

## Rationally Speaking #179: Dani Rodrik on “Is economics more art or science?”

Julia Galef: Welcome to Rationally Speaking, the podcast where we explore the borderlands between reason and nonsense. I'm your host, Julia Galef, and today I'm talking with Professor Dani Rodrik.

Dani is an economist at Harvard University's Kennedy School of Government. He is the author of many books including *The Globalization Paradox* and most recently, *Economics Rules: The Rights and Wrongs of the Dismal Science*. Dani, welcome to the show. Thanks for joining us.

Dani Rodrik: Thank you, nice to be with you.

Julia Galef: I've been following your work and reading your blog for years, but the impetus for me inviting you on the show just recently was that I just finished reading *Economics Rules*, which several of my very smart friends had highly recommended to me.

I really liked it. I thought it was an admirably nuanced take on how Economics works, and that you did such a great job of pointing out some of the limitations or flaws in Economics, but also defending ways in which it's maybe misunderstood by people outside of the field. Regular listeners of Rationally Speaking know that "admirably nuanced" is like the highest praise, for me.

So I thought we could start by talking about one of the ways that you point out that people kind of misunderstand the point of Economics. They often think that Economics is trying to be a science in the way that, like, Physics is a science. In which Physics is trying to discover natural laws of the universe, that are kind of fundamental and unchanging. People expect that Economics is trying to do the same with uncovering natural laws of how economies work, or how societies work.

What about that view of Economics do you think is wrong?

Dani Rodrik: Well, I think there's a big difference between the physical universe and the social universe. I think the social universe, in some ways, is infinitely malleable, and we actually take part in constructing, and reconstructing, and redesigning it over and over again. So I think it's the very nature of the social world that it is not fixed, that it varies, and it's highly dependent on context.

And so I think that makes Economics a very different kind of science, where I think any search for universal truths and universal regularities is bound to go wrong. In fact, the best of Economics is actually fairly contextual. We work with small scale models and specific causal chains that partially eliminate reality and make clear the dependence of that causal change, or that behavioral result, its dependence on the context.

So clarification of why is it that certain kinds of results depend on the premises is, I think, the key contribution of Economics as a science.

I have to say though, that we economists are often our worst enemies in the way that we present our science to the outside world. We often do present it as a universalistic science, and we don't do a very good job of portraying our discipline to the outside world. I think often that's how we get wronged. We sometimes say the problem is not with our Economics, the problem is with our public relations and our marketing, and we need to work on that.

Julia Galef: Well, I'm sure many listeners will be ... they will have heard economists and non-economists even talk about "laws" in Economics, like the law of supply and demand, that kind of thing. Do you really think that there aren't any kind of really solid non-contextual laws that Economics has discovered?

Or at least models that are contextual *but* we understand how they're contextual? Like in Physics, you know, Newtonian Physics is kind of contextual. It doesn't apply at all scales, but we understand what scales it applies at. So we know when to rely on it and when we're going to have to bring in something else like Quantum Mechanics.

Is like supply and demand the closest we have, or is there something else?

Dani Rodrik: I think anything that is really universal in Economics that could really be called a law is so blatantly banal that it doesn't take us very far. I think ... Yeah, let me actually qualify that because I think there are certain things in Economics that are universal, and they are still useful even though it's something that weren't there by law. So let me give you a couple of things, examples.

Now one of them is: incentives really matter. People respond to incentives. Now at some level, this is completely banal; on the other hand, we make so many mistakes in global policy and business and in, you know, all our social relationships, by ignoring this very simple principle. That we don't actually think through how, when we design policy for example, how will people behave.

Julia Galef: Right.

Dani Rodrik: If you had, you know, if we had standardized tests in schools, how will in fact teachers then respond to the presence of these tests? And they will start teaching to the test, and so forth. Just very simple principle, but it really takes us often quite far, in ways that if you don't take it into account, you would have ignored.

Julia Galef: Yeah.

