How might policy steer us towards better decision-making?

GUEST SPEAKERS
Dr Bence Bago, IAST Research Fellow, PhD in Psychology

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HOST
Rory Cellan-Jones

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Hello and welcome to crossing channels a podcast collaboration between Cambridge University's Bennett Institute for Public Policy and the Institute for Advanced Study in Toulouse. This series is all about using the interdisciplinary strength of both institutions to explore some of the many complex challenges facing our societies. I'm Rory Cellan-Jones and today's episode asks the question, why do we make bad decisions, we're going to look at the psychological quirks of humankind, what effects those bad decisions have on the society we live in, and how policy might best steer us towards better outcomes. To explore these issues today, we have Theresa Marteau from the University of Cambridge to remind us of your main research interests.

Theresa Marteau
Thanks so much. I'm a behavioural scientist. And I'm interested in identifying the cues in our everyday environments that shape our behaviour, often without our awareness, and then assessing what happens if you change those cues, what impact that has on our behaviour.

Rory Cellan-Jones
We've got plenty to explore there. And then from the IAST the Institute for Advanced Study in Toulouse, we have Bence Bago, Bence. So what do you focus on?

Bence Bago
Hi Rory, it's great to be here. I'm a cognitive psychologist and I study the underlying psychological mechanisms of why people form false beliefs and why they may make errors in their decision making.

Rory Cellan-Jones
So you've been deep into the world of bad decision making. So let's start by asking each of you what sort of decisions you research and what you what you'd count as a bad decision under that label.

Bence, what about you? What sort of decisions are you researching? And how do you determine what is a bad decision?

Bence Bago
Well, we research all sorts of decisions, but mostly like individual decisions, financial decisions, but what I'm mostly interested in is actually the reasoning and beliefs underlying the decision making process, right? So and how do we define bad decisions or bad beliefs for for that definition, we always need some kind of normative system to make normative predictions on what is like a good decision. For example, this can come from a rational decision theory on economics or utility theory, or even just logic or probabilities can dictate what a good decision is. And then whoever deviates from that decision is actually making a bad decision, because it's not, it's a sub-optimal decision. It's not the correct mathematically or logically correct decision. And when we talk about beliefs or reasoning, it's especially about beliefs. It's sometimes it's, it's a bit harder to define what a bad belief is. Because sometimes it requires a vast knowledge of events, for example, like how people can tell that the news is fake is actually fake or true is it requires a lot of editorial processes, people have to look through a lot of evidence. It's very complicated, long process. So it's really different from actual decision making.

Rory Cellan-Jones
Let's look at an example. I mean, and it's very interesting to say that there are kind of value judgments there in deciding what is bad and what is good. So deciding why someone took a job that paid them half as much as they could have earned in a different job. That by one definition is a bad decision. But if the poorly paid job is more rewarding in other ways, it's a good decision.

Bence Bago
Absolutely. I mean, this is why we have normative systems to try to define what's the best decision in such a case, and especially utility theory, they take into account what is best for you. And therefore, those decisions that might look actually completely irrational or bad from the outside are actually very good and reasonable, from different theoretical perspective

Rory Cellan-Jones
Theresa, what's your take on that? Are you making value judgments about what is sensible behaviour or not sensible behaviour?

Theresa Marteau
Implicitly, I am, but at a very different level to the one that Bence has just outlined, that he's working on, which is traditional cognitive psychology terrain. And the behaviours that I'm focused on are those which, on average, people would prefer not to have the end state from

those behaviours. So just to put that into simpler English, obesity, obesity in children, obesity in adults, overweight adults is a major problem worldwide. And my focus is not so much on an individual who wants to lose weight. But starting from the observation that the majority of people would prefer not to be overweight or obese, the majority of people would prefer not to have children, regardless of whether they're their children or not, but our children being overweight or obese. How therefore, can we change behaviour at scale, so that what people are doing fits more with the values on average.

Rory Cellan-Jones
And is this a timeless problem, making, say, for instance, these decisions about whether you will eat fatty food or not fatty food, or has modern society made it easier to make the wrong decision, as it were?

