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ECONOMICS AS AN INTELLECTUAL THUNDERBOLT

INTERVIEW WITH STEVE LANDSBURG

Steven E. Landsburg is a professor of economics at the University of Rochester. His books for the general public include *The Armchair Economist, Fair Play, More Sex is Safer Sex, The Big Questions,* and, most recently, *Can You Outsmart an Economist?: 100+ Puzzles to Train Your Brain.* For many years, he wrote regularly for Forbes and Slate, and occasionally for the *New York Times,* the *Wall Street Journal* and the *Washington Post.* He blogs at www.TheBigQuestions.com.

LARA-MURPHY REPORT: How did you go into economics? Weren't you originally planning on being a mathematician? And did you go straight into the free-market realm?

STEVE LANDSBURG: Well, I went to grad school for math, which was then and is still my true love. But just by coincidence, I happened to fall in with a crowd of econ students. I lived in a dorm where my next-door neighbor was Maury Wolff, a brilliant econ student who gave it all up to become one of the world's best horseplayers. (And yes, he uses game theory.) Elsewhere on the same floor there were several others who were taking the first year graduate sequence, studying with Dierdre McCloskey, Gary Becker, and Milton Friedman. Through them I met others, and before long we had a regular lunch group where I was the only non-economist. They were all so starstruck and passionate that it was impossible not to share their enthusiasm, and I learned a fair amount of economics just so I could keep up with the conversations and take part in the fun.

At some point, I learned over the lunch table that there was a lot of buzz in the economics world about a paper by Gary Becker and George Stigler, in defense of the proposition that "all people have exactly the same tastes in all things at all times and they never change." (The wording in the paper is slightly less provocative, but that's how Stigler, who loved to be provocative, first described it to me.) The paper, of course, was meant to be taken seriously, not literally. What they were really arguing is that when different people make different choices, it's a good idea to look for explanations that don't rely on unobservable things like tastes. I remember McCloskey scoffing at "explanations" like, "Why did the man drink the motor oil? Because he had a taste for drinking motor oil!"

At the time, I was probably looking for a way to procrastinate over my math dissertation, so I latched on to this and decided to do some research, looking for violations of revealed preference in British consumption data over time. A violation would mean that the average Englishman in, say, 1910 chose to buy consumption basket A even though consumption basket B was cheaper (proving that he prefers A to B), whereas the average Englishman in 1920 chose to buy basket B even though by then, because of price changes, basket A was now cheaper (proving that he prefers B to A). This would be evidence of a reversal in tastes. You can repeat this experiment many millions of times by looking at different sorts of consumption baskets—fruits, alcoholic beverages, whatever. And it turns out of these millions of opportunities, the number of taste reversals you observe is exactly zero.

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Now that was a very eye-catching result, not due

to any brilliance on my part, but just because it happened to be lying there in the data and I was lucky enough to stumble on it. I wrote a paper and brought it to McCloskey, who shared it with Stigler and Becker, and soon they were all prodding me to switch from math to economics, which was of course immensely flattering and exciting.

After I finished my dissertation in math, the Econ department at Chicago offered to hire me as a post-doc. I was quite torn, because I was also being offered jobs in math and I knew that I loved both subjects. The tiebreaker was probably the fact that I loved Chicago too—the neighborhood, the university, the city—and economics was giving me a chance to stay there. Fortunately, I've managed to stay involved with both math and economics my whole life, which has been an enormous blessing.

As for whether I was a free-market guy from the beginning, the answer is yes, absolutely. Part of what blew me away about economics was the power of the welfare theorem—the fact that under quite general conditions, competitive markets maximize social welfare. ***[Editors' note:*** *"Welfare" in this context means well-being, not payments from the government.]* Before you've studied economics, nothing could seem less likely; once you've digested a few simple ideas, nothing could seem more obvious. It's easy to point to examples where competition leads to disastrous outcomes. The fact that competitive *markets* (as opposed to competition generally) manage not only to avoid those disasters but to achieve the best possible outcomes—and the fact that one can easily understand why and how this happens, using some simple principles that in turn are widely applicable to understanding so much else—came as an intellectual thunderbolt.

