APPLYING WISE INTERVENTIONS AROUND THE WORLD

James Walsh 0:00

Hello everyone and welcome to the csae Research podcast. This is a series of conversations about projects taking place at the Centre fo

r the Study of African economies at the University of Oxford. My name is James Walsh, I'm a research associate at the Blavatnik School of Government where I recently finished my D Phil, and a member of CSAE. I'm delighted to be joined today by Greg Walton, who is an associate professor of psychology at Stanford University. And Kate Orkin, who's Senior Research Fellow and faculty member here at Blavatnik School of Government, where she leads the Mind and Behaviour Research Group in the Centre for the Study of African Economies. Today, we're talking about wise interventions and their use in policy solutions around the world. I've had a passionate interest in this for almost 10 years now. When I first was working in policy, and encountered Greg's paper in 2014, I had just joined the World Bank to participate in the team that was making the World Development Report on behavioural economics applications to development policy. And at the time, a lot of behavioural economics had been scaled around the world, but a lot of it focused on very standardised forms of behavioural economics that were removed from social context and meaning. So for example, there were interventions that had simplified letters or had used defaults to shift behaviour. And what was really exciting about the World Development Report was that we were trying to, in addition to kind of to those kinds of interventions, think about how richer forms of psychology could be integrated into policy that took advantage of things like meaning construction, social norms, mental models and schemas and how those things can be leveraged to support policy goals. And so of course, this is a long and rich tradition in academic research in a number of fields, from anthropology, to psychology to sociology. But one of the constraints around the research that are already been conducted in this area was that it was kind of like a toothless giant. So there wasn't really much work that we could find that showed how a policymaker might actually be able to leverage meaning construction in interventions to support people and help them flourish. And when we encountered Greg's work on wise interventions 2014, a lot of that changed. we started, Greg's work and wise intervention synthesised this approach for taking advantage of meaning construction, and thinking about how it could be used to help people flourish, and to solve social problems. So now, almost ten years later, I'm absolutely delighted to be here with him and with Kate. And I think one of the things to note about when the World Development Report was published, one of the one of the kinds of pieces of evidence that we found that was most exciting, and it's application of the kind of work that Greg was doing, was Kate's work in Ethiopia on using a style of wise intervention, these videos, that were intended to promote aspirations in rural Ethiopia. And so I think having these two guests here today is just an incredible opportunity to think through the application in kind of novel and innovative ways of psychology and in particular social psychology to develop and policy around the world and to think about it as a tool and solving scale problems. And so, I want to start, first of all, by talking to Greg about what wise interventions are, what the history of wise interventions are. And perhaps some examples, that as Greg has worked on, in using these empirical work.

Greg Walton 3:34

Thank you, Jamie. It's just a real pleasure and an honour to be here to be able to have the opportunity to talk with you. And I do think that there are so many opportunities in front of us to make the world better make our institutions better to serve people better and to help people flourish. So ,the term 'wise interventions' can be misunderstood, sometimes in some ways. So I want to just say from the outset that *wise* does not mean *better* than other approaches, it doesn't necessarily mean effective. Sometimes wise interventions don't work. Sometimes they're not the right tool for the problem. Sometimes they can even backfire in important ways that help us learn. Instead, the word has to do with the use of wise and phrases like 'streetwise' or 'wise to', 'wise to something'. It goes back actually to Goffman, who talked about the homophobia of the mid-20th century in the United States. This is Erving Goffman, the great sociologist, and how some straight people were, as he put it, 'wise to the humanity' of people who were non straight. That term got picked up later by Claude Steele in the 1990s, as he was thinking about his pioneering research on stereotype threat, and he talked about *wise schooling* and what he meant by *wise schooling* was schooling that would be sensitive to the predicament that students are in when a negative stereotype is about their group in that setting. So if you're in a school setting, and there's a stereotype that says that people like you are less able or less deserving than other people, school should be sensitive to that. And it should be built in ways that help you succeed. And don't raise that concern. So for me, what wise means is wise to the underlying psychological process that's important in the situation. And I think one of the most powerful ways to think about that, and what a psychological processes is, in this context, is that it's wise to the kind of core question that a person is asking in a situation, a question that is typically reasonable, it comes from the context that they're in. It's not pathological. But a question that, is, threatening and undermining. So it might be that you're walking around a school setting, and you see lots of references to people who are smart, and people get praised for being really smart. And you're see tests that are ostensibly going to assess who's smart and who's not. And then you might be asking the question, Am I smart? And if you do badly, on anassignment in school, if you maybe fail a math test, then you might wonder, does this mean I'm dumb at math? And that's a question that you're facing. It's a question that the context is posed to you, if you're in the first generation in your family to come to college, that is, people in your family haven't come to college before, then a question that you might ask is, can people like me belong in university? Or is this just a place that is ill suited for people like me where we won't fit in? And those questions come from contexts. And then the problem is that they have this tendency to become true. When we start to ask that question, we start to see the world in a different way. And then through psychological processes, confirmation processes, and also through behavioural and relationship processes, we end up creating a world in which that confirms that original question. And so what wise interventions do in many different contexts, is that they identify those places where those questions are coming up? And then they offer people better answers to those questions, answers that they can use to flourish.

