

PRINCIPLES OF BEHAVIORAL ECONOMICS

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Week 39

Lecture 39

Hello everyone, this is the course on Principles of Behavioral Economics, and I am going to discuss the policy implications of mental accounting. So, in this lecture—Lecture 39—and also the next one, Lecture 40, we are going to conclude mental accounting after discussing the policy implications. Now, while discussing the policy implications, you would realize that a large number of examples or instances we have already discussed in some other contexts. Nevertheless, here we are going to talk about the policy implications of those instances. So, we will definitely refer to the previous topics that have already been discussed.

So, in the discussion on mental accounting, we have concentrated largely on examining the non-neoclassical model behavior of individuals, particularly consumers. This behavior has important implications for the behavior of institutions such as firms and governments, as well as for markets. It is generally assumed here that these institutions respond rationally to the non-neoclassical behavior of individuals, with certain exceptions. Now, it is important to note that mental accounting addresses the non-neoclassical behaviors of primarily individuals, while we are claiming that firms and government agencies mostly behave in a more rational way.

So, why is it so? A key difference is experience. Firms tend to be specialized, have access to large amounts of data, and have the ability to analyze it more effectively. They are also subject to competition, so firms that do not respond appropriately tend to be driven out of the market. So, the chances of making mistakes—in the sense of not-so-rational decisions—can lead to devastating results for firms or for any entities that are competing with several other competitors.

So as a result, they have to be more deliberate and careful in their decision-making. Even when firms do have biases that cause non-standard behavior—particularly the principal-agent problem—they still have incentives to respond to the non-standard behavior of

consumers. The same applies to employers, financial institutions, and politicians when they respond to the non-neoclassical behavior of workers, savers, investors, and voters. So broadly, we would see more not-so-rational behavior among individuals classified as workers, savers, investors, and voters, while the other parties, facing more competition, having more experience, would generally be more careful in their decision-making.

The responses of five main categories will be discussed: individual agents, of course, marketers, labor markets, financial markets, and government policy. So we begin with individual agents and will conclude this module with discussions up to marketers. So one major implication is that people should allocate expenses to unambiguous categories to avoid overspending. People are more likely to spend if there is ambiguity in the categories used. An extreme example of such a self-control device is where cash is placed in labeled envelopes for specific uses.

So, for example, in the very beginning, I probably mentioned—or while discussing fungibility—that in earlier times, when there used to be more cash transactions, people would actually keep money separately in envelopes earmarked for groceries, children's education, vegetables, and so on. There are also implications here for gift-giving. We have seen that people may be delighted to receive a gift they would never buy for themselves, as it falls outside their budget for that category of expenditure. So these are the anomalies we have observed.

Another type of self-control device for consumption relates to the restriction of cash withdrawals from banks or ATMs to small amounts. So this is what we talked about in the context of the denomination effect. This may be an effective commitment if there is no opportunity to withdraw more cash in the near future. In a similar manner, consumers may limit their purchases to small amounts, so all these are instances where we try to exercise some kind of self-control. Smokers may buy packs of 10 cigarettes, for example, which again may be an effective commitment if there is no opportunity or if it is inconvenient to buy further cigarettes later.

In any case, if you do not have the things readily available with you when you are actually getting an extreme desire for smoking, then of course there could be inconvenience, but nevertheless, that reduces your consumption. So if you buy in smaller batches, that is another instance of self-control. This last example is interesting because it violates two economic principles. First, it is normally cheaper to buy most goods in larger quantities.

Second, it contradicts a principle of prospect theory described earlier: that losses should be aggregated because of diminishing marginal sensitivity. But here we observe that the losses should be aggregated—so integrate the losses—but here, basically, segregating the losses actually helps, as we discussed previously. See, in 365 days, one individual spends, say, nearly—or I would say, in 12 months—every month someone is spending 3,000 on cigarettes. So in 12 months, he would be spending 36,000. So 36,000 is actually a large amount.

But if you bring it down to per-day consumption, then it becomes much smaller. So as a result, here we can see that losses are being segregated. That drives consumption. There are other instances also when such things happen. Another area of behavior where commitment may be beneficial for consumers is when prepayment for a good or service is possible.