I was blown away, too, by the power of Chicago-style applied price theory—the ability to explain so much of human (and sometimes non-human!) behavior by making a few simple assumptions (behavior is generally driven by a purpose; people respond to incentives; markets must clear) and taking them seriously. The fact

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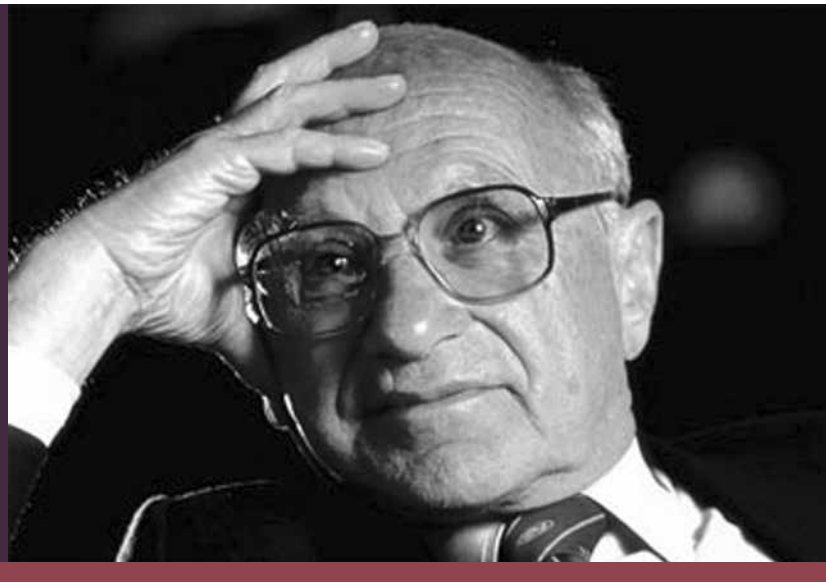

that the theory had so much explanatory power forced me to treat all of its implications with respect, and many of those implications argue for the power of markets as a force for good.

LMR: At the Institute of Economic Affairs (IEA) you gave the 2017 "Hayek Lecture" on the question, "Is the world overpopulated?"[1] Can you summarize your main points?

SL: Whenever the subject of overpopulation comes up, there's always someone in the crowd who thinks he can shut down the discussion by asking a rhetorical question like, "How many people can the earth support?" That's the guy who has absolutely nothing to contribute. His point, apparently, is that there's *such a thing* as too many people. But that tells us absolutely nothing about whether we've currently got too many or too few. After all, there's a limit to how much I can exercise, but you wouldn't want to conclude from that alone that I'm currently exercising too much.

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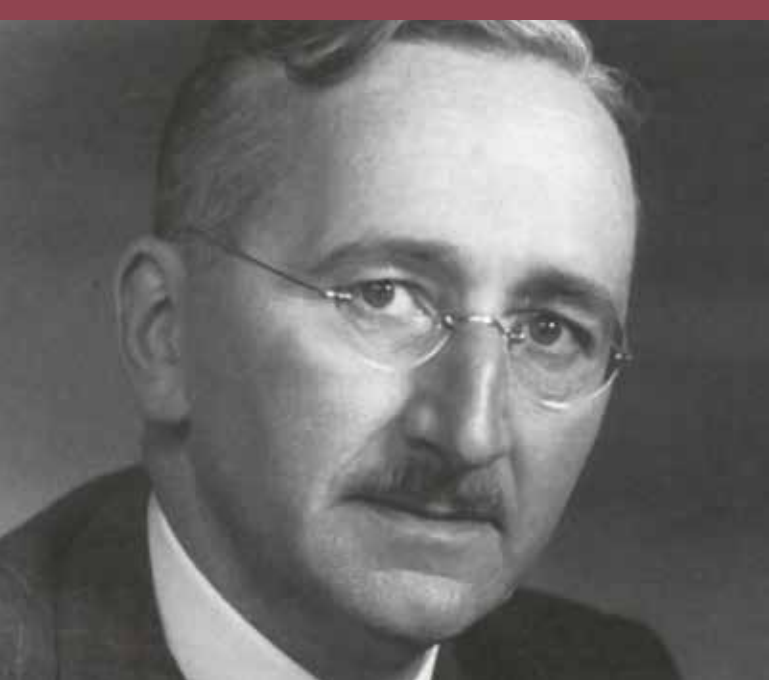

