

Steven Durlauf: Hello everyone, and welcome to the Inequality Podcast. I'm Steven Durlauf. Today I'm delighted to introduce Wendy Carlin. She is a Professor of Economics at University College London, a research fellow of the Center for Economic Policy Research, and an external professor at the Santa Fe Institute. She is also the co-director of the Stone Center in London, and so I'm really pleased to have her as a guest.

Wendy, in addition to being a distinguished economist, is one of the most important educators in economics via the CORE Project, which she and Sam Bowles have co-developed, which is a new way to teach economics to undergraduates. And so CORE stands for Curriculum, Open Access, Resources, and Economics, and CORE is an excellent acronym because that's not the easiest phrase to keep on one's tongue. So Wendy, I'm really very pleased to have you here, and thank you so much for taking the time.

Wendy Carlin: It's a pleasure to talk with you, Steven.

Steven: So I thought we would start with the CORE Project, and to quote your website, you talk about how you'd like to change the economic education globally to a focus on the most important problems facing our societies, including climate change, justice, innovation, and the future of work—all of those in different ways address inequality. And so Wendy, I was hoping that we could start with an overview of the genesis of the project and how you perceive the successes so far.

Wendy: Certainly. Well, let's go back to the beginning. So the real starting point was the financial crisis, and I was teaching undergraduate classes at that time, and I felt that I was rather poorly prepared to answer the questions that students were asking: why this crisis occurred, how were the concepts that they were studying helpful in allowing them to talk to their friends, to their family? And people were expecting them as economic students to be helpful in this situation.

So I soon realized that I wasn't alone and that there was a big problem, not just in economic education, but more broadly in the profession. But that was kind of one of the big triggers for generating a lot of interest among academics in trying to do something about how we were teaching economics, and it also kicked the students into action. So they got themselves organized pretty quickly and started pressing for curriculum reform.

So that was kind of one plank of the genesis, and the other was somewhere quite different. It happened in Chile a little bit later, in 2011, when there were lots of strikes in schools in Chile about the inequality in the school system, and the university students were going out to the schools and standing there supporting their school kids. And then they were going back to their classes and thinking, "Well, there isn't any teaching about inequality in our curriculum."

So these things came together, and we brought together a small group of researchers, and our question of them was, "Is there something in the works? Is someone producing a way of teaching economics that's kind of fit for purpose in our current circumstances?" And basically this small group of about a dozen people kind of split. Most of the people said, "No, there really wasn't." A

few said yes, or they were in the middle of doing something, and so that was where we mobilized.

And in fact, we came up with the name CORE, which, as you say, is a somewhat ugly acronym, but it's a great word because it captures what we decided that day, which is we weren't going for some kind of peripheral add-on courses. We were going for the core of the curriculum.

From there, the project developed—it's a global coalition. You can think of it as a mobilization of researchers around the world to contribute their time to produce very high-quality material, and we've built that community of writers up over the last decade or so. And then we've got an associated community of teachers who are out there in the classrooms bringing about change on the ground.

Steven: Well, I don't think one can exaggerate the uniqueness of what you've done in terms of bringing researchers and teachers together to actually create a 21st century curriculum that puts one on the frontiers of economics, as well as the reorientation towards the empirically profound problems that you've identified. Might you talk a bit about the specific ways that the CORE curriculum differs from standard operating procedure in the study of inequality?

Wendy: Yeah, okay. I think, though, maybe the place to begin is with Robinson Crusoe. So that's where many courses begin—they take Robinson's problem as the problem of scarcity and how to allocate a scarce resource in Robinson's time. But when you think of him there alone, you realize that there's not much inequality in the picture, and so we don't start there.

In fact, we start literally at the beginning of the book by considering this 14th century scholar wandering—Ibn Battuta—wandering around the world and noticing that there aren't many differences in standards of living between different regions. And so that's our kind of starting point, and we then show what's happened to standards of living and how they began to pull apart about 250 years ago.

So the giant issue of inequality across the world is a relatively recent phenomenon, which is news to most of our students, so they're quite kind of shocked when they see the data. So that's kind of the empirical starting point with this very big picture, but that's matched with our choices in modeling where we begin with people who are very different in their endowments or in their wealth and therefore in their opportunities, so that starts right at the beginning.