James Walsh 7:22

Amazing. And so can you give us an example of a wise intervention that you have implemented and some of the effects that you found?

Greg Walton 7:33

Yeah, if you don't mind, I actually would like us to start with one that I didn't do, but I'm a huge fan of it, because I partly because, I think the problem space is so interesting and important, and the outcomes are incredible. And I think it's under unknown and underappreciated. And this is work by the social psychologist Daphne Bugental, who worked at the University of California, Santa Cruz, and she was doing work with parents who were demographically at risk for committing child abuse. And these were, these were mothers, because these were often single family, single parent households. These were mostly Latina moms, many had been abused themselves as a child. They were mostly low income, they were quite isolated in their social circles. And what Daphna Bugental realised was that for these moms, there is this question on the table. Am I a bad mom? And there is another question that was closely related to that, which is, is my baby a bad baby? Like, it's kind of hard to say that question out loud. Like if you're a parent, and you're asking that question, like, that's really hard. It's a really hard thing. And so what she saw was that when mothers were having trouble with their babies, like, say, a baby was having trouble feeding, and maybe it wouldn't take the bottle, maybe it wouldn't stop crying, maybe she had trouble getting the baby to sleep. It would confirm in these mothers' minds, that these questions would seem to be evidence that they were a bad mom, or that their baby was a bad baby. And so she worked with a state programme, where they had social workers going in about 15 times over the month six through 12, the baby's first year of life. And there was a control condition where the social workers provided basic information about training and goal, that sort of parenting and goal setting, household budgets, that intervention was not effective. There was another control condition where there were no visits. In the key condition, though, the social workers went in and they were trained to ask the question, okay, what is the most the most significant problem you're having with your baby? And mothers would say, maybe I can't get the baby to fall asleep. And then they would say, 'Why do you think you're having that problem'? And the mothers would often say these reasons that we're implicitly or explicitly self-aware. he blaming like I'm a bad mom, or my big my baby prefers, her grandmother, my mother. And then they would just ask this was the critical question. They would just ask Could it be something else? And they just kept asking, 'Could it be something else' until the mother started to entertain an answer that wasn't pejorative, like 'maybe I need to try a different swaddle', 'Maybe I need to try a different bottle perhaps'. And then the interviewer would say, okay, great. Well, why don't you work on that? I'll come back in two weeks, and we'll see where you are. Come back in two weeks, they'd say, here's what you said, here's what you tried, how did it go. And what they found was just overwhelming. So they reduced child abuse, first of all, so mothers were less likely to abuse their babies. The mothers felt more empowered in their relationship with their babies, the mothers were less depressed. And what could be more depressing than feeling like you're in a power struggle with a nine-month-old and losing. The children were healthier, then in a later replication trial they tracked kids over several years into their preschool years, kids had more rapid cognitive development, they were less aggressive. And mothers were more likely to be differentially investing in those babies who were the most at risk, which is, of course, an important thing to do in a household. So I love that intervention. Because it, it brought up a question that was that was really important and really central, it had this graceful way of helping mothers to a better answer and to become efficacious in their in their very important work, and maybe their most important relationship with their lives. It helped them in that role, and then it helped their babies in their in their development.