The main point—which you can find spelled out in my books *The Big Questions* and *Fair Play*—is that if you want to know whether the world has too much or too little of something, you've got to start by looking at the incentives faced by the decisionmakers. The world probably has too much pollution, because the people who choose to pollute don't fully account for how their choices affect others. We probably have too few volunteers picking up trash along roadways, because the people who do that are not fully rewarded for the value of their efforts; many of the benefits accrue to others. So if you want to know whether the world has too many people or too few, you've got to look at the incentives faced by the decisionmakers who are deciding whether or not to create more people—that is, you've got to look at the incentives faced by parents and prospective parents when they're choosing their family sizes.

It's important to realize that costs and benefits that are felt by the family are irrelevant to the social question. Families are perfectly capable of weighing the private costs and benefits of childbearing, and to stop when the costs (to them) of an extra child exceed the benefits (to them). And we have scads of evidence—across time, across cultures, and around the world—that families

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do respond to changes in those costs and benefits exactly as you'd expect them to, if they were making rational choices. It's only when those costs and benefits spill over onto other people that we have a potential social problem.

It turns out that many of the costs that people associate with a growing population are *not* in that spillover category. Take resource consumption: We all know that, insofar as you consume only what you produce, or only what you trade for, you're not imposing costs on the rest of the world. But what about all the wealth you inherit? The answer is that you're taking that wealth not from the world generally, but (in most cases) from your siblings—siblings whom your parents cared about. If your parents thought it was worth bringing you into the world *even though* it was going to cut your older brother's inheritance in half—and if they made that judgment even, as is usually the case, if they cared very much about your older brother—then there's no reason for anyone to second-guess that judgment.

So the big question is: When families decide to have another child, what are the *spillover* (or, in economic jargon, *external*) costs and benefits? The big potential spillover costs are that the child could grow up to be a thief, a conqueror, a major polluter, or a ward of the state. Some of the big potential benefits accrue to everyone (outside of the birth family) who cherishes that child as a friend, a mate, a business partner, an employer, an employee, a customer, a supplier, or for that matter an organizer of the local birdwatching society. There are also huge potential benefits from the ideas that child will generate throughout his or her lifetime, ranging from small ideas like, "Let's put on a play!" to big ideas like, "Let's make computer chips out of silicon!"

New ideas are the engines of progress; the reason we are not now all living at the subsistence level (as nearly all human beings did until a couple of hundred years ago) is that around the time of the Industrial Revolution, people started to value ideas, to invest in coming up with new ideas, and to copy each others' ideas. Ideas in fact are especially valuable precisely because they can be copied an unlimited number of times, and each idea makes the next idea easier to find. (We've just been reminded of this by the Nobel prize to Paul Romer, who really pioneered the rigorous modeling and measurement of how ideas drive economic growth.)

My guess—and I can't prove this—is that by and large, we're still at a point where in most cases,

the spillover benefits of additional children outweigh the spillover costs. If that's true, then having another child is like picking up trash in the park—you're not fully rewarded for it and so you probably do too little of it. In other words, the world is underpopulated.