There is experimental evidence that prepayment can increase commitment to prepaid options and also increase motivation and engagement in relevant tasks. There are also policy implications regarding time budgeting. Again, people may budget time into different categories for self-control reasons. An author, for example, may have a time budget related to writing five pages a day. Other tasks, such as doing housework, repairing the table, or paying a bill, may be foregone in achieving this target.

So, of course, there would be some drawbacks associated with achieving this target. Nevertheless, in order to achieve what you want, you basically prioritize. So things which are more important need to be given more attention. So if you really focus on completing writing or a write up. then you have to—whatever you are writing, it could be a novel, a story, or a piece to be published somewhere.

Then, in that case, you can always set deadlines so that you must write at least five pages a day to complete it within the stipulated time. So, this is what—this is another example of self-control. Next, we will talk about marketers. We will focus on the following most important policy implications because there are a huge number of policy implications when it comes to marketers, specifically from the perspective of mental accounting.

As mentioned at the beginning, mental accounting has substantial applications in the field of marketing. So, it is not possible, or outside the scope of this course, to discuss all of them in detail. Therefore, we will specifically focus on five aspects: sales promotion, free offers, bundling, disaggregated pricing, pricing structure, cash versus credit cards, and trade-in pricing. As you can see, some of these topics have already been discussed. Now,

we are looking at it from two perspectives. One is somewhat summarizing and examining it from a policy standpoint—how observations related to mental accounting can be exploited, utilized, or manipulated by marketers to their advantage. Beginning with sales promotion, the concept of hedonic editing has important implications

in this strategic area. Researchers used three different types of promotions of the same monetary value to assess the applications of mental accounting. These include extra product promotions, where an additional amount of the product is provided at the same price. For example, you may often see shampoo bottles labeled '20% extra.' This happens with many products.

So they would increase the size by 10% extra, 20% extra. The second one is the price of promotion. A temporary price reduction below the regular price is given, which is also very common. All of us are familiar with that. We get price discounts like 20% discounts, 30% discounts, and so on.

And finally, premium promotion. A separate complementary product is provided for free. Now, the first method does not segregate gains since the gain is in the same form as the product bought. So in the first method, we are providing some extra amount of the same product, like 20% extra shampoo in the same bottle. Now, this is difficult here. Here in this context, it is difficult to segregate gains because the gain is in the same form as the product bought.

Whereas the other two methods do segregate gains, with a gain from the promotion being either monetary—that is, in the second case, where we are getting a discount— or in the form of a complementary product—that is, the third case, when an additional product is given with the main product. Thus, the last two methods were supportive of the hedonic editing hypothesis and could be more effectively utilized by the marketers. Price promotions involve several psychological processes on the part of the consumer, with implications for marketing that are often counterintuitive. For example, it may be better to offer no discount than a low discount in some circumstances.

A zero discount may become a reference point, being regarded as a normal price; that is, the product is sold at a regular price. But a low discount of, say, just 5% may be compared with a higher discount as a reference point. Now, a higher discount may have been offered previously or perhaps in competing products. If some competing products are offering higher discounts, then you have a reference point. Thus, a low discount may yield low transaction utility and result in lower sales than a zero discount.

You could be quite okay with buying the product at MRP. Because not all brands offer discounts. But then, when a very small discount is offered, you have a reference point, and that may discourage you from purchasing the product at a smaller discount. Consumers may either buy elsewhere or wait, expecting a larger discount in the future. So, you are either expecting a larger discount on the same product or on a competing product.

Or you would go for a competing product—a close substitute—that has or offers a larger discount. A number of studies have indicated that multiple discounts may be more effective than a single one amounting to the same thing, which could be thought of as segregation of gains. This is very common with e-commerce websites. You can see that on most e-commerce platforms; there are always additional coupons. On top of the existing discount, some products are sold at a 30% discount.

You are asked to go for another coupons, which will give you another 10%, 20%, whatever amount of discounts. So here your gains are segregated and it has been observed. That's why that multiple discounts may be more effective than a single one. And the reasons are, there may be other reasons for consumers preferring a multiple discount, other reasons other than segregating gains. Segregating gains is definitely there.

