

PRINCIPLES OF BEHAVIORAL ECONOMICS

Prof. Sujata Kar

Department of Management Studies

IIT Roorkee

Week 17

Lecture 17

Hello everyone, this is the course on Principles of Behavioral Economics, and today we are going to discuss Lecture 17, which is on a few effects and choice architecture. Basically, in the previous modules, we were talking about different biases, heuristics, and effects. We discussed many effects, including expectation effects. So, in that continuation, I am going to talk about a few more effects. We will begin with addiction and abstention.

In the conventional model, it is assumed that more consumption of a good gives more total utility, and most often, the goods that do not fulfill this condition are treated as exceptions. The neoclassical model does take into account 'bads,' like garbage or pollution, where more consumption decreases total utility. But these are phenomena where increasing consumption is monotonically bad, meaning increasingly bad throughout the range of consumption. For some people, however, there are goods that give too much pleasure, even though excessive consumption is associated with various problems in terms of health, time, and money spent. So, understandably, even though, say, smoking is considered to be a bad because it might have some negative health implications.

Nevertheless, people consume it because they are addicted to it, and the neoclassical framework doesn't have any straightforward method of handling such goods or commodities. So, addiction is a major factor in this context. The phenomenon of addiction can cover a wide range of goods, like alcohol, tobacco, and other recreational drugs, which are most commonly cited examples, alongside particular types of food like junk food, gambling, sex, computer games, and indeed any activity involving a significant degree of excitement and which might have some negative implications for the body and mind. The psychological and physiological mechanisms relating to the enjoyment of these goods are complex, being of a double-edged nature.

However, one factor that deserves mention at this point is the concept of diagnostic utility. If you remember, we have already talked about it. A number of studies have found that people infer their happiness from their actions in a self-signaling manner. So, if I can control myself by abstaining from consumption of those commodities which might not have positive implications for my body and mind, then I will be receiving some pleasure which is called diagnostic utility.

One study quotes as an example of a person who takes a daily jog despite a rain. He may view the activity as a gratifying signal of willpower, dedication, or future well-being. As a result of which despite of a few difficulties or several difficulties, if someone continues with certain activities or consumption of certain goods, then that will be part of diagnostic utility or utility generated from such consumption or behavior would be considered as diagnostic utility. To indulge even slightly may reveal themselves to indeed have an addictive personality, and the acknowledgment of such weakness may make it impossible to break the addiction.

These concepts of diagnostic utility and self-signaling may well help to explain the unfortunate and all too common phenomenon of falling off the wagon, vicious cycle of low self-esteem and compensatory indulgence. Next, we talk about the endowment effect. This effect is discussed in more detail in later modules. But the essence of the phenomenon is that utility is not independent of possession.

Those people who have acquired a good in some way, either through purchase or gift, tend to value it more highly than others. There are certain effects that are pretty similar, and we might see a combination of their impact on our behavior. For example, loss aversion, status quo, and the endowment effect. So, I will talk about the status quo also; loss aversion we have already talked about. In an experiment, subjects were divided randomly into three groups.

One group was endowed with a mug. Another with a candy bar, and the final group was not endowed with either. So there were three groups, as you understand. One had a mug, one had a candy bar, and the third one had nothing. The first two groups were allowed to trade their goods for the other one.

So they could exchange their mugs for candy bars, while the third group was offered the choice of either good. If preferences were independent of endowment, one would expect the proportions favoring one good over the other to be the same for each group. However, while 56% of the third, non-endowed group—those who did not have either the mug or the

candy bar—favored the mug over the candy bar, 89% of the mug-endowed group preferred the mug; that is, they wanted to retain the mug and did not prefer an exchange, being unwilling to trade. Only 10% of the candy-endowed group preferred the mug, wanting to trade. In this sense, 89% of the mug owners did not want to trade, and similarly, 90% of the candy owners did not want to trade.

Next, I will talk about status quo bias, which in some contexts is pretty similar to the endowment effect. Besides loss aversion, inertia is also caused by a general tendency to stick to one's current situation. So, sticking to one's current belongings gives us the endowment effect. Sticking to one's current situation gives us the status quo bias. It simply requires less cognitive effort to repeat a previous decision, like ordering the same meal from a restaurant menu as before.

