BEHAVIOURAL ECONOMICS

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Getting service providers and travellers to choose sustainable options

Overview

BEHAVIOURAL ECONOMICS draws together insights from different disciplines to help explain human decision-making and behaviours. It challenges the assumption of perfect rationality and reveals how many of our decisions are fast, subconscious choices, especially when we are time poor, distracted and multitasking. Knowing this aids us in understanding how a person is likely to behave in a given context.

Using behavioural economics can help us design Travel & Tourism products and services that promote the sustainable choice as the most likely choice the consumer or traveller will make. Considering decision-making and behavioural insights can inform promotional and sales materials, pricing strategies, staff training and the design of the experience itself. Behavioural economic approaches employ nudges and **behaviour-smart designs to avoid placing a disproportionate burden on the traveller to make sustainability decisions**. This could impact positively the overall footprint of the sector.

INTRODUCTION

TRADITIONAL economic thinking assumes decision agents make optimal choices based on full rationality, selfishness, and tastes that remain stable over time[1]. That would mean that every time we face a choice, we proactively identify all the relevant information available to us, analyse it rigorously, and select the most beneficial of the available options. This model underpins how we believe consumers behave in a given context, such as a traveller choosing among different holiday destinations with varying sustainability options. We assume they make common-sense decisions, based on facts and without emotional influence. Behavioural science reveals that this is wrong (see Appendix).

Human decision-making is, in fact, prone to error, with individuals acting in seemingly irrational ways. Choices are often subconscious and shaped by defaults or other context-specific factors akin to a reflex action. Behavioural economics theory suggests that human decision-making depends on two systems[2] (see Box 1). System 1 (intuitive) decisions are fast, driven by shortcuts and routine, and highly influenced by social conformity and emotions. System 2 (rational) decisions seek to analyse and compare options, take longer and require concerted effort. Context and the state of mind of the decision-maker can influence which of the two systems dominates in a given decision-making process. We tend to default to System 1 when we are distracted or busy, while System 2 dominates when a decision is considered high in importance and there is time for concentration and analysis of the alternatives. Given that we are mostly time poor, attention-deprived and routinely multitasking, contemporary living pushes more decisions through System 1. This means that more and more choices in everyday life disregard available information and skip the review of alternative options by employing shortcuts.

Box 1: How System 1 and System 2 work in an everyday context

Imagine you are in a new town and walking the main street to find a restaurant for dinner. You find yourself between two restaurants located on either side of the street: one has three occupied tables while the other has a single table with diners. **System 1** decision-making finds you choosing the restaurant with more people, avoiding a systematic comparison of the two restaurants, and taking a social conformity shortcut. **System 2** decision-making means exerting efforts to compare the two restaurants in detail and only then making your choice. System 1 decisions are characterised by:

- **Heuristics:** simple rules of thumb that we use to make quick judgments, especially when we have little time or attention[3]. Heuristics essentially trade accuracy for effort but they can also be smart tools when fast decision are needed due to uncertainty[4], or when data-driven comparison of alternatives is impossible.
- **Biases:** intuition-driven systematic deviations from optimal choices or violations of basic probability laws[5] shaped by impressions or attitudes, the origins of which might be impossible to trace but the influence of which may be sustained over time[6]. There are different views as to whether biases should be treated as failures of judgment[7] or smart decision tools[8].

Behavioural economics can help design behaviour-smart adjustments or innovations for almost any intervention with human involvement – from small-scale simple commercial tactics to large-scale policy programs addressing complex societal challenges. Business leaders need tactics and strategies to navigate today's attention economy[9] and deal with impatient, shortcut-taking, context-dependent System 1 consumers. For instance, seemingly simple changes in price information, such as the format and colour, sequencing and relativity[10], can materially influence price perceptions and associated purchase decisions[11]. Knowledge about the powerful impact of decision context, heuristics and biases (see Box 2) can serve as a basis for behaviour-smart tactics in designing services, experiences and promotional content. Digital marketplaces, games and apps apply 'nudges' designed to increase the likelihood of purchases and add-ons, for example:

- **Simplify and facilitate the buyer decision** by limiting available options, categorising and organising choices in sets, enabling easy imagination and understanding of the options, and helping move them through the decision-making journey[12].
- **Nudge the buyer** to complete the buying journey by placing stronger emphasis on the benefits of the potential offer, including a time-limited offer, and applying social conformity[13] or activating loss aversion[14].

