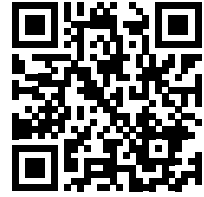


Economy in transformation: sustainability, development and technologies



Paula Berman

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Lecture presenter: Adriana Ligiéro

Abstract: In her presentation, Paula Berman brings the concept of quadratic voting to show that voting, both for electing members to the Executive Branch and formaking important decisions, can be less polarized and more inclusive of the opinion of the population, that is, the major stakeholders when it comes to public policy. To exemplify the use of quadratic voting, the panelist presents cases such as the state of Colorado and also Taiwan.

Keywords: quadratic voting, polarization, technology



ADRIANA: And now let's hear from Paula Berman. She will address the major challenges of using emerging technologies to promote economic growth and decentralization.



PAULA: I would first like to thank you for the invitation. I think that ENAP is a public institution that makes us have great faith in the future, great faith in Brazil. I am very happy to be participating here. I work for RadicalXChange, which is an organization that talks about institutional innovations and how we can make decisions.

We are here talking about how to develop a more sustainable economy, and how to contemplate the challenges of climate change. And these are all decisions that are political and social as well as economic. We need to think about how we can have institutional innovations that help us contemplate these highly complex challenges that we are facing now, like climate change, like the pandemics, with an extreme polarization, which is something very latent in our country.

And how can we use information technology to create new institutions that bring balance between the market and the State? How can we have the intelligence of the market and the cohesive role of the State while we are making these economic and political decisions? I would like to take two steps back here.

Therefore, I wanted to take two steps back and reflect on technology, since the theme is to try to understand how technologies can strengthen and help our institutions to address these economic and ecological challenges that we are facing. It is interesting to try to zoom in on this term, this concept of technology, to see what we understand by it. We usually understand technology as tools that the person and the collective will use to achieve defined goals. But I would like to add a little more nuance and look at technology as a spectrum. On one side, we have helping technologies that will empower individuals, collectives, companies, organizations. And on the other side of this spectrum we have authoritarian technologies, which are those that take away this empowerment and reduce this concentration of power for a group of people. So, this spectrum of technology can be looked at, one of the places that we can have this concentration of power to try to understand what is the ideological framework, what is the political impact of technologies that we can use for institutional innovation. How can we think about helping technologies and expand to those, increase the production of those in our society?

One of the challenges is that when we think about information technology a lot of what we do is think about broadcasting, where the idea is that you disseminate information on a large scale. And this is the paradigm around which much of our technological development and information technology is centered.

And then we have another category that should come in balancing these broadcast technologies and which we can call “broad listening”, which is the technology for listening, conflict resolution and coordination of objectives on a large scale.

So, this new way of looking at technologies we can call social technologies, where, instead of simply thinking of technology as a tool to help people coordinate around specific goals, we can look at social technology encompassing this whole process and removing this element from the defined goal. So, thinking about social technologies that help groups coordinate themselves to define what their goals are and so that we can reach this consensus to make decisions as communities, as a society, that will take us to a paradigm of a more sustainable economy.

One of them is that bringing leadership and expertise to the surface is very difficult, and there are a number of new models there, of liquid democracy, of having civic meetings to try to address this challenge. There is the issue that deliberating with quality on a large scale is very difficult. We see how difficult it is. Social networks are the agora of contemporary times and we have a lot of polarization.

This makes political decision making very difficult, which we feel strongly here in Brazil. I will comment on this issue of the tyranny of the majority, which is a central issue within our democracy, where you simply have a system where all the people, each person can vote with one vote, which leads to an outcome in which a majority can oppress various minorities.