Theresa Marteau
What we're seeing is humans haven't changed that much over the last, you know, hundreds of years. But what has changed are the environments in which we are now living. And you will know that as well as anybody else, Rory, in terms of the technological changes that we've had, but if we're thinking about our food environments, or our travel environments, they bear little relationship to the environments in which we lived 100 years ago. So just again, sticking with food environments, humans have evolved to eat high energy food, when there's little around. And what we've now got is a surplus of high energy food that's incredibly cheap, and readily available for most people. And that can lead to, well is leading to overconsumption.

Rory Cellan-Jones
Bence, one area I think you look at is misinformation. And of course, there the environment has changed radically compared with even 20 years ago in terms of social media. What does your research say there?

Bence Bago
We don't know. Like I at least I don't know how misinformation consumption was changed by the appearance of social media. Did it change the content of misinformation? We don't know that. But what we know for sure is that it made it more available to masses of people. So even people who would who might not normally find misinformation in their environment, they might actually meet it just because they are present on social media. So what social media did is that it just made it available for everybody.

Rory Cellan-Jones
What has your research found in that area about what makes things spread and what makes and what doesn't? Have you looked at that in terms of human reactions to reading you know, lies about things that may affect them, say for instance, vaccines?

Bence Bago
Absolutely. So there are two important questions that my research looks at. And for that, we have to differentiate between two types of behaviours. First is, is actually believing misinformation or believing any type of information. And the second is actually spreading the information. So basically, we're sharing it. And many research shows that these behaviours are not necessarily correlated with each other.

So and first in terms of beliefs, one of the most important things that I've been looking at is death of processing is what we call it is basically how much time and energy as a person are you willing to put into figuring out that an information is correct or not. So what we observe is that if we can make people think more to slow down to think more about a piece of information, it's going to decrease their belief in that misinformation but it's not going to affect

true information. So it's not going to decrease belief in in true news, but only to misinformation. That is what we call analytic thinking.

And the second thing is what we observe is that emotionality of the headline, so actually increases belief in any type of headline, but especially misinformation. So they tend to be somewhat more emotional, and they are going to increase the emotional reaction that the reader gets and, and therefore they are less likely to engage in analytic thinking, or just more likely to believe it in any case.

And about the spread of information, what we see and others actually, there's a lot of research in this area is that emotionality of the headlines or emotionality of the information itself increases the spread of misinformation. And we know that when people think about sharing headlines, they don't really focus on on their accuracy. They focus on other factors such as how much that piece of information is fitting with the potential readership. So your friends or family, whoever is going to read it on social media. And that is actually playing a more important role than actual accuracy.

So that's why people get a diverted attention from, from the accuracy of the headline and share misinformation, they don't really want to share misinformation, but they do because they don't pay attention to actually figuring out the truth at that moment,

Rory Cellan-Jones
Don't they also do it because it's fun? It's more fun to share a tall tale. It's more more fun to spread news that a man has bitten a dog and then a dog has bitten a man?

Bence Bago
It definitely plays a role. Don't get me wrong. But on the other hand, people don't want to share a misinformation because it just hurts their reputation. There is a lot of research in that area. I didn't do any research and is this but there's a lot of research available that actually hurts their reputations. So, so you don't want to share misinformation because people will think that well, your information is not valuable enough. So they don't believe you. They won't follow you. They won't like your stuff.

Rory Cellan-Jones
So we've looked at two areas where people may be making bad decisions, the area of misinformation and trusting that and the area of diet choices. What can government's do to improve matters there? Are they're using those research findings that people like you were coming up with to then themselves make better decisions and to change the decisions that citizens make. In the area of diet, Theresa, is that happening?

Theresa Marteau
A bit, but not nearly enough. If we look at two big government ambitions in the UK, at the moment, one is halving childhood obesity by 2030. That was an ambition set out in 2018. Another is net zero by 2050 with a carbon budget for 2035. And to achieve both of those, there needs to be significant changes to what we're eating. And the policies are not built enough on the scientific evidence to achieve it. So when we have seen evidence coming into policies we had in the UK and elsewhere, what are sometimes called soda taxes. So we have the soft drinks industry levy that was introduced in 2018. And that resulted in less sugar, about 10% less sugar, coming into people's homes when they were buying soft drinks which is great.

