Welcome to the Science Podcast for September 4, 2020. I'm Sarah Crespi. First up this week, contributing correspondent, Kai Kupferschmidt talks with me about a second wave of Coronavirus in Europe, and as part of this big special issue on democracy, Rohini Pande and joins us to talk about her paper that ask this intriguing question, Can democracy work for poor people?

Now we have contributing correspondent, Kai Kupferschmidt, he wrote this week about a second wave of COVID-19 in Europe. Hi, Kai.

Hey, Sarah.

I'm saying that kind of definitively, but can we say there is a second wave in Europe right now?

That's a difficult question. Even just the word wave, I think it's really difficult in this context because a lot of the scientists I talked to didn't really want to use the word and I understand it, I mean wave sounds like this natural ebb and flow, and we're kind of used to it from other infections that have the seasonality. One of the researchers I talked to said, "This isn't really like that, this is like a forest fire and you can suppress it, but as soon as you let up, it comes back." So I think that's what we're really seeing. We're seeing a resurgence and not some kind of natural phenomenon, it's just Europe did a lot in the spring to get the numbers down, and now they've gone back up partly because we've stopped doing quite as much.

Where are the numbers particularly climbing?

If you look at some of the hardest hit countries like Spain, for instance, it's interesting to see that the last few days, Spain actually had a daily case count that was higher than the highest numbers that they posted in spring. Of course, you can't really compare those two because testing has really ramped up, having 10,000 cases a day, now it's something very different from having had 10,000 cases, say in February or March.

Right, when you're basically only testing people who had symptoms.

Right.

What are some of the drivers of this resurgence of cases in Europe?

There's a certain consensus that a lot of it basically is changing behavior after Europe got the virus under control a little bit so the numbers went way down compared to, say, the US or Brazil, the whole debate started about how to reopen and what to reopen it. And it ended up that at least for a few weeks, there was like a fairly normal travel season, so a lot of people here from Germany, for instance, would go to Greece or Spain or France, and people just were a little bit less
vigilant and then of course, people also started going back in some cases, to offices, not everyone but we can see that in some countries, workplace outbreaks have taken over as the driver. But the other thing we see is that very similar to what we saw in the US a few months ago, that it's the younger people who are having the highest risk of infection at the moment, which is different from what it was a few months ago.

02:58 SC: We've been talking about case numbers, but what about deaths? Are you seeing an increase in people dying from the infection?

03:07 KK: So far, the research has really been in younger people, so it's not that surprising that we haven't seen the kind of rise in deaths that we saw in the spring. But of course, we've seen this, for instance, in Florida. We know that when this starts circulating in young people, they're not completely insulated from the rest of society, from the older, more vulnerable people. It might very well just be a longer time lag until we see the virus also starting to circulate more again in the older segments of the population, and then you would expect deaths to go up. Because surveillance has become better, we wouldn't expect to see the same increase in deaths that we saw in spring simply because we are catching much more of the milder infections as well. So for now, if numbers don't go up significantly, the hope is that we won't see the kind of excess mortality, that really devastating death toll that we saw in many countries in spring.

04:05 SC: We know so much more now about how the virus moves around. We know a little bit better about what is safe, does all this knowledge change the shape of the pandemic? Does it change how people are getting infected, who is getting infected?

04:17 KK: The big hope is that we can take out the biggest drivers. One of the things we've really learned about the virus is that it spreads in clusters at these super spreading events, so a small number of infected people tend to cause most of the secondary cases. And this happens very often in closed spaces where there's crowding and maybe there's even shouting or singing or things like that. Keeping these venues closed should already make a difference. There is hope that some of what we've learned will make it easier to keep this under control.

04:49 SC: If the focus here is gonna be on super spreading events on these clusters, how is that approach different than a general lockdown or a ban on gatherings?

05:00 KK: One of the things that some public health officials are saying is we should concentrate more on tracing backwards in a sense, trying to understand where the infections happened rather than going forward and identifying the contacts of some of these people, so that gives you two advantages. So one, it tells you where all of these clusters are happening, what you might be missing and where you need to concentrate your efforts to prevent infections, and it also means that you can pick up more infections. There was a modeling paper out that looked at how these two contact tracing strategies compare and with this virus, it's quite helpful to go back and then you can trace forward again because you're just picking up more chains of infection.