Dani Rodrik: Second principle is that giving people control over the return to their assets matters. Sometimes this is put in the form of "property rights matter." And it's just that, it's another version of the same principle of incentives mattering. It's just the principle that if you want people to invest, you have to give them sufficient guarantee that they can retain the return to their assets, or in their investments. Otherwise, they will not invest.

Again, you know, it seems like a very obvious thing. People care about being able to get rich on their investments or at least live off in their investments. But it's remarkable how many governments, how many historical periods where they basically just ignored this basic message. And hoped that economies would work out fine even though they're violating control rights, property rights, contracts, and just assuming that this will not be damaging to the economy.

So there are some universal trends, these are universal principles, that are in some sense are completely context and institution free.

Julia Galef: Mm hm.

Dani Rodrik: And say that if I get off a plane in a country that I've never been to before, and they come to me, "Professor Rodrik, what is it that we have to do to succeed in this economy?"

I can list off a few of these very broad principles, you know: Protect property rights. Make sure that the business environment is okay. Ensure physical sustainability. Regulate your financial intermediaries appropriately. Make sure you take care about incentives. So these are all things that I can say without knowing much about the context, and I can't really go wrong because they are close to being universal principles.

But I don't really help that economy a whole lot. Because it turns out that the way that I can actually implement these universal principles can be highly varied.

Julia Galef: Right.

Dani Rodrik: So you can have people invest in American type legal systems with exquisite protections for property rights and contract law and so forth. People can also invest in countries that look very different. I mean in Vietnam and China where they essentially have socialist law... People don't have the right incentives to invest, but those incentives are actually sustained through very different legal and informal mechanisms than they are in the United States or in Europe.

So that's where actually a lot of the contextuality comes in. You mentioned at the beginning things like you have the law of demand, you have the law of supply. They're actually not laws at all. Because even the most basic thing that we teach our students, that there's a downward sloping demand

curve...we actually have something called a Giffen good, where in fact that is not true. You can have an upward sloping demand curve.

Julia Galef: And just to clarify for people who aren't already super familiar with upward and downward sloping curves: By downward sloping curve you mean that as the price goes up, demand goes down. People want to buy less of something when it costs more. In general, except for Giffen goods.

Dani Rodrik: Yeah, exactly, or that you know supply curves slope upwards, and that when the price of something goes up, more of it is produced and supplied in markets. Now just as again in your example with Physics, that Newtonian Physics does not apply either at very small scales or very large scales, but we know exactly what's the scale at which it becomes relevant -- it's helpful to us. I think Economics does that in a way. That our frameworks, our models are essentially telling us in what context, under what kind of conditions, they apply. And under what kind of conditions they do not apply.

So I think it's that diversity, that multiplicity of models and frameworks, and causal relationships that actually makes Economics interesting and useful.

The tragedy is that when we teach Economics, especially in Introductory Economics, we're so hung up on just one benchmark model: the perfectly competitive market with nicely downward sloping demand, nicely upward sloping supply. And then the market solves allocation problems; markets are efficient, government interventions are inefficient and undesirable.

Now all these things hold in a very narrow set of circumstances, but as you learn more and more Economics, you understand that actually most of what economists do in the seminar room and in the graduate school and in their research is trying to understand exactly the diversity of outcomes when those benchmark conditions do *not* hold.

Julia Galef: Right. Well, a few minutes ago you said that the real problem we have isn't with Economics as with public relations. Do you in fact think that economists are sufficiently attuned to the limitations of that model?

Dani Rodrik: Yeah, I mean one of my concerns -- and I talk about this a lot in the book and also in my other writings -- is that precisely this diversity of perspectives, and this awareness of the contextual nature of our perceptions, of our results, does not get carried over to the public domain.

There are a number of reasons for that. One is that, for one thing, I think politicians and the media often do not have much patience for nuance. You know, your appreciation for nuance is not generally shared by politicians.

Julia Galef: It's not universal I found, yeah. Weirdly.