Box 2 Some common biases

- **Optimism bias**. Overestimating the probability of positive events and underestimating the probability of negative events.
- **Overconfidence bias**. Overestimating ability or judgement, or somehow having an unjustifiable belief that all will be fine.
- **Confirmation bias**. Seeking out or evaluating information in a way that fits with one's existing thoughts and preconceptions.
- **Delusion of competence**. Lacking reflexive acknowledgement that one is not equipped to make a decision or act appropriately in relation to the demand of a situation (called 'Dunning-Kruger effect').
- **Endowment effect**. Overvaluing a good that one owns regardless of its objective market value.
- **Status quo bias**. Showing preference for things to stay the same by doing nothing or sticking with a decision made previously.
- **Hindsight bias**. Revising one's own history of beliefs in light of what actually happened and arriving at a distorted judgement in estimating the probability of occurrence of an event ("I knew it all along" effect).

APPLICATIONS OF BEHAVIOURAL ECONOMICS TO SUSTAINABILITY IN TRAVEL & TOURISM

TRAVEL & TOURISM is one of the largest and most complex sectors in the global economy. A powerful driver of economic growth, it can be vehicle for generating social benefits and managing humanity's natural and cultural assets in a sustainable manner[15].

Design challenges[16] abound in Travel & Tourism and stem from the many imperfect assumptions about how people behave and make decisions[17]. For example, public sector institutions are assumed to adopt a long-term view addressing the wider interests of society, but political cycles can encourage officials to focus on short-term growth over sustained welfare of places and people. In contrast, business leaders and entrepreneurs are assumed to be solely profit-driven, but Travel & Tourism offers a wealth of examples of enduring private-sector investment in nature and communities. Travellers are assumed to behave responsibly as long as they have information about what is right and wrong, when the reality can be starkly different.

Insights and learning from behavioural economics can help advance sustainability practices and move the Travel & Tourism sector to the desired future through a full contribution to delivery of the Sustainable Development Goals[18]. Transitioning to designs that consider the role of System 1 and System 2 thinking, biases and heuristics in the decision making of travellers, can optimise not only commercial practices but increase sustainable consumption.