05:41 KK: If you assume that a lot of people get infected at these super spreading events, and then a lot of people who are infected don't actually pass on the virus, it means that if you find anyone
who tests positive, if you find all their contacts and quarantine them, the likelihood that any one of them would have become infected isn't even that big. On the other hand, if you go back and see where that person was infected, you're quite likely to find some kind of cluster or super spreading event because that's where a lot of people get infected.

06:09 SC: Going back to what you were saying about travel or vacations being one of the drivers behind this resurgence, on top of that, is there a problem with crossing borders?

06:22 KK: Just carrying the virus from one country to another maybe isn't the biggest problem, the problem is that when people are on holiday, first of all, they tend to behave differently, have more contacts, so they're actually more likely to behave in a way I think that's risky and are more likely to be infected even if the place where they're holidaying has exactly the same kind of risk profile as their home country. And then when they go home, if that country doesn't have the right kind of conditions, then it can easily lead to the virus spreading. Countries have tried to grapple with this in different ways, Germany started with a quarantine of 14 days, which is basically, if people stick to that, that should be a very good way of limiting spread from infections that people bring with them.

07:03 KK: But of course, not everybody was adhering to that so at some point, Germany started offering tests at the airport. But then if you test someone the day that they return from the holiday, if they picked up infection towards the end of their holidays, you're not gonna find that, but if you had a negative result at the airport, it basically meant you could skip quarantine. Now we've actually... We're switching to a system in Germany where you have a five-day quarantine when you come back, and then at the end of those five days, you can get a test and if that's negative, then you can end your quarantine, which is a much more sensible system.

07:34 SC: Would you say that there is an issue with different rules in different countries about quarantine, about what is open, what is closed, gathering size, mask wearing, that kind of thing?

07:45 KK: Yes, European countries have largely failed to come up with adherence strategy for the continent. Some countries are very strict about masks and other countries you don't really need to use them in many places. There are some countries that even that mass gatherings go ahead or at least larger gatherings; in most countries, that's not the case. And then, like I just said, in Germany with the travel returnees, even within a country the rules change a lot from one week to the next, or even just which countries are considered a risk area, and then certain rules apply for that. One of the scientists I talked to was arguing that really Europe by now should have come up with a common strategy, but it's very hard because these are also very different health systems, the epidemiological situations are different from country to country.

08:33 SC: Is there any possibility that the rules will be coordinated going forward?

08:37 KK: So I think whenever it comes to travel, because that naturally involves different countries, there's a bigger likelihood. Europe did manage to agree at some point that only countries that all of Europe agreed where low risk would be allowed to travel, because one of the problems is if, say, Greece opens its boarders to US citizens, then once they're in Greece in a borderless Europe they can travel to anywhere else. So their coordination is needed in Europe to do that. In the other
instances I think it is much, much harder. I can see a consensus may be emerging once the vaccines come, the European Commission has taken a leading role in procuring vaccines for the continent, and I can see some kind of strategy where Europe agrees together who gets those vaccines first, but when it comes to these things like masks, at the moment, I don't really see a clear policy for all of Europe emerging.

09:30 SC: It does seem like the tendency though is going to be localized lockdowns as opposed to countrywide lockdowns or all of Europe locking down as the numbers go up?

09:40 KK: Ideally, this is going to be the biggest change this autumn compared to the spring. In spring, we knew very little and the virus had basically spread into the countries without much surveillance, a lot of countries just use this very blunt tool of locking down all of society, in the whole country. Given what we know now and given the surveillance we have, it is much more likely that we can try to contain the virus by having these local lockdowns. Aberdeen recently had a kind of soft lockdown, schools actually remained open but bars and restaurants were closed and people were asked not to leave the city and people from outside were asked not to come into the city. That kind of situation, I could see that happening in many places. Governments clearly want to avoid having a repeat of spring, but France, for instance, has also said that it might not be able to avoid it, so I think a national lockdown, that'll be a very high hurdle, but depending on how the situation evolves, that could still happen even now.

10:38 SC: Is there an expectation that winter, the change in seasons itself will have an effect on the pandemic, that it will make it worse?