Dani Rodrik: And so the last thing that the journalist wants to hear when they call you up and say, "Well what do you think is going to be the effect of, let's say, the Transpacific Partnership? What do you think is the effect of, you know, increasing the minimum wage?" And you say, "Well, yeah, the obvious answer is it depends, so let me give you now a five minute lecture on, you know, what it depends on, and how much we know of these things..." I mean, you're not going to get your name in the media with an answer like that.

Julia Galef: That's right.

Dani Rodrik: It's going to be... a counselor or adviser or guru, you know somebody that politicians and policymakers listen to.

Julia Galef: Wasn't there some president who said, "Please someone find me an economist with only one hand," because he was so tired of economists saying, "On the other hand..."

Dani Rodrik: Dwight Eisenhower is supposed to have said that. But that's really when we're doing our jobs, see? We say, "On the one hand, on the other hand".

Julia Galef: Right.

Dani Rodrik: Yeah, what I'm trying to say, it's more than the one hand or the other hand. We know what those outcomes depend on. It's just that in real time, it's actually very different to sort out, to use the Physics analogy, whether we use whatever relevant model we should use when we're talking about a planetary scale, or whether we are actually in some microscopic scale.

Julia Galef: Right.

Dani Rodrik: In Physics, it's easy to tell apart. In the real world, it's not that easy to tell apart. For example, the answer to the question of, "Is a minimum wage a good thing or a bad thing for employment?" depends critically on whether you think that employers are behaving competitively. Or the way we put it in Economics, non-competitively or monopsonistically. That is, they have some kind of market power in determining the wages that they pay to the people they hire.

Julia Galef: Mm hm.

Dani Rodrik: It turns out in the first case where employers are behaving competitively, generally raising a minimum wage is going to be bad for employment. In the second case, where employers have some control over the wage that they can pay, then in fact the minimum wage can be a good thing for the employment.

Now, so we know these very opposite outcomes, what they depend on. But it's much harder in real time to figure out whether in fact, the relevant

employers are going to be behaving one way or another. That's where I think the answer arises.

Julia Galef: Well, one of the points that you drove home in the book is that the practice of figuring out when one model applies -- or a different model applies, or how much it applies -- is kind of more of an art than a science. Which isn't to say that economists can't do it kind of reliably. It's not to say that economists aren't doing it at a better than random chance rate.

But that explaining why I am confident in this model in this case, and you're not confident in this model in that case, is kind of subjective. Am I conveying that correctly?

Dani Rodrik: Yes, sort of. I think there's a quote that I discovered actually, by Keynes, after the book had been published. As usual with Keynes, you find that he said something that you were thinking of so much better than you could have said it yourself, but he said that Economics is "the science of thinking in terms of models joined to the art of picking the relevant models."

Julia Galef: Oh, yeah.

Dani Rodrik: That's exactly the point I was trying to make in my book.

Julia Galef: Yeah. Why did you need to write a whole book? You could just have said it in two sentences.

Dani Rodrik: Exactly. If I've seen this quote, I probably would just have written this sentence over and over again, and not write a book.

So what he called the art, I called the craft in my book. What he was getting at is that there's a lot of, basically, judgment and experience and sort of feel, that is involved in figuring out whether, in the example I gave of the minimum wage, whether we are creating an environment where firms are competitive or they are monopsonistic. Or to take another example, whether we should engage in deficit finance or fiscal reflation. Are we more in a Keynesian environment? Or are we more of in a classical kind of environment?

Again, depending on which of the two environments we're in, fiscal policy will have very different implications. The reason that's sort of an art or a craft is that in real time, it's very difficult to analyze, we have very little data. We have data that is very low frequency, so very few data points.

Julia Galef: Mm hm.

Dani Rodrik: And it's very difficult to tell what kind of a world we're in. Now, ten years later we might accumulate enough data and have even better statistical techniques after the fact, that we might be able to do that, but often in policy

you want answers in real time. There's not going to be enough evidence to discriminate in a very clear cut fashion...

Which is why I think a lot of the differences among economists are. Because they come with very strong priors, and the real time evidence is not -- and sometimes even evidence after the fact, is not -- sufficiently strong to dissuade you strongly from your priors.

