Passenger Perceptions of Depersonalisation of the Airport Experience

Tour 590

Research report submitted in partial fulfilment of the degree of Master of Tourism

February 2014

Jesse Gibbs

1233925

Abstract

The airport environment has been changing drastically in recent years, brought about by economic and technological reforms considered necessary by airports due to rising fuel prices and the global recession experienced in 2007/08 (Chang and Yang, 2008). A key response from the commercial aviation industry has been to technologise the airport experience, implementing self-service options so passengers can process themselves. These measures are particularly noticeable during check-in and passport control (Australian Customs and Border Protection Service, 2013; Chang and Yang, 2008). There are claims within literature that passengers demand and appreciate self-service (Nijhuis, 2012; Rostworoski, 2012). Yet, no study to date has studied passenger perceptions directly, and whether or not these new technological measures are improving the airport experience from a passenger perspective is unknown. The aim of this study is to fill that knowledge gap, by surveying people about their opinions of the current airport experience. It was found within the results that passengers value time efficiency and reliability over everything else; because self-service kiosks were also perceived to possess those qualities, passengers in general prefer using kiosks instead of being processed by staff members. There are mixed reactions to how far passengers want depersonalisation to extend, however. In regards to feelings of safety due to technologised security and enthusiasm over mobile phone-airport integration, it is impossible to generalise due to the diverse points of view. In order to completely understand the issue at hand, a detailed and thorough analysis of literature and the survey results is required.

Contents

1. Introduction

Dunedin International Airport in Otago, New Zealand has recently received criticism from passengers about newly installed self-service parking payment kiosks within the terminal (R. Roberts, personal communication, 5th November, 2013). Parking attendants taking payments from airport visitors using the carpark have been replaced with kiosks; carpark users have to use these kiosks upon leaving the airport terminal, and no longer will a staff member take the payment. This reduction in human contact has meant that passengers have been forced to adapt to the technological methods which have been put in its place. These methods extend far past parking payment, however; services such as flight check-in, security and mobile phone applications have all been rapidly transforming, therefore transforming the airport experience as a whole. Passengers travelling through the airport have struggled with this transition from traditional airport processes to self-service methods, meaning that some airports have been forced to rethink how they approach depersonalisation (R. Roberts, personal communication, 5th November, 2013).

This study comes at an important time, as airports and airlines look for ways to streamline their operational processes while maintaining passenger satisfaction (Chang and Yang, 2008). Within an airport environment, both airlines and the airport organisation itself become entwined in a passenger's airport experience. Airlines are in charge of their own direct interaction with passengers; these interactions generally come in the form of flight check-in. Airport organisations oversee other processes within the terminal, including shopping, signage and security – although security is also managed in conjunction with immigration and customs officials.

Recently, the operation of the modern airport has been changing drastically. The global economic downturn combined with rising fuel prices has resulted in deteriorated airline and airport profitability, which has led to measures being taken to boost the economy of the airline industry (Chang and Yang, 2008). Alternatively, on the demand side of the airline industry, Rostworoski (2012) claims that "we are living in the midst of a self-service revolution," (p.202) and consumers now expect self-service (Rostworoski, 2012). As a result of this pressure, an increasing number of airports have been looking at ways to tailor an airport experience which gives more control to passengers while cutting down operating

costs. The adoption of technology allows an airport to programme the airport experience in a way which gives passengers the control they expect, while still processing passengers in a way which airports have control over. Furthermore, the adoption of technology reduces the human hours required to complete tasks, thereby saving an airport and airline money.

Improvements in technology are revolutionising the retail environment, with firms using technology both internally and externally to improve operations, increase efficiencies and provide benefits to customers (Meuter, Ostrom, Bitner and Roundtree, 2003). The International Air Transport Association (IATA) has made an effort to implement electronic ticketing, common-use self-service kiosks, bar coded boarding passes, radio frequency identification and paperless cargo. "These five innovations are expected to reduce the operating costs and enrich its passengers' travel experience," (Chang and Yang, 2008: 980). Self-service technologies and the emergence of the mobile device as a multi-purpose tool have been said by some academics to change the airport environment drastically for the better (Nijhuis, 2012; Rostworoski, 2012). However, with the addition of technology such as self-service check-in, self-service security and increased mobile phone application, the airport experience may have already become depersonalised.

The Oxford Dictionary defines depersonalisation as "the action of divesting someone or something of human characteristics or individuality," (Oxford Dictionary, 2013). Going from this, the removal of human elements and the subsequent addition of technological elements stand to depersonalise the airport experience. If this is the case, further technologisation threatens to depersonalise the airport experience even further. Rostworoski (2012) sees this depersonalisation as a positive thing, and something which is consumer-induced; however, if the Dunedin Airport case is anything to go by, depersonalisation can potentially be negative for both passengers and airports alike. This point of difference is something which this research seeks to address, and can hopefully establish truly how airport depersonalisation is perceived amongst passengers.

Due to airports' significance in being the first and last point of contact for a tourist on a flying holiday, airport infrastructure can heavily affect perception of service quality (Rendeiro Martín-Cejas, 2006). For airports to make profit and remain economically viable, they need to attract passengers. In an area with multiple airports, there is increased competition for outbound or transfer passengers, and with this choice for passengers, they

are more likely to travel through airports which they prefer. Factors such as cost, distance, transit time, past experience and reputation can all factor into airport choice (Pels, Nijkamp and Rietveld, 2001). There are passenger demands for airports "to provide a more passenger focused service that allows for personal control and ensures fairness," (Independent Social Research, 2009), so it could be said that if those demands are fulfilled, then perceptions of service quality should be high; however previous research has not factored in the follow-on effects of technologisation and depersonalisation. If airport infrastructure is not presented in a way which is appealing to passengers, or is perceived as being too depersonalised or maybe even not depersonalised enough, then there can be negative consequences for airports from an economic point of view.

Therein lies the significance of passenger perceptions of airport infrastructure. The purpose of this research is to establish how passengers perceive depersonalisation of the airport experience. In doing this, a much clearer view of the impact of airport depersonalisation should be gained. While there has been research done on the different elements of technologisation within airports (Coutu, 2012; Chang and Yang, 2008; Nijhuis, 2012; Rostworoski, 2012), the topic of passenger perceptions of depersonalisation has not been directly addressed.

Because of the fast-changing nature of both airports and depersonalisation, the results of this study could potentially be very useful in understanding these phenomena. These results could be relevant not only to passengers and airport planners, but to a wide group of stakeholders including airlines, designers of mobile phones and self-service technology, and also those involved in other industries who have adopted self-service practices, including banks and supermarkets (Moutinho and Meidan, 1989).

If we are to understand what airport depersonalisation is and how it works, then it is crucial to understand the scale and significance of different components of depersonalisation. As described in this introduction, there are several elements which all impact how depersonalised the airport experience has become – or at least how much that depersonalisation is perceived. In the following chapter existing research will be outlined and summarised, which will assist in interpreting the results of this study.

2. Literature Review

2.1: Introduction

Airport depersonalisation is a relatively new concept, and therefore the research on it is recent as well. This could potentially result in a lack of information, but fortunately there have been articles written on the new technological elements within airport spaces, as well as self-service elements in other industries. While there has been no study to date directly addressing the topic of passenger perceptions of airport depersonalisation, there is a significant amount of literature on related topics. These topics include the different elements of the airport experience, the use of self-service across other industries, and the impact that self-service has had on consumers. The methods of the research will then be outlined and the process surrounding data collection and processing will be explained. Following this, the survey results will be presented and analysed, and will then be used as a basis for the discussion, which will take the results of the survey and consider them within an academic discussion. By applying the results to the issues raised in the literature review, they can be given practical application and the full impact of the research can be revealed.

2.2: The Airport Service Experience

2.2.1: Check-In

Check-in is one of the first processes a passenger goes through in an airport, but is also one of the most noticeably depersonalised. Self-service check-in kiosks have been largely implemented in airports worldwide (Lott, 2005). These kiosks allow passengers to check themselves in by inputting their details into a computer or scanning the barcode found on their ticket, or even on their smartphone. Customer service agents and check-in staff are often on hand to assist passengers, but if the self-service check-in process is completed correctly then no communication between passengers and check-in staff will take place. This is a contrast to traditional check-in, when passengers are checked-in by a staff member, often allowing for conversation between the two parties (Chang and Yang, 2008). Self-service baggage check-in is also becoming a more common feature of kiosks. Passengers can tag their baggage themselves and then leave it at a specified drop-off point (Nijhuis, 2012).

Airlines require passengers to check-in in order to gain an account of which passengers are present, allocate them seats and check-in their baggage. In the past, this required a high element of human-to-human contact in order for airline employees to oversee the check-in process. The result of this was large queues, as the airline could not process passengers at the same rate in which they were arriving to check-in. Market research has proved that queuing for check-in is one of the biggest dissatisfiers for passengers; this has led to demands from both the supply and demand side of the airline industry to reduce passenger congestion in the check-in area (Nijhuis, 2012). The answer has come in the form of automated check-in kiosks. The kiosks allow passengers to check themselves in by scanning their tickets and prompting the passenger to input relevant details such as the number of bags to check-in or the hotel where the passenger will be staying. The kiosks themselves serve three purposes: time saving for passengers, cost saving for airlines, and a space saver for airports (IATA, 2006). At present, automated check-in kiosks have already been largely implemented into airports, with significant economic benefits already observed. The IATA estimates that airlines save US$2.50 on every check-in, and a 40% market penetration at every airport. The estimated total savings to the airline industry total US$1 billion (Lott, 2005). Passengers spend a significant amount of time checking-in at in-person counters, especially during peak hours. Because of this, airlines are keen to promote kiosks to gain the benefits, specifically the reduced cost of the check-in process and alleviation of passenger queues (Chang and Yang, 2008). Due to the significance of kiosks, airlines compete for the leading position in supplying electronic service, but does this come at the cost of a personal experience?

Chang and Yang have researched self-service check-in kiosks and what passengers value about them. Interestingly, they found that American and European passengers are more likely to use self-service check-in kiosks than Asian passengers. This could be due to cultural expectations and demands of service (Chang and Yang, 2008). Asian passengers may be seeking the personalised experience of a check-in counter, or they may be weary of automation within their airport experience. Those who did use the automated kiosks were found to prioritise values such as baggage service, connecting flight check-in, multiple passengers check-in, and the ability to alter or cancel the reservation (Chang and Yang, 2008). None of these features require an airline employee if the automated kiosk performs

those actions. However, current automated kiosks have varying degrees of ability in performing these tasks. Chang and Yang's (2008) study centred on passengers using kiosks at Taiwan's Taoyuan International Airport. It was found that aspects which the Taoyuan kiosks' performed well were quick response, multi passenger check-in, friendly interface, promotions, baggage service (on the airport's new kiosks only), and the ability to alter the reservation. Aspects which the kiosks were considered not to perform well were processing connecting flight check-in, baggage service (on the airport's old kiosks only), incentive programmes, e-Ticket purchases, and seat selecting privileges for frequent flyers (Chang and Yang, 2008). These aspects rated poorly could potentially be remedied at an in-person check-in counter. Overall, Chang and Yang found that autonomy and privacy are valued benefits of kiosks. Some passengers preferred not to disclose personal details to strangers, such as the details found on a passport. Also, passengers feel comfortable knowing that kiosks are unlike humans, in that humans can handle situations very differently, and level of customer service can vary (Chang and Yang, 2008). Frequent flyers tended to have their separate views from other passengers. Frequent flyers prefer the personalised, often preferential treatment of a check-in counter, rather than "cold, incommunicable machines" (Chang and Yang, 2008: 990) such as kiosks. Airlines could perhaps remedy frequent flyers' negative perceptions by offering extra benefits through kiosks such as seat selecting privileges.