This results in status quo bias. However, there is something of a confound with this effect: the repeating of a previous choice may confer more utility. But it also may be a result of estimating that the probability of a previous choice being a good one is higher than selecting a previously untried option. So basically, if someone is very much satisfied with the existing option or choice, then trying another one might be more expensive, and as a result, he or she might not be interested in trying another one.

So one possibility is a confound in the sense that this may also explain such behavior. But it can also just be because of status quo bias, in the sense that there is an inertia because of which we do not want to try. We do not want to try things. We do not want to change our current position. Examples include sitting preferences in class.

I have personally observed that students, one in the beginning of the semester, they would come and sit at certain places and throughout the semester, in the classroom, they would generally come and sit at those places, maybe one chair here and there, but not much changes in their seating locations. So that is also an example of status quo bias. Nobody asks you to sit there. Your seating arrangements has nothing to do with your own numbers,

what time are you entering the class and all? Nevertheless, there is a strict preference. This is also exploited by companies, for example, 7-day free trials or subscriptions. Because when you go for a 7-day free trial or subscription of anything—a website offering you some service, a magazine, or newspaper content—initially, they say that you can try it for 7 days.

All of us are familiar with this. But when you go for the seven-day trial, they ask you to provide your credit card details so they can start deducting the subscription fee once the trial is over. And they say that you can cancel anytime before or during the seven days. But they know that, in reality, people do not put in so much effort. They do not want to put in so much effort or time to pay attention or cancel the subscription.

This status quo bias, that is the tendency to remain in a particular situation, is exploited by companies. Similarly, scheduling shows on TV channels. Many times, people do not want to change the TV channel. Something is going on, so it keeps going on. Maybe we are not even paying attention to it.

People are too lazy to change the channels. And this is how it also happens. So, what time do people generally sit in front of the television? What are the preferred channels and things like that? Accordingly, the shows can be arranged so that certain shows, when turned on, generally stay on for hours.

People do not bother to change them. So again, exploiting status quo bias. Understandably, it happens due to a lack of attention. The existence of status quo bias has important policy implications related to sales strategy and also government intervention. Sales strategy we have just talked about.

Next, we talk about another concept called choice architecture. We will discuss this as a precursor to the concept of nudge, which is covered in the second module. So, what is choice architecture? Standard economic policies rely on hard measures such as regulations, bans, penalties, and taxes—for example, on cigarettes. And then there are penalties.

If you violate these rules, you will be penalized. At the same time, they also provide subsidies. Subsidies work as incentives—for example, tax relief on pension or insurance schemes. So, things that are very visible can be considered hard measures. Hard measures are usually seen as desirable and necessary when behavior is detrimental to society and needs to be avoided.

So, something which we need to completely eradicate or we do not encourage people to do such things or getting into such activities are actually or is harmful for the society then we go for hard measures. Alternatives are soft measures through choice architecture, which involves the careful design of how choices are presented, and that is how we try to influence choices. Now, when we try to influence choices, it is not necessary that all individuals will respond to such influence.

So, even if some individuals do not respond to such manipulation, it will not be detrimental to society. As a result, these are soft measures, options presented to you under the presumption that they are good for you, better for you, or better for society. And that's why they are presented to you. You are free to choose such options or select one among them.

But if you do not do, that's also okay. If you indirectly influence the choices other people make, you are a choice architect. And since the choices you are influencing are going to be made by humans, you will want your architecture to reflect a good understanding of how humans behave. In particular, you will want to ensure that the automatic system doesn't get all confused because many times our choices are outcomes of our automatic system, whatever our automatic system signals. So, if the way choices are presented that confuses the automatic system, then probably the desired result will not be there.

Choice architecture is the strategic arrangement of decision-making environments to influence choices without restricting freedom. It's about how the way choices are presented can impact people's decisions even without altering the underlying objective value of those choices. In a sense, it's about gently guiding individuals towards desired outcomes by carefully structuring the context in which they make decisions. In the next, we will discuss a few principles of good choice architecture. Specifically we are going to talk about six such principles.

