

Predictably Human at Modeshift STARS



Introduction

A key topic for the Modeshift STARS business conference 2022 was influencing travel behaviour, with one aspect of this being using the lessons from behavioural science to increase the impact of behaviour change measures. This is important because humans don't generally react as they are expected to.

The ways in which people make decisions which don't conform to the paradigm of the rational, utility maximising entity are frequently called "biases"¹ with the people making these decisions called "irrational"². These are pejorative terms which reflect social norms about how we should behave, with decisions that are "emotional" seen to be inferior. My argument is that being human, with all our weaknesses and strengths, is a good thing and that a world taken over by robots (or "econs"³) making logical choices would be far less attractive.

Hence, I prefer to think of the ways in which humans don't conform to classical economics as examples of being "predictably human". The important point to note here is that human behaviour can be predicted, with one major caveat, this being that behaviour is very context specific.

To illustrate, I have developed a "predictably human" questionnaire: essentially a set of questions borrowed from Dan Ariely, Richard Thaler and Daniel Kahneman which demonstrate the "illogical", "biased", or "sub-optimal" nature

¹ For example, there is a book called the "Big Bad Bias Book" ([Behavioral Science | Big Bad Bias Book - Periodic Table of Behavioral Science](#)) which sets out over 200 biases in a convenient periodic table format.

² "Predictably Irrational" by Dan Ariely is one of the key books popularising behavioural economics

³ "econs" is a term coined by Richard Thaler, one of the founding fathers of modern behavioural economics, and explored in his book "Misbehaving"

of human choices. The key point is to (a) raise awareness of the fact that humans do not behave as econs and (b) start to demonstrate how we can improve our understanding of how people make choices, thereby giving us a better chance of influencing these choices⁴.

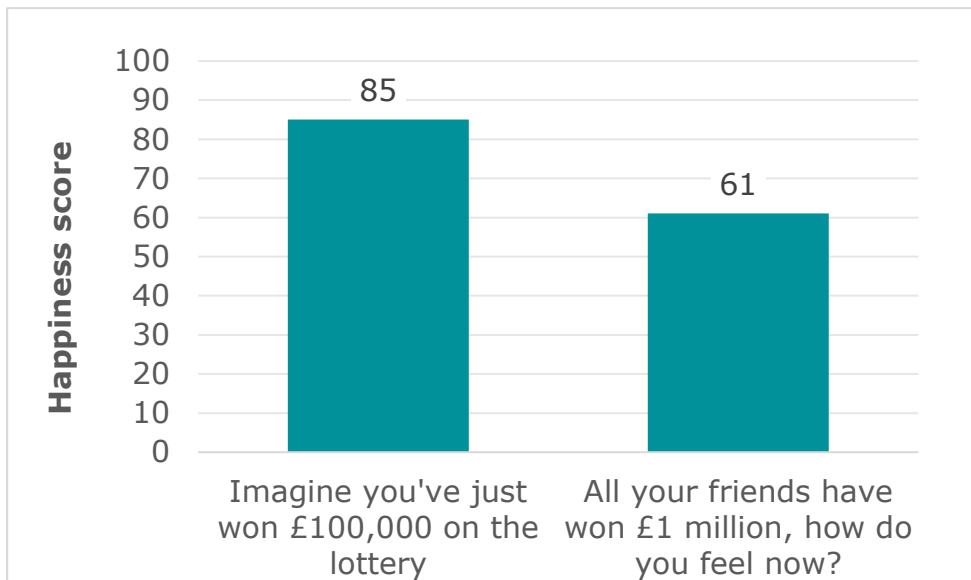
A sample of these questions was asked of Modeshift STARS conference delegates using the Betterpoints App. Some have been posed at previous events and some are available on my website ([Behavioural Science 101 | Beyond Logic Consulting - BEYOND LOGIC CONSULTING](#)) and for the sake of reporting on a larger sample and wider range of situations I share below some cumulative results.

Relativity

People think in relative and not absolute terms, and this has profound effects on how people respond to information and instruction. To illustrate this effect, survey respondents were asked to imagine they had just won £100,000 and then asked how happy they feel on a scale of 1-100, where 100 is as happy as can be. Later on in the survey they were asked the same question but told that all their friends had won £1 million.

