A Psychological Approach to Reducing Business Flying

Maria Aguirre Galindo
Mengna Jiang
Alexandra Veliko-Shapko

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Course convenors: Dr. Fred Basso & Prof. Saadi Lahlou
Other teachers: Dr. Liora Moskovitz, Mr. Maxi Heitmayer

1. Case Background 43288

Climate change is one of the most pressing issues facing our world. While Theresa May legislated carbon neutrality for the UK by 2050 (The Guardian, 2019) a recent increase in natural disasters show that our world needs more drastic measures in battling greenhouse gas emissions (GHG). Commercial aviation is currently one of the most emissions heavy industries, accounting for nearly 2% of total net emissions (ATAG) and emitting nearly 900 million tonnes of CO_2 in 2018 (ATAG). Likewise, the commercial aviation industry is expecting a compounded annual growth rate of 3.5%, leading to a doubling in air passengers from today to 2037 (IATA).

While aviation on a whole contributes significantly to climate change, only a small percentage of flyers, namely business flyers, regularly contribute to aviation's environmental crisis. A recent report commissioned by Imperial College London on behalf of the Committee for Climate Change found that 15% of the UK population were responsible for taking 70% of the flights (CCC, 2019). A first-class ticket will comparatively emit 7 times more carbon emissions than an economy ticket (The Guardian, 2010). Thus, while business travel only contributes to 19% of flights, it is far more environmentally unsustainable because one third of business passengers travel in premium classes, compared with only 1 in 17 leisure passengers (CCC, 2019). This is compounded by the fact the business travel industry spent 1.33 trillion dollars in 2017 (Lock, 2018) and is expected to expand to 1.7 trillion dollars by 2023 (GBTA. 2018). This is compounded by the fact the UK economy is expected to grow by 2% annually (PwC, 2019). Therefore, current trends suggest a significant increase in business travel.

Corporate travel clearly poses a risk to current climate goals set by the EU. Businesses may justify their use of less environmentally friendly practices such as first-class tickets by noting their employees must be ready for work the moment they arrive. However, corporate travel also poses a risk to employee health and well-being (Harvard Business Review, 2018) and incurs massive costs to the employers. While alternatives to business travel such as Voice Over Internet Protocol (VOIP) have been suggested, there are several justifications for prioritizing face-to-face meetings. In face-to-face interactions, travelers benefit from networking and efficiently socializing with a previously anonymous group of individuals, something that cannot be done over VOIP (Storper & Venables, 2014). Moreover, one travel writer points out that individuals who meet over the internet have an inherent desire to meet in person anyway (Saffo, 1993). Clearly, corporate travel is not subject to complete elimination.

However, there may be several avenues to significantly reduce business travel. Firstly, there is a widespread attitude in corporate America that meetings are redundant and therefore unproductive (Romano & Nunamaker, 2001), an attitude that likely applies to business travel as well. The average corporate traveler makes about 13 trips a year for a $1.7 billion industry (GBTA, 2018). Likewise, some justifications for costly business travel, such as networking, are one-off events for employees. By adopting a necessity basis for business travel, corporations can reduce their carbon emissions and travel spending.

This essay aims to answer the research question: how can corporations reduce their flight consumption? We aim to utilize theories in importance of business travel, loss aversion, social identity theory and choice incentivizing to make business travel more sustainable for the environment and for corporations.

2. Introduction

Current businesses profit from the interpersonal relationships that take place in their various projects. In fact, companies succeed or fail depending on how people manage different projects that involve risks, investment, innovation, etc. Companies are people driven, so if organizations want to assure their success, they need to understand the importance of relationships between their employees and clients (Patterson et al. 1997). Moreover, it is important to consider that such relationships are developed in a global world in which employees must have meetings with people that reside in different geographical areas. In fact, organizations depend in how well people communicate and interact while being in geographically dispersed locations. This situation has resulted in an increase of business travel among employees over the last couple of decades (Gustafson, 2011). Moreover, the need to meet people in other locations has also resulted in the implementation of new technologies that aim to make such meetings efficient in a virtual environment (Arnfalk & Kogg, 2003). In fact, people are becoming more aware of the negative factors that business travel has on the environment and on health. For this reason, there has been a growing movement that aims to make business travel more efficient by reducing unnecessary flying through implementing incentives and utilizing virtual meetings (Mason, 2002).