The most important concept in choice architecture is framing. Framing is something we have already talked about. Framing actually exploits or utilizes several concepts. One of them is defaults. A choice architect may use availability or other heuristics in framing to nudge.

Defaults are a very popular framing technique that exploits the status quo bias. Many people will take whatever option requires the least effort or the path of least resistance. So basically, again, you are in a state of inertia. You do not want to make any effort to change the current situation. So again, we return to the status quo bias.

And if we are in a default option, then again, we will continue with that. That is the basic concept of exploiting defaults as a framing technique due to the existence of status quo bias. If there is a default option—an option that will apply if the choosers do nothing—then we can expect a large number of people to end up with that option. Defaults are ubiquitous and powerful. Since 2012 in the United Kingdom, under the 2008 Pensions Act,

Firms are required to enroll their employees automatically in a pension scheme. So when an employee joins an organization, he or she will be automatically enrolled in a pension scheme. He or she may choose to opt out. So the opting-out option is always there. But the default option is to be enrolled or to get enrolled.

They started with larger firms, but since 2018, it applies to all firms. This is a good example of the power of defaults because if employees want to opt out of the pension scheme, they are free to do so. But this will require the expenditure of effort, cognitive resources, and time, and may even involve some psychological conflict. As a result, people will usually not take this step. So they would just be in the scheme because the scheme was the default.

And that is going to increase investment in pension schemes, which are basically beneficial for the employees only. So these are sort of indirectly forced savings, but you are not forcing the individuals very explicitly. The idea is that because we are prone to cognitive laziness or what is called the status quo bias, not many people will pursue this opt-out option, and this has proved to be the case. Similarly, when you download a new piece of software, you will often have numerous choices to make, such as whether it should be customized or a regular installation.

Generally, we go ahead with whatever is the ticked box, and this is again a default option. So whatever the company wants us to go ahead with, they will put it as a default option. If you do not want this default option, many times you are not even clear about which one is better for us. so if you are not clear about if you really do not want to bother about it you just go ahead with the option that is already clicked Do you want the regular or custom installation? Normally, one of the boxes is already checked, indicating it is the

default. You would also say that on many of the web pages we visit, there would also be a pop-up box that will come up, which would say that Would you like to, or does the website want to send you messages, access your location, or send you notifications? Most often, the 'Allow' box is highlighted. That is, it indicates that that is the default option. It If you do not pay attention, you may click on it, while it is quite possible that you really do not want to go ahead with it. So that is also sort of, if you do not pay much attention, then you will end up clicking, and the website will have access to sending you notifications, accessing your location, and so on.

They are also unavoidable in the sense that for any node of a choice architecture system there must be an associated rule that determines what happens to the decision-maker if she does nothing. But at times, it can be dangerous. For example, there are automatic

lawnmowers; if you do not basically switch them off, then that can lead to some damages. And there are some such machines—If you just leave it on, then that may lead to certain damages. So ideally, if we do not do anything, then in most situations, it's possible that nothing happens.

But then there are situations when something wrong might happen. Specifically, when a choice is complicated and difficult, people might greatly appreciate a sensible default. So the default option is there. For example, in the customized or regular installation, if I'm not very sure about how customization is going to help me, that's a complex decision for me. I'll go ahead with whatever is already ticked.

Making default choices can prove costly as well. For example, as I was saying, sometimes if certain instruments, if their default options are to continue mowing the lawn, then it is quite possible that at times they may also end up damaging some of the plants you really do not want. For example, when choosing a mobile phone connection service plan, we may head straight to the website of our landline service provider and then simply click the one that is listed as the most popular plan.

But the most popular plan might not be the most suitable one for you or for me. If we select a default, say a 799-rupee-per-month mobile phone plan rather than spending a few minutes to evaluate a Rs. 599-per-month plan that would be adequate for our needs, we may waste at least Rs. 2400 over a 24-month contract and continue to waste money at the same rate if we make the default choice of keeping the plan running after the lock-in contract expires.