James Walsh 11:49

Thank you, Greg. My understanding of a lot of ways interventions is going to be primarily implemented in the United States. And of course, the scope for applying these kinds of ideas is

global. And I'd like to ask Kate now, based on the exciting results that we've seen in the United States, in particular, but in rich countries in general, what scope do you think there is for applying these in low resource settings.

Kate Orkin 12:16

So I think there's huge potential for this, and it was incredibly exciting to talk with Greg today, I read his work first as a PhD student. And it's informed a huge amount of what we've been trying to do in the last couple of years. So I guess just to give a bit about my experience, kind of where I'm coming at this from. So when I was a PhD student, I was brought on to a collaboration between Oxford and a local institution in Ethiopia. And that was trying to do a form of wise intervention in that in that country. So the Ethiopian team recorded a series of documentaries of the lives of poor farmers in a very remote and isolated area. And they recorded the stories of people talking about their own struggles with poverty, but also how they had set clear goals, and managed to make small life changes that had improved their socio-economic position. And so the Ethiopian team had made these documentaries. And we then ran a randomised trial where we tested the effects of showing these documentaries, compared to a control group on how people made basic economic decisions. And then we followed up that sample over a five-year period. And we find pretty amazing results, given the scale of the intervention and the, the low-class nature of it. So having a one hour documentary screening, after five years, those farmers who had that screening have still invested more in sort of technologies and inputs on their farms. And they have higher levels of asset wealth, they've also invested more in sending their kids to school, so the kids are more likely to be enrolled, they spent more on kids' education, and then after the five year period, actually more of those kids who have completed Primary School. So, from a when our interventions, pretty remarkable and persistent results after a kind of long period. And then subsequently, we've done some work with an NGO called Give Directly. And so their sort of place in the world is that they, they argue that we need to benchmark any development interventions that we want to push, against cash transfers against actually just giving the money to the beneficiaries. And we need to say that interventions can't only have some statistically significant effect, they actually need to have an effect that's bigger than the effect of just giving money straight to poor people. And so we've run another trial where we've compared a similar intervention in Kenya to an existing Give Directly intervention, a large cash transfer, And we find that the psychological intervention is a lot cheaper, it actually has a much higher cost benefit ratio after a sort of 17 month period then the cash transfer does and obviously, the cash flow can lead to longer term asset accumulation and wealth. But it was a way of benchmarking, to say these effects are actually not only statistically significant, they are economically important, when you compare them to our existing best practice, there are the magnitude that we need to care about and think about, how we can integrate these into development policy. So I think those are just two examples. And colleagues and people in all sorts of different settings have been working on similar kinds of translations of wise interventions into to low income settings, and someone Greg works with Katherine Thomas and others have worked, integrating these programmes into actual government programmes. So big paper just came out in Nature with the World Bank, where they were, they had an existing government cash transfer programme, and they tested the effect of adding on some of these types of interventions, and they find a game that adding on that component improves the cost efficacy of the programmes. So I think there's a lot of evidence now that there's huge scope for these programmes in low resource settings. And, you know, in some ways, that's, that's pretty unsurprising. Because the exposure to many of the ideas and narratives that might help people succeed in enriches settings is really low. So, you

know, I think we almost take for granted, that is part of our cultural experience, someone might have said to us, at some point, the goals and the goals you'd have what you want, actually is important that has meaning for you that matters. Whereas, some of the samples we're working with, firstly, just exposure to the outside world and other people's experiences is low, like in the Ethiopian sample, 15% of people had seen TV in the last year, there's a lot of potential for exposure to different experiences to have an effect. But I think also, most importantly, you know, doing interviews with people and those samples, when you ask people, What are your aspirations, what are your goals, some of the women said, Well, what my husband wants. Sometimes it's the first time people have thought about some of the concepts that we're promoting and trying to build up in these interventions. So it's kind of unsurprising that there's quite a lot of potential for these interventions to have effects in those settings. And, you know, just finally, to say many of the issues that Greg was talking about, that that people have low status, either, you know, societally or economically, ophthalmology dies, they're thought of as lazy, as lacking diligence as making bad choices, those stereotypes exist in poor countries, just like they exist in rich countries. And, poor people are dealing with those stereotypes about themselves all the time, and have internalised them, you know, so it's very likely that the same sorts of interventions are going to have effects, because that same underlying problem is there.