For example, 20% off plus another 25% off rather than an equivalent 40% off. So many times this 20 plus 25% off is perceived to be 45% off. At times you can also see that 50% off plus 40% off. One may quickly think it is to be 90% off but this is actually just 70% off. One reason is the face value effect.

So we call this face value effect, meaning that consumers wrongly perceive the first offer as amounting to a total of 45% off instead of the actual 40% off. So this is how the marketers can perceive the consumers at the same time or along with having the impact of segregation of gains when there are multiple discounts. Another reason is that consumers may perceive a multiple discount regardless of the percentages involved as being a rare offer. A fundamental psychological insight is that consumers value rarity or scarcity and are prepared to pay more for products that they perceive as being scarce, however, in today's time when there are so many e-commerce platforms, almost all of them are always going for multiple discounts.

The multiple discount concept is not actually a rare offer, but still, in offline shops, you'd find multiple discounts are generally not so common; they go for a flat rate discount on products, and most often—not most commonly—multiple discounts. So, from that perspective, in the offline market, multiple discounts can still be rare. There are limited

offers, where either the amount of the product on sale or the time period of the offer is limited, which tends to increase sales. Emotions also play an important role in determining how consumers react to price promotions.

Transaction utility increases cognitive ease, which results in an increase in the importance of visceral or emotional factors as cognitive load is reduced. Studies reported that this influences behavior when consumers are faced with a choice between two snacks: one with greater cognitive appeal and one with greater affective or emotional appeal. The authors find that, as predicted, a 50% discount on both snacks causes a switch in preference from the former—that is, the product with cognitive appeal—to the latter, that is, the product with greater affective or emotional appeal, compared with when both snacks are at full price. Next, we talk about free offers.

There appears to be an ever-increasing tendency for firms to offer goods—and, in particular, services—for free. Such a strategy is more effective at increasing sales or usage of hedonic rather than utilitarian products. So, products of pleasure or enjoyment, as compared to utilitarian products, imply products which are more practical-necessity-based. In many cases, free offers are combined with other required goods and are often termed freebies. There appears to be conflicting evidence regarding the effectiveness of this kind of strategy when we are getting freebies or when there are free offers.

This kind of offer decreases the price that consumers are willing to pay for each product in the bundle when sold individually. Consumers seem to react to such bundles by not only regarding the freebies as being of low quality, but also by regarding the other products as being of lower quality as well. So, when there are freebies, interestingly, not only is the free product assumed to be of lower quality, but at times the original product is also thought to be of lower quality. That is why you are, you know, giving an offer or clubbing an offer with it in order to

incentivize consumers to go for those products. Thus, this kind of promotion could have a long-term damaging effect on overall sales. However, other studies have found that consumers may have a higher willingness to pay for the product after the promotion is retracted when it was offered for free, than when it was offered at a low or discounted price. The reason, once again, is related to reference points. Consumers may regard the discounted price as a reference point, inferring a low-quality product.

However, they are less likely to do so for free offers. Instead, they use the price of the focal purchase as an anchor to make inferences about the quality of the freebie. So, the focal

purchase is basically the good that you actually intend to buy, and the freebie is coming as a thing which is completely free of cost. So what happens is that the consumers are less likely to go for or inferring a low quality product for free offers. Instead, they use the price of the focal purchase as an anchor to make inferences about the quality of the freebie.

So if the focal purchase is actually perceived to be of good quality and has higher prices, then the freebie is possibly not considered to be of low quality. Otherwise, that's a possibility. The third thing we talk about is bundling. Free offers involve a particular type of bundling, but in more general terms, bundling occurs whenever two or more products are sold as a single package. So freebies are one kind of bundling.

There are basically two alternative pricing strategies here: consolidated pricing and partitioned pricing. Thaler recommends consolidated prices based on the mental accounting principle of aggregating losses, though there is also evidence in support of partitioned prices. Thereby segregating losses, where the consumer may be prepared to pay, say, \$92 plus \$5 shipping but not a total of \$97. So when consumers are willing to accept a price of \$92 and are also willing to pay a shipping fee of \$5, they find that

a price of \$97 is overpriced. So basically, when you combine the shipping and the price together, consumers may not like a higher price, so this is a case of consolidated prices, where basically we are aggregating losses. Then there is evidence in support of partitioned prices. So basically, it suggests that we should rather segregate losses. Here, partitioned prices are more relevant.