Again, I'm not entirely sure that's the right conclusion, but here's what I am sure about: Tallying up external costs and benefits is the *only* conceivable way to think usefully about this problem. After all, even if everyone chooses to have a dozen children and the whole world ends up impoverished as a result, that's not a social problem—it's an instance of people voluntarily choosing the joy of a large family over the joy of material wealth. It's only a problem if *my* large family intrudes on *your* life—and once again, we're back to tallying up the externalities.

Of course there's a broader lesson here: Not only is this the only conceivable way to think usefully about the population issue, it's the only conceivable way to think usefully about any question of the form, "Does the world have too much or too little of X?"

I just want to add that there's some ambiguity about what we mean by the "right" population. In this discussion, I've focused on whether a larger population would make the world better or worse for those of us who are currently alive. But a broader view would also account for the fact that if we increase the world's population from seven billion people to eight billion, an additional billion people would receive the gift of life itself. That could be an additional reason to support more population growth, and if you buy into it, then the population should be even larger than my cost-benefit calculations would suggest.

"The way you make cars out of wheat is this: You plow farmland; you plant seeds; you reap the harvest; you load the harvest on boats and ship it overseas to one of your trading partners, and the boats come back with cars on them."

LMR: Can you explain the "Iowa Car Crop" argument for free trade (taken from your book, *The Armchair Economist*)?

SL: I should say first that I stole this argument from David Friedman, but it's far too good not to steal. The observation is that we have two ways to produce cars in the United States: We can make them out of steel, as they do in Detroit, or we can make them out of wheat, as they

do in Iowa. The way you make cars out of wheat is this: You plow farmland; you plant seeds; you reap the harvest; you load the harvest on boats and ship it overseas to one of your trading partners, and the boats come back with cars on them.

As far as its economic effects, that's exactly equivalent to inventing a machine that turns wheat into cars. If that machine is outlawed—or equivalently, if your government imposes restrictions on foreign trade—that's good news for the traditional car manufacturers in Detroit, bad news for the non-traditional car manufacturers (otherwise known as farmers) in Iowa, and of course bad news for every American who wants to buy a car.

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On balance, trade restrictions have to make domestic citizens collectively worse off. That's easy to prove with a few lines of formal argument, but the nice thing about David's Iowa Car Crop story is that it's so easy for people to grasp. Of *course* it would be a mistake to ban a new technology just because it might put some people out of work. Electric light bulbs put a lot of candlemakers out of work; personal computers caused a lot of typewriter factories to close; the Internet has been really bad news for the people who published twenty-volume hardbound encyclopedias. But if you say that these disruptions were worth it, almost everyone instinctively gets it. So here's a chance to take that intuition and show people that it applies more generally. Finding a new trading partner is exactly like inventing a new technology—it's a machine for turning one thing into another thing, and it doesn't make a bit of difference whether the machine is powered by gears or by commerce.

That doesn't mean that all tariffs are ill-advised. That's because the government is always going to demand a certain amount of revenue, and they've got to get it by taxing *something*, which always entails some deadweight loss. The problem is to spread taxes around among goods in a way that keeps the total deadweight loss as small as possible. Sometimes that does mean taxing foreign goods at a higher rate than domestic goods; sometimes it means exactly the opposite. But that's an entirely separate set of issues from those that are addressed by the Car Crop story. The point of the story is that most of the usual arguments (usual in the sense that they're the ones we usually here from pundits and politicians, not from economists) are not just bad; they're completely indefensible.

LMR: In another one of your classic expositions, you used an NFL analogy to explain the Lucas critique of hydraulic Keynesianism. Can you boil down the issues for our readers in an abbreviated form here?

SL: This might be another stolen idea; my memory is hazy. I'm almost sure it emerged from a conversation with Chuck Whiteman, but

whether it was his idea, or mine, or whether it somehow emerged from bits and pieces we each contributed—or whether one or the other of us was at that moment stealing it from someone else—all of that is lost to the mists of history, unless Chuck remembers (or unless someone can point me to an earlier source).