James Walsh 17:48

Absolutely. And I think one of the exciting things over the past decade or so, has been the growing body of rigorous evidence, with substantive outcomes as Kate, both you and Greg have outlined in the examples you gave. So the scope is clearly there, but I want to turn to the more difficult questions understanding the constraints to operationalizing these ideas, both as pilots, and in terms of scaling them, and a particular focus, you know, first, on the challenge of bringing wise interventions, which are essentially focused on socio cultural processes, to heterogeneous cultural contexts, bringing ideas that often came from societies, or bringing these ideas that were built and researched in one context and bring them to often very, very different contexts. And I think this actually not only occurs, you know, across national contexts, it might also be a challenge when dealing even within a country, dealing with different cultural groups or different socio-economic groups. And so maybe I'll kind of start with Kate, I'm just curious for your perspective on thinking about applying these ideas that, you know, really did come from the United States, in low-income countries. Your work primarily is in has been in Africa, what are the constraints that you found to be most challenging? And how have you thought about overcoming them?

Kate Orkin 19:27

So I had an amazing conversation with Greg about this yesterday, and just framing ideas I've kind of struggled to articulate for a while. I mean, we were both agreeing there's this real difficulty for this whole agenda, because we can't do is say we're coming from these richer countries, we've developed, you know, people in poorer places are just thinking about things wrong. You know, what they need to do is save more or take more risks or, you know, make better decisions. I think that's dangerous because it might provoke a backlash. It's wrong. You know, there's moral issues with it. And so I think that is a real challenge that faces this whole agenda. You know, what Greg was saying, I think, is really about thinking about how we develop these sorts of interventions and what the purpose of them is, and really trying to be quite limited in scope about what we claim for these

interventions. So, I think there are two characteristics that are important if they're going to, if we're going to succeed in adapting things, sensitively, and in these low income settings. The one is making sure the interventions are relevant. And then the other is that they respect people's autonomy. And so on the relevance, Greg was saying, it's, these interventions are about asking people a question, you know, and helping them to think through a question. And then they also not about giving them an answer. It's just about facilitating a process through which they answer that question for themselves. And that language was amazing. And I hope Greg uses it widely, because I find it really helpful. You know, so in terms of asking the questions, in terms of relevance, that's about, you know, talking about issues that are questions that people would be asking anyway, as Greg was saying, so, you know, how do I keep going when things are difficult? How do I, you know, make a plan to make my life better? Those are questions people have anyway. And that's the sort of thing that we need to be to be focusing on. But I think also in terms of relevance, really pushing ourselves as researchers to be foregrounding people's lived experience, to be making sure that the narratives and the content that we present really resonates with how people think about their world and the kind of everyday struggles that they're facing. So I think the relevance is one issue. And then the other thing I think, is potentially even more important in a low-income setting is this idea of respecting people's autonomy. It's one of the arguments people make for cash transfers, you know, that you're not saying this is what you have to do, you're just putting people in a position where they can make decisions about what's best for them. And so that really goes to Greg's phrasing of not giving people answers. It's just about a process about how they get there. Yeah, I mean, I've got thoughts. I'd be interested to hear Greg's thoughts on that. But I mean, also thoughts about what this means for the research process. And I think my thoughts are quite provocative.

James Walsh 22:30

I want to push it over to Greg, because I've heard you use the word asset based approach as Greg, and I'm wondering if you could help us understand what you mean by that. And whether it's relevant in terms of understanding what the ethics and the kind of the design of these interventions?