Another current issue with kiosks is that inter-organisational management systems are lacking; a kiosk will often only serve matters relating to the airline which operates it. The ability to handle airport or inter-airline matters such as baggage check-in and connecting flights can be handled much more effectively by check-in staff. Other factors deterring passengers from kiosks include errors arising from the integration of humans and technology. For example, a kiosk may send data to an airline's central server slowly, and by the time the data arrives, an employee at a check-in counter may have assigned a different passenger to the same seat, causing a mix-up (Chang and Yang, 2008). But ultimately, some passengers are simply afraid of change and depersonalisation, and tempting these passengers to convert to self-service kiosks could prove to be difficult (Chang and Yang, 2008).

Although Chang and Yang's study has been useful in understanding self-service kiosks, it does not fully address the reality that self-service and in-person check-in co-exist - with that there is a new set of complexities to understand. This research does provide a good basis to build off however, and there are several interesting conclusions to draw from this study. Firstly, nationality can be influential in how self-service check-in kiosks are viewed. This could also mean that nationality has an influence on how depersonalisation is perceived. Secondly, time efficiency has played a large factor in the rationale for implementing kiosks (Chang and Yang, 2008; IATA, 2006). It will be interesting to see in this current research the value which passengers place on time efficiency, and how much this helps in offsetting any negative effects of self-service kiosks. Another issue raised by Chang and Yang (2008) is that self-service check-in kiosks are not necessarily equal, especially not across different airports. If the research is airport specific, as it was in Chang and Yang's case with Taoyuan International Airport, then the kiosks which participants are being questioned about will likely be similar. However, in a general, all-encompassing study such as this current study, kiosks can be quite different in presentation and practicality; therefore this could potentially influence the survey responses of participants who have experienced different kinds of kiosks – something to be aware of when analysing the results.

Also found within the study was that autonomy and privacy are well regarded attributes of the self-service kiosks at Taoyuan (Chang and Yang, 2008). This is perhaps the first hint that passengers may prefer depersonalisation of the airport experience. On the other hand however, the article also mentions that self-service kiosks are not always able to complete all passenger requests and that the negatives of the kiosks could be reversed when checking-in in-person. This indicates that there is still a dependency on the personalised service of traditional check-in – which raises the question, if self-service kiosks could correctly process passenger requests more often, then what effect would this have on traditional check-in?

Highlighted in the various studies of check-in processes is the integration of passenger check-in with baggage check-in. Nijhuis (2012) gives the example of Schiphol Airport in Amsterdam as one of many airports which has implemented self-service baggage check-in within its kiosks. The kiosks allow passengers to check-in their own baggage by printing off baggage tags, and then allowing passengers to drop off the baggage at a nearby drop-off

point. Nijhuis (2012) claims that self-service baggage check-in is greatly appreciated by passengers, and eliminates the need for airline check-in staff to tag and process baggage themselves. Qantas Airways has taken this one step further and introduced the electronic 'Q Bag Tag,' which is a permanent baggage tag designed to streamline baggage check-in at Australian airports. This initiative synchronises the tag with the passenger's details on their boarding pass (Qantas, n.d.). In Australia, not only are check-in staff becoming less required, but the required functionality of self-service kiosks is now also decreasing (Nijhuis, 2012). Less time and space is now required to check-in, and lessening queues mean that there is more space in the airport to cater to passengers' needs (Rostworoski, 2012). The baggage check-in process can be different even if the passenger check-in process stays the same. For example, if a passenger uses self-service check-in, they could be presented with several options of ways to check-in their baggage; therefore it is important to capture passenger preferences of baggage check-in within a study of airport depersonalisation.

In 2010, Montreal-Trudeau Airport's 125 self-service check-in kiosks recorded more than 2.3 million transactions, representing approximately 35% of passengers. Approximately 10% of passengers tagged their own bags in 2010, with 650,000 baggage tags being printed (Rostworoski, 2012). As of 2012, Montreal had current self-service check-in levels of 60%, a significant increase on just a few years prior (Rostworoski, 2012). Internet check-in is also increasing in popularity; passengers can check-in to their flight even before they leave home using the airline's webpage. This feature is still being tested by some airlines, but this shows a stark contrast between the personal experience of checking-in with an employee, and checking-in before even arriving at the airport (Rostworoski, 2012). As Rostworoski (2012) states, "Self-service check-in has the most momentum of all services. The global airline industry is aiming to achieve 80 per cent self-service processing of passengers from the check-in perspective," (p.203). The 80 per cent figure mentioned by Rostworoski stems from the '80/20 rule' of check-in and baggage services. The 80/20 rule suggests that roughly 80% of passengers do not need assistance checking-in, while approximately 20% do. Rostworoski goes on to suggest that extra staff created by the self-service revolution should be moved to cater personalised services for the 20%, while the rest of the extra staff should be relocated to provide assistance for self-serving options (Rostworoski, 2012). However, as passengers become more adept at using self-service kiosks, will increased staff levels

around self-service be necessary? As airlines and airports look to cut costs, making unnecessary staff members redundant could likely happen sooner rather than later. Rostworoski's work suggests that those who want self-service can now access it, and those who want personalised service can now have their needs better catered to; this may indeed be true, but it does not address the possibility that staff restructuring as a result of self-service could lead to redundancies, and therefore further depersonalisation in the future. If passengers do not perceive depersonalisation as being a negative factor, then this occurring may not be a bad thing – something else which this research aims to understand.

On the other hand, depersonalisation could in fact be a reversing trend in the near future. Rostworoski (2012) details that in the not-too-distant future, passengers will automatically be checked-in by default, and all they will have to do is show up to the airport, drop off their baggage and proceed through security. The time and space created by this process will allow airports to change the way they operate. Airports will become more focussed on shopping and dining, which are common social activities, adding a degree of personalisation to the experience, even if it is not the type of airport personalisation which passengers are currently used to (Rostworoski, 2012).

2.2.2: Security

After check-in, passengers will proceed to security, which has also seen some depersonalising elements implemented in recent years. The adoption of self-service passport scanning technologies has transformed that way that passengers interact with customs. The concept of self-service passport control is one being increasingly implemented by airports worldwide, including in New Zealand and Australia, where the 'SmartGate' has proven to be very popular (Australian Customs and Border Protection Service, 2013). Passengers with a biometric passport, otherwise known as an ePassport, which has a microchip installed, can continue through security much faster than before. The SmartGate is available to New Zealand and Australian passport holders, and well as United States and United Kingdom ePassport holders departing New Zealand (New Zealand Customs Service, 2012). SmartGate can be accessed by sliding the passport into a self-service passport kiosk (different from a check-in kiosk), then taking a ticket which is then processed at an automated camera. The photo taken of the passenger is then matched with

the passport photo using facial recognition technology, which maps the underlying facial bone structure of the passenger. A mathematical formula is then used to establish whether the photo taken of the passenger matches the passport photo (Australian Customs and Border Protection Service, 2013). SmartGate has also been designed to allow for slight changes in appearance, such as a new haircut or a change in weight. The concept has been largely successful thus far; Australia is expecting an annual growth of 5.4 per cent in inbound and outbound passenger numbers over the next seven years. By 2020, Australian Customs expect to be processing 22.9 million travellers each year, so SmartGate will be playing an active role in decreasing passenger queues and wait times (Australian Customs and Border Protection Service, 2013). Currently, SmartGate is available at eight Australian airports and three New Zealand airports (New Zealand Customs Service, 2012), but this looks set to increase.

These changes to airport security, although much more streamlined and convenient, have also fallen victim to depersonalisation. New Zealanders travelling to Australia no longer get their passport stamped; considering that many travellers enjoy collecting visa stamps this could come as a disappointment. However, some customs officers may stamp a passport upon request (Australian Customs and Border Protection Service, 2013). Another factor illustrated by SmartGate is that passengers using self-service passport control will no longer be able to make conversation with customs officers or receive a formal welcome into the country. On the other hand, security is seen by some as an unwelcome interruption or an invasion of privacy (Nijhuis, 2012), so advancements in self-service will likely carry no ill-feeling among these particular passengers.

Before proceeding into the departure area, passengers will need to clear the security section checking for prohibited items. Again, this area has seen a decrease in human interaction. Increasing amounts of airports are adopting advanced body-scanning technology, with more security staff being placed behind monitors instead of directly interacting with passengers. However, in some cases, security staff positions are being reduced altogether; Schiphol Airport in Amsterdam, the Netherlands, has introduced the 'security scan,' which is a device that makes use of harmless millimetre wave technology to enable automatic detection of objects on people's bodies. This process means that an image analyst is no longer required, and claims to make it more customer friendly (Nijhuis,

2012). It is interesting to note that in the Schiphol example, reduced staff numbers supposedly makes the experience more customer friendly, hinting that depersonalisation in this case is positive (Nijhuis, 2012)

In the case of security, depersonalisation can potentially raise fears amongst passengers who are anxious about the capability and accuracy of the technology. Safety is a large component of any airport (Hainmüller and Lemnitzer, 2003), so it is crucial to understand to what extent these fears exist. The terrorist attacks in the United States on September 11, 2001 demonstrated on a global scale what the repercussions of airport security failures can be (Frederickson and LaPorte, 2002). Those attacks were the catalyst for significant changes in airport security worldwide, and have also changed perceptions of safety (Goodrich, 2002).

2.2.3: Terminal Navigation

After clearing security, passengers will need to navigate the terminal in order to find their departure gate. Several airports have made specific attempts to make the terminal easier for passengers to find their way around, but what is interesting is that not all of these initiatives are depersonalising. Going back to Heathrow Airport in London, England, it has established what is called the Heathrow 'Journey' Team, which consists of 80 uniformed customer service representatives who collectively speak more than 40 languages (Adderley, 2012). Rather than being situated at a desk, these agents move around the terminal, asking passengers if they need any help or advice. The flags of the languages which they speak are placed on their nametags, and should they not speak the passenger's language, then arrangements can be made to bring a representative to them who does speak their language (Adderley, 2012). However, language problems are usually pre-empted by matching appropriate speakers to the time and location of each international flight (Adderley, 2012). For example, members of the Journey Team who speak Mandarin will be around the terminal or near the departure gate for a flight which is leaving for Beijing. The Journey Team is an example of a new airport initiative which is aimed at being very personalised, going against the current trend of airport depersonalisation.

Moving along the navigation depersonalisation spectrum towards the middle, some airports have introduced touchscreens within their terminals, such as Incheon International Airport in Seoul, South Korea which has adopted touchscreens which offer passengers the ability to

search for directions around the terminal, flight information and hotel and airline bookings (Airport Technology, 2013). Changi International Airport in Singapore has introduced the Service Workforce Instant Feedback Transformation system, more simply known as SWIFT (Coutu, 2012). SWIFT operates through a series of touchpads placed throughout Changi's terminals. If passengers have a query they can operate the touchpads in search of an answer. The passengers can then rate the helpfulness of SWIFT, and if it is deemed that SWIFT was not helpful, or extra assistance is required, then a human customer service representative will be sent towards that touchpad to help out the passengers in need (Coutu, 2012). Although this method is more depersonalising that the Journey Team, it could be argued that it is depersonalising in a positive way. Going back to the check-in example, some people enjoy the privacy and autonomy of kiosks or touchpads. Where the personalisation works however, is that an airport employee is on hand for those passengers who should want it. It could be considered the best of both worlds, pleasing a wider variety of customers. However it should be noted that the Journey Team will better apply to passengers who want personalisation, whereas those passengers who want depersonalisation will appreciate more the likes of Schiphol Airport's dynamic lighting system.