Anyway, the story is about a National Football League commissioner who, for some reason, wants to discourage punting. He notices that punting almost always occurs on the fourth down, and figures he can therefore mostly eliminate it by changing the rules so that teams get only three downs. To his astonishment, it doesn't work. Teams start punting on the third down.

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The problem is that we have two competing theories here: One is that teams typically punt on the *fourth* down and the other is that teams typically punt on the *last* down. If all your data comes from a world in which the fourth down is the last down, then there is no way, even in principle, that your data can distinguish the true theory from the false one. The commissioner noticed that the data support the false "fourth down" theory, but failed to notice that the same data equally well support the true "last down" theory.

How could the commissioner have done better? Not by gathering better data! Whatever data you collect will still fit both theories equally well. Instead, the only sensible course is to stop and reflect on why teams *choose* to punt when they do—to build a theory of what they're trying to accomplish and what incentives they face. Equipped with that theory, you're far better able to forecast the effects of a prospective policy change.

The Lucas Critique is the observation that, at least in the mid-to-late twentieth century, a lot of macroeconomists—and particularly those who described themselves as Keynesians—were repeatedly falling into the same trap as our mythical football commissioner. Particular instances of this were already well understood, but Lucas drove home the extent to which the fundamental error was imbedded in the fabric of the whole Keynesian enterprise.

One well-known instance is in consumption theory, where ample statistical evidence shows that a person who earns an extra dollar will typi-

cally spend an extra ninety cents and save the remainder. (There's room to quibble over the exact amount; take the ninety cents for illustration.) That's the linchpin of the traditional Keynesian model: If I can put an extra dollar in Alice's pocket, she'll buy an extra 90 cent bagel from Bob the baker, putting 90 cents in Bob's pocket, so he'll spend an extra 90 percent of that to buy a chocolate from Carol the confectioner, and on and on we go.

But Milton Friedman had pointed out in the 1950s that there is more than one explanation for Alice's observed behavior. Theory One is that every time she earns an extra dollar, she spends an extra 90 cents. Theory Two is that every time she earns an extra dollar she either spends the entire thing (if she thinks her income has risen permanently) or spends almost none of it (if she thinks that her income has risen temporarily). If 90 percent of all income hikes are perceived as permanent, then, on average, Alice will spend 90 percent of all her income hikes. The data (at least as we've presented it so far) can't distinguish between the two theories. So if you really want to understand consumption behavior, you've got to first think hard about what Alice is probably trying to accomplish, and use your insights to make some predictions about which theory is correct. You'll also want to come up with creative ways to test the validity of your framework. Friedman did this brilliantly with consumption, and Lucas's point was many economists had failed to grasp how desperately the same sort of brilliance was needed for analyzing other components of the Keynesian machine.

Lucas was guided by his own Critique when he looked at data on the Phillips Curve, which, throughout the 1950s and 1960s, seemed to show a strong correlation between inflation and employment. Lucas (following through on ideas of Friedman and Edmund Phelps) observed that most of the inflation in those decades was widely unexpected, so the data could not distinguish between a theory that says inflation causes employment and a rival theory that says unexpected inflation causes employment. (Just as, when fourth downs are always last downs, the data can't distinguish between a theory that says fourth downs cause punting and a theory that says last downs cause punting.) Lucas addressed this problem with a deep analysis of the reasons why inflation might be related to unemployment, and changed macroeconomics forever.

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LMR: You've got a brand new book coming out, *Can You Outsmart an Economist?* (More details available at: http://www.outsmartaneconomist.com/) Can you summarize the contents, and give us one or two fun examples?

SL: Oh, yeah, absolutely! It's a book of puzzles and brain teasers, designed to teach lessons

about economics, statistical inference and related matters. Often the lesson is, "Think beyond the obvious."