If you think that trade agreements have very very informed effects on long term growth and productivity, and there's certainly models of that kind, versus if you believe that trade agreements have limited effects on productivity and growth, but there are first order effects on the distribution... And there's certainly models of that too. I mean you can keep on fighting this intellectual battle over and over and over again, and never really reach a resolution.

A non-economist would be justified to say, "But what kind of a science is this if you can't narrow your differences, and you always tend to stick to your priors or to your preferred models?"

Julia Galef:

Right. There's a phrase, sorry to interrupt you -- There's a phrase some people I know use, called "reference class tennis." That refers to these disagreements that you can get into, where you and I have different intuitions about whether this start-up is promising, or whether this technology is ever going to be developed. And we just keep bouncing the conversational ball back and forth because I can say that, "Yeah, but the startup is in this industry, and startups in that industry tend to fail." And you can be like, "Yes, but the team has these features and that makes me optimistic, and ..."

And we just keep feeling that different reference classes are relevant, and those different reference classes suggest different outcomes. It's just a really hard question to settle, if it could be settled at all: What's the right thing to use in forming our predictions?

Dani Rodrik:

Yes. But I think even in the worst case in Economics, at least in principle, we know why we disagree. That is to say we know exactly what our disagreement hinges on. So that when a Keynesian versus a classical economist are debating, they understand exactly what features of the economy they are disagreeing on. That actually at least has the prospect of this debate being resolvable.

And the fact that often it does not, I don't think we should necessarily hold it against. We should also weigh it against the fact that often it does get resolved. In 50's or 60's for example, there was this notion that peasants and agriculturalists in low income countries were very insensitive to price incentives, that they really are not responding to prices. They were too set in their old traditional ways of doing things. And they wouldn't adjust to circumstances change, for example...

We accumulated enough evidence in 60's and 70's to actually learn that that is not true, and I don't think you can get away now in sort of making that argument. We know that you can be very low income but you're still going to respond to incentives and prices mattering, things like that.

We also do resolve some of these things over time, and I think again in the worst possible case, at least we know what our disagreements depend on. That's much better than simply having these fights with no sense of where is this disagreement coming from.

I forgot his name but a famous chemist used to criticize or cut down his colleagues by sort of walking out of their seminars by saying, "Oh, what he was talking about, he's not even wrong-"

Julia Galef: Right. Wolfgang Pauli.

Dani Rodrik: I'm sorry, Pauli. Yes, exactly.

I think that's one charge that I think economists can avoid. I think a lot of social science has that kind of quality to it, which is that you can listen to many talks and not know exactly under what circumstances might this actually be a wrong argument. I mean, how would I actually know whether this is right or wrong? I think the virtue of economic models and the way we think is that that we cross all the t's and dot the i's, and we know exactly when we would be wrong.

Julia Galef: Well, to go back to Physics again, there is an expression that you can just "add more epicycles" to a model. Which comes from -- you probably know this, but for the sake of some of our listeners -- earlier astronomers, who thought that the planets revolved around the earth in these circular orbits, observed that that theory didn't match the data that they saw, of how the planets actually moved across the night sky. But they didn't throw out their circular orbits around the earth theory. They just said, "Well, okay, maybe circular orbits around the earth but *also* the planets are moving in these smaller circles as they're moving in the larger circles. And those smaller circles are epicycles." And that amendment to their theory allowed them to keep it in spite of the contradictory data.

I guess I'm wondering to what extent you think this also happens in Economics. Where there's these models and we get data, and some economists can just say, "Yes, but ...", and then propose a reason why we shouldn't expect that model to apply in this particular context, but the model itself, the fundamentals are still strong.

That, I feel like I've seen some of that, and it also seems to me like the kind of thing I would expect to happen in a field like this. Even assuming everyone is very smart and, you know, working in good faith, et cetera.