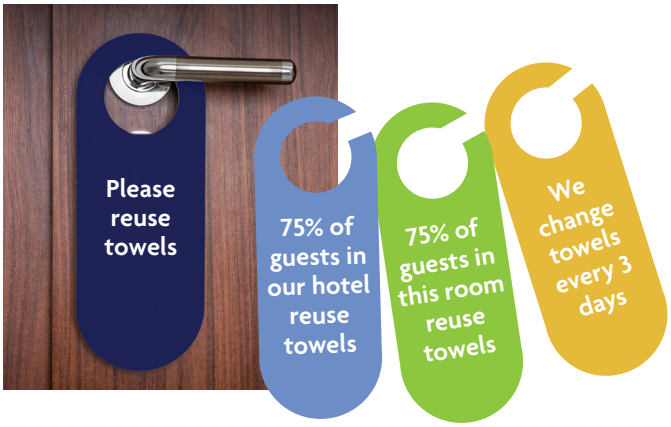


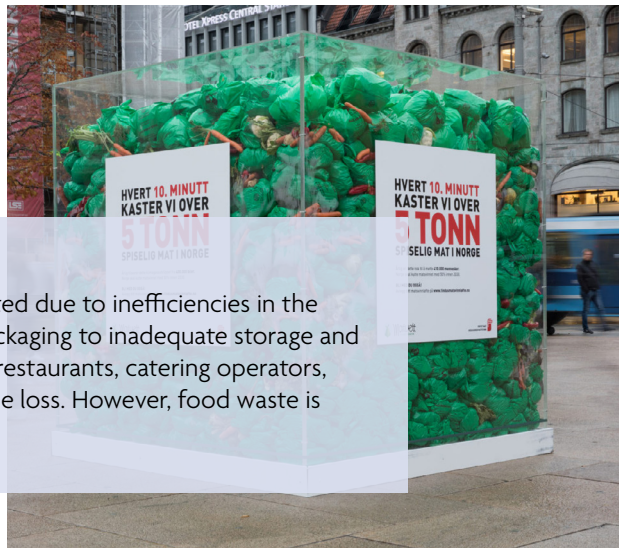
Figure 1: An illustration of the power of behaviour-smart thinking. Here, the same message is framed differently to trigger behavioural outcomes back on social conformity[19] effects and the power of the default option.

Behavioural economics can benefit sustainability efforts by helping minimise or design out unsustainable options from Travel & Tourism experiences and operational processes. It helps us effectively influence or 'automate' sustainable traveller behaviour, making the sustainable choice the more likely or only choice. In this way, **undesired impacts are reduced or avoided altogether rather than making them conditional on the choices of travellers who often perceive sustainability as conflicting with leisure mode and holiday behaviour**[20]. This upends the classical approach that starts with education, assuming that increased awareness will ultimately lead to behavioural change and thus reduce negative impacts.

The work of behavioural economists in curtailing behaviours, such as smoking, or promoting behaviours such as physical activity offers models that can be applied to Travel & Tourism settings[21]. **The following case studies demonstrate the powerful impact that behaviourally informed solutions can have** on the behaviour of travellers, tourism professionals and businesses, and the footprint of the Travel & Tourism economy. These practical illustrations demonstrate that the behavioural toolset includes a wide variety of tactics that consider timing, context and decision flows. From providing specific information at the point of decision, to focusing awareness or nudging, behaviour-smart approaches can be employed to activate desired behavioural change towards what is best for the Travel & Tourism industry's footprint

CASE STUDY 1:

Food waste initiative in the food industry in Norway



The Challenge

Approximately one-third of food across the globe is wasted due to inefficiencies in the global food system[22], from ineffective production and packaging to inadequate storage and slow transportation. Human behaviours and practices at restaurants, catering operators, hotels, and private households are also responsible for the loss. However, food waste is often not a consideration for suppliers and consumers.

Behavioural Economics Solutions

Norway launched a national effort to reduce food waste based on behaviour-smart techniques. Its 'Cut Food Waste 2020' programme was launched and led by the initiative Matvett ("food sense") to cut food waste by 20% by 2030 and to engage at least 50% of the industry[23]. The aim was to change food management practices at hotels, restaurants, supermarkets, and other food establishments. Analysis of the root behaviours related to food waste identified operational practices in the kitchen, kitchen workers perceptions about food waste and lack of prioritisation of avoiding waste. Consumers added to the problem mainly due to lack of awareness and knowledge about the tactics that could help avoid food waste. Firstly, kitchen workers and consumers needed to be made aware of the scale of the food waste problem in a way that is easy to understand and impossible to ignore.

An awareness raising campaign based on posters and cards to illustrate the scale of the challenge was launched. For example, it included images of a fresh fish or plated meal with a line cutting through one-third of it to show how much of the meal is likely to end up in the waste bin. The awareness raising visuals were placed in kitchen areas to target workers as well as in consumer halls, buffet, and shopping areas to increase the sensitivity of clients. The Cut Food Waste 2020 program also included other consumer-facing interventions such as using smaller plate sizes, a proven technique for cutting food consumption and respectively waste[24], and placing targeted communication in buffet areas to change the perceptions that multiple returns to the buffet are more acceptable than piling up large amounts of food at one visit – the latter associated with generating more food waste.