Here's one: An experimenter places two pigs in a box. One pig is very large and the other is very small. At one end of the box is a lever that dispenses food into a bowl at the other end of the box—several pigs' length away. Which pig eats better?

The obvious answer is that the big strong pig takes most of the food. The correct answer is just the opposite. If the big pig presses the lever, the little pig waits by the bowl and eats most of the food as soon as it's dispensed. The big pig comes running to get his share, pushes the little pig out of the way, and takes what's left—which might be just enough of a reward to get him to push the lever again tomorrow. The small pig, by contrast, has absolutely no incentive to push the lever. He knows that if he does, the big pig will wait by the bowl and won't be pushed away.

A little bit of thinking yields the correct answer, which, incidentally, has been verified experimentally in labs. The immediate moral is that it can pay to be small. The bigger moral is that if you want to predict behavior, it pays to think carefully about incentives.

Or: Data show that physically attractive college teachers are consistently rated more highly by their students. Does that prove that students care about physical attractiveness?

The obvious answer is yes, it certainly seems that way. The correct answer is that this is exactly what you'd expect to see in a world where some careers—not necessarily teaching—reward physical attractiveness. Beautiful people

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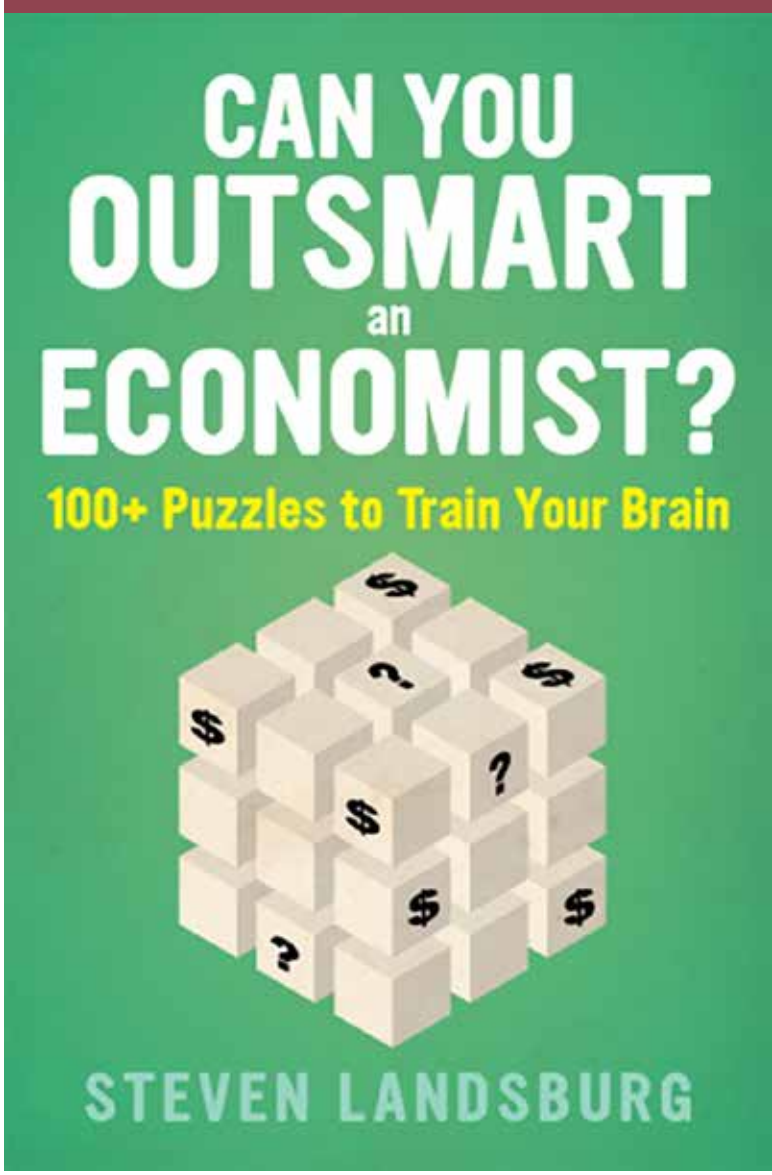

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have a natural competitive edge in modeling, acting, and retail sales. Therefore (on average of course) a beautiful person who chooses to teach is a person who gave up a lot of other good opportunities—presumably because he or she really prefers teaching. By contrast, the less beautiful teachers (again on average) might be in the classroom just because they're not wanted anywhere else. So of course the more beautiful teachers are, on average, doing a better job.