Dani Rodrik:

Yeah, well you know that happens actually, I would say, surprisingly little in Economics. And I think that's because we have a habit of working in very simple models. Simplicity is a virtue in what we do. And I think anything that you do to sort of say, "I'm now going to add layers upon layers to make this thing fit a little bit better some kind of anomaly..." It is not a style with which we work.

So what happens in Economics is, when you encounter an anomaly, you develop a new model. An example: the history of analysis of markets in Economics is actually a bit like that. Where economists sort of developed one framework, and then hit another anomaly. And then they developed another framework.

Going back to the whole Adam Smith's invisible hand, it was this notion that basically in competitive markets, that efficiency would be taken care of by simply these decentralized consumers and producers acting in pursuit of just their own self interest. And markets would produce these wondrous allocations, that would be efficient, even though there wasn't any kind of plan or anybody ensuring that.

Now very soon thereafter in the 19th century, there was a lot of work in markets, where in fact they had reason to believe that producers were not behaving competitively. So you had models of monopoly, models of oligopoly, a few producers -- but they were basically models that were not crafted on the Smithian model. They were alternative models.

And in my terms, what I would say is that these models were useful because they would say, "Look, the world doesn't always behave in the way that Adam Smith described. Sometimes they behave in the way that say, Augustin Cournot described, which was a model of a duopoly." So you just have to figure out whether the baseline conditions are [such that] it becomes relevant to apply the Smithian model or the Cournot model...

...We had gone all the way to the more recent example when economists began to take information into account, that there are goods where the consumers cannot tell all the relevant attributes of the good, whether it's high quality or whatever. When you're buying a used car, has this car been used carefully? What kind of a condition is it? Is it a high quality car? And then you can sort of models, you know, the Akerlof type models with asymmetric information.

This wasn't just grafted on. And I don't think George Akerlof ever meant to say that the market for lemons is a substitute for the Smithian model. No, there are just some circumstances, such as when you're buying a used car, or let's say when you're borrowing money from a lender, that there is such a huge asymmetric information between the two sides of the market. That applying the Smithian model is not going to make a whole lot of sense.

On the other hand, if you are talking about the markets for apples and carrots, maybe the Smithian model is okay.

That's my preferred interpretation of Economics, as a series of models developing over time that tend to shed much better light at the variety of outcomes that we get. Just because with we now have the model of imperfect competition or model with asymmetric information, doesn't mean that the essential insight of Adam Smith has been lost. It just means we need to be careful which model we're applying.

Julia Galef: Okay, I could be misunderstanding, but it still feels like that has the risk of the epicycle problem. So you're talking about these models as separate models that are being added to our our toolkit. But you can also conceive of it as addendums to, or amendments to, the Smithian model. Where you're saying, "Yes, but it doesn't apply to these particular cases." That seems like an amendment.

Where, if you take that to the extreme, you're kind of overfitting. You're taking your curve and fitting it to every data point, to the point where it's not helpful.

Dani Rodrik: I think there's an essential philosophical distinction between saying that there are universal laws of motion of planets, and what we're trying to do is derive those, and with every epicycle, with every amendment, we're getting closer to actually doing that...

... Versus saying what I'm saying. Which is that this is not the right laws of science for Economics. First, because there is no reason to think that there is a universal model of Economics, because we're talking about social reality, social reality as constructed reality. It's not closed, it's not a closed physical system. Secondly, because the more complicated, and actually in some sense, realistic you make your models, the less useful they get.

Julia Galef: Right.

Dani Rodrik: This is another point I make in the book, which is that simplicity of these models is the fact that they capture only part of the reality. But if you're using them wisely -- doing your art and the craft correctly, applying the relevant model -- it actually gives you an insight in a particular situation that a much more complicated, more realistic model would not.

It's sort of like you're walking out of your house, and you need a map to take you where you're going. If you're going to be using the subway, you're going to take one map with you. If you're going to be taking your bike, you're going to take a bike map. If you're going on the highway, you're going to take a map of the highway. If you had a universal map that actually had a one-to-one, every detail of all the bike paths, all the subway tracts, and all the highways, and all the sort of walking paths, that wouldn't be very realistic. It also would be useless.