10:46 KK: This is one of the big question marks I think. I've seen people argue quite passionately in both directions, I tend to think that we haven't seen a strong signal of seasonality, which doesn't mean that there's nothing... Certainly here in Europe, people's behavior will change a lot in winter. I think this is what we see again and again, is that people's behavior is what matters, and if the virus spreads best if people are in a closed, crowded indoor environment with bad ventilation, then that is much more likely to happen in winter, unless we all change how we normally behave in winter. So this is one of the really big questions everyone has, and the other one of course, is that winter here also coincides with the flu season. The other big question is, will people be so different how they behave that basically we will not see a huge resurgence of Coronavirus and also the flu will spread much less? Or will we end up having a double whammy of the flu and the Coronavirus spreading, which puts doctors in hospitals in a fairly difficult position as well, because the symptoms can be very similar.

11:53 SC: The bright spot you mentioned in this is that people are... They're still willing to participate, they're still interested in protecting each other and making sure that if the rules have to change, the rules have to change.

12:04 KK: Yeah, I think working for science and being European and living in Europe, but then of course, I take great interest in the debates in the US and I see them playing out and to me, this is one of the biggest differences really between what's happening, for instance, in the US and what's happening here. The polarization of these kinds of measures in the US has just taken on a level where you feel like there's a segment of the population that just is dead set against any kind of
measures, and we haven't really had that so much. Of course, we've had protesting in the last... Especially now, in August, there've been a few protests in Berlin and in other large cities in Europe. But if you look at the survey data in Europe, it's quite clear that in most countries, a large majority of the population agrees with measures that have been taken and is even in favor of slightly stricter measures, while a fairly small minority thinks that the measures that are being taken are already too strict.

13:06 KK: For years and years, people have said that one of the most important things in a public health crisis is the trust of the population specifically when you only have people's behavior because you don't really have a vaccine yet or any drugs or things like that. That trust is one of the most important things that people listen to the government and are willing to take their advice.

13:26 SC: Alright, thank you so much Kai.

13:28 KK: Thanks, Sarah.

13:28 SC: Kai Kupferschmidt is a contributing correspondent for science. You can find a link to his story and all of our Coronavirus coverage at scienceMag.org/podcast. Stay tuned for an interview with Rohini Pande about how democracy works or doesn't work for the world's extremely poor.

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13:50 SC: As part of the special issue on democracy in this week's issue of science, we have pieces on the pitfalls of using artificial intelligence to draw voting districts. The numbers on how much campaigns really influence election outcomes, and how political scientists miss these connections between race, the police and democracy in the US. Rohini Pande is here to talk about her contribution, a review on this question, Can democracy work for the poor? Hi, Rohini.

14:21 Rohini Pande: Hi.

14:23 SC: This is really an intriguing question, Can democracy work for the poor? This implies it isn't working now, can you outline some of the problems, some of the failings that you see?

14:32 RP: Sure. So Sarah when I talk about the poor, I'm really talking about what we would call the extreme poor or those across the world who are living on relatively low incomes, like a $1.90 a day. And these are groups that historically were concentrating what we would think of as poor countries. But one of the most striking features of the last 30 years is that as the world has grown much richer and countries like China and India have seen significant growth, we've actually seen also the limits of economic growth in helping the poor. So today, a majority of the world's poor actually live in middle-income countries, not in low-income countries. And also majority of the world's poor live in countries that are officially democracies. And so these two facts together sort of tell you why democracy isn't working for the poor, that somehow they aren't able to use the electoral institutions or the democratic power to push for adequate redistribution of opportunity, redistribution of resources, so that they gain a fair share of economic growth. And as a result, we have countries like India which have the largest share of the world's poor in absolute numbers but
also the third largest number of billionaires in the world.

15:48 SC: Right. So this conundrum where you have middle-income countries with high numbers of people in extreme poverty, and maybe in the past is something that international aid organizations would have tried to help with, where people were depending on economic growth to solve. But neither of those things are really happening for people in extreme poverty.

16:07 RP: That's right, and I think one of the key features of thinking about international aid in particular, is they're also constrained by their own domestic politics, and it's hard for governments in rich countries, also unequal countries, to create an argument for why they should be sending money, possibly cash transfers, to countries like India, Nigeria, Indonesia, that appear to have significant resources of their own. So there's both been, perhaps as inequality has risen in richer countries, a bit of a pushback against foreign aid more generally, but certainly quite a strong pushback against providing aid to middle-income countries. At the same time, I'd say the hopeful side is that these middle-income countries are largely democracies, and so rather than us thinking about development ending extreme poverty, being about a series of cash handouts, a more sustainable way is really to ask how we can get these democratic institutions to work for the poor in their own country.