Targeting professionals in the industry was two-step. First, to encourage measurement of food waste, and second, to create relevant improvements for canteen and buffet designs, as well as tactics for safe reuse of leftover ingredients or product parts.

The Outcomes and Lessons

The Cut Food Waste 2020 programme has achieved the goal of reducing food waste by 20% among more than 42% of the hotels, 63% of the canteens, and 46% of the restaurants[25]. Like many others, this sustainability challenge in hospitality, tourism, and other sectors relates to behavioural patterns, which produce undesired impacts. By targeting these root behaviours and applying behaviour change techniques it was possible to begin addressing undesired impacts.

CASE STUDY 2:
Fuel efficiency for airlines - the Virgin Atlantic experience

The Challenge

The carbon footprint of air transport is a major sustainability challenge for Travel & Tourism and the aviation industry. Before the COVID-19 shutdown, this industry produced about 859 million tons of CO_2 annually, representing 2% of the global emissions generated by all human activities[26].

Virgin Atlantic's Fuel Efficiency team was tasked with exploring ways in which CO_2 emissions can be reduced through increased fuel efficiency of flights. Three tactics required proactive efforts by the pilots and included efficient fuel load, efficient flight, and efficient taxiing-in. Despite their inclusion in the standard operating procedures in pilot manuals, most pilots did not apply them and often openly ignored them.

Behavioural Economics Solutions

Using an experimental approach, some 335 captains were randomly assigned to one of three test groups or the control group[27] to explore the following behavioural interventions over an 8-month period covering around 42,000 flights:

Providing pilots with personal feedback by sending them a monthly report of their fuel efficiency flight performance, including a comparison between the percentages of flights in which they applied the three fuel-saving tactics to the percentage from the prior month.

Providing pilots with a monthly report of their fuel efficiency flight performance but complementing that with a personalised monthly performance target.

Providing pilots with a donation on their behalf to their charity of choice if they succeeded in achieving their personalised targets set for the month.

The Outcomes and Lessons

The modified behaviour of pilots saved $5.37 million in costs, 6.8 million kilograms of fuel and 21 million kilograms of CO_2 translating to an emissions reduction of negative $250 per ton of CO_2[28]. The effective behavioural change among the pilots relates to the so-called 'Hawthorne effect' or the awareness of being observed. The mere fact that fuel efficiency behaviour was tracked made them more likely to apply the three fuel-saving tactics. The personalised performance reports and personalised targets motivated engagement in the desired behaviours. An important finding was that the changes in pilot behaviour sustained long after the end of the project.

CONCLUSION +ACTION PLAN

TRAVEL & TOURISM businesses can unwittingly frame sustainability as a niche or optional choice. Taking an approach informed by behavioural economics means accounting for System 1 (short cut driven) thinking, and making sustainability non-negotiable or, at the very least, the default option. I**n this way, business leaders avoid placing an extra decision-making burden on their customers, especially at a time when they want to relax and get away from the stress of everyday life.**

For a majority of travellers, thinking about sustainability can be overwhelming and in conflict with enjoying their Travel & Tourism experience. They also tend to spend only a short time at a destination and so are least likely to see or experience the downside of their negative impact on a place. So, rather than taking the ineffective route of educating travellers in hope that they will make mindful System 2 (rational) choices, in some cases **businesses can make it easy for travellers to make the right and more sustainable choice.**

As the global Travel & Tourism private sector looks to the future, actions it might consider include: :

1. **Make sustainability the default** option set as the expected norm.
2. **Simplify** options and choice sets, incorporating sustainability as the most likely option a traveller will make.
3. Where there is a choice, **visualise its impact** simply to promote pro-sustainability behaviours.
4. When relevant use **targeted information and timely education** to incentivise clients to choose the sustainable option, and employees to optimise sustainability performance.
5. Calculate the positive impact of **collective pro-sustainability behaviours** and capture them in your business impact statements and sustainability plan.
6. Connect your business agenda with the wider global strategy of the **Sustainable Development Goals** as a shared purpose.