Julia Galef: It would just be the world. Yeah.

Dani Rodrik: Exactly, and I think Economics is the map for that kind of a world. Therefore, it's useful only when it's simple. So its simplicity, its lack of realism -- it's a feature, it's not a bug. Secondly, an almost immediate implication... You need to carry a multitude of these models in your mind. If you get fixated on only one, you just keep getting the world wrong.

Julia Galef: Going back to the point about it being a craft and not a science, of when we apply the models... So assuming that economists have some kind of skill, even if we don't have a precisely specified description of how to apply models that fit, it would be a science. Nevertheless, there is such a thing as expertise. Economists are better than random at figuring out which models to apply when.

It reminds me a little bit of chicken sexers. Which sounds weirder than it is --

Dani Rodrik: Chicken what?

Julia Galef: I'll explain! They're people who are able to tell what sex a chicken is. Like, pick up a baby chick, examine it, say this is male or female. Which is actually much harder than you might just intuitively, naively guess. There's not like an obvious thing that you can check. But some people are really good at reliably predicting whether the chicken is male or female -- but they can't explain how they're doing it.

Dani Rodrik: Right.

Julia Galef: All of the skill is happening at this kind of subconscious, pattern matching level, so there is no explicit body of knowledge that we could transfer from one person to another on how to sex a chicken.

Dani Rodrik: Right.

Julia Galef: But, you know, especially now that machine learning as a field is really taking off, and we have so much data and computing power, I wonder if the kind of unconscious bodies of judgment, that really good economists have, is the kind of thing that could be externalized. Do you see a future for Economics where the process of deciding which model is applied in which context is something that a machine learning algorithm, with a lot of data fed into it, could just do really reliably? Even if it can't explain what it's doing?

Dani Rodrik: Yeah. First I think there's a sense in which we do Economics an injustice -- and I know I've been using the term art and craft, but it's not a skill that cannot be taught within Economics. I think it is true that the best economists do this, have sort of developed this skill over time without necessarily thinking too much about it, but effectively what they're doing is something that can be taught, because there's a method to it.

And the method is an extension of what we are talking about before, which is that every model not only relies on certain explicit premises but also has a lot of implications about how the world should behave. And these provide even if not formally, informally a way in which you could test one model against others in real time in practice. There is a scientific element to that craft.

Except that because of the paucity of data, you cannot necessarily have a very definite answer. Or if your priors are very strong, they're not going to necessarily change a whole lot. It is not simply having some kind of innate skill and some people are better at it and others aren't. It's something that I think can be taught.

Now, we do a terrible job. Actually we don't do it at all in graduate school. But it is something that is actually more than simply a sense, or a gut sense of what is the right model.

Getting back to your questions about computational methods and data, and machine learning, I think-

Julia Galef: Or maybe to clarify that question a little more, I guess I'm talking about doing less explanation, and more prediction, on the margin. Yeah

Dani Rodrik: That's right, so I think that's a big issue. I'm doubtful that you can have prediction without explanation. In the sense that you can have a very complex pattern of correlations, that keep on having very good predictive value... But if you don't understand what that depended on, it could be that from one day to the next, that structure of correlations completely disappears. Because there's some change in the system, and you didn't understand that existing structure of correlations depended on that thing remaining constant.

Julia Galef: Mm hm.

Dani Rodrik: And that's again maybe a difference between scholarship and being an economic consultant if you will, or an economic forecaster. If I were an economic forecaster, I will be very hopeful that big data and machine learning and these mechanisms can actually provide a lot of useful guidance as to how I can predict the future.

But the researcher and the scholar in me tells me that that's really not science. Especially in Economics, these irregularities are highly specific to things that might be changing.

And so there's two things. One is we can have systems that are predicting the right outcome time and again without providing any understanding. These are like black boxes. We don't understand why we are getting the right answer but we're getting the right answer. That's unsatisfactory because we don't understand it.

Julia Galef: And I guess you can't really intervene on the system, if you don't know the causal structure.