Greg Walton 22:47

Yeah, I think that there's a lot to say here. And at a high level, I think it's important to understand the complexity and have a balanced approach. That is, it's certainly not the case that everybody everywhere is a snowflake. And we can only do one on one clinical therapy to you know, help people with the psychological problems that they face in their life there are predictable, you know, situations, those situations can occur across cultural context, across institutional context. So for example, a lot of my work is on students experience of belonging when they come to university. And, you know, it's pretty predictable that every, you know, kid who comes into college, especially first generation students, especially students from underrepresented minority backgrounds are going to worry about whether they belong at some point in that transition to college. So we're not all snowflakes. At the same time, it's also important to recognise the significance and the importance of both culture, cultural diversity, and institutions and institutional diversity. And so then, I think from a development perspective, that is from a developing interventions perspective, it's helpful to begin by asking, Okay, what is it that people are trying to achieve in a context? Like, what does it mean for them to flourish here? What are their goals, that it's not somebody else's goals, it's what

are their goals? And then to ask, okay, typically, psychological interventions work as a function of barrier removal. So to ask, what are the worries? What are the psychological barriers that might exist here? What are the things that people are maybe fearful of or worried about? And that might be something like, can I belong? Can I do it? Am I enough? can I achieve? Would achieving threaten my relationships with other people?

Can I trust other people? And then that's a process of listening for questions. And you can do that listening for questions in a lot of different ways. You can do that in open ended ways. You can do that with laboratory experiments like psychological experiments, that's a question of basic research. And then you want to learn once you've started to understand what the questions are, you want to learn, okay? What are the kinds of answers that might be legitimate and useful in this context? That is legitimate, it's authentic to that space, it can hold and useful. That is people can use that answer to guide how they make sense of their world, and then how they behave in that world. And then, just as Kate was saying, to deliver the intervention, you want to think about that as offering people that answer not giving people that answer. So you're offering people that answer you're, you're saying something like, we've thought about this, we've heard from other people, here's what other people said, What do you think about this? Has this been true for you? Or could this be true for you? How would you describe this to somebody younger than you? And so then we don't have the ability to like, control somebody else's mind. But we do have the ability to give them something to contend with, to think about. And if somebody finds that answer, useful for them, that is that would help them flourish and help them achieve their goals, and they find that legitimate in their context, then they can run with it, and they can use it and it can change their lives as, as Kate was describing earlier with the work in Ethiopia. But that then depends on the nature of the setting. So there are some settings where the answer that you're offering isn't going to be useful, or it might not be legitimate. We use the language of affordances, to talk about that, that interventions depend on the affordances of the situation. So for example, you could do a great intervention in a school setting. But if kids aren't learning Chinese, for example, they're not going to learn Chinese no matter what you do psychologically. Right? So the psychological intervention is designed to facilitate people's ability to take advantage of the resources and opportunities that are available for them. And resources, and opportunities are not always available for everybody. And that's a huge source of inequality in the world. A second kind of affordance that's really important is a more psychological or subjective affordance. So, you offer people a way of making sense of themselves and their situation. And does that seem authentic and legitimate in that space? So you offer people a growth mindset, you say, intelligence can grow with effort and hard work and strategies and help from other people. But then their math teacher repeatedly emphasises how math is about being smart. And some people are smart, and some people aren't. And this class is about figuring out who's smart and who's not. Well, that idea then is, in a sense, locally false, like the teacher has kind of discredited, it's been it's been unvalidated within that setting. And we now know from very large scale of growth mindset trials and social belonging trials, that in situations where the local environment is making the psychological answer that you're offering is legitimate. It doesn't have benefits.

James Walsh 28:08

Interesting, okay.

I have a question here based on what you what you both have just said. Well, I have two questions. The first question is are wise interventions and nudges. It strikes me that, as you both described them, there are some key conceptual differences between a nudge and a wise intervention. And I'd be curious to get both your perspectives on that. The second question I have is whether wise interventions are best understood as complements or substitutes for standard interventions focused on, you know, institutional change, for example, or resource-based change, for example, you know, cash transfers, or access to services and so forth. So let's start with the question about nudges. And Greg are wise interventions are not

Greg Walton 28:56

Absolutely not.

James Walsh 29:01

Great. Okay Well, tell me why. Tell me why Greg.

