as getting the best possible grade in economics is non-optimal, so is your wife's doing the best job possible cleaning the house.

Then, there's "You can never be too safe." Yes, you can. How many of us bother to inspect the hydraulic brake lines in our cars before we start the engine and head off to work? Doing so would be safer than simply taking for granted that the lines were intact and driving off. After all, prior to launching a space vehicle, the people at NASA make no similar mechanical assumptions. They go through extensive multiple checks of all systems, taking nothing for granted. Erring on the side of over-caution is costly, and so is erring on the side of under-caution, though for a given choice, one might be costlier than the other.