So this is how default options could be expensive at times if we do not pay much attention to changing or altering them. This is a big price for most people to pay to avoid a few minutes of additional research. On the other hand, accepting the default may in other cases be perfectly reasonable given the opportunity cost of our time. So, again, when the decision-making process is complex, it does not take just a few minutes, but you have to acquire a lot of information before making the right decision. Then the opportunity cost associated with spending time to find out what is best for me could be higher than just going with the default option, as a result of which the default is preferred.

Next, we talk about expected error. Humans make mistakes. A well-designed system expects its users to err and is as forgiving as possible. Most ATMs no longer allow users to leave their card in the machine because after reading the card, the machine first prompts you to take the card before it spits out the money. As a result, unless you take the card, the money will not come out.

The machine indicates that you should take your card. The strategy is to use what researchers call a forcing function, meaning that in order to get what you want, you have to do something else first. So, these are basically choice architectures or examples or principles of choice architectures that are actually influencing your choices for your betterment. Similarly, automobiles have become much friendlier to their human operators as cars come with several warning systems, keeping in mind passenger safety operations related to headlights. You cannot leave them on.

And then there are, of course, many cars where if it is dark, their headlights automatically switch on. Otherwise, they won't. When you are about to run out of fuel, there are indicators, or when you need an oil change, there are indicators. For elderly people taking the medicine once a day is a better design than twice a day or every alternate day because the automatic system can be educated to think, "My pills every morning, when I wake up." Taking the pill becomes a habit and habits are controlled by the automatic system.

So when the automatic system is trained, this is actually less troublesome for us. But training the automatic system to take pills every alternate day actually becomes more time-consuming, more difficult, or more tedious. Visitors to London who come from the United States or Europe have a problem being safe pedestrians. They have spent their entire lives expecting cars to come at them from the left, and their automatic system knows to look that way. But in the United Kingdom, automobiles drive on the left-hand side of the road, so the danger often comes from the right.

they are helped by good design the pavement has signs that say look right so you are reminded again and again that you're supposed to look to your right If we talk about feedback, the best way to help humans improve their performance is to provide feedback. So these are all part of choice architecture. Well-designed systems tell people when they are doing well and when they are not—when they are making mistakes, that is not doing well. Examples include modern models of cameras that have several features to take care of human errors of Not removing the lens cap, not placing the target object at the center.

If you remember or if you are at all familiar with it, then a long time back we also had cameras where we needed to manually put the films in, and placing the films properly was the first task. Then, if we are taking pictures without removing the lens cap, then all the pictures or the pictures that are taken with the cap will be actually wasted. And we would not know because there was no indicator. So, modern-day digital cameras are equipped with all these features to take care of this kind of human error.

They also include a very satisfying but completely fake shutter click sound. The shutter click sound used to come or used to be there in cameras with film because then the film would actually move forward. But now the sound is completely fake because it has been put there, inserted there just to ensure that the photographer realizes the picture has been taken. Feedback can be improved in many activities, like painting a ceiling. Someone invented a type of ceiling paint that goes on pink when wet but turns white when dry.

An important type of feedback is a warning that things are going or may go wrong, like when laptops warn us to plug in or shut down due to low battery it says that save whatever work you are doing because the laptop is going to shut down, so these are kind of you know warnings that help us to improve our behavior however warning systems have to avoid the problem of offering so many warnings that they are ignored so if something keeps on beeping then you get irritated we tend to ignore that so warning has this you know negative side as well

Next, we talk about mapping. I think this is the fourth principle. The relation between choice and welfare is called mapping. That is the intended benefit of the choice architecture. So whether the choice as designed by the choice architecture actually gives us welfare or not.

So that is mapping. A good system of choice architecture helps people to improve their ability to map and hence to select options that will make them better off. Often people have a problem in mapping products into money. It may be hard to track how much it cost you to use your credit card. Among the fees, one may be paying our annual fees, interest, etc.