Greg Walton 29:03

So you can nudge an object, right? Like a nudge, nudge has no psychological theory. So it treats people as going with the flow and making the world flow better. And sometimes that's useful. I appreciate it when the cafeteria makes it easier for me to get healthy options. But then I don't take anything from that into any new situation that I'm in. We're talking about people's sense of belonging, or their aspirations in life, or somebody's marriage, or whether or not somebody's a good parent, it would be immoral to try to nudge that, right? Instead, these are things that we contend with these are the most important sort of parts of our humanity. And we need to contend with how we make sense of and process that especially when it's difficult and hard.

James Walsh 29:49

Right. Kate, do you want to add to that?

Kate Orkin 29:50

Yeah, I was applauding Greg on the podcast. I mean, I think the thing for me in these contexts, you know why I found Greg's work so powerful was; nudges assume the presence of the state. And in most of these places, there's just very little, you know, so there was this one famous and, you know, really interesting intervention, it was about how do you get farmers to use the right amount of fertiliser, and they tried a range of different interventions. But some of the things that were most effective were, you know, making sure that you delivered it exactly at the right time, when they were kind of cash flush, they could purchase it, they could make sure that they applied it. And then, to get them to use the right amount, you had to give them a little teaspoon, so that they would put exactly the right amount, you had to have different sizes of teaspoons for different crops. So those things are, they work, they had great effects. But I do not know a state that can make those kinds of

interventions in the places where we're working. And so I think, what is incredible about these interventions is that they go beyond the individual decision, they're really thinking about how people are approaching a broad range of problems in their lives. And because they're about your fundamentals, if you can manage to shift them, the potential for them to persist over a long time period is, is quite big, you know, any of us can think about profound encounters that we've had in our lives with, with role models with people who are inspirational, those things stay with you for a really long period. And that's kind of what we're trying to scale up and approximate for people who may not had have had those encounters, but it's, you know, goes much beyond the particular, one or two particular decisions. And it's also, you know, attempting ambitiously to have quite a lot of longevity.

James Walsh 31:36

Interesting, and building on that Kate, what do you think is the most effective strategy to be thinking about in terms of scaling the availability of wise interventions, especially in those hard to reach, low resourced settings?

Kate Orkin 31:53

One of the things that was tough about doing the costing calculations in this ken trial was just to get out to peoples houses in a pretty rural, remote part of western Kenya, a huge bulk of the intervention was not about delivering the video or paying the field officers who went to peoples' houses, it was just about the transport. So I would give a very practical answer; we need to use infrastructure that exists already as much as we can, and think about this as a cost effective bolt. For example, in many developing countries there's big infrastructure of community health workers. They do a lot to give early nutrition advice, they deal with public health problems, they make sure mothers are getting vaccinations for their babies, those sorts of things. And there's quite a lot of evidence that they do struggle to achieve take up of those settings. That seems to me to be an ideal infrastructure that we could use to deliver these sorts of interventions. And then it's about making sure that the technology that you are using, works within that context. There's an amazing NGO in Ethiopia called Digital Greens, that have these little solar charged cameras, that manage to project without having any electricity and you can use them in farmers training centres, they are actually doing something to integrate the aspirations approach into what they're doing. They show videos of farmers using fertilizers or high yield seeds and you can see how you could just bolt in an aspirations intervention on the top of that. And potentially that might enhance the infrastructure that was reaching people already.

But I really don't want to be the person who says we should be replacing existing developing interventions with these things and then you get a separate infrastructure, , I think it's about trying to trying to work them into contact points that we have with people already.

James Walsh 34:05

What's your view on radios? Are you long radio Are you short radio industry in this.

Kate Orkin 34:08

I mean, I think if you can, if you can get if you can get interventions that work. It's undeniably the thing that is reaching the most people at the moment. So Betsy Levy Paluck has got some really interesting work in Rwanda, around sort of norms of conflict, they're affected by a talk show that they had of a sort of intercultural dialogue that they did on the radio. So, you know, yes, people should do that.