Dani Rodrik: Yes, that's part of the other thing -- because you don't have the structure of causality.

Julia Galef: Right.

Dani Rodrik: Then, you can't intervene because you don't know exactly what a model does. What a simple model does is precisely tell you what that effect depends on. And in these complex systems you don't have that, because ... I think people doing big data are increasingly realizing that, I don't think that sharp distinction between explanation and prediction is one that's really going to stay with us.

I think in terms of doing science, I think explanation of causality will always remain a big part of it, because I think people who do that understand that if they don't have a clue as to why they're getting the results they are, then they're going to be always surprised because things will change.

We are not talking about a closed physical universe where ultimately it's all about just a fixed set of rules.

We are conscious agents that are always remaking the rules -- and adjusting to the rules. I think that again provides for a much richer set of outcomes that any given pattern of correlations, given time, may not fully describe.

And the moment we try to understand what a complicated model does, again it's just going to be in terms of these simple models. In my own field for example, we have a lot of what are called computable general equilibrium models.

So you want to understand what's the effect of NAFTA, what's the effect of the Transpacific partnership, where you have thousands of producers, tens of different sectors, and different types of labor and so forth. We had these highly complicated, multi sector models that try to generate implications for what's going to be the effect for the manufacturer of this kind of implementer, that kind of implementer. You get some numbers out.

And the fact is that unless we can relate those numbers to some very simple models, that we can actually understand them in terms of those simple models, I don't put any credence at all on those numbers. Because otherwise, they're just a black box... they're not credible.

It's only to the extent that you can explain those numbers in terms of simple models, simple benchmark models -- "Ahh we're getting these result because you see the presence of increasing returns to scale here. It's causing those

kind of adjustments,” and so forth. Then it sort of begins to make more sense, and I think they get more credence.

Julia Galef: Got it. We're almost out of time. I had originally thought that we would talk about epistemology for a little while and then also talk a lot about globalization -- but I should have figured that once we started talking about epistemology, the time would slip away from me! I'm gonna have to get you back-

Dani Rodrik: I would much rather talk about globalization, which I know something about, next to epistemology, which I know nothing about.

Julia Galef: Oh no, you do know -- well, I mean maybe you don't call it that. But I would consider your book *Economics Rules* to be a book about epistemology, so that's how I'm using the term. But no, I'm very glad that we talked about that. That was very illuminating, and I'll just have to invite you back again to talk about globalization, because I have many questions about that too.

But before I let you go this time, I want to invite you to nominate the Rationally Speaking pick of the episode, which could be a book, or an article, or website, or just anything that has influenced your thinking in some way. Do you feel like you have a pick for us?

Dani Rodrik: A book or an article, is that ...

Julia Galef: Yeah, I mean, past guests have even named movies or plays that sparked some worldview change.

Dani Rodrik: You know, one book that I keep coming back to, and I think it's partly relevant these days given where the world economy is, is *The Great Transformation* by Karl Polanyi.

It was written back in 1944, and Polanyi was talking about how in the earlier era of globalization, the classical gold standard came to an end in the early part of the 20th century. He talked about the conflict, the paradoxes of trying to have a liberal economic order in a world where people are demanding control over their minds, and have social systems and political systems that are diverse.

I think in many ways today, we're facing up to the same challenge where we've tried to construct a world of globalization and trade and finance. You know, have markets global while governance still remains very much local and national.

And I think much of the backlash against globalization can be understood in terms of that famous argument that Karl Polanyi put forth back in 1944 in that book. It's something I would recommend to anyone who is trying to make sense of how the world is currently.

Julia Galef: Wonderful. And coincidentally I just ordered that book, like 2 days ago, so that's very apropos. Wonderful. Well Dani, thank you so much for being on the show. You're a terrific guest. I hope to chat with you again soon.

Dani Rodrik: Thank you, and thanks for having me.

Julia Galef: This concludes another episode of Rationally Speaking. Join us next time for more explorations on the borderlands between reason and nonsense.