Schiphol Airport in Amsterdam is the first in the world to introduce a dynamic lighting system aimed at serving passengers' needs (Nijhuis, 2012). Right from the beginning of the airport experience, the lighting inside the terminal changes from warm tones to a cooler colour in order to get passengers moving at the right times. Airlines can also take advantage of this, and with the addition of large video screens, can change the lighting and video information to guide passengers to the gate, as well as display flight information (Schiphol, 2013). As mentioned, Schiphol's dynamic lighting is an example of depersonalisation, relying on technology to move passengers and prompt them through the terminal. However, it is considered that passengers enjoy the modern style of the terminal (Schiphol, 2013), plus requiring less customer service staff would likely save the airport money. For any airport introducing a depersonalising element such as dynamic lighting, it could be undertaking a risky policy if there is no personalising contingency plan in place. Considering that passenger perceptions of airport depersonalisation have not been extensively studied, airports should pay very close attention to the results of other airports such as Schiphol, or

the results of studies such as this one. Another way for an airport to minimise the risk is to diversify the methods of terminal navigation being offered. While depersonalised methods are being trialled, more hands-on customer service should be available to compensate for any passengers unfamiliar with the technology and seeking personalised service. On the other hand, Heathrow Airport will need to make sure that on top of its Journey Team there are more depersonalised methods of navigation available such as extensive signage and digital maps in order to cater to those passengers who do not prefer to speak to customer service agents.

2.2.4: Mobile Phone-Airport Integration

Another way which passengers can navigate an airport terminal is by accessing GPS on their mobile phones and using it to find their gate and other features such as shops, toilets or even the location of parked cars (Rostworoski, 2012). However, the applicability of mobile phone use in the airport experience extends far beyond the terminal itself. The use of mobile phones is different from the other aspects of depersonalisation, as it can fit into many places within the departure or arrival process. Many airlines and airports now have their own smartphone applications ready for download (SITA and Airline Business Magazine, 2011). Heathrow Airport has been providing a free app for three years, available on major systems, including iPhone, Android and Blackberry (Adderley, 2012). The app lets passengers check flight details, receive directions to and from the airport and around the airport terminal. Also featured on the Heathrow app are terminal guides, city guides, weather forecasts, and parking booking capabilities (Adderley, 2012). The application has proven to be very popular, as so far over 500,000 people have downloaded it (Adderley, 2012).

Internet and mobile phone use is also common at the point of sale of an airline booking. For sales relating to Montreal-Trudeau Airport, 25% of transactions are web-based, and of those, 2% are through mobile/smartphones, which is a constantly growing trend (Rostworoski, 2012). Montreal is also looking to build on mobile phone compatibility further, as the airport is aiming to integrate all signage with mobile interactive tools, such as quick response (QR) codes (Rostworoski, 2012). QR codes are square barcodes which are increasingly appearing on signs and advertising material; when the code is scanned by a

smartphone, the phone will display more information relating to the material on which the QR code was originally placed. These initiatives are not specific to Montreal, however, as they are occurring in many airports throughout the world. Other now-common mobile functions include text messaging alerts for upcoming flights, and the presentation of electronic boarding passes (Rostworoski, 2012).

2.3: Depersonalisation at Dunedin International Airport

Lovelock (2013) conducted an observational study of passengers at Dunedin Airport to find out how passengers act and feel when passing through an airport. It was found that passengers tend to avoid eye contact, and only communicate with the people that they are travelling with; actions which reflect a sort of self-imposed depersonalisation. The only unifying factor among passengers is the flight number, as this is a commonality which brings passengers together to a specific gate at a specific time. In terms of how passengers perceive airport processes, there is anxiety among some people about the amount of time that the elderly take to check-in (Lovelock, 2013). Older people can sometimes take longer if they are unfamiliar with technology, and some passengers are afraid of change altogether (Chang and Yang, 2008).

The check-in counters at Dunedin Airport provide a chance for passengers to interact with airline staff. They also provide an opportunity for the passenger to be questioned, which can give the passenger a sense of being the centre of attention and a feeling that they are being taken care of, which can result in feeling a sense of safety and security (Lovelock, 2013). Airport management of passenger flows has ensured that the airport experience involves very few direct encounters, but the check-in experience is one of the few social encounters inside an airport in which passengers have a reason to communicate with staff (Lovelock, 2013). With the introduction of self-service check-in however, one of the last means of human interaction inside an airport is diminishing.

Analysis of Lovelock's (2013) interviews with passengers revealed a couple of relevant themes. One passenger, a 45-year old male, is quoted as saying "I just want to get going really. I never come too early, so I don't have to queue – I hate that the most. I just want to go straight through security and get on the plane – but of course there is always going to be waiting isn't there?" (p.13). For any passenger with the same point of view as this,

depersonalisation will likely be welcomed because the primary goal of the passenger is to get through the airport as quickly as possible; something which technology contributes to by reducing queues and processing times.

Another point raised by Lovelock (2013) is that self-service processing is an acquired skill, and passengers will likely become more adept with self-service technology as they gain more experience with them. Airports and its processes can cause passengers to be very anxious (Lovelock, 2013), so those with anxiety and a lack of confidence will most likely turn down self-service options in favour of human alternatives; in turn this means that passengers do not gain experience or confidence with self-service, and they are stuck in a cycle of only using processing methods which airports are gradually phasing out. One method airports could undertake in an attempt to get passengers out of this cycle is going back to Chang and Yang's (2008) recommendation of offering self-service passengers exclusive incentives, such as seat selection privileges or meal vouchers.

2.4: The Future of Airport Depersonalisation

In the future, the relationship between airports and mobile phones only looks to become stronger. 91 per cent of airlines are investing in smartphone services and 85% are selling or planning to sell services by mobile phone by the end of 2014 (SITA and Airline Business Magazine, 2011). Furthermore, the functionality of phones with airports will also increase. Mobile check-in is the fastest growing check-in channel, and it is estimated that over the last few years this rate has increased five-fold (Rostworoski, 2012). Research is being done into how to use a phone's near field communication (NFC) technology within an airport terminal. NFC would allow smartphones to interact with other electronic devices in a secure fashion by waving a phone over a scanner in the same method that credit cards can now be waved when purchasing goods and services (Rostworoski, 2012). For example, smartphones could be used for automatic check-in, security, shopping and boarding (Rostworoski, 2012). Essentially, everything a passenger would need to get through an airport could be stored on their smartphone. This can possibly detract from a personal airport experience by centering the experience around the mobile phone, a common household item. No longer does the airport have to be seen as exotic or a place of difference - passengers can now depart with help of the familiarity and comfort of their own phone.

In the future, phone integration could be forced upon passengers, and hard-copy boarding passes, often a souvenir item, will no longer be needed. But perhaps most interestingly, the use of mobile phones means that the airport experience can begin well before the user arrives at the airport. From the moment that they download the Heathrow application, they are engaging in the airport experience, potentially taking away the mystique of the physical airport location. It should also be noted that the use of NFC technology would lessen the need for airport employees to process passengers, thereby further removing person-to-person contact. Again, whether this depersonalisation could be a negative thing will vary from passenger to passenger; but if we were to generalise based on the Taoyuan study, passengers tend to prioritise ease of access over everything else (Chang and Yang, 2008), and we can assume that depersonalisation through mobile phone use is a catalyst for a positive outcome.

2.5: Depersonalisation in Other Industries

Due to the lack of prior research and the recent growth of airport technologisation, a literature review of airport depersonalisation stops short of establishing results and outcomes; it is based on a narrative of different elements of the airport experience and assumptions on how those elements are perceived. We can gain a clearer idea of the relationship between technologisation and depersonalisation and the resulting perceptions of this relationship by looking at other industries. In fact, "there is hardly an industry that is not undergoing an upheaval in how it deals with customers" (Hof, 1999:86). Improvements in technology are revolutionising the retail environment as a whole, with firms using technology both internally and externally to improve operations, increase efficiencies and provide benefits to customers (Meuter, Ostrom, Bitner and Roundtree, 2003). Many service providers are now actively using a wide variety of technologies, in order to allow customers to consume services electronically without having to interact with a member of staff; much of these technologies are enabling customers to process themselves, the same trend which is currently being experienced in airports. These technologies are referred to as self-service technologies, or SSTs (Meuter, Ostrom, Roundtree and Bitner, 2000).

Retail environments such as supermarkets have undergone large-scale implementation of self-service kiosks recently, and the banking industry has been offering self-service options

since the 1960's in the form of automated teller machines (ATMs) and more recently online banking (BBC, 2007). Early forms of depersonalisation, such as the early ATMs were met with little interest from customers, who were anxious towards the technology and not confident that it would be a suitable replacement for human service (BBC, 2007). Using ATMs has been common practice in western society for several decades now, but there have still been people who have been slow adopters of SSTs. Fearful of alienating a large portion of their customer base, most firms offer customers a choice between an interpersonal or technological encounter (Meuter, et al., 2003). This is noticeable in an airport context also, as passengers can decide whether to use self-service check-in, or check-in with a customer service agent. They can also decide between going through self-service passport control or being processed by a customs officer. Due to this choice, customers will only use SSTs if they perceive an advantage in using it (Meuter, et al., 2003). This relates to Chang and Yang's (2008) earlier perception that rewards should be offered to entice technology-weary customers over to SSTs if companies wish to shift towards implementing SSTs to a further extent. However, even if there are perceived benefits, customers may not use the technology if they are not comfortable with using it; a trait known as technology anxiety (Meuter, et al., 2003). In the case of technology anxiety, firms may find it more difficult to convert customers from in-person services to SSTs.

Studies have been done in the past on SST use; a study on the adoption of interactive teleshopping determined that non-adopters were older, less educated, of lower socio-economic class, and more likely to work in blue-collar occupations than adopters of teleshopping (Eastlick, 1996). However, SST usage cannot always be predicted using demographics. There has been a lack of consistency across studies of technology use (Rogers, 2010). Rogers (2010) conducted an analysis of 228 studies on the adoption of technology, and found that half of the studies showed no relationship between a user's age and their willingness to use technology. A few studies showed that early adopters are younger and some indicate that they are older, meaning that there is an obvious lack of consistency across studies.

Technology has played a crucial role in customer type identification for quite some time now; in 1989 it was noted that "a new breed of consumer, who is more demanding and more technologically aware, has emerged." (Moutinho and Meidan, 1989:27). As

technology changes, it is important for firms to be aware that customers change with it and react in different ways. Moutinho and Meidan (1989) looked at SST use in the banking environment, and identified four different types of customers. 'On-the-move' customers are primarily worried about queues, and prefer the most convenient ways to bank. 'Hi-tech value/cost-oriented' customers are enthusiastic about new technologies, and would often like to see them implemented further with extended functionality. However, they can be concerned that the cost of technologies will be passed down to the customer. 'Better-of-the-same' customers tend to like seeing current services continued, but improved. They are generally place high importance on the human factor of services. 'Price sensitive' customers are those heavily influenced by costs first and foremost. Of these four types of customers identified, 'on-the-move' customers appear to be those who would enjoy SSTs the most, as self-service generally reduces queuing times and increases the amount of processing options available. 'Hi-tech cost-orientated' and 'price sensitive' customers will also be positive about SSTs, especially if they reduce airport operating costs as intended (Chang and Yang, 2008). 'Better-of-the-same' customers will likely be harder to convince to use SSTs, especially since the new technology is rapidly changing the airport environment and replacing the human contact which this type of customer values so highly.

An effect of technologisation of the banking industry is "a decrease in the direct interface between the customers and the bank, i.e. depersonalisation," (Moutinho and Meidan, 1989:26). Moutinho and Meidan (1989) also found that there are several impacts on the banking industry which came from depersonalisation. These include: lower direct involvement with the customer, less customer loyalty to the bank, and difficulties in differentiating among various bank products. For an airline or airport, decreased customer satisfaction and loyalty could be dangerous. Services such as frequent flyer programmes could potentially offset some of the negative effects, but companies should aim to please as many of their customers as possible. However, as shown by Moutinho and Meidan's (1989) study, there are several different customer types and appealing to every group could be difficult.

2.6: The Service Encounter

After understanding the history and the role of technologisation, it is important to understand the significance of the service encounter itself. Automation may in fact be changing the nature of contact, rather than reducing it (Skyes, 1991). Bitner, Brown and Meuter (2000) have studied service encounters in detail and how they have changed in nature due to technology. A service encounter is between the customer and the firm, and these encounters have traditionally been 'high-touch, low-tech,' but due to technologisation this interaction is changing. Bitner, Brown and Meuter argue that technologised services can provide many benefits for both firms and customers, but only if they are managed properly. A significant concern about technology from customers is an issue of privacy, and who will have access to their personal information (Bitner, Brown and Meuter, 2000). If privacy is a concern arising from technology use, then this should be investigated further within an airport setting. It is important to gauge how much passengers value their privacy within an airport, and to what level their expectations of privacy are fulfilled.