We do spend some time on the standard economic problem of where an individual faces some fixed alternatives—maybe relative prices when they're going shopping, for example—but we don't make that the central way people think about how the economy works. So we think about, for example, think of a firm: the firm has owners and there are workers, and they're very different.

If you think about the owner, then what's the alternative the owner has? The owner can shut the firm down, walk away, do something different, take their capital out of the firm if there is any. But if you think about the workers, they're in a very different position. They have different alternatives.

So for example, if this was a care home in a small seaside town, there may be a very small labor market, and the care workers may have fewer alternatives, so that will mean that the owner or the managers at the care home don't really have to offer particularly high wages because there aren't many alternatives for the workers. So this is just an example of how we use the fact that the world out there that the students are looking at has people in different positions as a way of introducing them to some of the power of economics in answering their questions.

Steven: And it's a lovely introduction because the way that you articulated it, you know, raises two issues which are not, I would say, at the beginning of the traditional economics teaching. One of them is imperfect competition—in other words, that there's market power—and second, thinking explicitly about hierarchies and leading the idea of power to a more general conception.

Thinking about power, of course, leads to the way that other intellectual traditions address economics, and so might you say something about the way that the CORE curriculum includes takes from, I'll call them, heterodox approaches? And I guess the two that I have in mind—one would be the Marxian tradition, and the second would be the Austrian.

Wendy: One way of thinking about how we approach this issue—and the role of students has been quite interesting here because the students were very much animated by the absence of any content from different schools of thought in their curriculum—so that was one of their big demands, and they were critical of CORE in saying, you know, "Where's the chapter on feminist economics, ecological economics, Austrian economics, Marxian economics, and so on?"

And our response to them was to say that in this core course that we're teaching—like the intro, the principles course—we want to provide students with the tools and the concepts to think about how the economy works. And so we have the idea of pluralism by integration, by integrating the insights from all manner of schools of thought where they happen to be most useful, rather than pluralism by what you could say juxtaposition, by, you know, the schools of thought kind of fighting with each other, which I think is more what the students had in mind.

So there's definitely a place in the broader curriculum for a history of thought course, but that's not how we do it in the core, in the economy.

So just to give you a couple of examples: we make a lot of use of Hayek. So Hayek's view of the market as a dynamic discovery process, you know, really finds its way into how we present market interactions. So we don't focus on the outcome, if you like, where the supply curve crosses the demand curve and say that's that equilibrium—is that the big focus of our attention? We're much more interested in the dynamics around how the economy moves towards that equilibrium.

And, you know, we encourage teachers, and we have fun with students running around the classroom playing the market game, for example, and having that process of moving towards the equilibrium price. So we use Hayek's idea that prices are both the signal and the motivation to act on it, so that comes straight out of the Austrian school.

Dynamics in general are important in how we teach, so we put a lot of emphasis on entrepreneurs and innovation. And it's quite striking that not only is inequality fairly weakly covered, or covered sort of in the sidelines in a typical intro course, but so is innovation—another of the central problems that we're grappling with.

So we use a kind of Schumpeterian approach, talking about innovation rents as an incentive for entrepreneurs to innovate, so resting on Schumpeter, who, you know, in a way was a bit like CORE—he used insights from many different schools of thought. He wasn't exactly a kind of dyed-in-the-wool Austrian, though he was.

So yeah, so I think that's an example. Marx's insights—we have a nice "how economists agree" box where we put Marx and Coase into bed together because they shared the same view about the exercise of power within the firm. So our interpretation of what happens within the firm, which is a very important component of understanding, for example, how wages get set in the labor market, that owes a lot to Marx. As well as in our new version, the 2.0 version, we bring that together with a much more conventional, but often not taught in intro, search and matching model of the labor market.

Steven: So speaking for myself as a teacher, I've always tried to emphasize to students that economics contains a certain logical formalism of reasoning from preferences, constraints, beliefs, to individual decisions which are then made in the context of institutions, markets, social structures, etc., and that actually entails very little subsequently.

What I find especially appealing in the way you formulate the curriculum is that you accept that there's a logical formalism, but what does it lead to? That depends on the substantive assumptions about structures, power, and the like. And that seems to me a very powerful way to actually make the case for economics, as well as recognize the limits of particular perspectives.