Many people might not be aware of what are the fees one is actually paying. Credit cards are not alone in having complex pricing schemes that are neither transparent nor comprehensible to consumers. Libertarian paternalism gives a very mild form of government regulation to solve this problem called RECAP. Record, evaluate and compare alternative prices. That is in short RECAP.

It is a regulatory approach requiring firms to disclose all fees in a standardized, machine-readable format. This allows consumers to easily review their actual usage and compare pricing plans, improving decision-making without restricting choices. As a result, this is one example of mapping where we are helping individuals make better decisions. The next one is structuring complex choices. As alternatives become more numerous and complex, choice architects have more to think about and more work to do, and are much more likely to influence choices for better or worse.

Elimination by aspect is one strategy that can be used, and we have already talked about elimination by aspect while discussing search heuristics. Other strategies include the way paint shops may organize thousands of colors for customers to choose from. So, what are the different options, or how one can go about presenting all sorts of colors? There could be 2000-plus colors; it's not actually helpful to put them alphabetically. It is rather more helpful to put similar colors together.

So, they use a paint wheel with color samples ordered by similarity, which eases the problem of selection. So, one can start with, for example, white, then move from there. We can use white and then slightly different shades of white, moving on to maybe yellow, then from there to orange. All possible shades of each and every color are presented so that one can compare them very easily.

And then, of course, the color that is being chosen—one can find out the name of that color. So names are actually very secondary, and that is why it is not really—it does not make much sense to order them alphabetically. Another method is called collaborative filtering, which is an effort to solve a problem of choice architecture. You use the judgments of other people—so that's what is called collaborative. Other people's judgments are used in order to filter your choices. So those people who share your taste filter the vast number of books or movies, for example, available to increase the likelihood of picking one you like.

For example, you go to any OTT platform; you would see that there are thousands of things—TV shows, movies, other kinds of content. So, which one to go for? You may depend on recommendations. You may depend on—to a large extent—ratings by domestic as well as international agencies. However, sometimes it is good to learn what people unlike us like and to see whether we might even like that.

So, one drawback with this collaborative filtering is that we probably may stick to things which like-minded people are suggesting, and I continue with this. Now, I must try something else also, which I may even like. Structuring choice sometimes means helping people to learn, so they can later make better choices on their own. So unless and until we allow people to learn about things they do not know, then, of course, that is sort of restricting the choices, which is not a good thing. And the last thing—the last principle of choice architecture—is incentives.

Choice architects must think about incentives when they design a system. Sensible architects will put the right incentives on the right people. One way to start thinking about incentives is to ask questions about a particular choice architecture: who uses, who chooses,

who pays, and who profits? Free markets often solve all the key problems by giving people an incentive to make good products and sell them at the right price due to competition, but at times there are incentive conflicts, for example, paying for group lunches alternately by members.

So it is quite possible that, suppose I have a few colleagues with whom I decide to go for lunch, maybe on the weekends. So one weekend, I pay for everyone's lunch. The next weekend, someone else is supposed to pay. Now, when someone else is paying, it's quite possible that I—and like me, a few others—decide to go for expensive items. So then there would be some conflicts.

We call them incentive conflicts. There are incentive conflicts in many markets, including healthcare. The patient receives the healthcare services chosen by their physician and paid for by the insurance company, with everyone from equipment manufacturers to drug companies to malpractice lawyers taking a piece of the action. Those with different roles have different incentives, and the results may not be ideal for either patients or doctors.

So, these are again examples of incentive conflicts. The most important modification that must be made to a standard analysis of incentives is salience. Salience can be manipulated, and good choice architects can take steps to direct people's attention to incentives in their choices. If the AC in your home was programmed to tell you the cost per hour of lowering the temperature a few degrees during the heat wave, this would probably have more effect on your behavior than quietly raising the price of electricity.

So once the prices are increased, then, of course, at the end of the month, you would see a much larger bill. But then again, during the next course, you may forget that the prices are higher. I must constrain my consumption. Or rather, you may think that, given that it is very hot outside, I actually need it. In contrast, if there is continuous feedback, then that may incentivize you to better control your choices.

So with this, I conclude this module. These are the references. Thank you.