Service encounters also take on an important marketing role for a firm, as a service encounter embodies the firm from the customer's point of view. It is an opportunity for the firm to market itself but also an opportunity for it to disappoint the customer (Bitner, Brown and Meuter, 2000). The influence of these encounters also means that service has a large effect on customer satisfaction, loyalty, intention of repurchase, and word-of-mouth communication (Bitner, Brown and Meuter, 2000). Due to the 'high-touch' element of the service encounter, most of the past research of service encounters has involved the interpersonal aspect of service; this trend has been changing drastically however, as "across industries, technology is dramatically altering interpersonal encounter relationships and, in some instances eliminating them altogether… through effective use of technology across encounters, the customer's total experience may be enhanced," (Bitner, Brown and Meuter, 2000:141). The ability to use technology means that data can now be stored more easily, meaning that interpersonal interactions become more effective. To put this into an airport example, an airline check-in operator can more effectively meet passengers' needs and spend more time having direct interactions with the passenger because less time is required to access or input data. In this instance, technologisation has apparently made some services more personalised; but in many cases within an airport, technology has replaced

interpersonal interaction altogether. Even though data collection is even faster if the human 'middleman' is removed, the removal of the middleman eliminates the personal element. Bitner, et al. (2000) also feel that depersonalisation of this kind may not be a bad thing, especially for those who seek less interaction; "using self-service technologies, customers can access services when and where they want without some of the complications of interpersonal exchanges," (Bitner, Brown and Meuter, 2000:141). Self-service technology is an enabler for customers, and gives them the control, flexibility and customisation which they have come to expect (Rostworoski, 2012). Customers also do not like rigid rules; they want services that can accommodate their specific needs. If SSTs have the functionality to fulfil those needs, then they will most likely be the first choice for those seeking depersonalised services.

The ability to adapt in real-time is a distinct advantage for service providers; this characteristic is also referred to as 'personalisation' (Surprenant and Solomon, 1987). Technology can play a crucial role in service customisation if it is handled correctly. If self-service technologies can offer choices catering to customers' specific needs, then perhaps SSTs are not as depersonalising as originally thought. In the past, human service providers had an advantage over technological alternatives because of a human's ability to think and adapt in real-time, but as technology improves and services become more customisable, the advantage of human service contact is diminishing. More options are now available because of technology, and this is evident in the different ways which terminals can be navigated (Adderley, 2012; Nijhuis, 2012), and the ways which baggage can be checked-in (Qantas, n.d.; Rostworoski, 2012). The ability to customise is one of the key advantages of technology implementation within services; this flexibility in the delivery of services is described as one "of the most important quality gains technology produces" (Quinn, 1996:74).

Service design can be a complicated process; service designers are often faced with the dilemma of choosing between efficiency and personalisation (Surprenant and Solomon, 1987). Customers often face a similar problem. They want to be treated personally and uniquely but do not want efficiency and predictability to be sacrificed for personalisation. Traditionally, 'good service' has often been viewed as being personalised service, which in the past has led to competition between companies to be the friendliest (Surprenant and

Solomon, 1987). Firms tend to agree that personalised service is something that customers want, but there is debate about what personalised service actually is. Broadly speaking, 'personalised service' refers to any behaviours within a service interaction which is aimed towards individualisation of the customer. Personalised service generally includes smiling, eye contact and a friendly greeting. Sometimes it means customising the base service to suit an individual customer's wants or needs, and often it can mean taking an interest in the customer and making small talk (Surprenant and Solomon, 1987). It seems that for a service provider to be fully personable they need to be enthusiastic, able to hold a conversation and able to deal with situations unique to individual customers.

The service encounter is crucial in personifying the entire supply chain, which is a large responsibility for the person conducting the service (Surprenant and Solomon, 1987). Because the service provider is the entire service in the eye of the customer, slight changes in the delivery of the service can have multiplied effects over the entire supply chain. Changes in personalisation can affect perceptions of the institution and the service as a whole (Surprenant and Solomon, 1987). For example, a bad experience at check-in can influence a passenger's entire perception of an airline, and even the aviation industry as a whole. However, influence of the supply chain comes back to how important personalised service is. When understanding the effects of supply chain delivery, it is important to gauge how significant personification is for customers. Satisfaction is defined as a function of the discrepancy between expectation and performance (Churchill and Surprenant, 1982). A customer's expectation is heavily tied to how they perceive the business, so depending on those perceptions, satisfaction can be high or low.

3. Methods

The foundations of this research are based around an aim and objectives. The aim acts as the primary goal of the research, while the objectives assist in breaking down and achieving the aim. The research method has been developed with these goals in mind. For this research, the aim is:

- Establish passengers' perceptions of depersonalisation of the airport experience.

This aim is aimed towards filling the knowledge gap presented in the literature review – how passengers feel about airport depersonalisation. By tailoring a study towards passenger perceptions of airport depersonalisation, it is hoped that a significant contribution towards airport and self-service theory can be made. The overall aim of the research is broad and encompassing, but will be made more achievable with the following supporting objectives:

- Understand how passengers have perceived the depersonalisation of airport services.
- Establish the effects that personal experiences of airport services have on passengers.
- Find out the negative effects of depersonalisation, and analyse how these may be mitigated.

A survey has been selected as the method of data collection, as it can provide clear answers in a reasonably short space of time (Coomber, 1997). Also, the internet has allowed for surveys to be distributed internationally, reaching a wide respondent base with little costs involved (Coomber, 1997). The survey was based on quantitative methods in order to allow for easily distinguishable and comparable answers. However, some questions were qualitative in order to take advantage of a mixed methods approach (Johnson and Onwuegbuzie, 2004). This will allow for some comparative data which can be easily understood and utilised, while also providing some personal insights which can give reasoning and explanations to the rest of the data. By incorporating personal, open answers within the data, it is also possible that respondents will raise issues not addressed in the survey design (Johnson and Onwuegbuzie, 2004), allowing a more complete capture of passenger perceptions. The survey questions generally include asking passengers what

they value throughout different elements of the airport experience, and how depersonalisation affects them and the choices they make (see appendix A). Throughout the survey construction it was a goal to build a survey which was short enough to ensure a high response rate, while being detailed enough to gain some valuable results.

Throughout the course of the literature review, it became clear what the questions should focus on, and the format that the questions should take. A table was used in the survey construction process, which allowed for the brainstorming of questions and referencing of key information (see chart 3.1). The analysis of literature brought forward several different issues and themes which were included within the final survey design (appendix A). With check-in and security being two elements of the airport experience which have undergone large depersonalising changes in recent years (Chang and Yang, 2008; Nijhuis, 2012), it was deemed important to ask for passenger perceptions of dealing with staff members and also dealing with technology. Participants were asked to rate both human and self-service check-in and security by giving five aspects of each a rating out of five; these qualities include: timeliness of service, friendliness, being treated as an individual, privacy and the ability to process the passenger's request correctly. By following the same formula when asking those questions, it becomes easy to compare how well each element is perceived. In addition to those particular questions, participants were asked how much they personally value those five aforementioned qualities, in order to gauge how significant each quality is when making comparisons between human and self-service elements.

Participants of the survey were also asked how they would prefer their baggage to be checked-in, their interest in using mobile phones with airport technology, and how they prefer to navigate airport terminals. These were also done using quantitative measurement, as can be seen on appendix 2. A couple of qualitative questions were also included, however. By asking participants how they have witnessed airport depersonalisation, it can be examined how technology has changed airports the most in the eyes of passengers. Another open-ended question involved asking participants whether they prefer paying for parking at a kiosk or to a staff member upon leaving the airport. By including an open-ended question about kiosk use, a clearer understanding of the answers given in the other questions should also be gained. Finally, participants were asked for their

age group and nationality, to see if there are correlations between demographics and types of responses.

It was decided that the survey be an online survey due to the ease and convenience of gathering and processing the data (Coomber, 1997). Respondents were able to take the survey in their own time, and surveys were be able to be distributed much quicker than if done in-person on-site. The survey tool Qualtrics was used for creation of the survey, and the survey was then distributed online through social media sites, including Facebook and Reddit. The disadvantage to using this method is that there is an age distribution bias among the participants. As younger people, primarily in the 18-30 age group, are the dominant users of technology and social media (Correa, Hinsley and De Zuniga, 2010; Prensky, 2001), a disproportionate amount of the respondents were young. It was estimated during the survey planning process that this would occur, but because the research had to be entirely completed within just four months, distributing the survey online meant that there was more time to do background research and write up the report. However, despite being disproportionate, an acceptable amount of responses were still collected from the other age groups to make some relevant conclusions. There are other limitations; in a study with a heavy focus on technology use, all of the respondents will already know how to use a computer if they are to complete the survey. Therefore, the perceptions of passengers who do not know how to operate computer technology are not being gathered; this is an issue which could be addressed in a further study, and is significant to gaining a complete understanding of passenger perceptions. Furthermore, because the survey distribution became trapped within particular social circles, there is an over-representation of certain nationalities such as New Zealand, American and Canadian, and an over-representation of students compared to other occupations.

Qualtrics was also used to collect and collate the data. Quantitative data was automatically processed into tables, also available for cross-tabulation and comparisons between variables. Qualitative data was collected in a list format, making it easier to inform answers. A pilot test was conducted, consisting of several trial runs and approximately 10 responses in order to determine whether the survey questions were understandable and if the data was being collected correctly by Qualtrics. After the pilot test was satisfactory, the survey was distributed to a public audience online via social media channels. The survey was online

from December 4th 2013 to January 27th 2014, but the majority of the responses came within the first few days as the survey was spread quickly around social circles. The response rate slowed after that as most potential respondents who were exposed to the survey had already taken it. However, the goal number of responses for this study was 100, so to end up with 155 complete responses constitutes a success. In addition to the completed responses, there were 56 uncompleted responses, giving a completion rate of 73%. Nevertheless, any answers given within incomplete responses are still valuable for this research and are incorporated within the results.

Something to consider when viewing the results is that participants were free to exit the survey at any time, and therefore the questions earlier in the survey may have higher response rates than those later in the survey. Comparisons and conclusions will be made based on proportions rather than frequencies in order not to have bias within the results. The results gathered from the survey process will be clearly outlined in the following results section.