So how would you assess the success of the curriculum in terms of the way that it's been received by teachers, by students? You've indicated some of that. And have you perceived resistance?

Wendy: We were surprised when we put out the first version of The Economy at how welcome we were—how welcomed this was. So we had very positive responses from teachers, from both people who are mainly engaged in teaching but also from researchers, from heads of departments, and so on.

So it seemed as though a lot of people thought something should be done, but they had no idea what should be done or how to do it. So the fact that we brought together this coalition of people with different field specializations to provide input into producing the curriculum, the fact that we had a very clear pedagogical approach, which was that if students weren't doing anything, they weren't learning—so it's very much engaging students, it's very interactive—and it looked good.

So people were kind of impressed that this looked good, it was serious in terms of the economics that were embedded in it, and it had serious pedagogy. They also liked the fact that it was free, so

this is free online to anyone anywhere in the world, and it's now available in lots of languages as well.

So that said, there are really big costs of switching, and anyone who's taught realizes that it's really a lot of work the first time you set up the course. And so persuading people to switch to teaching in a really very different way, even if you've persuaded them that it's much more like the way you do your research than the way they are teaching at the moment, it still involves costs.

So a lot of what we've done is to try to make it easier by building a very big test bank, for example, by creating all kinds of resources for teachers, and also trying to kind of create networks where people kind of pass on the word and say, "Yeah, okay, it was a lot of work to begin with, but it's way more fun, and I'm getting in touch with really smart students right from the beginning of their undergraduate program."

Steven: I keep using the word uniqueness, but I think that it's appropriate. Changing the organizational economics teaching to be a cooperative enterprise across institutions is absolutely unprecedented, in a certain sense the democratization of learning because of the input that you're taking directly from students.

I think professors generally would be uncomfortable with that—the idea is that there's an informational difference, our knowledge difference, an experiential difference where the professor sets the curriculum and the student is the passive recipient—but you've successfully integrated the two, and I think that that really should be commended.

Have you felt any resistance? In other words, pushback from some schools, some professors, etc.?

Wendy: Yeah, I guess most of the resistance is passive, so in the sense that people stick to what they're doing. In a way, the most vocal criticism has actually come from the heterodox people because they're—I think because they're more engaged in trying to change things in the curriculum—and we've had very interesting and constructive interaction with them along the lines that we discussed a bit earlier.

But in terms of major pushback from our peers saying, you know, "This is not correct," we haven't had that. There are still people who say you've got to teach the basics first—you've got to teach the representative agent, clearing markets, complete contracts, full information—you've got to teach that model first, and only then can you start to deviate from that.

So that's a really big difference, and there are some people we will never persuade. But I think we are beginning to persuade more and more people that you can start from where the discipline now is and use the very special case of clearing markets, price-taking firms as indeed it is a special case. And when you come to it, students are perfectly interested in it, but they don't use that as their benchmark for trying to understand problems in the world.

Steven: Well, I think that that identifies one of the key issues in teaching introductory economics, and that is how does one link the theory to empirics. And so the philosophy of starting with where the profession is actually, by implication, since research does follow the empirics, put you closer there, and that seems, you know, again another essential feature.

I think with respect to resistance, you're surely correct that much of it is—I don't know if I'd call it resistance, just as hard teaching old dogs new tricks. Changing the way people teach probably takes a fair amount of time.

For what it's worth, my conjectures on heterodox schools: they actually are coming from a different place than you, and that is that they wish to replace—they wish to supplant—and you wish to integrate. And so it's natural that if you wish to supplant, you don't want to—you'll have objections to a more integrative framework.

May you say something about how sociological, political, and other social science perspectives are integrated into the CORE? I'm interested in some of the contradiction to standard approaches to teaching.

Wendy: This follows on from the way we've kind of framed what we're trying to do when we're teaching economics. And something I didn't mention explicitly, but we call the book *The Economy*, not *Economics*, so we're trying to use the tools of economics to shed light on how the economy works. And that, by the way, is, you know, much, much closer to how researchers approach a problem. They have a problem out there in the world, and then they think about how they're going to bring economics to bear on the problem.