However, it may only apply to hedonic goods but not utilitarian goods, based on the idea that people are more inclined to ignore unfavorable information with hedonic goods and thus do not pay attention to surcharges that may cause negative feelings. Basically, when we plan to buy or consider buying hedonic goods and services, it is more driven by our concept of individual or objective pleasure and enjoyment. Or rather, I would say subjective pleasure and enjoyment. Since these concepts are very subjective, we may not consider how others

feel about that particular good or service. Thus, we pay less attention to surcharges that may cause negative feelings. Basically, the transaction utility is lower in this case, or negative transaction utility is lower in this case. On the other hand, following Kahneman and Tversky's notion that prices are legitimate exchanges for value received, prices do not merely represent a cost or loss, they can also be viewed as a proxy for benefit.

So, basically, when I pay a price—as I have already discussed this concept—it is not considered a cost or loss, but rather, in exchange for the benefit, I am willing to pay something, and this is the price of the benefit. Alternatively, a proxy for a benefit. With this in mind, price partitioning may segregate losses, reducing consumer evaluations, but at the same time, it may segregate gains, improving evaluations. So there are now two things at work when you apply price partitioning. Then, we are basically segregating the loss component, but against the prices paid, we are receiving certain goods and services.

So, these are the benefits. If the benefits are aggregated, then, of course, there are two evolutions working in opposite directions. Now, which one dominates will decide whether you would be paying for that particular commodity, good, or service or not. Therefore, price partitioning may have a net effect on evaluations that is either good or bad, depending on the circumstances. If partitioning or segregating the losses exceeds integrating the gains, then consumers won't buy it.

If partitioning or segregating the losses is less than integrating the gains, then consumers are going to buy the goods or service. Various studies examining the circumstances that may influence overall consumer evaluations of product bundles show that mental classification of goods into different categories, such as expensive versus inexpensive, can play an important role and lead to the anomaly that people may be prepared to pay more for an expensive item alone than for the expensive item bundled together with an inexpensive one. This anomaly suggests that the inexpensive product is actually detracting from the value of the expensive one.

It is reducing the value of the expensive one. There are different possible explanations for this. It may be that bundling the product suggests that the expensive good is of lower quality, or it may be that the high price of the expensive product on its own suggests higher quality. For complementary products, it is observed that though partitioning raises the salience of the price of the components, it also differentially raises the salience of different aspects of the product, depending on the component that is partitioned.

So, of course, when we go for partitioning, then we are actually suggesting salience. Things are segregated. So each and every component now becomes prominent, visible and salient to us. So it might have, again, varied impact on a consumer's decision making. For example, in an experiment with refrigerators bundled with ice makers and a warranty, the ice maker is a consumption related accessory while the warranty is a performance related accessory.

Partitioning both the ice maker and the warranty significantly improved consumer evaluations but the effect was greater with the consumption related accessory. So, when basically they were partitioning that is segregating the prices then what happened is that it improved consumers evaluations and it was observed to improve consumers evaluations and that was more with consumption related accessory that is for the ice maker. So, improved evaluations in the sense that evaluations when

went in favor of that particular commodity. Another example of a situation where salience is important is bundle promotions, where consumers receive a discount when they buy a certain number of units. However, it is observed that the main effect was actually to cause brand switching, maybe because the purchase quantity requirement was often too high to cause consumers to buy much more of the same product. But the salience of the product caused by the promotion induced brand switching.

So this is another interesting observation that it actually led to brand switching, meaning people moved from one brand to another. So consumers tend to set a budget in different categories but also tend to have a petty cash category to cover miscellaneous small expenses, which we have already discussed. Firms can take advantage of this aspect of mental accounting by disaggregating prices, particularly for services or consumer durables. A common marketing ploy for selling relatively expensive durables and services is to express the price in terms of an amount per day. Thus, a \$500 per year health club membership might be expressed as less than \$10 per week or only \$1.37 per day.