Chart 3.1: Survey Planning Table				
Research Question	**Objectives**	**Survey Questions**	**Assumptions/Notes**	**Informing Literature**
What are passengers' perceptions of depersonalisation of the airport experience?	Gain a holistic view of how passengers perceive airport depersonalisation.	The survey questions will be aimed at answering the smaller, secondary research questions.	There is a research gap in regards to this research question.	Chang and Yang (2008), Rostworowski (2012)
How have passengers perceived the depersonalisation of airport services?	Establish how passengers feel about airport services being depersonalised, and how depersonalisation has changed the airport experience.	• To what level has your airport experience become depersonalised for you?... • When using self-service check-in kiosks, how would you rate the following?... • When checking-in with a human customer service agent, how would you rate the following?... • When using self-service passport scanning kiosks, how would you rate the following?... • When being processed by a human customs officer, how would you rate the following?... • When using an automated parking kiosk, how would you rate the following?... • When exiting an airport carpark by paying a toll to a human parking officer, how would you rate the following? • How important is it to be able to use your mobile phone to assist with the following?... • How would you prefer to find your way through an airport terminal?	Passengers spend a significant amount of time checking in, especially during peak hours (Chang and Yang, 2008). Passengers appreciate self-service facilities, including baggage check-in. Security is often seen as an unwelcome interruption or an invasion of privacy (Nijhuis, 2012). Consumers expect self-service. Advance check-in through the internet, and self-tagging baggage and common bag drops are growing in numbers (Rostworoski, 2012). Customers expect and demand flexibility and customization in service encounters (Bitner, et al., 2000). Passengers want to be treated personally and uniquely but do not want efficiency and predictability to be sacrificed for personalisation (Surprenant & Solomon, 1987).	Chang and Yang (2008); Nijhuis (2012); Rostworoski (2012); Bitner, et al. (2000); Surprenant & Solomon (1987)
What effects do personal experiences of airport services have on passengers?	Find out if there is a relationship between personal experience and perceptions of depersonalisation.	• Does technologised security make you feel safer than in the past?	American and European passengers are more likely to use self-service kiosks. Some passengers are afraid of change (Chang and Yang, 2008). Airports are the first and last point of contact for a tourist on a flying holiday. Therefore, airport infrastructure can heavily affect perceptions of service quality (Rendeiro Martín-Cejas, 2006). Early adopters of technology have more years of formal education than later adopters, but there do not seem to be any links between age and technology adoption (Rogers, 2010).	Chang and Yang (2008); Rendeiro Martín-Cejas (2006); Nijhuis (2012); Rogers (2010)
What are the negative effects of depersonalisation, and how may these be mitigated?	Identify any negative effects of depersonalisation, and theorise how those negative effects can be mitigated.	• How important do you think it is that airport facilities have the following qualities?	Integrating technology with human contact can lead to error. Improvements needed in inter-organisational management systems for kiosks (Chang and Yang, 2008). Customers will only use self-service technologies if they perceive an advantage in using it (Meuter, et al., 2003). The use of technology also raises issues of privacy (Bitner, et al., 2000).	Chang and Yang (2008); Meuter, et al. (2003); Bitner, et al. (2000)

4. Results

The purpose of this chapter is to outline the results of the survey and present them in a way which allows for easy interpretation and comparison. The results will be presented in a similar order in which the corresponding questions appeared in the survey, and will also be accompanied by a written description outlining key findings. Furthermore, the results will be shown as overall results, but will also be broken down by age group in order to investigate whether there is any relationship between age and perceptions of airport depersonalisation.

The first question which participants were asked in the survey was "Have you noticed your airport experiences becoming depersonalised?" This question was open-ended, and therefore difficult to report the entirety of the answers; but this was asked in order to understand how passengers feel, and what their interpretations are without the influence of other questions. Some respondents had negative feelings when asked to describe if they have noticed airport depersonalisation:

- "It is hard to find someone to help with a problem that may arrise (sic), or someone to ask a question to."
- "Gate agents have no idea what they're doing anymore and if you don't know how to use the kiosk you're s*** out of luck. that's definitely not how it used to work (sic)"
- "I feel like I am in a flock of sheep with no idea where I am going."

These particular respondents feel a lack of direction caused by depersonalisation within an airport terminal. The implementation of technology and self-service has meant that passengers have been given a sense of control, but without being given a tutorial on how to use the technology. For these particular passengers, it is clear that extra human assistance needs to be made available throughout the airport.

Some respondents reported the nature of airport depersonalisation without expressing obvious positive or negative feelings:

- "A lot more computers, less face-to-face interactions, automated tellers replacing real people."
- "I am able to collect my boarding pass from a kiosk or have it sent to my phone."

- "Most of my interactions getting on the plane are being done through machines (sic)"
- "Less contact with people is necessary at airports now than 5 years ago."

While these passengers had observed depersonalisation, they did not present their perceptions of it. This is understandable, as the question did not specify that respondents should convey their feelings, but this also gives an insight into the nature of their perceptions. When comparing these participants to those who gave positive or negative answers towards depersonalisation, there is a probability that these passengers are simply observers who proceed through the airport experience without feelings towards it.

Some respondents were positive about airport depersonalisation:

- "It seems depersonalised, but to be honest I prefer it that way."
- "Slightly, but also feel more efficient with the self-service check-ins. They seem to reduce the amount of people waiting in line."
- "Yes but that is a good thing"

Answers which were positive towards depersonalisation were generally quite short, and cited time efficiency as being a key attribute – giving further substance to claims that passengers prefer depersonalisation due to faster processing times (Chang and Yang, 2008; Nijhuis, 2012; Rostworoski, 2012).
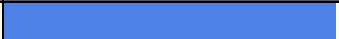
While others had not noticed airport depersonalisation taking place:

- "Not really, but this is because I do not use airports very often and because technology is so prevalent in society today that I am used to technological service."
- "Not yet, but I haven't flown for a few years."
- "I haven't been to an airport since 2007, so... no."

Most participants who had not noticed depersonalisation taking place responded by simply typing "no". But some of those participants said that they had not noticed depersonalisation because they had not been to an airport in recent years, also implying that airport depersonalisation is a recent phenomenon (Rostworoski, 2012). Most people however had noticed a difference, and most of what was described by participants revolved around self-service check-in kiosks. There were also some descriptions of changes in

security and attempting to navigate an airport terminal; showing that depersonalisation is something witnessed by passengers at different stages of the airport experience.

As shown by Table 1, the majority of participants were in the 18-30 age group. Because of the higher numbers in this age group, we can use the results from the 18-30 group with more confidence, but despite this, we can still gain valuable data from the older age groups. In order to investigate whether there is a relationship between age and perceptions of airport depersonalisation, age-related results will be presented alongside the general results. It is important to establish whether technologisation is perceived differently among different age groups, as airport users come in all ages.

Table 1: Age groups of survey participants			
Answer		Response	%
18-30		108	70
31-40		7	5
41-50		12	8
51-60		18	12
61-70		7	5
71-80		2	1
81+		1	1
Total		155	100

As for the other demographics of the participants, the nationalities of survey respondents were chiefly from New Zealand or North America, but there were also participants from across Europe and Asia. The most common occupation was student, but there were also participants from a wide range of employment backgrounds. It is clear that a drawback of using convenient online sampling is the potential for the survey distribution to be caught within specific social circles, but as previously mentioned, this is partially offset by the larger number of responses gathered, and the lower time and cost of resources needed to gather that data.

Table 2 shows the number and proportion of participants who have used self-service check-in before. 87% of participants have used self-service before; and those participants were then asked to review self-service check-in (Table 3).

Table 2: Have you used self-service check-in before?			Response	%
Yes			160	87%
No			24	13%
Total			184	100%

Out of a potential score from 1 to 5, timeliness of service was the best performing aspect of self-service check-in kiosks, with an average score of 4.10. The kiosks were also deemed capable of friendliness, privacy and the ability to process requests correctly, as these aspects were all in the 3-4 range, meaning that they are ranked between fair and good. The kiosks were rated 2.78 on their ability to treat customers as individuals, meaning that they perform below average when it comes to personalisation; however, this was to be expected as kiosks are depersonalising features of the airport experience (Chang and Yang, 2008).

Table 3: When using self-service check-in kiosks, how would you rate the following?						
	Very Poor	Poor	Fair	Good	Very Good	Mean
Queuing time / timeliness of service	1	5	25	61	52	4.10
Ability to process your request correctly	4	10	26	69	35	3.84
Privacy	2	23	44	56	19	3.47
Friendliness of the service	13	15	51	55	10	3.24
Treating you as an individual	23	33	46	36	6	2.78

Table 4 also displays perceptions of self-service check-in kiosks, but separates all of the age groups apart and displays the means given for each quality (see table 3 for the overall results). The results for several of the qualities fluctuate slightly between age groups and do not represent any significant difference between age groups. However, for being treated as an individual, older participants tend to rate this higher. People aged 50 and below are

more likely to feel that self-service check-in kiosks are not treating them as unique individuals. The table indicates that people aged 71-80 feel that the kiosks are extremely reliable.

Table 4: When using self-service check-in kiosks, how would you rate the following? *(age groups separated with means displayed)*							
	18-30	31-40	41-50	51-60	61-70	71-80	81+
Queuing time / timeliness of service	4.09	4.00	4.27	3.88	4.17	4.50	N/A
Friendliness of the service	3.26	3.29	2.82	3.12	3.17	4.00	N/A
Treating you as an individual	2.65	2.57	2.55	3.24	3.00	4.50	N/A
Privacy	3.45	3.71	3.45	3.65	3.33	3.50	N/A
Ability to process your request correctly	3.84	3.71	3.91	3.41	4.00	5.00	N/A

Participants were asked if they had ever checked-in with an airline customer service agent, the human alternative to a check-in kiosk (Table 5). 90% of passengers have checked-in with a customer service agent previously; the proportion of passengers who have used this more traditional method of checking-in is only 3% higher than those who have checked-in with kiosks.

Table 5: Have you checked-in with an airline customer service agent before?			
Answer		Response	%
Yes		151	90
No		17	10
Total		168	100

Those participants who had checked-in with a customer service agent previously were then asked to rate their experiences on the same scales used for the self-service kiosk question.

Table 6 shows how passengers rate checking-in with customer service agents. Human agents were deemed as being able to process requests correctly and also being friendly, as both of these qualities were rated higher than 4.00. Being treated as an individual and privacy were also rated well, with both being between 3.50 and 4.00. Timeliness of the service was low, rated at 2.76.

When compared to how self-service check-in kiosks are rated, some interesting comparisons can be made. The largest difference is in the queuing time/timeliness of service; kiosks were rated as 4.10, whereas customer service agents were rated as 2.76 – a difference of 1.34. In treating passengers as individuals, kiosks rate as 2.78 and service agents rate as 3.86 – a difference of 1.08 in favour of service agents. The service agents were also rated as being friendlier, more private and more able to process requests correctly.

Table 6: When checking-in with an airline customer service agent, how would you rate the following?						
	Very Poor	Poor	Fair	Good	Very Good	Mean
Ability to process your request correctly	0	2	12	70	66	4.33
Friendliness of the service	0	6	16	96	32	4.03
Treating you as an individual	1	7	36	74	32	3.86
Privacy	1	8	52	70	19	3.65
Queuing time / timeliness of service	14	45	58	29	4	2.76

Ratings for airline customer service agents are fairly similar across the different age groups. Ratings are generally higher amongst the 61-70 and the 71-80 age groups. From looking at Table 7 it appears that older people are fonder of airline customer service agents than younger people – with the exception of the one 81+ respondent.

Table 7: When checking-in with an airline customer service agent, how would you rate the following? *(age groups separated with means displayed)*							
	18-30	31-40	41-50	51-60	61-70	71-80	81+
Friendliness of the service	4.01	4.33	4.00	3.82	4.33	4.00	4.00
Ability to process your request correctly	4.29	4.50	4.33	4.24	4.83	5.00	4.00
Treating you as an individual	3.82	4.33	3.83	3.59	4.50	4.00	3.00
Privacy	3.62	3.50	3.50	3.65	4.33	3.50	3.00
Queuing time / timeliness of service	2.74	2.83	2.58	2.82	3.17	4.50	2.00

Table 8 shows the proportion of people who had used a self-service passport scanning kiosk (such as SmartGate) before. 63% of participants had used self-service passport scanning kiosks before; the proportions of those who have and have not used the passport kiosks before being much more equal that the check-in kiosks.

Table 8: Have you used a self-service passport scanning kiosk before?			
Answer		Response	%
Yes		105	63
No		62	37
Total		167	100

Those participants who had used passport scanning kiosks before were asked to rate the kiosks based on the same five qualities used in the check-in questions. Table 9 shows that passport scanning kiosks perform well in reducing queuing times, processing requests correctly and giving passengers privacy. Friendliness of the service and treating passengers as individuals were rated 'fair,' being close to a score of 3.

Table 9: When using self-service passport scanning kiosks, how would you rate the following?						
	Very Poor	Poor	Fair	Good	Very Good	Mean
Queuing time / timeliness of service	1	3	13	45	40	4.18
Ability to process your request correctly	6	5	19	41	31	3.84
Privacy	4	12	23	43	20	3.62
Friendliness of the service	9	18	38	29	8	3.09
Treating you as an individual	14	27	31	23	7	2.82

Table 10 shows that the results for self-service passport scanning kiosks do not appear to be significantly different across age groups, except that older people again feel that kiosks treat them as individuals more than younger people feel, and older respondents in particular also rate the kiosks' ability to perform their requests correctly very highly.