The average responses are shown below. In both cases people won £100k but because of the *Relativity* effect if others won £1m people were around a third less happy. Breaking this down, this is typically because around two-thirds of people are less happy with the other third either being as happy or happier. If there were no biases here, people should be happier, after all, their friends have just won £1m, surely something to celebrate!

Figure 1: relative feelings of happiness after winning £100k



⁴ I deliberately use the word “choice” rather than “decision” because the term “decision” tends to be associated with a process of conscious thought and reflection, possibly even of evaluation whereas the reality is that the great majority of our behaviour is determined by our sub-conscious using simple rules of thumb or “heuristics”, which very commonly involves just doing what was done last time in a similar situation.

An example of where the *Relativity* effect is there for all to see is in the super high salaries of CEOs and professional footballers. When combined with other behavioural effects such as *Self-esteem*, it means that an extremely highly paid footballer can feel they are under-paid because they can see that other footballers have even higher salaries and so are valued more.

For influencing travel behaviour one example of the challenge relativity presents is where people compare bus fares with the cost of petrol. Again, the effect is compounded because of other behavioural effects which mean that people radically under-estimate the actual cost of a car trip. The problem is that the cost of car is disconnected from the actual journey, with petrol typically seen as part of the weekly household expenditure and other costs such as depreciation largely ignored.

More positively, the *Relativity* effect can be utilised in the design of journey planners which can show comparative information for different modes, including factors such as calories burned or carbon emissions, as well as cost.

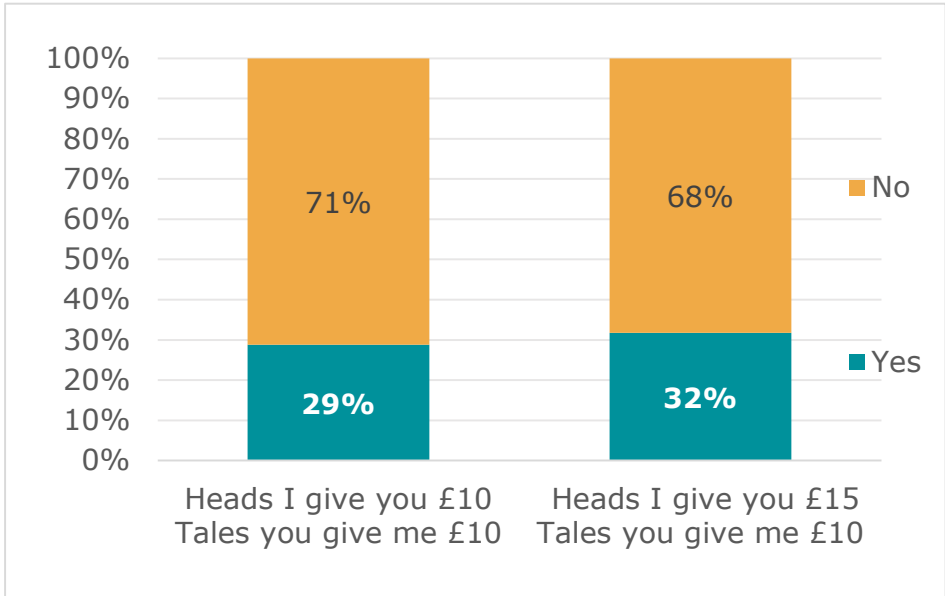
This is an example of a technique known as *Anchoring*, where the price of the item you're looking to sell is made to look better value by the presence of more expensive items.

Endowment effect

The *Endowment effect* is caused by the fact that when we own something we put greater value on it. It is illustrated in the Predictably Human questionnaire by being offered a bet where if I toss a coin and it is heads then I give you £10 but if it is tails you have to give me £10. If there was no bias (or it was econs rather than humans offered the bet) then it would be accepted 50% of the time. However, because of the *Endowment* effect this bet is pretty unattractive, with less than a third accepting it. Even once the potential win is raised to £15 (with the potential loss remaining at £10) it remains unpopular, as shown below.