It is important to consider the decrease of business travel because of the negative impact that is having on people and the environment. In fact, current literature shows that business travel is one of the main contributors of CO2 in the atmosphere. This situation is alarming due to the present state of global warming that the world is facing. Most atmospheric scientists have agreed in the fact that greenhouse gas emissions have already impacted the global climate system negatively and such changes will only accelerate in the near future. As a matter of fact, the Norwegian institute for Air Research, measured the CO2 emissions of their employees during the years 2005 to 2007 from all types of business travel (conferences, visits, workshops, field campaigns, etc.). Taking into consideration that the annual emissions were between 1.9 and 2.4 tCO2 per scientist, they estimated that more than 90% of their emissions were caused by air travel (Stohl, 2008). This situation shows the distressing reality of business travel impacting global climate change. Additionally, business travel is known for negatively impact the health of employees. More than one third of business travelers report high levels of stress, a sense of isolation, and commitment issues with their family. It is important to mention that such situations are correlated with the heavy workload that most of the time travelers face. Moreover, other factors such as sleep deprivation and alcohol intake were found to be higher in employees that presented a high frequency of travelling. Such negative situations present a link with depression, anxiety, and lethargy (Burkholder et al., 2010). Given such findings, there is a high necessity for companies to consider the negative impacts of business travel in order to create strategies that foster positive outcomes for employees, reduce CO2 emissions, and increase efficiency for companies.

Therefore, the aim of this paper is to develop solutions that aim to incentivize employees to reduce unnecessary business travel in order to make business travel more efficient and positively impact their health and the environment. The strategy is developed by considering social identity theory, status quo bias and loss aversion since we believe that is important to consider such psychological theories in order to create acceptance of the strategy among employees. Moreover, the strategy incorporates extrinsic motivations to make employees rethink their flying behavior. The first part of the strategy aims to implement five incentives that have the capacity to decrease flying behavior. The first two incentives are employee-centric, and the three remaining are corporate incentives that aim to support the employee-centric approach. Moreover, the second part of the strategy aims to implement a “fast-and-

frugal" tree that facilitates the decisions-making process of whether to fly or not. Such solutions are developed with the purpose of transforming how business travel is done among companies, so we hope that the implementation of such solutions will decrease business travel and positively impact society.

3. Importance of Business Travel

Globalization is a factor that has greatly influenced current economic life. In fact, companies with business units around the globe are on the rise. Thus, the need for business travel has greatly increased over the past few decades (Gustafson, 2003). This section aims to understand the need for business travel in order to recognize in which scenarios business travel might be unnecessary and thus decreased. The goal is to understand what types of meetings do not necessarily require employees to fly and thus incentivize those employees to reduce their flying behavior.

a. Face-to-face interaction

Successful exchange of information has been showed to be a primordial part of organizational performance, and face-to-face interactions greatly influence the exchange of information. Storper and Venables (2004) show that for information to be properly exchanged, there are various variables that come into place, such as the verbal, non-verbal, intentional, and non-intentional aspects of a social interaction. They show that such aspects are better perceived in a F2F interaction since people have a better capacity to sense the non-verbal cues and validate the information that is shared with the behavior seen. Individuals can legitimize or delegitimize information based on cues perceived from the body. In other words, individuals either trust or do not trust the information that is being shared based on the F2F interaction. For this reason, traveling to meet a partner is seen as primordial when building certain relationships, mainly the ones in which partners are in different continents (Aguilera, 2008).

b. Inter-firm cooperation

Globalization has also impacted how the development of projects are done. Teams do not have to be situated in the same geographical location to partner and develop a project. Also known as distributed teams or innovation teams, people that work for the same company but that are located in different units need efficient and constant communication to develop a given project (Aguilera, 2008). For example, individuals meet in order to coordinate production between different corporate sites or prepare strategic business decisions, such as take overs, mergers, or strategic alliances" (Bathelt & Henn, 2014). Since such projects require team members to frequently communicate, this situation has the potential to increase business travel among employees.

c. Conferences and Training

The growing need for flying employees to other countries to get training and attend conferences has increased in the last few decades. In conference people usually travel to gather and share information that is intellectually challenging and that generates discussions and creates a learning environment (Bathelt & Henn, 2014). Training usually happens in the headquarters of a company, and it aims to develop the skills and knowledge of the employees by having an expert develop a training method for the employees regarding a subject (Vinten, 2000). Conference and training have been showed to impact the increase of business travel. For example, various countries in the EU have increased their flying rates due to training and conferences. According to the Travel Survey, in 1994, 23% of France's long-distance

business travel was due to training and conferences (Stationery Office, 1997). Additionally, Lian and Denstadly (2004), show that in Norway 42% of domestic business travel was due to such factors.

