PRINCIPLES OF BEHAVIORAL ECONOMICS

Prof. Sujata Kar

Department of Management Studies
IIT Roorkee

Week 18

Lecture 18

Hello everyone, this is Lecture 18 of the course on Principles of Economics. In this lecture or module, we are going to talk about the concept of nudges. As I mentioned in the previous module, the choice architecture discussed in the previous module is a precursor to nudges. In the sense, we nudge individuals by using choice architectures. So, what is a nudge?

A nudge, as we will use the term, is any aspect of the choice architecture that alters people's behavior in a predictable way without forbidding any options or significantly changing their economic incentives. To count as a mere nudge, the intervention must be easy and cheap to avoid, in the sense that if we do not go for the option that is basically nudged by the choice architecture, then that should not cost us much. We should be able to avoid that option easily.

So, something that changes the incentives of ECONs cannot be a nudge. Something that changes the incentives of Homo sapiens can. Ideally, ECONs are the rational individuals, and they make the best possible decision. So, there is nothing to be changed. Only when, as humans, we make decisions with a lot of biases and errors, and that may need certain interventions, and there, nudge becomes relevant.

We take certain examples of nudges. We begin with this piano stair in Odenplan Metro Station in Sweden, which was a nudge experiment conducted in 2009. So, what was done is that in the airport, next to the escalator, a stair was, you know, created or put in where when you go up or down, then each step will basically play a piano chord. So that would be interesting for many people.

People may be encouraged or may feel encouraged to take the stairs instead of the escalator. Increased obesity in Sweden prompted the government to come up with this novel idea to induce people to use stairs instead of escalators. The stairs played piano notes and encouraged 66% more people to use the stairs. Another example: Google wants to

encourage its employees to eat healthily. Borrowing ideas from behavioral economics, Google is now putting candy in opaque bins rather than clear dispensers.

So if it is in clear dispensers, then one may feel more attracted. If they are put in opaque dispensers, then one may completely ignore it. Placing salad in full view of people entering the cafeteria and dessert much further down. Encouraging people to use smaller plates by pointing out that people with bigger plates tend to eat more. And color-coding foods in accordance with how healthy they are and more.

We take another example of Nudge. Three alternative versions of letters for job interviews were sent to unemployed individuals. This experiment was conducted in the UK in 2015. The alternative versions of the letters in brief are mentioned here. Eight new customer assistant jobs are now available at Tesco.

Come to Bedford Job Centre on Monday, 10th June between 10am and 4pm and ask for Sarah to find out more. So when such letters were sent, nearly 11% turned up. The next alternative said, 'Hi Sam, eight new customer assistant jobs are now available at Tesco.' Again, the rest of the details are the same, like 'Come to Bedford Job Centre on Monday, 10th June between 10 a.m. and 4 p.m.' and ask for Sarah to find out more.

There is a touch of this letter being relatively less impersonal, in the sense that the individual is addressed as 'Hi Sam.' And as a result, there was a slight increase in the turnout number. So it increased to 15%. The third one said, 'Hi Sam, eight new customer assistant jobs are now available at Tesco.' Again, 'Come to Bedford Job Centre on Monday, 10th June between 10 a.m. and 4 p.m.'

And ask for Sarah to find out more. And then it adds another line: 'I have booked you a place.' Good luck, Michael. So this actually becomes an even more personal approach. You are not only called for an interview, but it says, 'I have booked your place,' and it also wishes you good luck.

So the percentage increases to 27%. Now, this was a case where it was observed that people in the UK are not very interested in attending job interviews. So this was tried. Of course, these are examples of framing and choice architecture. They are used to nudge individuals to attend job interviews in larger numbers.

Other examples include fitness and similar apps. If you use them, you see that they continuously tell you, 'You are the best; you are doing very well.' Continue doing it. You

are very good, etc., etc. So these are typical ways to nudge you to continue doing something.

Nudges could be for the benefit of nudgers as well. So generally here we wanted to benefit the individuals who are being nudged in the previous example. So examples also nudge was used or nudges were used to use for the benefit of the nudged. Now, we are claiming that nudges could be for the benefit of nudgers as well. We take an example.

In the men's room at Schiphol Airport in Amsterdam, the authorities etched the image of a black housefly into each urinal. This is actually a very celebrated experiment. That was to encourage men aim at a target to reduce spillage and the staff conducting flying urinal trials found that etchings reduced spillage by 80%. Now this benefited the nudgers because those who are being nudged, it actually does not matter to them. But if they are nudged and if the nudge works, then there will be less spillage and there will be less job to clean the mess.

And basically this was designed to benefit the nudgers. Next we talk about the concept of priming. Priming refers to the somewhat mysterious working of the automatic system of the brain. Sometimes the merest hint of an idea or concept will trigger an association that can stimulate action. In surveys, people are often asked whether they are likely to engage in certain behaviors like voting, losing weight, or purchasing certain products.