APPENDIX

Conventional Economics vs Behavioural Economics applied to Travel & Tourism:

Conventional Economics Approach	Behavioural Economics Approach
The choices of individuals remain consistent across all bundles of goods and services, and through time. Example: *If one likes going on all-inclusive holidays in the Caribbean, they are likely to continue taking this type of vacations for the rest of their lives.*	Individuals make different choices across different product/service situations; preferences evolve over time. Example: *One may have expressed preference for all-inclusive Caribbean holidays for years but decide to book only hotel and keep flexibility for food options when planning a trip to Italy.*
Individuals are assumed to have thorough knowledge of all available options and are able to process it all without any limitation of their computational ability. Example: *When deciding on their next skiing holiday destination, they hold extensive information on all possible places in their choice set and the potential experience that each will offer, making a final decision on the basis of perfect and unbiased comparison of the characteristics of all available options.*	In most situations, individuals lack thorough knowledge or do not have information about all possible options; even if they have complete information, they lack computational power to estimate and compare the outcomes associated with all options. Example: *One cannot really know whether three months from now when they plan to go skiing, they will end up having the best possible weather conditions and skiing experiences in Austria, Switzerland, or France.*
Individuals are capable of forecasting the future implications and consequences of their decisions. Example: *One knows exactly how much they will enjoy holidaying in the Caribbean every year if they invest in a specific timeshare opportunity.*	Individuals have a hard time imagining their future selves as well as the consequences of decisions with future outcomes, especially when they unfold over a long period. Example: *One invests in a timeshare opportunity miscalculating the fact that after a few years of going to the same place, they will desire to holiday in different locations but will experience guilt about spending on travel to other destinations instead of spending time where they have already invested.*
Individuals never regret past choices, as they are always optimal in terms of maximised utility and wellbeing. Example: *One never regrets previous destination choices and holiday formats even if they discover new places that offer more diversity or better experiences.*	Regret is part of decision-making realities, and on many occasions, regret over past choices significantly influences current and future decisions. Example: *After starting to use their annual holiday to explore different countries and experience new cultures around the world, one regrets having "wasted" so many summers in the past to going to the same resort.*
Controlling for risk, utility maximisation is consistent with wealth or income maximisation. Example: *When making decisions about the next holiday, one's choice is driven by affordability given current income (wealth status).*	Wealth and income maximisation are not the only nor the most important sources of utility. Example: *When making decisions about the next holiday, one's choices are driven by the experiences they anticipate so it is possible that one makes an effort to save up to be able to afford a holiday that is outside of their normal budget but that is likely to offer more memorable experiences.*
Individuals' ability to calculate and make efficient choices is irrespective of age, experience, education, or social context. Example: *A traveller at 21 is capable of the same analysis and comparison of holiday alternatives as an experienced traveller at 45 with a travel career of more than 20 years.*	Individuals learn over time and adapt their decision toolbox depending on new knowledge, experience, and contextual considerations. Example: *Travelers with more travel experience have more knowledge to compare/decide, and avoid choices that may involve higher potential for service failure.*
Individuals' behaviour is independent of context and characterised with the same calculating manner toward maximizing utility. Example: *A young traveller is likely to make the same choice for summer holiday regardless of the choices of their friends and regardless of whether at the time of the choice they are alone at home or out in the company of friends.*	Behaviour and decisions can only be properly explained through the prism of the immediate context and the decision-making capability of the decision maker. Example: *A young traveller's choice of summer holiday is influenced by the choices of their friends and they are likely to make very different decisions depending on whether the decision is being made while on their own at home or while they are in the company of friends.*

Adapted from: Nikolova, M. S. (2020) Behavioral Economics for Tourism: Perspectives on Business and Policy in the Travel Industry[29].

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DESIGN
World Travel & Tourism Council

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