So if you've got that kind of approach, and once you take on board the new benchmark that we're using, that really opens up the question of what people are like and how they interact, the fact that their interactions occur in an environment where information is always limited, where contracts are incomplete. Then you have to take on the insights from social psychology, sociology, political science. They become essential to your role in teaching economics, understanding how the economy works. They're not sort of an optional extra that you can put into a box or at the end of the book.

So it's really, you know, just the simple case of going beyond *homo economicus* to a richer version of human motivation that's going to lead you to think about other problems. So problems like a joint project—and students are very—you know, they encounter this all the time in their dorm with who's going to do the washing up and clearing up—and so, you know, where there are social interactions involved, we should be able, and we know we can in economics, characterize those.

And in some of those interactions, people are altruistic as well as selfish, and the way they behave depends on whether they think these interactions are going to happen again, whether they, you know, whether they're going to be repeated and so on. So we need more nuanced versions of human behavior in our models, and that's what we do.

And we kind of discipline it, so it's not like any old thing can go, and we do that through introducing students to a set of simple games and also through classroom experiments where they literally experience, for example, participation in a public goods game. They see that people do make a contribution to the public good, and then they experience it round after round, and they realize that some people are not contributing, so they stop bothering to contribute. And then when you show them the results at the end of, say, 10 rounds, they can see the contributions going down.

And they also see that if you change the rules so that you can punish people who don't contribute, then you can sustain a high level of contribution. So that kind of experience of something other than purely homo economicus drives home one of the elements that we're bringing to the curriculum.

Steven: So looking at where it is today, where do you anticipate the evolution of the curriculum? And I should preface that by saying that one of the essential features of your project is that it's a living curriculum.

Wendy: It's evolving. At the moment, we have six new CORE Insights from the Global South that are being published over the next few months, so that's something new. So the first one's on sovereign debt, there'll be one on hyperinflation, there's one on climate justice, one on precarity, another one on the informal economy.

So that's kind of the project looking out to provide really top quality teaching material from top researchers but from the Global South, so focusing specifically on problems that students in those environments want to understand.

We are also going to do a whole ebook on economic inequality, so we'll be knocking on your door for help with that. And other than that, we have a big project which, if we can get funded, we would really push on, and that's a project for translations. Because we've got all this material, we just need to make it available, because in many parts of the world, even though research is all done in English, teaching, especially in the first course, is often done in the local language.

So we've got quite a few translations of the 1.0 version. We've got Spanish, Chinese, and Korean happening for the 2.0, which is very exciting, but we have a whole list of other languages that we would like to get published. So we have quite a lot on our slate.

Steven: I wanted to ask one final question which had to do with the teaching of ethics. In other words, you've emphasized how issues of justice are integral to the curriculum. My sense is that most economists would be uncomfortable in the teaching of this subject in an introductory class, and so can you say a bit about your vision of teaching and the integration of the normative and the positive?

Wendy: Yes, most teachers are uncomfortable teaching this, so they prefer to stick with Pareto. And what we do is we try to establish a pattern where we ask for an evaluation both in terms of efficiency and in terms of fairness, and we don't say what's fair.

We give some frameworks for thinking about fairness, for example, whether something is procedurally fair—that would be an example—so we can put it on the table. We also get students to play or to look at examples of what happens in the ultimatum game to get some sense of how people think about fairness.

All of these things are ways of breaking down barriers for teachers because they give teachers something to do, and that's often the problem when teachers are teaching something new that's not a model. They feel kind of uncomfortable in the classroom, and giving them games to play, which are now extremely easy to do on students' smartphones, and frameworks like this sort of frame of always asking, "Is it efficient? Is it fair?"—I think that breaks down some of that discomfort of teachers.

Steven: In looking back, do you have any things you would have done differently?

Wendy: I think no. I mean, it's sort of just it's just—

Steven: It's an unfair question, I know.

Wendy: It's kind of—there hasn't been much time, I would put it that way. There always seems plenty to do, and it kind of goes sort of galloping on with lots of new ideas and new people getting involved, so it's a very exciting project to be involved with.

Steven: So I thought we should—of course I want to turn to your research. And so you've done important and interesting work, of course, on inequality measurement, and I wanted you to, if you might, give some background to the work and then focus on what you've had to say about the Gini coefficient.