We've got another intervention which I don't think is being stopped last time I read the paper, which is to restrict in shops in stores where junk food can be placed and my group is one of the few that has been able to generate some evidence on that. And we managed to put

together two data sets that allowed us to see that if drink, so we were looking at alcoholic and non-alcoholic drinks are placed on the aisle ends, it can increase the likelihood that that drink ends up in someone's shopping trolley by between 25 and 50%. So that's a very large effect. So hopefully, that is going to be implemented quite soon, just to make the point about the extent to which we need governments to make these changes.

A few years ago, in the UK, there was what was called the responsibility deal. So the idea was that we would have some evidence about what could work and industry in this case, retailers would voluntarily introduce those items. So there was one supermarket in the UK, I'm not sure if it's in the public domain, so I'll resist where they removed all their displays of alcohol. When people went into the store. None of the other stores did that. Their sales went down, nobody else's sales went down. So they stopped doing it

Rory Cellan Jones
A bad decision for that supermarket.

Theresa Marteau
Absolutely. And so one of the points that that illustrates is some of the industries here are calling for legislation in order to have a level playing field.

Rory Cellan-Jones
I mean, the other philosophical question here is have you the right as a state to take decisions for your citizens, which may seem overbearing, which may seem to be telling them what's in their best interest, and in the short term may not be in their best interest. There's a great example right now, about very cheap, basically, junk food deals, buy one get one free talk of banning them, at a time when food prices are soaring, that could be seen to be making a harsh economic decision for citizens who might think, yeah, it's up to me to decide whether I want to eat bad stuff, or at least it's stuff I can afford?

Theresa Marteau
I agree. But if one looks at the evidence, what it tells us is that, theoretically, if people did buy, just on promotional goods, then they could be a saving. But when we look at what happens when people go into stores, it actually increases the amount that they spend, because these tend to be unplanned impulsive purchases, and can increase spend by as much as 20%. And these deals so called deals are on junk food.

And what we also know is that if you've got a bar of chocolate in your house, and look, you've got two then, you will eat two, rather than one. So you spent more money, and you've arguably harmed your health or possibly that of your child. So I think the evidence that we're seeing being argued about at the moment is it's a distortion of what the evidence shows. So it would actually be better for households if these deals were removed straight away.

Rory Cellan-Jones
Bence, what's the evidence that governments or regulators are looking at the kind of research you and your colleagues are doing when it comes to misinformation? And understanding how to do something about how to change people's way of thinking?

Bence Bago
Governments, I don't know. But we kind of hoping that social media companies would be willing to change their policies to implement some interventions that could actually help people to not share misinformation, for example.

Rory Cellan-Jones
And what kind of interventions might that be, they would presumably depend on actually acting in some ways against the social media company's financial interests, because the more people click on things, the more money they earn from advertising, whether or not those things are true or false.

Bence Bago
Absolutely. But I feel like there is an intention to regulate the social media companies in terms of society because people, if you ask them, there is like a very high agreement that they don't want to see or share misinformation. They don't want it so so governments are being forced to actually do something about it. And social media companies could actually - so one strategy that people looked at is to divert our attention to accuracy. These are called accuracy prompts. So people should focus on their accuracy, just when they evaluate the headline, so they're just like little prompts that they get when they enter social media or something like that.

Another thing that's been being done and has been done forever, basically, is fact checking and retraction. So, basically, but fact checking is a really good, important process. And we know that after something is retracted or is not shown, or, or it says that this is a false information, people usually don't believe it anymore. So correction works in that sense. But fact checking is really a problematic process in the sense that it's very, very slow. It's not really scalable. It takes a lot of time. And there's a lot of, a lot of information on social media.

Rory Cellan-Jones
And it's not uncontroversial there's a huge ideological battle over facts.

