

External interventions can help to curb excessive consumption by providing individuals with an opportunity to *pause* and *think* about consumption.

ROT102

# DECISION POINTS: A THEORY EMERGES

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**SOME OF THE TOUGHEST DECISIONS IN LIFE** are so-called ‘*should vs. want*’ decisions. John should be saving money for the future, but the temptation of a hot cup of cappuccino creates a *want* that distracts him from his savings goal. Paula knows that she should be exercising at the gym, but she would rather spend the time with her friends at the movies. George knows that he should be eating the healthy granola for breakfast, but his desire for a meat-lovers omelet gets the best of him. And while Ringo knows that he should only consume a small amount of his favourite potato chips, he suddenly finds himself fish-

ing at the bottom of the bag and wonders where they have all gone.

These are just a few examples of the kind of decisions that have long challenged individuals and intrigued researchers. It is not that people don’t know what they *should* be doing; they simply behave in a seemingly irrational manner when faced with a tempting consumption opportunity.

Researchers have proposed numerous theoretical accounts to explain such behaviour. One such account is the Dual Processing Model, exemplified by the work of **Richard Thaler** and **Hersh**

**Shefrin.** Writing in the *Journal of Political Economy*, the authors propose that each individual is actually an ‘organization’ consisting of two entities, the ‘planner’ and the ‘doer’. The planner is foresighted, realizes the consequences of current decisions and hence charts out an optimal path for the individual. The doer, on the other hand, lives in the moment and is myopic, and pushes the individual to pick the alternative that gives them the greatest value in the present.

In Thaler and Shefrin’s model, the planner controls the doer’s desire through willpower. In general, the model suggests that when people are asked about their preferences, their *planner* comes forth and they respond with a *should* option. However, when they are faced with a tempting opportunity (like that bag of chips in Ringo’s hands), the *doer* comes forth and pushes the individual towards the *want* option. The term ‘should option’ applies not only to options that maximize an individual’s future well-being, but also to those that improve social well-being. For instance, one should not keep the air-conditioning running beyond what is necessary to stay comfortable, yet many people leave their units on all summer long. Likewise, one should conserve fuel and take public transit when available, but when the time comes, the comfort of a car is hard to give up.

A second theoretical account that has often been used to explain how individuals make *should* vs. *want* choices is the Theory of Hyperbolic Discounting. At the heart of this theory is the idea that people pervasively de-value the future and tend to prefer a ‘smaller/sooner’ reward (SS) over a ‘larger/later’ one (LL). Economists have modeled this devaluation by using ‘discount rates’ – a rate designed to capture the level of tradeoff between the present and the future. However, the mere discounting of the future is not enough to explain this phenomenon. Consider the following simple choice task:

**Option A:** Receive \$10 today versus

**Option B:** Receive \$12 at the end of one week.

When we offered this choice to university undergraduates, a significant number (42 per cent) opted for the \$10 immediately. As it turns out, they are not unusual: this pattern of choice is fairly consistent across experiments. Next, we added a constant period of time to both options and presented the following choice to a matched group of undergraduate students:

**Option A1:** Receive \$10 at the end of 52 weeks versus

**Option B1:** Receive \$12 at the end of 53 weeks.

At first blush, it might appear that the choice between A and B is functionally identical to the choice between A1 and B1, and hence the pattern on choices should be similar. However, we find that in the latter scenario, *no one* chooses A1 over B1! This can be best explained by the Theory of Hyperbolic Discounting, which says that the value of future outcomes is discounted very steeply very close in time to the outcome, but more gently further away. As a result, when an individual sees a choice between SS and LL options in the future, they are both discounted greatly and hence the pres-

ent value of LL appears greater than the present value of SS. And that is why people who view the two options from the present choose the LL reward over the SS reward.

However, things get interesting when one gets *very* close in time to SS. Because of the steep discounting of LL (but not of SS), the perceived value of SS is now larger than the perceived value of LL. The region close to SS is called the ‘lapse zone’ – it represents points in time in which the individual could make a ‘mistake’ and prefer the SS reward over the LL reward. This happens because the SS option is so close in time that people can almost imagine having the reward. To wait any more for the LL reward induces a sense of deprivation, and hence people succumb to the temptation.

Note that the concept of SS and LL rewards is a handy metaphor for *should* vs. *want* options. For instance, in the domain of eating, SS might represent a tempting chocolate cake while LL might represent better long-term health. That said, there is widespread agreement amongst academics and lay people alike that lives controlled exclusively by the planner – whereby people always make LL choices – might be exceptionally dull. Consumption of indulgences in moderation is good for our well-being; the trick is to keep the consumption in moderation. The greater trick, therefore, is to design effective ‘stopping rules’ for consumption.