d. Transnational corporate networks

Transnational corporate networks are set when a company decides to establish subsidiaries in a different country from which the company is based. Since the activities that are done in the subsidiary have to be incorporated into the company's overall activity, managers or experts in a given field are required to fly and establish themselves in the subsidiary for a given period of time. The managers or experts are known for connecting the cultural and institutional networks between the home company and the local subsidiary. Since these people are representing the home company, they are required to travel from time to time to the headquarter site and report the condition of the subsidiary (Bathelt & Henn, 2014). Therefore, this situation shows that business travel increases when subsidiaries are established in other countries.

After revising the reasons for which business travel is important for employees, it can be suggested that flying to meet other employees is primordial in certain cases. First, people need to fly and meet others when there is a need of making primordial judgments about a partner or a potential client (Storper and Venables, 2004). Second, people also need to fly when there is an urgent topic of discussion regarding the development of a project, or when there are conferences and training that are impossible to be done through virtual meetings. Ultimately, people need to fly when subsidiaries are being developed in different geographical areas (Bathelt & Henn, 2014). While this information might be of some help to perceive which meetings absolutely require business travel, we recognize that there is not a precise approach to categorize certain meetings as needing or not needing business travel. There is rather a blurred line between which meetings require flying. For this reason, it is suggested that companies develop a unique criterion that will help employers understand which meetings absolutely require flying and which ones do not. Nonetheless, extensive literature has shown that less complex types of meetings can be substituted by virtual meetings and thus decrease business travel (Gustafson, 2012, Aguilera, 2007, Bathelt & Henn, 2014). Since certain meetings do not require business travel, the next section aims to examine approaches that can help companies to decrease business flying.

4. Problem Analysis 40775, 42505

a. Social Identity Theory

From its inception, the Social Identity Approach has been applied to organizational settings (Haslam & Platow, 2001). In a corporate perspective, identities in the workplace can be described as nested memberships in the form of industry, organization, departments, and teams (De Cremer, van Knippenberg, van Dijke, & Bos, 2006). Essentially, the complex beehives of social structures within organizations can be a delicate system. Therefore, change within such symbiotic structures can be heavily disruptive to not only the organization, but to the individual members' perceptions of themselves and their place in the company.

Because employees adopt an identity within the workplace, one could infer members of a travel heavy industry such as in multinational companies may have adopted frequent business travel as a structure within their overall identity. Moreover, business travelers gain various benefits from frequent

travelling, such as, travel miles, elite clubs and first-class seats. Therefore, they may be reluctant to give up flying which represents their social status.

b. Status quo bias & loss aversion

People's travel decisions can be influenced by cognitive biases, such as the status-quo bias (Garcia-Sierra, van den Bergh & Miralles-Guasch, 2015). The term status-quo bias is used to describe people's tendency of "doing nothing or maintaining one's current or previous decision" (Samuelson and Zeckhauser, 1988). This statement suggests that people are reluctant to take action that will change this state (Ritov and Baron, 1992). The status quo bias is often explained in terms of loss aversion (Kahneman and Tversky, 1984). A change from the current state usually entails expected loss on some dimensions and expected gains on other dimensions. Since people are loss averse, the losses are weighted (cognitively) more heavily than the gains. People therefore are unlikely to choose an alternative in which the expected gains are only slightly higher than the expected losses (Ritov and Baron, 1992).

If air travels are set up as the default option within corporations, employees are likely to stick to airplanes rather than switching to other means of travel due to the status quo bias. Moreover, the loss of changing from the status quo (air travel) to an alternative (e.g., train travel) may be considered greater than the gain due to loss aversion. To change behavior, people need to perceive the potential gains of an alternative to be much higher than the potential loss.

5. Solutions 43288

a. Incentivizing Sustainable Options

In our approach, we aim to have business flyers rethink their travel behavior by incentivizing techniques that tap into consumers' extrinsic motivation mechanisms.