James Walsh 34:34

Okay, great. Back to you, Greg. So I think the real question that I have, and that I'm excited, si Greg will be talking to the Blavatnik School on the theory underlying wise interventions, and this is the area that Greg has really been working on, as I understand it for at least the last seven or eight years. And I think the reason why I think is really important is that in this space, right, we have kind of we have intuitive thoughts about whether incentives are generalizable, whether information kind of provision and experiments are generalizable, I think we have an existing architecture in our mind, and certainly in social science for thinking about how that stuff should work. And wise interventions are primarily working are fundamentally working through socio cultural processes. And I think the question that I'm still trying to work out in my head, and what I'd love your perspective on Greg is how we assess the generalizability of wise interventions. Suppose we get great, you know, results from a field experiment that did a wise intervention. What do we make of that? How do we think about whether it will work across scale across time, across cultural contexts? And even across platforms of delivery?

Greg Walton 35:38

Yeah, so I learned a ton here, from a woman named Beth Tipton is a statistician at North Western and what she is a specialist in is understanding generalizability of interventions in education contexts, in particular, it's a tool for drawing, in this case, public school samples in the United States that will be generalizable. So the point that she's making, so as a psychologist, I begin by thinking about the psychological process, like exactly how are people thinking and feeling? How is that working? What does that do to how they behave? And then when we start to think about recursion and effects over time, we ask, okay, if people are behaving in this way, how does the world feedback to them? And I'm sort of very much in the space of thinking about those socio-cultural processes that you're thinking about. But then, Beth is saying, then is that the random place that you begin by doing an intervention in, what is that Representative of? You know, if you were to do that in a different place someplace over here, would you expect similar results or different results from that, and you can start to do statistics that help you to define, you know what those spaces are. So for example, in the national growth mindset study, which was a very large trial of Growth Mindset Intervention in the United States, there was a random sample drawn of American public, high schools. And the characteristics of those high schools could then be compared to the characteristics of the entire population of sites, in this case, the entire population of American high schools or American public high schools. And that gave you a B statistic, which Beth developed to specify just how closely related the sample population is (and by population I mean sites, I don't mean people) to the generalizability population, the population to which you're trying to generalise. One of the really important things is that inferences about heterogeneity, especially heterogeneity within contexts. So like this kind of setting versus that kind of setting within a sample of settings, or heterogeneity of participants, like for example, female versus male respondents in a in a given set of

settings. That depends on the nature of that sample that you're drawing and the population to which it's generalizable. So if you've drawn some very peculiar sample heterogeneity that you find within that sample may not generalise to the broader population. So there's a stage of research where we're really working at the psychological level of analysis, we really want to understand what is the psychology or that maybe very small scale work, there's a stage of the work where then we begin to transform that psychological wisdom into interventions and start to offer people ways of thinking and see if that could make a difference, even in one setting, when we can do it really well. There's a stage of the work where we start to ask, Can we do this in a more scalable form? Are there delivery mechanisms that will let us reach larger populations? And then there's a stage of the research where we then ask, okay, so if we can do this in larger populations, where and for whom is this effective? And where and for whom? Is it not effective? There's, at this point, really little value, maybe no value in understanding average treatment effects? The value is in understanding what is the magnitude of the treatment effects within empirically definable, general set of settings into what does that generalise? What settings does that generalise? And where does it not work? Because there are there's the places that will be informative for theory, and will also be informative, obviously, for policy.

Kate Orkin 39:24

And to add in what on what Greg was saying, you know, I think this question comes up for wise interventions, it ought to come up for many development interventions. And I think, what it really highlights for me is that the randomised trial movement and sort of movement towards experimentation in economics has left behind a big part of what medicine does, in order to make sure that interventions are generalizable. So, you know, when medics come up with big public health interventions, or psychological treatments, or those sorts of things, they are thinking about this generalizability question and how they do the adaptation all the time. And, you know, nobody's saying there's got to be interventions that work universally for people. I think medicine has been really good at things like, you know, equal partnerships with Global South academics, so that means that there's a network of trial sites all over the world that can test interventions simultaneously, you know, lightly adapted, but for different contexts so that whenever you have a randomised trial of a particular medical intervention, you've actually got already, you know, evidence on how it's working in different settings. But that requires investment in relationships with academics in the Global South, equal partnerships, making sure that there's capacity for that research to be done in multiple places at the same time. And the other thing that, you know, the medics do that I think is important is really involving participants actively in all of the stages of the research process. So it's about doing focus groups, but it's also about the kind of advisory committees of participants who can, you know, advise on the extent to which an intervention is acceptable, how it's being received in the local community, those sorts of things. You know, and so there is a structure [for this] in medicine; we just took RCTs and then we didn't take this part. And I think that's really coming back to bite, certainly development economics. And I think wise interventions highlight that because they are culturally specific and you need to adapt them, but lots of interventions are culturally specific and need to be adapted. And there are other sciences that have figured out how to do this a lot better than we're doing it. And I think it's, you know, just raises a really big challenge for us. But I mean, to me that was so important in the process of doing the Ethiopian intervention, because it was completely different to how I would have done it, if I'd been going into that context and doing it myself. So, you know, as a team led by an Ethiopian academic, he was deeply steeped in the anthropology of the area, as well as the sort of quantitative social science, then the, you know, the other two academics