There are many others. When a university (in this case the University of California at Berkeley) admits 46% of its male applicants and only 30% of its (equally qualified) female applicants, can we infer gender discrimination? The lawyers who brought suit against Berkeley certainly thought so—until it was revealed in court that the discrepancy is entirely explained by the fact that women were applying disproportionately to the most selective programs at Berkeley. In the department that took only about 6% of its (male and female) applicants, three out of five applicants were female. In the department that took roughly 65% of its (male and female) applicants, 353 of the 370 applicants were men.

Sometimes the fun is in recognizing a puzzle that everyone else has overlooked. Why do people stand still on escalators but not on stairs? Why aren't all buildings the same height? Why does Sony care whether its TVs are sold at a discount? You might think that the only puzzle is why anybody would raise questions with such obvious answers. But the obvious answers are wrong. To find out why, buy the book![2]

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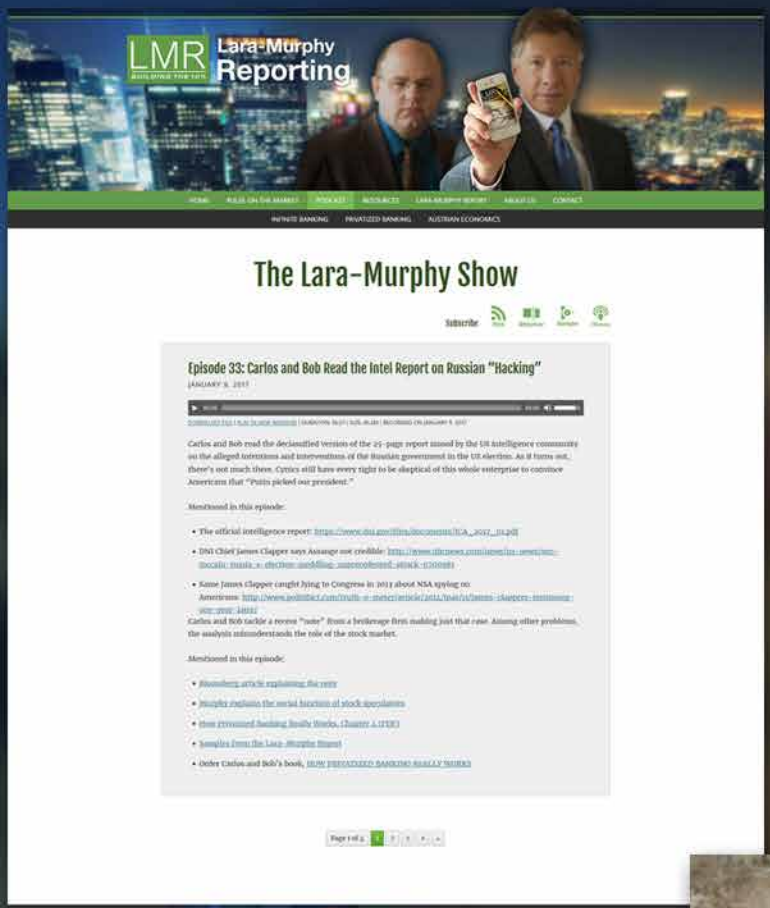
Note: The economists and financial professionals interviewed in the LMR are given the freedom to express their views, without necessarily implying endorsement from the editors.



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