### Decision Points

In our research to date, we have focused our efforts on helping people that have self-control problems, but are aware of the problem and want to do something about it. **Matt Rabin** and **Ted O’Donoghue** have referred to such individuals as ‘sophisticates’. Sophisticates are all around us – for example, people routinely say that they would like to lose weight or save more money, but simply cannot due to forces they feel are sometimes outside of their control. We contend that such individuals could be encouraged to control their consumption behaviour by providing them with ‘decision points’.

Based on the Dual System Model of behaviour discussed earlier, we believe that when individuals are in the process of consumption, they start off in a deliberative mode in which they actually think explicitly about the pros and cons of consumption. However, once they start consuming they quickly shift into automatic mode, where continued consumption becomes mindless and habitual. The provision of a *decision point* can enable the individual to snap back into a deliberative mode. For a sophisticate, this would entail a ‘call to vigilance’ and the realization that the consumption was something that they should do in a controlled manner. Such vigilance often results in the termination of the act of consumption. In the language of the theoretical accounts presented earlier, decision points allow the ‘planner’ to take control of the individual’s organization, and transport the individual from the lapse zone to a detached view of the choices confronting them.

Several streams of research in Cognitive and Social Psychology draw contrasts between *automatic* (implicit) and *controlled* (explicit or deliberative) processes of making decisions. The former is typically assumed to occur outside of the bounds of awareness, while

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the latter can be consciously modified. Our automatic system effortlessly processes salient cues, while our controlled (rule-based) system is conscious and effortful. Rules can control impulsive behaviour (such as eating too much chocolate or spending too much) by inflicting guilt, remorse, or a loss of faith in oneself when rules are violated.

Psychologists also discuss two stages of decision making: *pre-decision deliberation* and *post-decision implementation*, with individuals' actions being relatively more automatic in the latter (implemental) stage versus the former (deliberative) stage. These streams of research suggest that as the amount of attention paid by consumers to the decision *increases* and as consumers are provided with explicit decision-making opportunities, the decision is more likely to be made on the basis of rules rather than on impulse.

In the Spring 2008 issue of *Rotman Magazine*, two of us [Profs. Soman and Cheema] discussed our research on the so called 'partitioning effect'. Suppose you go to the movies and order a large bucket of popcorn at the concessions stand. The large buckets are out of stock, so instead they give you the same quantity of popcorn in four separate bags. We found that the partitioning of the resource into smaller sets reduces consumption.

These results were explained using our Theory of Decision Points. When the theatre-goer decides to eat popcorn, she typically engages in limited deliberative processing. She might make a decision to eat something, but not think much about the quantity she wants to eat. As the movie starts and she gets comfortable, she starts eating. After the first few kernels have been savoured, though, the process switches gears into automatic. The individual now does not evaluate her decision with each kernel – she doesn't ask herself, "should I eat this kernel?" and the next, and so on. She continues consuming as if a force of nature outside of her control was directing her.

A very similar story is told by an Internet blogger who wrote about his consumption of Lay's Potato Chips:

*Remember that commercial ..can't eat just one..? YEAH, ONE BAG! Sitting at the computer munching and ..OMG. Where did all those chips go? Who can stop crunching and really close the bag? Clearly not me..... If you can eat 10 chips then put the bag away, I salute you. You are my hero.*

However, when the moviegoer (or the blogger) is fishing at the end of the bag and have no more popcorn or chips left, they have to make an active decision: "should I open the next bag and continue consuming"? This triggers off a cognitive process and kicks the

individual back into a deliberative mode. And if this individual is a sophisticate, they are likely to stop consuming. Partitioning works in curtailing consumption because it creates a larger number of decision points for the individual. Finishing each small bag of popcorn presents a decision point and therefore an opportunity for the individual to reassess the need to consumer further.

A decision point can be defined as any intervention that is designed to get an individual to pause and think about the consumption they are currently engaged in. Following are three broad methods for creating decision points. In many cases, these methods can be combined to create powerful interventions:

- 1. Inserting transaction costs** (which works on the premise that requiring the individual to take a positive action makes them deliberate on the consumption decision);
- 2. Providing reminders or information** (which works on the premise that drawing attention to a neglected activity can provide the impetus to get it done with); and
- 3. Creating interruptions to the consumption activity** (which works on the premise that the interruption allows the individual to pause and think).

### Partitioning and Decision Points

One easy method of creating a decision point is to partition the quantity of resources to be consumed into smaller units, such that there is a very small transaction cost that needs to be incurred before consumption can continue. While the transaction cost itself need not be very high, it works because it creates an interruption and provides an opportunity for the sophisticate to move to a deliberative mode and make a decision to stop consuming.