When looking to change travel behaviour the *Endowment effect* can provide an unhelpful barrier to change if the aim is to encourage people to give something up. It is, for example, a barrier to people giving up their ownership of a car, with PCP finance (Personal Contract Purchase) being a particularly clever way that car manufacturers can lock in customer loyalty by making customer feel like they are owning their car rather than leasing it, and by making it incredibly easy to upgrade to the latest model.

Figure 2: illustration of the Endowment effect

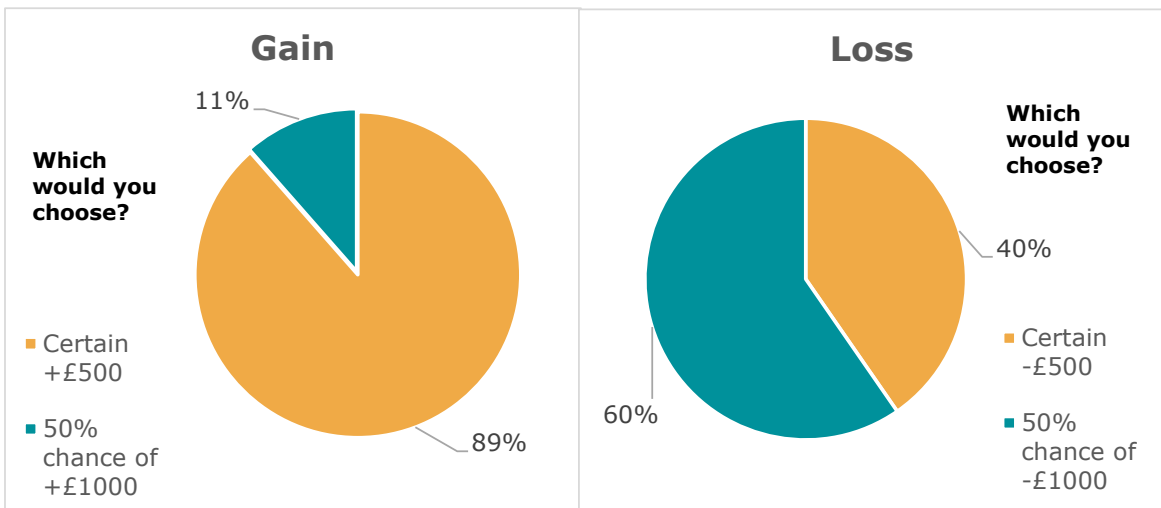


Loss and uncertainty aversion

In the Predictably Human survey our aversion to uncertainty is demonstrated by the question: which would you prefer – “Winning a certain £500 or a 50% chance of winning £1,000”. According to classical economic theory these are exactly equivalent and so half should choose each option. Humans though are quite different to econs and so the great majority (around 9 out of 10) prefer a certain £500 than the chance of winning twice as much (but also the chance of getting nothing).

This is illustrated in the chart below, which also shows the aversion to losses. So, while 89% preferred a certain £500 to a 50% chance of winning £1,000, when these are turned to losses rather than gains far more were prepared to take a chance (60% versus 11%) with fewer opting for the certain loss of £500 compared with the certain gain (40% versus 89%).

Figure 3: Different treatment of uncertainty when there are losses and gains



The aversion to uncertainty is reflected in the dislike of unreliability with this typically being a greater deterrent to bus use than longer journey times or lower service frequencies (within reason). For car travel it is reflected in the dislike of congestion, though this is mitigated to an extent by the availability of Satnavs which provide real time continuous information which reduces the level of uncertainty.

On the other hand, *Uncertainty Aversion* provides a positive for walking and cycling which are less uncertain than either car or public transport. This benefit can therefore be promoted alongside other benefits of health, fitness and zero carbon emissions.

Final comment

What these examples demonstrate is that people are emotional beings which prefer to think of themselves as rational. So, while our behaviour does not conform to how we think it should, if we take the time to understand people's real motivations and constraints, behaviour is reasonably predictable and hence also capable of being influenced.

For more information, including about other ways in which people are predictably human, contact:

Tony Duckenfield

Beyond Logic Consulting

tonydfield@gmail.com

www.beyondlogicconsulting.com