Table 10: When using self-service passport scanning kiosks, how would you rate the following? (age groups separated with means displayed)							
	18-30	31-40	41-50	51-60	61-70	71-80	81+
Queuing time / timeliness of service	4.17	4.60	4.50	3.93	3.80	4.50	N/A
Friendliness of the service	3.02	3.00	3.38	3.14	2.60	4.00	N/A
Treating you as an individual	2.61	3.00	2.88	3.21	3.40	4.00	N/A
Privacy	3.59	3.80	3.50	3.79	3.40	3.50	N/A
Ability to process your request correctly	3.85	3.80	3.50	3.57	4.20	5.00	N/A

87% of passengers have had their passports checked by a customs officer before (Table 11). Table 12 describes the feelings of those who have. Customs officers were rated as being very capable of processing requests correctly, and were then followed in order by privacy,

treating passengers as individuals, friendliness of the service, then lastly queuing
time/timeliness of service. Compared to self-service passport scanning kiosks, customs
officers outscore the kiosks in 3 out of the 5 aspects which participants were asked about.
The kiosks and officers were rated relatively similar however, as for 4 of the aspects, the
two were within a mean of 0.5. The most noticeable difference is in the queuing
time/timeliness of service; kiosks outscored customs agents by 1.44.

Table 11: Has your passport been checked by a customs officer before?			
Answer		Response	%
Yes		141	87
No		22	13
Total		163	100

Table 12: When being processed by a customs officer, how would you rate the following?						
	Very Poor	Poor	Fair	Good	Very Good	Mean
Ability to process your request correctly	0	2	15	78	43	4.17
Privacy	1	17	39	64	17	3.57
Treating you as an individual	11	26	30	61	10	3.24
Friendliness of the service	9	24	51	50	4	3.12
Queuing time / timeliness of service	20	37	47	27	7	2.74

Table 13 displays the ratings for customs officers across different age groups. The 18-30 age
group is particularly critical of customs officers, as on average they have given low scores for
all five qualities when compared to other age groups. Older people also tend to be more
patient with the queuing time, and also feel more so than younger groups that customs
officers are treating them individually and in a friendly manner.

Table 13: When being processed by a customs officer, how would you rate the following? *(age groups separated with means displayed)*							
	18-30	31-40	41-50	51-60	61-70	71-80	81+
Queuing time / timeliness of service	2.63	3.00	2.30	3.17	3.00	4.00	3.00
Friendliness of the service	2.89	3.50	3.40	3.61	3.83	4.50	4.00
Treating you as an individual	3.04	3.67	3.60	3.50	4.17	4.50	4.00
Privacy	3.51	4.17	3.70	3.67	3.67	4.00	3.00
Ability to process your request correctly	4.15	4.50	4.10	4.11	4.33	5.00	4.00

Although comparing ratings between kiosks and staff members give us an idea of which perform better in certain situations, this analysis is incomplete without knowing how important each rated aspect actually is to passengers. For example, airline customer service agents are regarded as being friendly, but the queuing time is long. How important both friendliness and timeliness are regarded will impact on how the overall service is perceived, and a passenger's chances of preferring a customer service agent over a self-service kiosk. Survey participants were asked to evaluate how important each element is to them, ranging from very important to very unimportant. Table 14 shows how the importance of each element was rated. For most passengers, it is absolutely essential that their requests are processed correctly. Timeliness of the service is also perceived as being very important. Privacy and friendliness are also ranked between 'important' and 'very important'. Being treated as an individual is rated the lowest, at 3.61. Interestingly, with timeliness being rated highly and individualism being the lowest rated, this could be a further sign that passengers prefer depersonalised elements of the airport experience, as long as it caters to the most important elements outlined in the table below.

An interesting consideration is that passengers could perceive depersonalisation differently across different airport services. Upon analysis of the importance placed on these qualities, there does not appear to be any significant difference between perceptions of self-service check-in and self-service passport control, as they are all approximately similar on each

quality. The same can be said for differences between in-person check-in and passport control. Therefore, perceptions of depersonalisation do not change between these two different types of airport services.

Table 14: How important do you think it is that airport facilities have the following qualities? *(numbers in brackets indicate value of importance)*						
	Very Unimportant (1)	Unimportant (2)	Neither Important nor Unimportant (3)	Important (4)	Very Important (5)	Mean
Ability to process your request correctly	1	0	0	21	136	4.84
Queuing time / timeliness of service	2	1	5	44	106	4.59
Privacy	2	3	20	66	67	4.22
Friendliness of the service	2	4	18	85	49	4.11
Treating you as an individual	8	17	43	51	39	3.61

Table 15 looks at how much each age group values different elements of the airport experience. Noticeable differences include people aged 60 and under placing higher value on queuing time and timeliness of service than their aged 61 and over counterparts. For people aged 40 and under, personalised service does not appear to be as important as it is for people aged 41 and over. Privacy is very important for most respondents, but as the age range moves past 60, privacy becomes less and less important.

Table 15: How important do you think it is that airport facilities have the following qualities? *(age groups separated with means displayed)*							
	18-30	31-40	41-50	51-60	61-70	71-80	81+
Queuing time / timeliness of service	4.67	4.43	4.67	4.67	4.00	4.00	4.00
Friendliness of the service	4.12	3.71	4.50	4.22	3.71	4.50	4.00
Treating you as an individual	3.46	3.43	4.33	4.17	4.14	4.50	3.00
Privacy	4.21	4.43	4.42	4.39	4.14	3.50	3.00
Ability to process your request correctly	4.86	4.86	4.83	4.89	4.43	4.50	5.00

The following questions of the survey followed a different format, and were not directly linked like the previously ones. Instead, these questions aim to get direct answers on how passengers prefer their airport experience to be constructed. Table 16 outlines the answers given when passengers were asked how they would prefer their baggage to be checked in. The three methods presented vary in their level of depersonalisation. Checking-in baggage with airline staff is the traditional, personal way to check-in. Printing off baggage tags at a self-service kiosk then dropping the bags off at a bag drop is a shift towards depersonalisation, and is currently being implemented in airports worldwide at a rapid rate (Rostworoski, 2012). The electronic bag tag is the same concept as the aforementioned Q Bag Tag from Qantas; this method is the most depersonalised, and in Qantas' case, it is currently available in all major domestic airports in Australia (Qantas, n.d.). Because this is an airline initiative, the list of airport's which offer this service is often at the airline's discretion (Qantas, n.d.). 46% of respondents prefer to check-in their baggage in person with airline staff. 36% prefer printing off bag tags themselves, while 18% prefer using electronic bag tags.

Table 16: How would you prefer your baggage to be checked-in?			
Answer		Response	%
At a check-in counter with airline staff.		72	46
Printing off a bag tag at a self-service kiosk, and dropping off your baggage at a bag drop counter.		57	36
An electronic bag tag fixed to your baggage, which contains your passenger details much like a barcode would.		29	18
Total		158	100

Graph 17 shows the proportion of answers within each age group when respondents are asked how they would prefer their baggage to be checked-in. For three age groups (18-30, 51-60, 61-70), the highest proportion is in favour of checking-in baggage at a check-in counter with airline staff. For two further age groups (41-50, 71-80), this proportion is equal with printing off baggage tags at kiosks. Other notable results on the graph include a high proportion of 31-40s choosing to check-in their baggage by printing off baggage tags and then dropping their luggage off at a bag drop counter; and the sole 81+ respondent preferring electronic bag tags as a method of checking-in baggage.

Graph 17: How would you prefer your baggage to be checked-in? (percentage within age groups)

Table 18 shows the proportion of survey participants who have used an automated parking payment kiosk before. These have been largely implemented worldwide, but are of particular interest to this study due to the criticisms of parking kiosks at Dunedin Airport (R. Roberts, personal communication, 5th November, 2013). Those who have were then asked whether they prefer the kiosks or paying a parking officer when leaving the carpark, and also the reasons for their preference. This question was open-ended in order to further gauge how individual passengers respond to both kiosks and staff members. Most answers indicate a preference towards parking kiosks. These answers include:

- "Kiosks. It is generally faster and easier as there is generally only a few parking officers working at a time resulting in queues when a plane has just landed. Now days with eftpos facilities it is even easier (sic)"
- "Kiosk. Faster, less chance of human error."
- "Kiosks - faster and easier"
- "The kiosk because it's fast and efficient, plus it decreases stress when people want to get home and it's healthier for the employees (don't have to breath in Carbon Monoxide) (sic)"
- "Kiosk. It is mindless, inhuman work. No person should have to do that job."
- "Kiosk - very simple and quick."

Almost all of the answers choosing kiosks cite time efficiency as a reason for preferring them. Interestingly, some respondents also have a concern over a staff member doing the job, as it is mundane work and they risk prolonged exposure to carbon monoxide. On the other hand, some passengers do prefer paying a toll to a parking officer. Such responses include:

- "A parking officer, because they have more tendency to be lenient with the amount of time that you have to pay for. If you are 1 minute or 30 seconds into the next paying bracket, they are more likely to not charge you for the full half hour."
- "Pay a person - technology makes me nervous"
- "Paying a toll to a person - at least they can say thank you to you for using their services"
- "Toll officer at the carpark exit - the machines always get it wrong"

Reasons why some people prefer to pay a toll officer instead of a kiosk include toll officers being more personable and flexible when it comes to payment. Also, the kiosks are viewed by some as being unreliable, which is a leading cause of technology anxiety amongst passengers (Meuter, et al., 2003).

Table 18: Have you ever used an automated parking payment kiosk?			
Answer		Response	%
Yes		113	72
No		45	28
Total		158	100

Moving onto security, participants were asked if technologised security makes them feel safer within an airport environment. Table 19 shows that on average, people feel slightly safer, as the mean is 3.22 out of 5 (with 3 being the median on a scale from 1 to 5). Overall, implementation of security technology in airports is making people feel safer, but only minimally.

Table 19: Does technologised security make you feel safer than in the past?			
Answer		Response	%
Much Less Safe		3	2
Less Safe		19	12
Neither Safer nor Less Safe		80	52
Safer		47	30
Much Safer		6	4
Total		155	100

Table 20 details how each age group answered when asked whether technologised security makes them feel safer than in the past. The results are displayed as means, with 1 being 'much less safe,' 5 being 'much safer,' and 3 being neutral. All age groups except 61-70

answered within the 3-3.5 range, implying that each age group either feels neither less safe nor safer, or slightly safer with the addition of security technology. The 61-70 age group answered 2.43, meaning that they feel slightly less safe with the addition of security technology.

Table 20: Does technologised security make you feel safer than in the past? *(age groups separated into means)*						
18-30	31-40	41-50	51-60	61-70	71-80	81+
3.28	3.00	3.08	3.33	2.43	3.50	3.00

Survey participants were also asked about their interest in integration between mobile phones and airports. Much like the previous question, the answers average out to be near the middle of the scale, at 3.12, showing only a minimal interest in mobile phone-airport integration. Table 21 shows that the answers are rather spread out across all possible answers.