In a series of experiments, we found support for the constraining effects of partitions. In one study, we compared users of international long distance calling cards who had ordered a \$50 card, but received it in the form of either one \$50 card or five \$10 cards. Given that the buyers had randomly received one of these two options, we did not expect any differences in the calling patterns. However, we found significant differences in consumption patterns. First, we found that on average, people who had received a \$50 card took 5.7 weeks to consume it fully, while those who had received five \$10 cards stretched their usage over 10 weeks. Second, we noticed that the typical consumption pattern was such that people who had five cards tended to use each card over two weeks.

When the card ran out during the second week, they had the choice of continuing their international call after redialing a sequence of numbers, or terminating the call. Debrief interviews with some of the participants indicated that they were behaving in line with our Theory of Decision Points. One response summed up the idea perfectly: “I can keep talking with my family in India, but when I’m cut off I think about whether I really need to continue and often, the answer is – no.”

In other studies, we found that people ate less chocolate (and cookies) when each piece was individually sealed in a box, gambled away a smaller number of game coupons when they were sealed in small quantities in an envelope, and even saved more money when their cash incomes were partitioned into separate sealed envelopes. In each case, it was not the actual transaction cost to open the next partition that drove the results but the fact that it created a decision point.

### Transaction Costs and Decision Points

While partitioning is a good intervention to create decision points for fixed tangible quantities of resources, the general idea of using small transaction costs to interrupt consumption can be used more broadly. In one recent study, we studied the consumption of food at buffet meals served at corporate events. Food is typically served on a long table for participants to walk up and help themselves, and in such a setting most diners complain that they eat too much.

Over a series of such buffet lunches that each lasted an hour, we kept track of the total quantity of food consumed by category (salads, meat and dessert) as well as the percentage of people making a repeat visit to the buffet table (54 per cent). Then, in a simple transaction-cost intervention, we put a queuing stand with ropes parallel to the buffet table. The rope served to guide the queue of diners along the table, but more importantly, it made it difficult for them to make a quick dash for an extra helping of meat or dessert. We found that the additional transaction cost did the trick: now only 23 per cent of people made a repeat visit and the quantity of meat consumption went down significantly, by about 18 per cent.

In a completely different domain, we are studying the consumption of air conditioning and find that many households switch on the air conditioning and simply leave it on for extended periods of time, whether they are at home or not – a colossal waste of electricity. Interviews suggest that people are well aware that they need to conserve energy, but they just never get around to switching off the air conditioning. In our research, we study households who install timers such that their unit automatically switches off every four hours. When this happens, the decision to continue using the unit becomes an active, deliberative decision rather than a passive one. Early results show that the provision of these decision points reduces consumption. A final example of the use of small transaction costs on consumption comes from the research of **Todd Rogers**, **Heather Schofield** and **Sendhil Mullainathan**. In a cafeteria at Harvard University, they found that a large number of patrons used disposable cups rather than reusable cups. They altered the layout of the cafeteria such that the disposable cups

were placed a small distance away and occupied a smaller area, and found that the number of patrons taking the disposable cups was reduced significantly (by 65 per cent).

In a third condition, the researchers kept the original arrangement of cups but included a sign asking patrons to “Reduce waste by taking a reusable cup.” Again, they found that the number of patrons taking disposable cups decreased (by 75 per cent). In the language of our theory, these researchers created decision points by adding a small transaction cost, as well as by providing information (or a reminder) via a sign. Interestingly, they also asked people what they expected the effects of these interventions to be, and found significant under-prediction. As such, it appears that the provision of decision points has a much bigger effect of consumption behaviour than people’s lay theories might expect.

### In closing

Much research in the area of Behavioural Economics has suggested that people continue to consume in excess of what they should. In many cases, this is not because they are unaware of the detrimental effects of consumption, but because their willpower is not sufficient to conquer temptations. In the language of past theories, their *doer* takes over from their *planner*, and they fall into a lapse zone.

The Theory of Decision Points suggests that external interventions can help curb excessive consumption by providing people with an opportunity to pause and think about consumption. In the case of individuals who are seeking to control consumption, these decision points typically snap them from an automatic mode to a deliberative mode, returning control of the individual to the planner.

In ongoing field research, we are developing this notion further by studying effective design features of decision points. For instance, we are finding that a well-designed message sent to one’s cell phone, reminding the individual to pay bills, visit the doctor or take their medication, has a significant effect on behaviour. While our present research has focused on the effects of decision points on consumption, its broader effect will be to make decision making less automatic and more deliberative. **R**



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