working on the project, Tanguy Bernard, was a French academic, but lived in Ethiopia for a long time spoke Amharic, and then they worked with a local Ethiopian TV production company. And so the whole interaction of making the videos and then piloting them, was all done in local language. And then they made sure that there was a lot of feedback from the sort of people who are going to be receiving the intervention, I wouldn't have dreamed about half of the things that they thought to do. And to me the overarching question, this highlights for development, econ is like you, we've got to start putting a lot of money into building, you know, the ability of academics in the global south to lead this research. And I think that's provocative, but I think for this agenda success, it's really important,

Greg Walton 42:49

I want to I want to emphasise that point. This is Team Science. And it's like there's an explosion, you know, when I started in psychology, most research was as grad student and advisor working in a small setting, you know, doing a laboratory study. And like, when we're thinking about the problems of the world, and problems of upward mobility and problems with social inequality, that becomes massive team science, you know, on the scale that fields like physics, sometimes start to work at. And it also ought to have the, you know, very serious kinds of public investments into doing that really, really well. So to me, it's outrageous that as a global community, we were able to develop vaccines for COVID, within a year, very effective vaccines. But basically, we did nothing on making sure that doing the science to make sure that people would take those vaccines and would practice social distancing and that mask wearing wouldn't have to become politicised as it did in some places. And, you know, it's tragic when we have invested as societies in school systems, for example, but then kids are dropping out because they feel like they don't belong, or they feel like they're not smart enough. It's tragic, you know, when there are marriages that fall apart, because couples are having trouble dealing with a conflict that exists in that marriage. And they're starting to wonder, you know, does my spouse even love me, like these are, these are structures that exist in society that are really important for people of inherent importance and important for upward mobility. And we under a completely under invest in doing the research that we need to do to actually let people take advantage of those structures as they best could?

Kate Orkin 44:32

Yeah, I mean, I think the vaccine is a great example of that medical infrastructure I was talking about. So you know, from the Oxford AstraZeneca vaccine, one of the reasons they could scale it up so fast is that they already had, you know, Oxford already had a, you know, trial sites that they collaborated with in Brazil, in South Africa, nobody could travel, nobody travelled from here to go there. But there was a set up team who could make sure that the, you know, we gathered the evidence about whether it worked in those populations, and, you know, really empowered, you know, funded structures that existed to make sure we could look at generalizability. And that took generations of investment from both local and international donors to make sure that those things existed. And we have nothing like that. And we need it.

Greg Walton 45:21

Yeah, let me let me give you another example. I heard this example about a year or so ago, that in the 19th century, there was an increase in infant mortality rates, because people were living in cities and food had to be transported into cities and milk would spoil. Science fairly quickly understood what was happening in the principles of milk spoilage and also the effective intervention of pasteurisation. And then it took like 30 years for any major city, and I think the first was Chicago to mandate milk pasteurisation. Like how many children's lives ended because of that kind of delay? Like how many people in in the United States, in the United Kingdom, around the world don't achieve their goals in life, maybe don't succeed in school as they could, because they're facing these kinds of worries. This is unacceptable. Especially when we start to know how to how to solve those problems.

James Walsh 46:24

And that note, Greg, Kate, thank you so much for a wonderful discussion. It's been incredibly stimulating for me and thank you everyone for listening.