But social scientists have discovered an odd fact: when they measure people's intentions, they actually end up affecting people's conduct. So if they are asked, 'Would you like to purchase some durable commodities in the coming three months?' It has been observed that the number of purchases actually increased substantially. So those who say, 'Yes, I am planning to purchase,' are likely to stick to their commitment, or at least some percentage do, which leads to an actual increase in purchases.

Now, this is called the mere-measurement effect. Since people are asked what they intend to do, they become more likely to act in accordance with their answers. Priming is found to be effective in influencing forms of behavior by offering simple and seemingly irrelevant cues. For example, objects characteristic of business environments, such as briefcases and boardroom tables, make people more competitive, less cooperative, and less generous. So priming is one way through which people can be nudged.

Now, we talk about the properties of nudges. It is based on the idea of libertarian paternalism. This is highlighted because we are going to briefly discuss this concept of libertarian paternalism. Second, it aims to help people make better decisions themselves

rather than making decisions for them Again, it is not an imposition of decisions; the decisions are presented to individuals.

It's just that choice architecture or choice architects need to ensure that most people would pick the choice that the choice architect wants them to pick. But it is for their benefit, that is, the benefit of those who are nudged. It imposes little to no cost on those who are exposed to it. So it has no detrimental impact on individuals who are nudged.

It has little to no effect on the choices of those who are already rational and well-informed. Because rational and well-informed people do not need to be nudged, as I have already mentioned. The effect on the choices of those who are not already rational and well-informed is potentially beneficial for them by their own standards. So, it is always or most often for the benefit of individuals—that is how initially, or at least those who talked about nudge extensively, conceptualized nudge to be something like this. So, as I say, I'll be talking about libertarian paternalism.

What does it actually mean? So, it is a combination of two words: libertarian paternalism. Libertarian implies that it provides the liberty to choose. It doesn't impose on individuals that they have to choose this. At the same time, there is a paternalistic aspect to it.

So the libertarian aspect of our strategies lies in the straightforward insistence that, in general, people should be free to do what they like. We are not going to impose anything and allow opting out of undesirable arrangements if they want to do so. So, if they want, they can also opt out. They may not choose the option that the choice architect actually wants them to take. The paternalistic aspect lies in the claim that it is legitimate for choice architects to try to influence people's behavior to make their lives longer,

healthier, and better. So it is for the benefit of individuals, and that's why this is the paternalistic aspect. We're always thinking about your benefit, and that's why you are nudged. No other reason is there. That's what it tries to say.

Now, when do we need a nudge? People may need nudges in one of the five possible scenarios listed below. First, fraught choices. Second, degree of difficulty. Third, frequency.

Fourth, feedback. And fifth, when preferences are uncertain or uninformed. So we are now going to talk about each one of them very briefly. First of all, the fraught choices that are self-control challenges. We have seen that predictable problems arise when people must make decisions that test their capacity for self-control.

Self-control issues are most likely to arise when choices and their consequences are separated in time. At one extreme are what might be called investment goods, such as flossing and dieting. So you decide to floss your teeth every day, but you may not do it. Or you may not be doing it on a regular basis consistently. Similarly, it is the case with dieting.

So these are basically self-control choice challenges. For these goods, the costs are borne immediately, but the benefits are delayed. So you can see that you have to take the cost of flossing your teeth immediately, but the benefits would be realized over a period of time. The same is the case for dieting. You consult a dietitian, which may involve certain expenses, go for certain products, but then the benefits are going to come after a certain period of time.

so that's why the the cost and the benefits are separated in time for investment goods most people err on the side of doing too little Since the benefits are not realized immediately, we may not be very willing to invest right now. At the other extreme are what might be called sinful goods like smoking, alcohol and jumbo chocolate doughnuts which are in this category. Where the enjoyment is immediate, the benefits are immediate, while the costs come at a later period. So the cost here is in terms of illness and the expenditures on illness.

So all these things are delayed. They will come in the future. We get the pleasure now and suffer the consequences later. Both investment goods and sinful goods are prime candidates for nudges. So, these are the situations when we need nudges.

This is the first case. The second one is the degree of difficulty. Many problems in life are quite difficult, and often there is no technology as easy as a spell checker available to help. These hard problems are good candidates for nudges. When we are struggling to make the right decision, a nudge may help us.

We are more likely to need more help picking the right mortgage than choosing the right loaf of bread. The third one is frequency - even hard problems become easier with practice so if we keep on doing something on a regular basis then possibly we would be better at it even if it is a difficult task. Unfortunately some of life's most important decisions do not come with many opportunities to practice as probably I have mentioned previously that we do not marry very frequently.