Wendy: I can tie this directly back to a question from our student in the principles of economics module at UCL where I teach. So when we first used *The Economy* for this class, we introduce students, as I have already said, really early on to the measurement of inequality, and the way we introduce them to doing calculations themselves is that we provide them with information about inequality on a pirate ship and how the booty, when the pirates get hold of some, how it's divided up between the captain, the quartermaster, and the crew.

And so it's a small number—we know exactly who got what—so that comes from the constitution of pirate ships, which were written down at the time, and we can also give them a basis for comparison because we can calculate the Gini, or get them to, for the royal navy ships that were chasing them.

So, you know, these are really small number examples of populations from which you can calculate the Gini coefficient. And so we gave them the explanation of how to do this—that what the Gini coefficient is about is the difference, the mean difference among all pairs of individuals. So they can draw a diagram of this with the share of the booty that each of the people on the pirate ship get, and then we take the mean difference among all pairs divided by the average income and multiply it by one half. That's literally the formula for the Gini coefficient that we gave to them.

And the students were, as usual, given exercises to do. They were given little example populations, and they had to calculate the Gini coefficient and compare the size to the Gini reported for different countries, so they could get some sense of whether the population they were looking at was more like South Africa or more like Denmark, say.

Um, anyway, one student thought that it would be much easier than adding up some numbers and dividing them to use an online Gini calculator to finish their homework, and they did that and handed it in, and then it got marked wrong. And they complained about this, as students do, and said, you know, "This is the answer I got."

And this really created a puzzle because we didn't know why they got this—why the answer was wrong, why there was a discrepancy. They, of course, claimed their answer was right, and this stimulated a whole kind of train of work that Sam Bowles and I have done over the last few years. You know, it literally came from that classroom.

And so it ended up in a research paper where we provide a new interpretation of the Gini coefficient as a measure of experienced inequality on a complete network. So it's exactly like those tiny examples that I just described to you that we had in the textbook and that we'd given to the students to use. But we hadn't realized that this was different from the number that you would get from the algorithm used to calculate the Gini.

So that really got us thinking and made us realize that you could interpret the Gini coefficient, when thought of this way, as relating to the subjective experience of disparities. And the network interpretation gives you the Gini, so if you calculate those income differences—so think about the difference from other measures of inequality which focus on the nodes, the levels of income of all the people that you're comparing—this is a measure that focuses intrinsically on the differences between income of all the people in this population who are all connected.

And once you think about it like that, you can imagine that there could be situations in which you want to measure not a complete network but actually how inequality is experienced, because you may not interact with a whole load of other people in the so-called population. And so it kind of provides a more general toolkit for thinking about measuring inequality on complete and incomplete networks.

Steven: I think that raises a lot of very interesting questions. One of them would be how to think about the experience of group inequality. So in other words, I experience inequality at one level, which is the people I interact with—so that would be the local network interpretation. A different type of inequality is what I experience in knowing that I'm in a category—in other words, my ethnicity, my gender—and it may be that my sensitivity to inequality may be different if it's another group.

Wendy: Exactly. And this is really interesting, and obviously it's the basis for a lot of research. And there's one paper that's been published on this by Majumdar et al., and what they did is they took the idea and used really detailed data on networks from a group of 75 villages in India. And because they were following, you know, what you're kind of talking about, they were interested

in the experience of inequality, thinking about it as to do with wealth, but also thinking about the structure of the social network, including caste.

Bringing both of these to bear is going to really matter if you're thinking about policy. So I think this interpretation of the Gini and the kind of many Ginis that you can develop based on who you're interacting with and who kind of counts is an important avenue that we should really try and get more people working on.

It's a kind of Veblen idea, right? It's kind of we're comparing ourselves, and that's what we mean by our experience of inequality. And I think it may be a different and possibly sharper way of thinking about some of the problems that we observe in our current economic environment.

Steven: That absolutely comes to mind in thinking about populism and the interpretations of it in terms of economic resentments. It's very natural, I think, and appropriate to focus on a subjective experience, and then that leads to the distinctions between levels, such as one's personal social network versus one's group description, be it caste or be it race.

Steven: So you've also written on very broad questions of the nature of capitalism, and I particularly was hoping you could tell us about your "Shrinking Capitalism" paper.