Table 21: Are you interested in using mobile phone applications to speed up your airport experience, at the expense of human contact?			
Answer		Response	%
Very Uninterested		14	9%
Uninterested		40	26%
Neither Interested nor Uninterested		31	20%
Interested		53	34%
Very Interested		17	11%
Total		155	100%

Table 22 provides some interesting results surrounding mobile phone-airport integration. With 1 being not at all interested about integration and 5 being very interested, the level of interest peaks with the 31-40 age group, then declines as the age of participants increases,
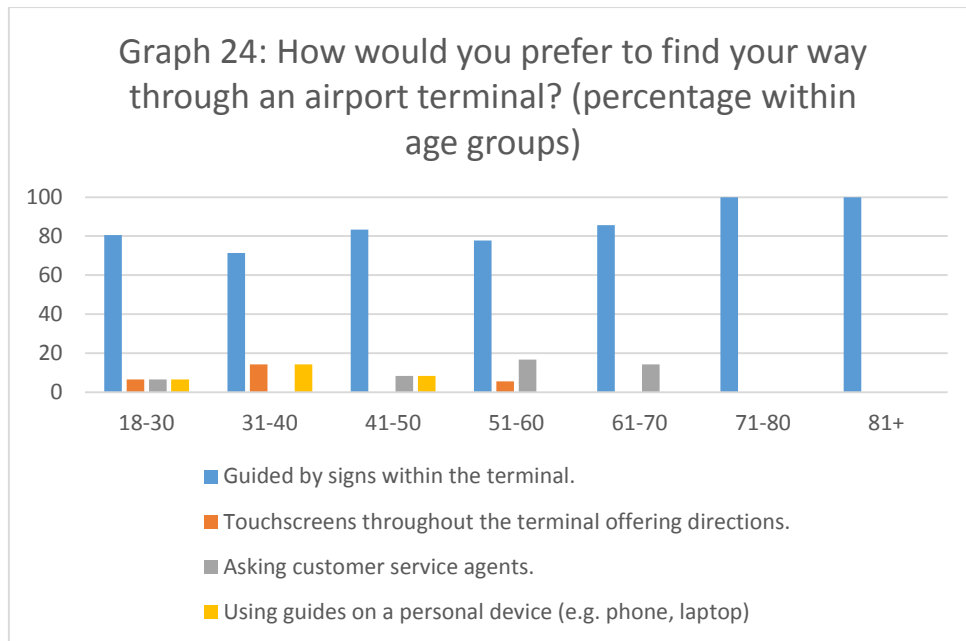
before levelling out at 2 with the 61-70 and 71-80 age groups. Again, the 81+ respondent breaks the trend slightly by giving an answer of 3.

Table 22: Are you interested in using mobile phone applications to speed up your airport experience, at the expense of human contact? *(age groups separated into means)*						
18-30	31-40	41-50	51-60	61-70	71-80	81+
3.31	3.71	2.75	2.61	2.00	2.00	3.00

Table 23 shows participant responses when asked how they would prefer to find their way through an airport terminal. Four different options of varying personalisation levels were offered, of which participants could choose one. An overwhelming majority, 81%, prefer to be guided by signs within an airport terminal as their primary method of navigation. Responses to the other three options are small in numbers, but the two technology options (using airport touchscreens or personal devices) were the two lowest ranked methods of terminal navigation.

Table 23: How would you prefer to find your way through an airport terminal?			
Answer		Response	%
Guided by signs within the terminal.		125	81%
Touchscreens throughout the terminal offering directions.		9	6%
Asking customer service agents.		12	8%
Using guides on a personal device (e.g. phone, laptop)		9	6%
Total		155	100%

Amongst all age groups there is a distinct preference to use static signs as the primary method of navigating airport terminals (Graph 24). A noticeable pattern is that the younger age groups are slightly open to the idea of using technology as a means of finding their way around, but this declines from the 51-60 age group onwards. Also, the 51-60 and 61-70 age groups are the most likely to ask customer service agents for directions.

Graph 24: How would you prefer to find your way through an airport terminal? (percentage within age groups)

Legend:
- Guided by signs within the terminal.
- Touchscreens throughout the terminal offering directions.
- Asking customer service agents.
- Using guides on a personal device (e.g. phone, laptop)

Participants were asked to briefly describe how they feel about the airport experience becoming depersonalised. This question was left open-ended in order to gain a personal opinion which would aim to sum up their results given previously throughout the survey. The different responses show several patterns; there appears to be a fairly even balance between positive, neutral and negative responses towards airport depersonalisation. Most of the answers which are positive about depersonalisation cite time efficiency as a key reason.

- "If it speeds up the process of getting to my flight then i prefer it. Being treated as an individual shouldnt be required if it is a machine (sic)."
- "It seems to speed things up which isn't a bad thing."
- "i love it, it makes for a quicker more efficient check in. passport control is a breeze makes international travel much quicker (sic)"

Some people are positive about depersonalisation because they prefer not to communicate with airport or airline staff. Some participants perceive airport staff to be stressed and undesirable to communicate with, whereas some passengers feel that they are too tired when travelling and cannot be bothered talking to others – preferring machines for that reason.

- "I like it. It allows me to proceed at my own pace without having contact with people."
- "I would rather deal with a machine than a person that is so stressed that she treats me terribly."
- "It's good. I don't want to have to talk to a whole lot of service people and usually means less lines"

Many of the neutral responses talk about the positive effect of time efficiency and the negative effect of less interaction balancing each other out.

- "Depersonalisation makes the experience less enjoyable, but more time-friendly."
- "It will decrease wait times and be more cost effective but technology can only do so much and it can't always help you/solve the problem."
- "it has its upsides and downsides. its faster but there are far more errors made (sic)"

Others who are neutral towards depersonalisation do not have feelings towards it because they see it as pointless to, since they cannot influence the direction that airports are taking. These particular passengers feel that it is easier to go with the flow and not think about it.

- "It's the way of the future... no strong opinions either way."
- "It's no worse than the rampant depersonalization afflicting most other areas of society."
- "I am not overly bothered by it. That's what is happening everywhere you go. Self-checkouts at the grocery store, kiosks for developing photos, kiosks for printing your own movie ticket. It's the way of the future."

A common feeling among those who gave a negative response towards depersonalisation was anxiety about technology being able to perform tasks as well as staff members. Among these passengers there is a noticeable lack of trust that kiosks can do the correct job. Some

also cited not trusting machines with their personal information because they do not know where it is going.

- "Because the information airlines require is very personal, I would rather have a real person handling it."
- "i cope but always scared it wont return my credit card but it does. we are just slow adopting to technology (sic)"
- "People may cost more than machines, but they are better able to provide a reliable service and quickly sort errors"

Others claim that personal service is necessary for those who cannot adequately operate kiosks; examples given include the elderly and wheelchair-bound.

- "It makes it a better experience. Although I do feel for the aging generation."
- "It's ridiculous! A computers not going to help you if you need assistance eg in a wheelchair or even the elderly who some have no idea about technology. Where are the days of great customer service (sic)"

Some participants simply claim that they want a personal touch when they travel – something much better achieved by interacting with staff members rather than kiosks.

- "Too many things are becoming less personal. You look forward to a friendly smile and a helping hand."
- "I think it would be very sad to loose human contact altogether as this is an important aspect of having this personal service and especially for tourists to experience the warm hospitality of NZers I think it is most important that we don't become totally automated. We still need the human face there."
- "I like to be able to speak with staff"

Overall, there have been multiple results presented throughout this chapter which all contribute to airport depersonalisation theory. It has been found that passengers value time efficiency and reliability to perform tasks as the most significant features an airport service could possess. Due to this, self-service kiosks outperform their human counterparts in both check-in and passport control. There are mixed reactions surrounding the preferred method of checking-in baggage and passenger feelings towards mobile phone-airport

integration, showing that currently there is not one method of service delivery that airports can use to keep the majority of their passengers satisfied. There were also mixed perceptions of safety regarding airport security in the present compared to the past, indicating that technologised security has made passengers feel safer, but only slightly. An aspect of the airport experience where traditional methods dominate passenger preference is terminal navigation, where a large majority of passengers prefer to be guided by static signs placed throughout the terminal. It was found that older passengers value personalised services more than younger passengers, and younger passengers place higher priority on time efficiency than their older counterparts. However, age does not seem to be a factor when determining whether a passenger is more likely to choose a kiosk over a staff member. A significant relationship appears between age and willingness to use mobile phone applications within an airport – older passengers are less inclined to use phones than younger people inside a terminal. All of these results will require further analysis if they are to enhance current understanding of airport depersonalisation, which will take place in the following chapter.

5: Discussion

The purpose of this chapter is to examine the results of the survey in further detail and consider them within an academic discussion. These results can be applied to issues raised in the literature review and use them to aid in filling the knowledge gap. Once this is done, it will give substance to the numbers presented and give the results practical application, which is the overarching motive of this research. Throughout this chapter, past research will again be analysed, but this time against the backdrop of the results of this study. The purpose of this is not to prove or disprove existing claims, but rather to see if those claims are relevant within the context of this study. Relevant claims can be added with new findings of this research to piece together a contribution to airport depersonalisation theory.

5.1: The Visibility of Airport Depersonalisation

The results chapter began by describing survey participants' open-ended answers when asked how they have noticed their airport experiences becoming depersonalised. From a literature perspective, airport depersonalisation generally has a positive tone. Rostworoski (2012) claims that self-service technologies and mobile phone integration are drastically changing airports for the better. Nijhuis (2012) focuses on the 'unwelcome interruption' of security, and the positives which self-service brings to the airport experience. These views may be a correct representation for some passengers, but many do not share the same sentiment when directly asked how their airport experiences are changing. Some passengers feel lost amongst all of the technology, while some feel 'left behind' because they have not learnt the self-service process as fast as airports have expected them to and customer service agents have been repositioned. Chang and Yang (2008) reflect upon the negative side of self-service check-in kiosk technology, but this does still not address the overall feelings of passengers. Rostworoski (2012) and Nijhuis' (2012) works appear to be promotionary of airport technologisation, and thus negative passenger sentiments are largely overlooked in previous research.

Some passengers were unaware of airport depersonalisation or simply did not care, as the depersonalised, technologised environment inside the airport does not differ greatly from

their lives outside it. For example, it was outlined in the results that some passengers notice depersonalisation, but the airport experience for them is depersonalising at the same rate as other experiences in their lives; therefore it is perceived as a form of societal depersonalisation rather than airport depersonalisation. This is an attitude which airport managers would prefer to see, as these passengers will be easily adapted to the new technology systems being implemented within airports as they are familiar with technology in their everyday lives, plus these particular passengers do not notice any negative effects of depersonalisation (Moutinho and Meidan, 1989).

Most of the answers which are descriptive of airport depersonalisation cite kiosks and less human interaction as two of the major changes to airports in recent times. The emphasis on kiosks is unsurprising; much of the past literature on airport depersonalisation has centred around self-service kiosks, also kiosks are very widespread (Lott, 2005) and have revolutionised the way that people check-in (Chang and Yang, 2008; Nijhuis, 2012; Rostworoski, 2012). This expected passenger emphasis on kiosks is also why a significant portion of the survey was dedicated to establishing passenger perceptions of both kiosk interaction and human interaction within an airport setting.

5.2: Perceptions of Kiosks

Before analysing the individual results of kiosks and human interaction in the check-in and security settings, it would be beneficial to analyse how important each quality is to passengers. Going back to the survey design, passengers were asked to rate kiosks and staff members based on the queuing time/timeliness of service, friendliness of the service, treating passengers as individuals, privacy and the ability to process requests correctly. As described in the results section, all five qualities were rated as being important, but interestingly, being treated as an individual was rated as being the least important quality out of the five. Furthermore, 'friendliness of the service' was rated as being the second-least important. These findings are very significant for this research, as even though 'being treated individually' and 'friendliness of the service' were still rated 3.61 and 4.11 respectively, the qualities which add personalisation to the airport experience are deemed as being the least important. In contrast, the most important quality to passengers is the ability for airport services to process passenger requests correctly, followed in second by

queuing time/timeliness of the service. For passengers, the most important things to them when in an airport is having things done right, and having them done quickly. The emphasis placed on time efficiency is also one of the fundamental reasons why airport depersonalisation is occurring in the first place (IATA, 2006). Rostworoski's (2012) claim that consumers are demanding self-service also looks to be holding validity within the context of this research. This falls in line with the supposed demand from passengers for airports to provide a more passenger focussed service that allows for personal control and ensures fairness (Independent Social Research, 2009). While passengers appear to be encouraging of the concept of depersonalisation, this does not mean that all depersonalised elements of the airport experience will necessarily be blanketed with positive reviews.