17:06 SC: What are some of the barriers for the extremely poor to participating in democracy, to accessing power? This isn't just about voting per se, there's more here than not going to the ballot box.

17:19 RP: That's right, and I think in fact, in the number of settings people know that the poor often turn out in recently large numbers to vote. So the kind of giving up on the democratic system that we often think about when we think about the poor and rich countries, it's not that pervasive across the developing world, but this will face multiple constraints on exercising the electoral power. So for instance, it could be that you have just very complicated ballot systems that you have to navigate, which is just harder for less educated person to do. So one of the examples I talk about in the paper comes from Brazil, where until the late 1990s, the paper ballot had something like 600 or more individuals on it that you had to navigate and choose whom to elect. And that was a context where actually just moving to an electronic voting machine system with simple prompts and photographs made a big difference. And the author shows that this has downstream effects in terms of increases in public health spending. Another place that I think there is a constraint is just information about what politicians are doing.

18:32 SC: You talk about some of these models for understanding what's happening here, can you describe some of the mechanisms in place that make it difficult for the poor to have representation?

18:46 RP: We often when we talk of democracy we use this word of representative democracy. So we say, that's the idea we have, that citizens delegate their kind of in policy making, two elected representatives. And I think it doesn't work out well for two reasons. First is, those who you delegate the interest to, the governments, the elected officials may not have the citizens' interest at heart, they make it about something different. And this really highlights the importance of information, so it's only if citizens are well-informed about what the politicians are doing, they can align their interests with those of the politicians by reminding them that if you don't do what I like, I
can vote you out next time.

19:27 RP: The second thing is that the government structure themselves are also not just for a politician who implements a policy, there's a whole series of delegated governance, a politician will pass some high level policy then a bureaucrat will decide what's the form that policy is going to take, then they're going to pass it down to some local administrator who's actually going to implement it. And this is to remind us that this whole act of continuing to improve information is not just going to be between the citizen and the politician, but also within the government, where you often don't have the lever of elections and so then you have to start thinking about what other systems will you have to put incentives together.

20:10 SC: Well, so let's talk about some of the empirical examples, some of this research that's been done to figure out where the levers are, how you can get people voting, what the results are of having greater transparency. So for example, you talked about in Brazil, there were some people who were e-voting, electronic voting, and some people are paper voting, you saw greater health expenditures as an outcome. Can you expand on what it means that the outcome is greater health expenditures?

20:37 RP: So in 1998 in Brazil, electronic voting devices were introduced, but they were introduced in a phased manner which allowed the voter to compare areas that just voted and those that didn't, and see what the differences in outcomes. So the first thing they find is that it reduced the number in valid votes by more than 10%, and this increased set of valid votes likely from the poor led to an increase in the election of left-wing legislators, and it's this left-wing legislators who militated for increases in public health spending such that over the next eight years they found a 34% increase in public health care. And I think most importantly, what they find is that this increase in pro-poor spending led to a 6.8% decrease in low-weight births and this decrease was concentrated among mothers who only had a primary education.

21:34 SC: Can you talk about the example you use where increased transparency led to a lot of downstream effects?

21:41 RP: Yeah, so let me talk about two different papers. The first paper was one where they did something that we think of as very commonplace in the US, but doesn't happen in a lot of developing countries, which is just increasing debates across politicians in the run-up to elections. And then they took video recordings of these debates to rural areas in Sierra Leone, and what they found is that this changed people's information about who the candidates were, and a change of who they elected. Importantly, it seemed to have some effects in terms of accountability, in that those who were elected in areas that had seen debates seemed to spend more. So in recent book that I've done with quarters, we took this to the next step over and said, "Well, if you think that voters been informed, we'll hold politicians accountable. Does this mean that politicians, if they know that the poor will get information, actually change how they behave in anticipation of electoral accountability?"

22:42 RP: So we worked on this in New Delhi, which is one of the largest cities in the world with a population of over 18 million, half of whom I would say live in slums. Two years before the election, we sent politicians letters saying that a newspaper will be reporting on their performance,
and then we track to see over the next two years up to the election what effect it had on spending and then what it meant for electoral outcomes. What we found, and where are things consistent with the debates paper is that political parties can play an important role, so we found that one of the main ways in which the anticipation or performance disclosure seem to work is that it improved politician performance and parties are more likely to give tickets to better performing incumbents.