Maybe most of us marry only once in a life. Then retirement comes also once in a life. Children's education, which college to put in, where to go, etc. These also cannot be repeated several times. So there is no opportunity to practice.

Generally the higher the stakes, the less often we are able to practice. Most of us buy houses and cars not more than once or twice a decade but we are really practiced at grocery shopping. So the frequency actually help us at times taking the right decisions. If there is no chance of frequently doing one thing then nudges may help us. The fourth situation is feedback. Even practice does not make perfect if people lack good opportunities for learning.

I am practicing something on a regular basis but I am making also mistakes on a regular basis and nobody is there to tell me. So I am not learning where I am actually making some mistakes. Many of life's choices are like practicing without being able to see where the balls end up. Someone can eat a high-fat diet for years without having any warning signs until the heart attack. When feedback does not work, we may benefit from a nudge.

Number five, when preferences are uncertain or uninformed. Smart tourists often rely on others (waiters, for example) for help. It is particularly hard for people to make good decisions when they have trouble translating the choices they face into experiences they will have. When people have a hard time predicting how their choices will affect their lives, they have less to gain by numerous options and perhaps even by choosing for themselves. For example, I want to take a vacation at a place about which I do not have much experience.

I may find out a lot from the internet. but then I personally have not experienced much, could be possible that the language is different, the culture is very different so, being at that place we may prefer taking help from others. So this is where there is lot of uncertainty and maybe in such situations, nudges help us. Now we talk about how successful and appropriate nudges are. First of all, Nudges are conditioned by heterogeneity and duration.

Raihani noted that nudge interventions may vary across contexts. What may work well in one situation or with one group of people may not work well in other situations or with a different group of people. So things may be very different across cultures, across communities, across countries and places. So heterogeneity—the moment there is heterogeneity, we cannot be very certain that one nudge that worked in one country at one place is also going to work in some other country or some other place. Also, with time, the impact of a nudge decreases.

Take any example—take the example of the piano stairs. People would initially be very excited; they would try it. After a while, when they become somewhat habituated to it, they

might stop taking it. When it is in the news, people would be more excited. When this is a regular feature, that excitement is already gone.

Frequent flyers are already familiar with those stairs, so they will not take them anymore. It was also observed that gradually, even those who were interested would take the escalator to go up and, while going down, take the stairs to enjoy the music—the piano stairs. As a result, the impact of the nudge gradually fades away. UK House of Lords Science and Technology Select Committee 2011 report "Behavior Change" expressed concerns about ethical issues. So this is the second dimension, which talks about the success or appropriateness of nudges.

They say that because nudges involve altering behavior through mechanisms with which people are not obviously aware, it is unethical. So we are trying to modify people's behavior, manipulate people's behavior, but they are not aware of it. Even if we are claiming that this is for their betterment, they still should have or have the right to know about it. As a result, this might be considered unethical. Along a similar line, there are two more criticisms that I'm going to talk about. One is preference purification.

Sugden argued that nudge theory tries to purify contaminated revealed preferences. Basically, as the neoclassical model talks about revealed preferences, our choices are revealed; our preferences are revealed through choices. Now, generally, human beings come up with choices that might not be the best for them. So, that is why the term 'purify' has been insisted upon. Your choices are biased.

They are not the best possible ones. So, nudges are brought in to purify your contaminated revealed preferences. And it is then the satisfaction of these purified preferences that nudge theory aims to maximize. Alternatively, he claims that nudges are meant to nudge HUMANS toward ECONs. So basically, we are generally humans.

Behavioral economics is all about studying how the behavior of humans deviates from the hypothetical concept of ECONs, as conceptualized by neoclassical economists. But then the allegation is that through nudge theory, we are actually pushing humans to behave like ECONs. You are supposed to do this. This is the best possible for you. So you go for this. You are not allowing us to remain humans anymore.

So there is much more discussion on this issue. I really do not have the scope or time in this course to discuss them at length. You can always follow the references mentioned here in the slide or at the end in order to know more about these concepts. The fourth point of

criticism is the concept of the SuperReasoner. A SuperReasoner has access to all relevant information.

An individual who has access to all relevant information gives full attention to all relevant information, has no cognitive limitations, and has perfect self-control. A real ECON is called a SuperReasoner. Now, Sugden claims that given a truly free choice, there is no reason to assume that SuperReasoner would choose the best option since their processing abilities may be objective, but their preferences are subjective. In the sense, if we talk about Google's initiative of putting the desserts in the lower ranks and salads

at the full view then it means you are trying to influence one's decision, do not go for cookies, do not go for bakery items you should rather go for salad. Now the thing is that behind this the assumption is that it is best for them to choose salads instead of cookies but it could be a subjective preference to choose cookies instead of salad. So even if I have all the information, I'm a super reasoner, I have all the information, I'm giving full attention to all the information and I have complete self-control. Nevertheless, it is my preference at times to go for bakery items instead of going for salad.