Bence Bago
Yes, exactly. So there is always a battle of what what should count as true. But, you know, fact checking itself is a very objective process, you say something, and there should be evidence for that thing to happen. And if you don't find that evidence, then there is no fact there is nothing. Everything should depend on evidence.

Rory Cellan-Jones
Which brings us really to the great case study, the great example of recent years of where decisions matter, both at an individual level and the government level, which is the global pandemic. I know, you, you, Theresa, have been very heavily involved in the government body SAGE, which advises on that, from the behavioural point of view. What sort of decisions by the public have you been most focused on in terms of how they respond to cues to stay at home, to behave sensibly in terms of social contact and so on?

Theresa Marteau
I think during the pandemic, a number of things struck me, first of all, was how rapidly people change their behaviour in major ways, almost overnight, in the face of an immediate threat. And this contrasts very much with the usual behaviours that I'm studying for which we're trying to change them in the face of a longer term threat via climate change, be it non communicable diseases. So people change their behaviour really radically and rapidly.

One of the main behaviour changes was reducing the number of social contacts people had each day, staying at home, as well as washing hands, and, and so on. The other thing that it really brought home was how while the majority of people were motivated to make those changes, not everybody could. So very early on, we saw good evidence that regardless of whether you are rich or poor, the desire to self isolate, to stay at home, if you were infected, was equally high. But the ability to do that depended on whether or not you could work at home, and whether or not you had enough money to support your family, if you were going

to self isolate, particularly if you're in the gig economy. So those are sort of two very strong observations that we see in other contexts.

And a third one that I'll throw in is how interesting it was how rapidly people change their routines. For many people, particularly those working at home, they developed different routines, different habits, and some of them we're living with now. So in the context of health, although some people became more active, on average, the levels of activity in children and adults have not gone back to pre pandemic levels. So people became more sedentary, more screen time. And guess what they also ate more and we're seeing that in childhood obesity, where there's been an increase in the proportion of children who are obese, I think the 2018 figures were 20% of children, aged 10, who were obese, it's now 25%, and similarly for adults. So we saw lots of things.

Rory Cellan-Jones
And we had as a classic example of people facing a decision where it might have been good for society, but bad for them. For instance, somebody who got a ping, from the UK government's contact tracing app saying, "you ought to stay at home because you've been in contact with somebody infected," they had to make the decision between obeying that possibly for the good of society and saying to themselves well actually that means I will lose out on social contact, and I will lose out financially because I will not be able to go to work. What evidence was there of how those pressures played out whether there was social pressure, for example, on them, because as a whole society was saying stay at home?

Theresa Marteau
I remember, Bence could probably remind me about Maslow's hierarchy of needs. I can't remember what's at the top, but pretty near the top will be food, being able to eat. And so for the families, the households that were living on the lowest income, they could not make their decision to stay at home even though they might have wanted to, to protect society. So they didn't have that choice. And while government policies did shift a little bit to provide I need more financial support. For some of those families, it was difficult to access.

And at the same time, there was a system of fines introduced if people didn't self isolate. So although it was not formally evaluated, which is another whole problem, what it seemed, what we heard was that people then stopped getting tested because if you were tested, you were found to be positive, and you couldn't afford to self isolate, then don't get tested. So you don't know if you're infected. And therefore you can carry on working. At a top level, that's how those dilemmas that that people experienced, but they didn't have the ability to choose to stay at home.

Rory Cellan-Jones
And Bence, how did I mean misinformation obviously played a huge role during this period. misinformation about vaccines, did you see people making what you might class as wrong decisions because of that?

Bence Bago
It is something that is incredibly hard to estimate from a scientific point of view. Like we don't know how much misinformation played a role in any type of behaviour, it's it's incredibly hard to estimate for sure. What we know is that there are conspiracy theories about COVID-19, such as the 5G towers that activate the virus conspiracy, and then many people attacked the tower. Of course, that was definitely motivated by a conspiracy theory. But measuring the extent to which misinformation plays a role in actual behaviour. It's incredibly hard.