23:29 SC: When you say better performing, do you mean that they spend money in their district on things that the people who lived in their district actually wanted them to spend money on?

23:38 RP: That's exactly right.

23:41 SC: The third lever that you talk about for increasing representation, getting what people in extreme poverty need from the government is engagement, and the example you use I think here is going door-to-door, getting people to pay their taxes, which I thought was a really interesting way to get engagement. How does that work?

23:58 RP: I think what I really like about this paper is that it actually investigates these ideas in the context of the Democratic Republic of Congo in an area where sometimes you might say, "Oh, the state is so broken, nothing might work." And I think it's very reassuring to see that in a very poor setting that's just come out of conflict, if you give individuals... When you go to individuals, you collect their taxes through door-to-door campaign, but at the same time, you tell everyone that you can come to town halls, you can participate, you can raise questions then what you find is that those who had taxes collected from door-to-door, those who have seen themselves be giving resources to the state become more engaged in how the state will use those resources. In the town halls, there was much greater engagement and participation by those who had tax collected and they also record higher trust in the state.

24:52 SC: You bring up a historical example in your view, which I was very surprised by, so this is how England expanded the vote from people who own land to... I guess at this point it was all men in the country. Can you talk a little bit about how something like that happens?

25:10 RP: Let me just put in a broader context and say one reason I find this and other examples of the extension of the franchise really interesting, because there are cases of the powerful, arguably giving away some of their power. And to me, this really is what I think of as the Cast-22 of democratic reform, how do we get power to those who like it to start with? And this was an example where I think multiple things came together. So first, there was actually a set of politicians who were quite idealistic, these were insiders who were powerful and who wanted to see a better alignment between citizen and politician preferences. They were particularly keen to reduce a lot of what they felt was exchanging resources towards among a small set of people, because it was a small set of people. But importantly, the second thing that also happened was this was the era of a lot of public health issues starting from cholera in Britain, and there was a growing recognition that public health concerns intertwine the fortunes of the rich and the poor, and therefore it was particularly important if you wanted to have a case or a policy response to public health rather than just exchanging favors between a small set of people, one wants to include the poor in the process as well. And as you can imagine, I think that has some resonance today.
26:35 SC: Absolutely. So how do we take these examples, these empirical examples, this research, these different interventions and pull it together and go somewhere with it? Is the idea for NGOs to get back in the game? Or is this an advice for governments? What's the next step for this type of research?

26:53 RP: I think the next step for this set of research is really to keep pushing on what we learn to some extent and hope a bunch of people pick it up. It could be NGOs, it could be international development agency, which are often kind of bilateral engagements, it could be multilateral organizations like World Bank, and it could also be domestic governments. I think what I'm trying to push against, as I said, is first overwhelming cynicism. I think very often there's a sense of saying, "Oh, these poor countries, they just cut up government, citizens just want private transfers, they're too poor to really understand what democracy is about and so let's not focus on political institutions, let's just focus on giving cash transfers or lifting out the poor out of poverty one by one." And I think we now have a reasonably strong evidence base that is less likely to work if we just give cash transfers, but also that we know how to make some aspects of democracy work better.

27:52 RP: But I think it's not an easy task. As I said, the hardest part is there are all these people who benefit from existing political systems, and so I think there's also need to think carefully about what are strategic coalitions that one can form to push this course. So what I would hope is that as people read this, they would be like, "Uh-huh, I come in to say the category of a connected political insider, but maybe I want to form an allegiance with an international development agency or with citizens in some form in order to create a constituency." And so these are really all examples of showing how one can use strategic alliances and some just recognition of how democratic and state institutions work to push the agenda.

28:38 SC: Thank you so much, Rohini.

28:39 RP: Thank you.

28:41 SC: Rohini Pande is a professor in the Department of Economics at Yale University. You can find a link to her review and the special issue on democracy at sciencemag.org/podcast.

28:52 SC: And that concludes this edition of the Science Podcast. If you have any comments or suggestions for the show, write to us at Science Podcast at aaas.org. You can listen to the show on the Science website at scienceMag.org/podcast. On the site, you'll find links to the research and news discussed in the episode, and of course, you can subscribe anywhere you get your podcast. This show was edited and produced by Sarah Crespi with production help from Podigy, Meagan Cantwell, and Joel Goldberg. Jeffrey Cook composed the music. On behalf of Science Magazine and its publisher, AAAS, thanks for joining us.