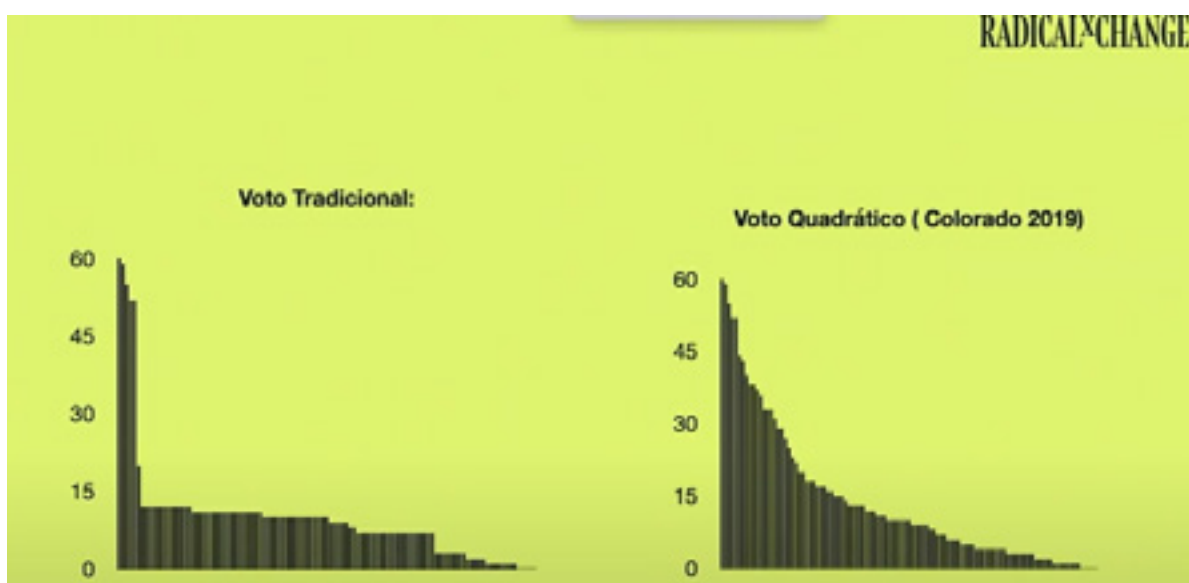
And this is like a straitjacket within which this voting system ends up trapping us and we know that it leads to a number of challenges for democratic processes, so I'm going to focus here on the tyranny of the majority and comment on the issue of deliberation as well. As I said, democracy is a system where the majority can take away the rights of the minority and, besides this, we also have the issue of the tyranny of the indifferent majority.

In traditional systems, it is very common that you have these political decisions, where the people who care the least about an issue, those who are indifferent, are the ones who have the most power when it comes to determining the results. You have a very simple example here, where you have 45% of people preferring dogs, 45% of people preferring cats, and you have that 10% who are on the fence, who don't care much about the issue, and they are the ones who end up making the most important decisions that we have in our society, this is very common. Besides the tyranny of the majority, we have the tyranny of the indifferent majority. I will talk here about a voting method, a radical social technology that brings a balance. As I said, it interests the market intelligence, because it has a price system and a system that aims to have more representation and that helps to get us out of this situation of the tyranny of the majority.

Thus, the quadratic vote has a weird name, but it works in a very simple way. Every citizen has a series of credits, and then the price of his vote is the square root of the number of credits. One vote costs one credit, two votes cost four, three votes cost nine, four votes cost 16, five votes cost 25, and this price grows exponentially. If you want to shout, if you have a very strong preference. You can express that and it helps the minority to coordinate, to express their strong preferences, but you are going to pay a cost, there is a high price for that strongest expression. And you have a more limited political budget, so to speak.

That means balancing the minorities and the majorities, because it gives a greater power for when you have this price system, it prioritizes a greater number of voters. I have in the example here that one person placing nine votes, he would have to spend 81 credits in order to allocate nine votes. Nine people placing one vote each would have that same impact of nine credits, but the total cost would only be nine voice credits. So, it brings this greater strength to groups coordinating around a cause that they can achieve. And in addition, it brings much greater richness to the results. Here I am giving an example from the state of Colorado, where we have already applied this method.

They had a vote, they had to prioritize a series of proposals, more than 100, and they, using traditional voting methods, always had a result where you had few proposals at the top and little signal in the remaining proposals. And with quadratic voting we can get a very precise curve, showing what the priority of each of these proposals is.



And besides that, it also reduces polarization, precisely because it brings this wealth of nuances, of detail. Some examples of how, using a traditional Strongly Disapprove/Strongly Approve scale, you generate results that are more polarizing here on the left side, and on the right side, with quadratic voting, you have this nuance of greater preferences. I'm just bringing another example of radical social technology that can help us do this large-scale social listening and coordination.

Another central problem is that deliberating with quality is very difficult. In small groups we can have a wealth of debates that is very difficult to have digitally, online, on a large scale. So, I will bring here the example of a technology called Polis, which is widely used in Taiwan and that we, as an organization, are working with several institutions to increase its adoption. It brings this richness in the deliberation of groups that we have small groups, but it can do this online with thousands of people and it works in a very simple way.