Rory Cellan-Jones
And Theresa another thing that fascinates me, we're talking about decisions of the general public. What is also interesting is the way the people at the top making the decisions that the ministers, the chief scientists, and so on, was that an interesting laboratory for a behavioural scientist?

Theresa Marteau
Well, I was partially sighted in all of it because SAGE grew like Topsy. So there were any number of subgroups. And Patrick Vallance as the Chief Scientific Adviser and Chris Whitty as the Chief Medical Officer, were the ones who were collating the evidence together. And so I had partial sight of some of that. But then when they lobbed it over the castle wall, into number 10, Cabinet Office, goodness knows what happened.

And one of my recommendations, if anybody wants recommendations for next time, is that it would be really good if we had more of a dialogue, a formal dialogue. So SAGE, published the papers, synthesised the evidence, tried to be very clear about the uncertainty in the evidence, the confidence behind all of the statements. And then sometimes that was incorporated into policy and sometimes there was a deafening silence, sometimes they did the opposite.

And what I think would increase trust in policy responses to advice both for the advisors but also for the public would be is if government, the policymakers made a formal response, didn't have to be that detailed, where they would give their reasons they might have had other scientific advice they might have been weaving in other considerations, but just to have that documented, I think would have increased trust and would have increased the science, so you know, the evidence that we were working on.

Rory Cellan-Jones
Let's wrap up by trying to draw some of those lessons, what I'd like is a sort of a minute summary summary from each of you about what needs to change to improve decision making across our societies to learn better from the kind of behavioural work that you both do. Bence, what's your recipe, if you have one?

Bence Bago
We talked about misinformation but I what I think is a worse problem right now is actually information itself, in fact, information environments, and how polarised they are. So if you're learning one type of if you are watching one type of news from one very specific channel, you might actually learn different kinds of informations than what you learn from a completely different channel.

And this is a problem because it might lead to… the people have their preferences in terms of channels and news sources. And it might lead to problems in the sense that you might actually miss very important accurate information. And we see this kind of information challenge, these biased information environments, in many cases from COVID-19 to climate change. And that means that there is a lot of people out there who miss a lot of knowledge just because of watching one type of news over the other.

And my big intervention would be is to try to change this information environment in the sense that it's not polarised anymore. And people regardless of their politics, or ideology, or any type of beliefs, can be accessed to the same type of information

Rory Cellan-Jones
That seems something to hope for, but perhaps not expect to be achieved in a hurry, the end of polarisation. Theresa, would your message be to governments, to regulators, to all of us

to trust the scientists, whether they be epidemiologists or behavioural economists or whatever?

Theresa Marteau
Up to a point but I think my main message would be in order to change our behaviour to improve population and planetary health. At the moment, the scales are tilted against that. So we need to redesign our environments to make healthier, more sustainable behaviour, the easier one. So to make it easier, cheaper, more affordable to walk, bike use public transport than currently, the odds are in favour of using a motor car and flying places. So I'd be changing environments and then in order to achieve that, because most of that is outside of our individual control. It's about having policies that are built on the best evidence.

So it's behavioural science, economic science, social science, cognitive science, and actually implementing those policies. But that's a tough nut to crack because there are any number of interests in there. You know, there's political ideology, there's corporate interests, we've got different publics with different views, that's the space where this has to be played out. At the moment, I don't believe that the public interest is served strongly enough by the policies that we have.

Rory Cellan-Jones
Well, what we obviously need is two great multidisciplinary institutes like the Bennett Institute in Cambridge and the Institute for Advanced Studies in Toulouse. And that's where we'll end for this episode. Thank you very much to our expert panel, Theresa Marteau from the University of Cambridge and Bence Bago from the IAST. Let us know what you think of this edition of crossing channels. You can contact us via Twitter. The Bennett Institute is @Bennett Institute, the Institute for Advanced Studies is @IASToulouse and I am @Ruskin147. If you enjoyed this programme then do listen to our other crossing channels episodes, notably our recent edition, with the Kyiv School of Economics talking about the Ukraine invasion. And please join us next month for the next edition where we will be looking at what political leaders can learn from history.