So, this is to incentivize consumers to purchase or go for such offers. Nowadays, if you go to the Amazon website, you would see that, for example, a dishwasher priced at Rs. 30,000. But you would see something written in a much larger font, say 10,000 rupees, and then per month. So basically, this is the EMI they are suggesting you opt for. So if you choose a three-month EMI, then you would be paying roughly 10,000 rupees per month.

And below it, the actual price of the product is written as 30,000 rupees. So the point is that at first you might think a dishwasher is available for 10,000 rupees a month, but then you realize this is the total price broken into three months. The total price can also be broken into 6 months, 12 months, or 24 months. As a result, when this per-month amount becomes smaller, even those who cannot afford a 30,000-rupee product at once may consider purchasing it.

May consider buying them. So again, here we are segregating the losses. Next, we talk about the pricing structure. We have discussed the flat-rate bias, where consumers often

prefer to pay flat rates for products like cellular phone services. This has already been discussed.

However, firms often take advantage of a non-neoclassical feature of consumer beliefs, which is overconfidence. People tend to underestimate the usage of recreational goods like phone and internet service and are also overconfident regarding the precision of their demand forecasts. Firms can take advantage of this by offering tariffs with included quantities at zero marginal cost, for example, free minutes. Followed by steep marginal charges. So these days, we can actually see these kinds of things.

Whenever we go for different kinds of service packs for our mobile phones, you have, say, 2 GB data per day, 3 GB data per day. But when you exceed the limit, then there are steep marginal charges. So to a certain extent, it is actually free minutes. So zero marginal cost till the time you basically reach the limit. But then when you exceed the limit, then there are steep marginal charges.

So most often we feel confident about the fact that I'm not going to use more than 2 GB or 3 GB per day. But then if firms understand that there are possibilities, then of course they would benefit financially tremendously. Similarly, in rental markets, firms can charge moderate flat rates combined with large late fees. The sixth perspective or dimension is of cash versus credit cards. We have discussed that people may prefer credit cards over cash due to the effects of salience, payment decoupling and the greater feeling of loss when paying by cash. However, there is a flip side to this in terms of the post-transaction situation. Studies reported that

post-transaction connection is greater when payment is made by cash, resulting in greater emotional attachment to the product, greater commitment to the seller, and greater brand loyalty in terms of a higher likelihood of repeat purchase. So since the transaction in terms of cash is salient, the advantages are also from the emotional perspective that in our mind it leaves a more impactful impression. The transaction overall becomes salient, the losses are salient, and the gains are also salient. The psychological mechanism here may involve cognitive dissonance in that, like the disposition effect,

people may be more reluctant to admit that a cash purchase was a mistake than a credit card purchase. Since you have greater emotional attachment, accepting that it was a mistake is also more difficult. Now the company relying heavily on credit card purchases may make more sales initially but may also have more fickle customers because since there is no

commitment, the customers may not feel like coming back repeatedly. There are other factors which, you know, compel the customers or induce them to go for repeat purchases.

That is, of course, brand loyalty, and there are many other things. But then this is one situation where it is possible that credit card transactions, since they are not salient, that's why they, you know, fail to come up with a lasting impression on the consumers in terms of the product's impression. In the context of sunk cost, it is seen that people place more value or importance on the good being traded in than the good being purchased. By taking advantage of this, car dealers are observed to give a customer more for their trade-in than it is actually worth.

So, for example, if I am returning or selling my old car in lieu of a new car, Then this is one example of a trade-in. So they would actually inflate the price of my old car, saying that I am going to give you a discount of, say, 2 lakh rupees or I am going to offer a price of 2 lakh rupees. Well, I think that would, of course, make me happy, but actually they might be giving me a discount of only 1.5 lakh. So they do this by artificially inflating the price of the car being purchased and then artificially inflating the trade-in allowance.

Consequently, some car-buying guides and public policymakers advise car buyers to keep the two transactions separate. And to agree on the price of the new car before negotiating our trade-in price. So, with this, I conclude this module. We will continue our discussions on the policy implications of mental accounting in the next module, where we will discuss labor markets and government policies. Thank you.