Economic incentivizing, sometimes referred in literature as "nudging" or "choice architecture," proposes positive reinforcement and suggestions to influence decision-making (Thaler & Sunstein, 2008). In the tradition of Kahneman and Tversky's dual-process theory (System 1 and System 2) that suggests humans have separate mechanisms for lower order decisions and complicated decisions, nudging theory assumes many poor decisions are made on the automatic System 1 (Parkinson, Eccles & Goodman, 2014). Some examples of nudging include placing healthier food items, such as fruit, on a consumer's eye level in a grocery store (Kroese, Marchiori & de Riddler, 2016). Generally, incentivizing, nudging and choice architecture are used interchangeably with each other. However, to maintain the broad scope of solutions used in this project, we will use the term "incentivizing" to describe our solutions that aim to reduce unnecessary corporate flying.

In determining how companies can incentivize alternatives to flying, we took two approaches: corporations reducing flying on a grand-scale policy and modelling the transport decisions of individual employees. We believe the method of tackling both sides of the decision-making process, corporate and traveler, provides the most well-rounded solution.

Individual Incentives

Today's companies are already incentivizing employees to make more sustainable decisions. For example, Facebook's head office is fighting carbon emissions by offering a $10,000 bonus to workers who move closer to the campus (2015). In a similar vein, Bank of America offers $3,000 to any employee who switches to an electric or hybrid vehicle (2016). While these solutions are clear incentives for sustainability, both companies offer little evidence of its effectiveness. Cognitive biases, rationalizing and brand loyalty may prevent employees from adopting a more sustainable option even with these incentives because of *resistance to change*. We determined that these typical solutions may not work because the incentive for employees to adopt these changes may not economically match the benefits received. In other words, an employee's desire to keep their existing car may not match the trouble to switch cars for a $3,000 bonus. Therefore, our solutions aimed to provide meaningful incentives to change a company's relationship with air travel, which we present below.

i. Sustainable Search Engine: Our first employee-centric solution is developing a bespoke travel engine/incentive scheme for corporate travel. In our research we came across a company called "Rocketrip," a business travel platform that motivates business travelers to spend less company money on their travels by sharing half the savings with them and some shopping discounts with them. In their website, they describe how their services make employees *more cautious about company money* by motivating them with financial rewards. Our solution would model Rocketrip's platform by making business travelers more cautious about *their carbon footprint.* Essentially, as a portion of a company's CSR, employees will be reimbursed when they choose more sustainable forms of transport. We find this solution more realistic than a simple bonus because it offers more streamlined decision-making, thus simplifying the process. Simplification is an established "nudging" technique that explains decision efficiency in situations with fewer or well-defined options (Sunstein, 2014). Such incentives will see travelers pick coach over business, train over plane, or foregoing the trip entirely, leading to more sustainable travel decisions. Likewise, travel engine Skyscanner already lists an estimated CO2 figure for each option using metrics such as direct vs stopover journeys, type of plane used, and recycling their on-board waste (2019). Our solution aims to incorporate both companies' approaches to enable sustainable decisions.

ii. Travel Close to Home Scheme: Our second employee-centric solution is implementing a subsidized scheme to encourage "flight-less" employee holidays. Companies are already utilizing incentivizing schemes to encourage preferred behavior, with one example being subsidized corporate gym memberships. For example, the UK government began implementing tax incentives for companies offering a cycle-to-work scheme in 1999. We propose similar measures to push employees to travel closer to home during their family holidays. Essentially, a company could offer 5 extra PTO days if the employee foregoes flying. However, establishing a culture where flight-less holidays could be tricky, yet several countries have already established a widespread culture of train holidaying. In recent years, Sweden has seen a resurgence of train traveling due to *flygskam* or "flight shaming." This year, Swedish Railways found that 31% Swedes are foregoing flying altogether due to climate concerns (Inc.com, 2019). While it may seem far-fetched for a society to adopt a value system quickly for environmental reasons, it would not be the first such occurrence. Vegetarianism is quickly growing in popularity due to moral, environmental and health concerns; with the UK vegetarian population growing to 14% in recent

years (TheGuardian, 2018). Thus, a social approach encouraged by upper management may provide the bottom-up solution needed to instill permanent change.