Wendy: This is a paper with Sam Bowles, and we were never quite sure about calling it "Shrinking Capitalism," but it seemed like a nice idea at the time. And the idea was that capitalism was shrinking—so that it's like a positive statement—and what that relates to is that the share of the economy which can really be well managed under normal kind of capitalist firms, and especially with the ability to make reasonably complete contracts and so on to get the work done, that that was shrinking as the share of care work and the knowledge economy expanded, where this seemed much more problematic.

So that was a kind of view about the ongoing shape of the economy that was, capitalism or the role of capitalist firms was potentially shrinking. And then the other idea was—that was a normative idea—that there were reasons why capitalism should shrink. That relates to the relationships, the power relationships to which we alluded much earlier, that characterized the ability of the boss to tell the worker what to do and which some of which came very much to the fore during COVID, where particular groups of workers were suddenly essential workers, and they had to go to work, and they were often working in quite dangerous environments and had little control.

We wanted to shed light on these relationships within the firm and the importance of aspects of being, such as dignity, that there's—for a long time, it was all about dignity in the market—that was a great achievement of the modern economy—but what we were trying to shed light on was dignity at work, dignity in the firm.

Steven: In sum, as that, you know, that links back to some of the motivations at the beginning of the CORE curriculum when you said that it was about not economics but the economy, and recognizing these deeper psychological and social dimensions to work, the normative implications, etc. It's really integral to your vision.

Steven: So the last question I want to ask you is a bit more personal. You've taken a very unique trajectory as a scholar, and what advice would you have to graduate students in terms of retaining the intellectual open-mindedness and receptivity to different perspectives that you had in your career, and what sort of courses should they be teaching now? How should they think about research?

Wendy: First of all, my first piece of advice to them is teach, especially at the intro level. So students—they ask the best questions, and you'll get many great research ideas from them. So at your first opportunity, teach and volunteer to do that intro course.

The situation at the moment is really exciting but very challenging. The speed with which AI is learning how to create sophisticated economic models is truly breathtaking. I mean, a few months ago it was fantastic at coding; now it is building and solving models. In one sense, this is breaking down barriers and reducing the cost of entry into parts of economics that may have been closed for some students, or taking like years to get to the stage where you could try out your idea and see if it could be formalized in an economic model, a model that could be simulated, for example. Now I think that's just much closer at hand.

There's a big question about how best to navigate this opportunity, and I don't know that, but I think it's something that we should all be thinking a lot about. So the premium really for a graduate student, even more now, is curiosity—it's good questions, bold questions that will provide you with the motivation to keep you going during what's, you know, often experienced as a very lonely time as a PhD student.

And thinking about AI again, if you can't write good prompts, if you don't have good ideas, then you won't be able to exploit the power of AI, and that means you're going to be left behind, sort of independent of whether you are technically brilliant or not. I think it's going to come down much more to whether you have good ideas and good questions than in the past where there was a premium on technical capacities.

You're going to have to find interesting data. There's now a wealth of administrative data available in many countries—high income, low income—and that's going to let you do the sort of sophisticated econometric modeling that's now required for credible inferences that we insist on in economics.

So I think, you know, in a sense, that there's an enormous openness—there's the possibility of great data, there's the possibility of great assistance from AI in your modeling—and it's going to come down to wide reading and being open to suggestions and not kind of getting yourself stuck into a particular field or subfield too early.

Steven: Wendy, I can't thank you enough. There's really a tremendous amount to think about here, so I'm very grateful to you, Wendy.

Wendy: It's been a pleasure, Steven.

Steven: The Inequality Podcast is a production of the Stone Center for Research on Wealth Inequality and Mobility at the University of Chicago. I want to end the podcast with thanks to the people who really make it happen. First, I want to express deep appreciation to our producer and engineer, Shane McKeon, who oversees every aspect of the process of creating these podcasts and really does just a splendid job. Second, I'd like to thank our Assistant Director, Nina Gray, for production oversight and the role she plays in bringing the podcast to fruition. And finally, I'd like to thank Grace Kolovo, who's the executive director of the Stone Center, who basically does everything in terms of making the center work. You may get in touch with us at stonecenter@uchicago.edu. Thank you so much for listening

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