So here, even if I have objective ability to process things perfectly, still my subjective preference could be to choose something else, which might not be at that point of time the best possible one for me. So if SuperReasoner is successfully nudged, then they would be worse off as judged by themselves. I wanted to have, you know, dessert, but then I'm forced indirectly or subtly by the choice architect to go for salad.

So as a result of which my preferences are altered and now I would be worse off. So it is actually judged as the best possible option by the choice architect. That's why we are saying that if SuperReasoner is successfully nudged, then they would be worse off as judged by themselves, though not necessarily judged by the choice architect. The choice architect thinks that by taking salad, he is better off. But the individual might actually feel more like going for dessert.

And if the design allows them, or rather subtly forces them, to go for salad, then he or she will be worse off. So this is the case of SuperReasoner, where we are trying to subtly alter their behavior more toward being an ECON. Next, we talk about nudge as a policy tool. Nudges should be needed only sparingly.

But there are four good reasons why we may need to nudge someone. They may face a very complicated choice. They may have very little experience. They may be relatively uninformed. They may have self-control problems.

This gives us a framework to think about when nudges might be needed. The next thing we need to think about is how to most effectively use nudges. Thaler and Sunstein suggest six principles. So, to use nudges effectively, we have six principles.

First, incentives. People respond to incentives such as price and cost, but only if these are salient. Second, understand mappings. People may need help understanding the mapping from choices to outcomes. Defaults matter a lot due to present bias and choice overload.

Give feedback—people learn, so provide feedback on when things go well or badly. Expect errors—people make mistakes, so systems should be forgiving. Finally, structure complex choices. Keep things simple to avoid overload or errors. Now, if you look at these highlighted letters, N-U-D-G-E-S spells 'nudges,' and these six principles were also discussed in the previous module under choice architecture.

Choice architecture uses these principles to nudge individuals. An important aspect of nudges is that they should not sacrifice liberty, as Thaler and Sunstein wrote. 'Without forbidding any options or significantly changing their economic incentives, the intervention must be easy and cheap to avoid.' Basically, a nudge should not change the set of options someone has, but its very objective is to change the option that will be chosen.' It is the lack of a neutral option that is key here.'

So, we can often design systems that do a better job of helping people to do the things they want to do, but find hard to do for behavioral reasons.' That's the essence of a nudge.' The policymakers in the United Kingdom use the idea of mind space.' The basic idea is to provide a practical means to think about behavior change and apply insights from behavioral economics and psychology in policymaking.' So this is Mind space—you can see that at the beginning, these individual words start with letters that together constitute M-I-N-D-S-P-A-C-E.'

I will just briefly mention what they are.' So, Messenger: we are heavily influenced by who communicates information.' Incentives: our responses to incentives are shaped by predictable mental shortcuts, such as strongly avoiding losses.' Norms: we are strongly influenced by what others do.' Defaults: we go with the flow of the preset option.'

Salience: our attention is drawn to what is novel and seems relevant to us.' Priming: Our acts are often influenced by subconscious cues. Affect: Our emotional associations can powerfully shape our actions. Commitments: we seek to be consistent with our public promises and reciprocate acts. Ego: we act in ways that make us feel better about ourselves.

As you can see, we have talked about almost all of them, specifically up to priming—how choice architecture uses all these concepts to nudge individuals. And at the end, we talk about a method to design nudges. There are alternative methods. This is the very basic method, and the method is also called BASIC. Again, you can see that we will have an explanation for each of the letters included here.

For example, B stands for behavioral mapping: identify behavioral patterns that might need attention. This is the 'what' phase. Then I have A: analysis, understanding the reason behind the behavioral pattern—the 'why' phase—why people behave in such a manner. Then S, which is basically providing the solution. We call it solution mapping. The scientific and systematic process of designing the nudges—the 'how' phase—how we can influence their behavior.

I, intervention: testing the solution before full implementation, which is the 'test' phase. You test it on a smaller sample, see whether it is working or not, and then one can go for the full-fledged implementation of the plan or the idea. And finally, C, which is continuation. Further implementation of the nudge with continuous monitoring of proper implementation and evaluation; this is also called the results phase. So finally, we can obtain more and more data to check how this entire process is going, how the nudge is actually effective, and what the result of this nudge is.

So, this is—I have very briefly talked about the concept of nudge here. Basically, a lot of work has been done on this concept. But again, discussing all of them—all the dimensions—is beyond the scope of this course. So, with this, I conclude the current topic. In the next session, we are going to start discussions on prospect theory with certain tools, methods, etc.

as a precursor to the prospect theory. These are the references used for this module. Thank you.