Corporate Incentives

We have also developed several, smaller strategies companies can take on to support the individual solutions. These solutions primarily operate as scaffolding because we anticipate lowering flights will be a grassroots movement.

i. Tax Breaks: Governing bodies have long aimed to change behavior on a grand level. As mentioned in the individual solutions section, the UK government offers tax incentives for companies who offer corporate gym membership schemes. In a similar vein, the government could encourage alternative methods of transport for business travel by means of tax breaks.
ii. Clear Travel Policies: In a recent report, American Express found that only 75% of business travelers found their company lists a clear, but strict, travel policy (AmericanExpress, 2018). These results signify that 25% of travel policies are unclear, potentially resulting in noise, or inefficient travel. We propose companies follow the World Wildlife Fund's example by implementing policies that puts lowering carbon emissions first by reducing the need for business travel, reducing travel distances by optimizing meeting locations, reducing greenhouse gas emissions through efficient modes, and consider compensating carbon emissions, in that order (WWF, 2011).
iii. Flying Less Challenges: Furthering the discussion in Swedish "flight-shaming," we propose businesses set up challenges for their employees to creatively adjust their meetings to meet certain travel criteria. For example, Oliver Smith, a travel writer for *The Telegraph*, recently announced he would be limiting himself to one-round trip flight a year (TheTelegraph, 2019). In a similar vein to Mr. Smith's challenge, we propose businesses create develop incentives rooted in pre-commitment strategies, the "nudge" describing humans' inclination to stick to goals (Sunstein, 2014). In a paper explaining the nudge, Sunstein stresses that committing to the specific action at a precise future moment better motivates the action (2014). Thus, in addition to setting clear travel policies in solution bii, we propose businesses set a clear benchmark in their travel challenges.

b. Solution for Quick Decision-Making

Deciding when corporations must send their employees on air travel may turn into an arduous and expensive task. The time and energy spent on determining whether to fly may lead to companies spending a burdensome amount of resources on flying decisions. This potential raises the question: how can companies quickly and meaningfully decide when or when not to fly?

German psychologist Gerd Gigerenzer offers a different brand of heuristic psychology from Kahneman's cognitive biases. Gigerenzer disagrees with Kahneman and Tversky's classification of heuristics being cognitive *biases* (Gigerenzer, 1991). Rather, he believes heuristics are adaptive mechanisms to make quick, and *accurate* decisions; which he dubs, "Fast-an-Frugal" heuristics. Gigerenzer draws the example of an emergency room doctor assessing heart attack patients through three simple health questions (Gigerenzer & Todd, 1999). As a follower of Herbert's Simon's *Bounded Rationality*, these heuristics assume humans stop their search for a solution once they found one that *satisfies* their needs, rather than searching until they find the perfect solution (Gigerenzer & Selten, 2002).

We believe we can manifest an efficient decision-making solution in the tradition of Gigerenzer's "Fast-and-frugal" heuristics. Figure 1 displays our "fast-and-frugal" tree that dissects the most important portions of a flying decision. Our tree's existence is justified in research that suggests not all meetings, including those done over business trips, are productive (Doodle, 2019). Therefore, having business travellers rethink meetings through decision-making aids such as fast-and-frugal trees may lead to fewer flights and increased productivity.

We based our decision-tree off a flow chart shared on Harvard Business Review that helps individuals decide whether to schedule a meeting (Saunders, 2015). We aimed to prioritize what we believe are the most important reasons one would fly for a business meeting. However, companies may wish to adapt the flowchart below to fit their unique needs.