You can open up a conversation that each person can put his or her opinion into. Here: What do you like to cook? Pasta. And then each person can add their views and all the people can agree or disagree or just pass. And what is this artificial intelligence going to do? It has a special intelligence instead of our social networks that are antisocial and create more polarization. It will divide people into opinion bubbles and then it will see which consensus proposals are approved by people among different opinion bubbles. Here to give a very concrete example. They were legislating how Uber should be regulated. If you remember, Uber was a very serious issue when it came into Brazil and it was like that in Taiwan as well.

And then you had that group that thought it was anti-Uber and thought it was a threat to taxi drivers. And there was that group that was pro-Uber and pro innovation. Not very different from what we saw here, the typical polarized situation. What does this technology do? It looks at which proposals are liked by the pro and anti-Uber groups. What did they get in this case?

They had a number of very interesting results. For example, that the taxis no longer had to be orange, they could be any color, and also that the regulation of the way taxis worked had to be revised so that they could compete fairly with the new app services. So, a super common-sense thing that a pro-social technology helps us to find and that works well with most of the very polarizing situations is that we have much more consensus, but this consensus is not revealed by the new information technologies that we use today. So, I'm just giving you an example that we are working with this kind of technology here in Brazil, working with quadratic votes, with several municipal scales in the Colorado government, in Taiwan, and I invite you to continue this conversation.



ADRIANA: Thank you, Paula. Look, it's impressive how you manage, in a very didactic way, to bring us some examples of concrete results of how you can use technology to promote coordination on a larger scale. Now I feel like asking a million more questions. I imagine that there will be a lot of visits to the RadicalxChange website and a lot of questions here too. Paula, Carlota Perez was talking precisely about this need for pivoting the government, for the government to act in a different way and to really start working oriented towards great missions and bringing together the various actors focused on these themes, to these consensuses in a broad manner.

And then I would like to pose two questions from our audience. One of them: what is the profile and competencies required from public managers so that they are able to make this transformation towards a sustainable economy and so that they have the conditions to carry out this collaboration, this articulation?

And also, a second question that is related more to our Brazilian electoral system, which is that our electoral system is considered one of the most proportional in the world. The minorities have a lot of space to express themselves as well. When we have a second round in the election for the Executive Branch, why is this method better? And there I understand they

are referring to the quadratic method. But I think that we could use these social technologies not only for the direct elections, but also in several moments of the conception of politics. How do you see this, Paula?



PAULA: Great questions. To start with the last one, I already agree with you that quadratic voting, of course, is not restricted to presidential elections. But in this case, it has an interesting utility which is the question of the useful vote or the strategic vote that it deals with. When you can have, when you can distribute your credits among a plurality of candidate options, you don't have the incentive to make that strategic vote for a candidate that you don't necessarily approve of, but you think that he or she will have better political conditions, more political viability than a candidate that you disapprove of.

Many times, we have the protest vote, and being able to choose more than one candidate opens a little bit of this scope so that we are not so limited in the issue of strategic voting. But, again, I agree with Carlota, because I think that, and connecting this to the first question, what is the profile of the public servant so that he or she can bring this innovation?

I think that is a question of starting small. Of course, I brought some very specific examples, and yes, radical social technologies that we understand can help. They can have a profound impact, but as we know, decisions within the government always involve a lot of risk and there is a series of bureaucratic processes for us to be able to implement, to make any change.

It is interesting to look first at the decisions in which you have less pressure, more controlled risk, so that you can experiment, start with these decision processes and see what advantages they can bring, and then, in a second moment, bring this to the bigger decisions. In the state of Colorado, in the United States, we had a very interesting process.

We started talking with them and implemented in 2019 the quadratic vote for an extra budget that they had to distribute at the end of the year among more than 100 proposals. And they liked it so much. They saw that it really was a methodology that the name is complicated, but easy to implement and that solves practical problems.

As I showed, it brings a lot more nuance to the results. They have already started using it to make internal decisions. Within the different Colorado state offices, they had to prioritize certain issues. And to make this trade-off between what the priorities are within the offices, they started using this method because they saw that everybody was much more satisfied with the results, and the results were of higher quality. And now we are in the process of trying to understand how this same quadratic vote methodology can be used to improve our ability to make assessments about the social impact of large infrastructure investments. It is a process that has to be ongoing.

It is good to start small and, in terms of, once again, what is the character of the public servant, I think it is to understand that democratic participation is here to help, to bring more legitimacy to the decisions, more security to the decisions, and not to diminish the authority of the public servant, nor of the elected official, but to support him or her in the decisions that we are making, and bring a wealth of information that we usually can't get by with more traditional processes.

ADRIANA: Paula, thank you for this insight. We really welcome ways in which we can include more of the citizen's view, the view of the people who actually use the public service at the end of the process.