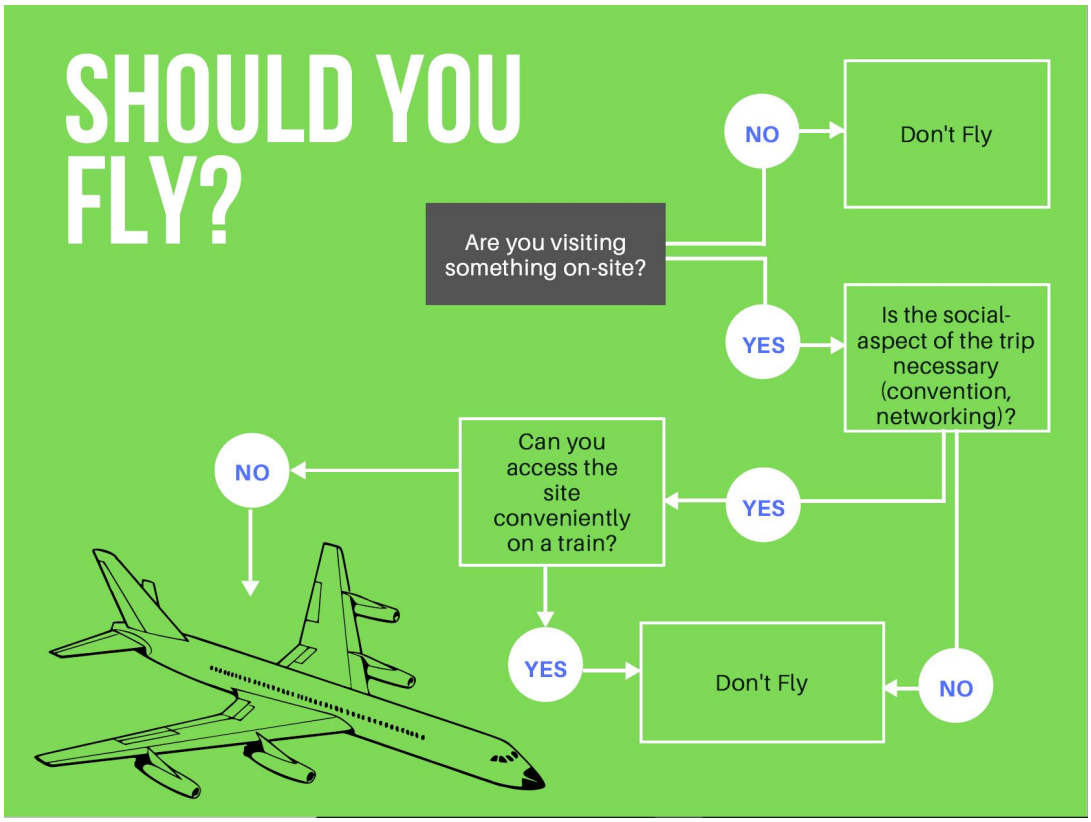

Figure 1: Fast and Frugal Tree for Flight Decisions

Companies may find this solution reductionist. They may argue that deciding the circumstances to travel are far more complicated than the three reasons we list in our fast-and-frugal tree. However, the primary purpose of fast-and-frugal trees is to reduce the complexity of decision-making. The tree framework will likely result in fewer resources spent on deciding, thus saving money and CO2 emissions for a company. Likewise, we hope at the very least the fast-and-frugal tree starts a conversation in corporations on prioritizing the most important meetings for business travel.

6. Discussion and Future Research 40775, 42505

How can we make corporations reduce unnecessary corporate flying or make business travelers rethink their travel behaviour? Our essay suggests implementing incentivizing techniques that leverage

individuals' extrinsic motivation mechanisms, operating at both the employee and corporate level to reduce business flying. The creation of a "fast-and-frugal" tree aims to facilitate the decision-making process regarding business travels. These solutions are promising but only taking advantage of extrinsic motivation may be limited. 86% of companies in the UK claim that they were either reducing their carbon emissions or intending to do so, and they see videoconferencing as the best alternative to flying (WWF, 2011). It seems that improving virtual meetings has the potential to further decrease unnecessary business travel. Therefore, we suggest that companies can also consider utilizing virtual reality in the future to create a better virtual environment for working and to reduce in-person meetings that require travelling.

The implementation of VR can bring great value to both companies and employees in different areas such as communication and trainings. Ebbinghaus Forgetting Curve (1885) shows that learners will forget an average of 90% of what they have learned within the first month. VR can be used to improve the effectiveness of training within organizations by offering the opportunity of experiential learning. For example, Walmart is providing Oculus VR headsets to all stores in the U.S. (Incao, 2018). Andy Trainor, the senior director of Walmart U.S. Academies, said, "The great thing about VR is its ability to make learning experiential…We've also seen that VR training boosts confidence and retention." (ibid.). VR can also be used to facilitate communication across functional and professional boundaries by enabling visualization of complex data and abstract ideas (Watts, Swann & Pandit, 1998). British Airways has used VR to model passenger flow in airport terminal buildings so more people within the companies are able to understand the problems and involve in the project (VR News, cited in Watts, Swann & Pandit, 1998). "Involving all" during the exchange of information helps the process of innovation in the organization (ibid.). Yet, the introduction of such devices might create a threat to the social status that employees hold due to being frequent flyers. Due to the status quo bias and loss aversion, people need to perceive the potential gains of virtual reality to be much higher than the potential loss. Future research can focus on how virtual reality can be used to create a new form of interaction within organizations and how such interaction can further reduce business travels. For example, what types of meeting or training would employers or employees prefer to participate in a virtual environment created by VR instead of flying to the site. Furthermore, future research can explore how to incorporate virtual reality into the 'fast-frugal-tree" for making business travel decisions.

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