As realised through the results, one of the most frequent ways in which passengers have noticed airport depersonalisation taking place is through the implementation of self-service check-in kiosks. On the face of it, the reviews for checking-in with airline customer service agents appear to be higher than that of kiosks. Crucially, however, the lowest rated quality for agents is queuing time/timeliness of the service. Agents are perceived as being more capable than kiosks when processing requests, but the difference between agents and kiosks in the timeliness aspect is much larger and would likely result in the typical passenger choosing to check-in with a kiosk rather than an agent. This is reflected through the following opinions of survey participants:

- "It has dramatically sped up the process which used to take a long time e.g. queuing at check-in / customs. This positive result outweighs any impersonal effects. I don't feel airports need to be personalized to suit each individual person."
- "Like it (kiosks) if it is more time efficient."

It is important to remember that the other three qualities, including privacy, friendliness and being treated as an individual are not being disregarded, but they do carry less weight in comparisons such as these because they are not as highly regarded as the other qualities.

The self-service passport kiosk is a more recent initiative than its check-in counterpart (Nijhuis, 2012; New Zealand Customs Service, 2012), and this is reflected in the usage statistics. 63% of passengers had used passport kiosks previously, compared to an 87% usage rate for check-in kiosks. The comparisons between the passport kiosks and customs

officers in this case are similar to those between check-in kiosks and customer service agents. The queuing time/timeliness of service rating is heavily in favour of the passport kiosks, and while the ability to process requests correctly is in favour of the customs officers, the difference is not as large. Although customs officers are perceived as also being more capable of treating passengers as individuals, the difference between the two in this regard is unlikely to sway the average passenger towards using a customs officer over a passport kiosk. The trend among usage rates of passport kiosks in Australia and New Zealand reflects this preference and shows widespread growth, especially as passengers new to the concept become more familiar with it (Australian Customs and Border Protection Service, 2013).

The results for the question asking participants to choose their preferred method of checking-in baggage do not necessarily reflect what is written in existing literature. Nijhuis (2012) and Rostworoski (2012) both discuss passengers appreciating self-service baggage check-in options, and say that usage of these options is growing. It should be noted that self-baggage check-in is still being implemented in many airports, and therefore it is likely that not all participants have had the chance to use them, and indeed, usage of these options appears to be growing; however, when presented with all three options in the survey, 46% of participants still indicated that they would prefer to check-in their baggage the traditional way. Because the other two methods (printing off bag tags at kiosks and using electronic bag tags) are considered to be depersonalised, 54% of people prefer using depersonalised methods of checking-in baggage. Perhaps as depersonalised methods of baggage check-in will be implemented further and passengers become more comfortable with the concept, more people will begin to prefer these methods. If Rostworoski's 80/20 rule is to be upheld, stating that airlines should aim to have at least 80% of passengers choosing self-service check-in and baggage methods, then airlines will need to convince approximately another 26% of passengers before this goal is to be achieved. As mentioned earlier, possible options for airlines when attempting to entice passengers to use self-service options could include offering 'kiosk benefits' such as seat-selection privileges or airport discounts (Chang and Yang, 2008).

5.3: Attitudes towards Parking Payment Kiosks

Of the 72% of respondents who had used an automated parking payment kiosk before, most responded positively towards using them. This is an interesting observation, considering that Dunedin Airport has had a significant issue recently with passengers being negative towards the kiosks (Lovelock, 2013). The primary reason for survey participants preferring kiosks is time efficiency, which is unsurprising given how important timeliness was rated earlier in the survey. The main negative feelings surrounding kiosks begin with a lack of trust in technology. Much of this distrust can be attributed to a lack of familiarity with the kiosks, earlier referred to as technology anxiety (Meuter, et al., 2003). TA is also prevalent within the answers of survey respondents:

- "Airports can be intimidating, and I like having a lot of human contact to guide me through the experience so that I know I am doing the right things."
- "I prefer a parking officer (over a kiosk) because if there is an issue it is more easily sorted out with a person than a machine."
- "I prefer paying the officer (instead of a parking payment kiosk) because he can't "eat" my change like machines can"

Technology anxiety is a deep rooted feature within society, as it has been common since the inception of ATM use in the 1960's (Meuter, et al., 2003). The previously mentioned 'kiosk benefits' could potentially aid in decreasing technology anxiety among passengers, but deep-rooted societal aspects could be tough for the aviation industry to conquer, as forcing passengers to use kiosks would likely cause widespread dissatisfaction – the exact scenario which has caused Dunedin Airport problems. Issues such as leniency and conversation cannot be solved with technology, as kiosks are emotionless and are not programmed to handle requests on a case-by-case basis. It will be a difficult task for airport and airline managers to establish the most effective way to take the positives of human interaction and implement them with the self-service process.

5.4: Feelings of Safety

With the nature of airport security changing drastically in recent years due to the implementation of self-service passport kiosks and modern passenger scanning systems,

such as Schipol's 'security scan' (Nijhuis, 2012) there is always the possibility that perceptions of airport security are changing, whether for better or for worse. In this study however there was only a small change in perception, with passengers feeling slightly safer overall. This could be because security threats are potentially perceived as advancing at the same rate as airport security – a theory which could be examined in a further study. Interestingly, much of the literature on advancements in airport security talks about the customer-friendly aspect rather than the security aspect (Australian Customs and Border Protection Service, 2013; New Zealand Customs Service, 2012; Nijhuis, 2012). Therefore in the literature, personalisation appears to be considered more often than security, which prompts us to consider if personalisation is forefront in passengers' minds as well. If this is the case, then this could potentially be another reason why there has been no significant change in the perception of safety within the airport environment.

5.5: Mobile Phone – Airport Integration

The level of interest in integrating mobile phones with the airport experience at the expense of human contact was close to neutral, although slightly in favour of using phones. However, as shown by Table 13 in the results section, 45% of passengers are either interested or very interested in this kind of experience. It should also be mentioned that those passengers not interested may still be interested in mobile phone-airport integration as long as it is not at the expense of human contact. The statistics of mobile phone-airport integration do indeed show that there is a growth, including a rise in the use of apps, online sales, mobile check-in and quick response codes (Adderley, 2012; Rostworoski, 2012; SITA and Airline Business Magazine, 2011). What the survey results show is a fairly even distribution of willingness of passengers to use mobile phones in a depersonalising manner. Some survey participants chose to comment on their relationship with mobile phone-airport integration, again with a variety of responses, including:

- "It (depersonalisation) has limited effect on me; perhaps it would have more if I owned a smartphone."
- "People need to take a minute to stop looking at their phones (and other technologies) and actually enjoy the physical experiences happening around them!!!"

- "I am able to collect my boarding pass from a kiosk or have it sent to my phone."
- "I like using my AirNZ phone app to check in if I do not have any bags, and use it to make sure my flight is departing on time."

Sourcing information or purchasing tickets on a mobile phone is no more depersonalising than using a personal computer, so this type of phone integration could potentially be open to a wider consumer base. Elements such as mobile check-in and looking up terminal maps while inside the airport instead of asking for assistance are depersonalising, and would therefore be unlikely to be used by the 35% of passengers (see Table 13) who say that they are uninterested or very uninterested in mobile phone-airport integration at the expense of human contact. Depending on their target market, airports and airlines will need to be aware of the level of depersonalisation involved in their mobile phone-related products.

5.6: Airport Terminal Navigation

The overwhelming majority of survey participants who prefer to move through an airport terminal guided by static signs rather than any other form of navigation suggests several things. This could mean that passengers currently have no problem being guided by static signs, so they see no reason to change. It could also mean that passengers prefer to be left to find their own way if they can manage it, as only 8% of respondents prefer human assistance. The technology options, including touchscreens and personal devices also scored very lowly, meaning that digital terminal maps may not be in high demand. As popular as some airport mobile applications have been (Adderley, 2012), a map is generally only one part of them; these results suggest that most of the demand for airport apps is not due to any terminal maps which feature within it. Another point highlighted by these results is that even though the technologised elements received low scores, depersonalisation still scored high, as being guided by static signs involves zero human interaction. These results imply that 81% of passengers will navigate their way through an airport terminal using only static signs if possible, avoiding interaction with customer service agents altogether. Static signs are as old as terminals themselves, but this traditional method of terminal navigation still does nothing to add personalisation to the airport experience.

5.7: Technologisation and Depersonalisation

By analysing the results surrounding passenger preference, it is apparent that technologisation and depersonalisation are not as related as first thought. It was established earlier that the rise of technologisation within airports has increased depersonalisation, but in terms of passenger preference, technologisation and depersonalisation are independent of each other. Many passengers appear willing to avoid further airport technologisation while still valuing depersonalising elements of the airport experience. For example, passengers generally prefer to use kiosks due to time efficiency, but many also tend to shy away from technology when it comes to checking-in baggage, using mobile phones within an airport, or navigating an airport terminal. Passengers will proceed through an airport on a step-by-step basis, and if they do not perceive a benefit in technology, they will not use it (Chang and Yang, 2008).

Technology's role in airport depersonalisation is incidental; it is not necessary for technology and depersonalisation to increase at the same rate, just as passengers do not perceive them in the same way. Existing services can be altered to be more or less depersonalising, and new technology can be implemented without increasing or decreasing depersonalisation. To reiterate what Sykes (1991) has said: automation can "change the nature of the contact rather than reducing it". However the current reality means that, Bitner, Brown and Meuter's (2000) theory of technology storing data, making personal communication more effective does not hold up in the context of this study. In the year 2000, self-service technologies were not widespread within the airport environment – indeed, during that time technology would have improved personal communication, but perhaps Bitner, Brown and Meuter did not foresee the effect that SSTs would have.

Making matters more complicated, individual passengers' feelings for depersonalisation are not consistent across different elements of the airport experience. In order to keep passengers as satisfied as possible, there needs to be a fine balance of both technologisation and depersonalisation which varies as passengers proceed through an airport terminal. As noted in the results, some passengers prefer traditional elements of the airport experience, while some are fast adopters of technology. From the results of the survey, radical technological investment in terminal navigation, such as Schipol's dynamic

lighting system, does not seem necessary. There is also not a strong overall demand for mobile applications, despite the success of airports such as Heathrow in this regard (Adderley, 2012). It is important to consider all passengers however, as there is also a market share of passengers who do seek further technological implementation, as shown by those respondents who said that they are interested in mobile phone-airport integration, and those who prefer to check-in baggage using electronic bag tags (see Table 16). Considering all of these factors and obligations, it will be up to airport and airline managers to produce services which appeal to their diverse passenger base. Should they find an appropriate balance of depersonalisation, then enhanced passenger satisfaction will likely follow.

5.8: Age and Depersonalisation

Something else which was not covered within the literature is the impact that age has on perceptions of airport depersonalisation. Separating the results based on age group allows us to determine whether there is a relationship between age and perception. Also, this method will allow us to see whether older people struggle with depersonalisation more than younger people. It should be reiterated however, that since the survey was only taken online all respondents must have had access to a computer and most likely have had some former experience with operating computer technology.

When comparing kiosks to customer service agents and customs officers, there do not appear to be many differences between age groups that could indicate an obvious relationship between age and perception of depersonalisation. The results showing that people aged 40 and under tend to care less about individualisation and more about timeliness of the service mean that depersonalised options such as kiosks will naturally be a much easier idea to sell to younger people than those in the older age brackets. However, the older survey participants appear to be more generous with their ratings, as they still rate the self-service options higher than the younger respondents in several of the qualities. While there is some concern shown from passengers about older people not being able to access kiosks effectively, the ratings given do not provide sufficient evidence to back-up these claims. However, because the older participants who participated in the survey had to have enough experience with computers to access the survey online, this could

potentially skew the results. A possible point for further improvement would be to design a study which incorporates the input of passengers who are not so technologically adept. The results of a study such as that would likely be more reliable when analysing relationships between age and attitudes towards depersonalisation.

When looking at the relationships between age and preferred method of baggage check-in, there are several interesting observations. Firstly, the idea of electronic bag tags does have some interest across most age groups despite not yet being widely implemented worldwide (Nijhuis, 2012). Secondly, the high proportion of 31-40 year olds who prefer to check-in their own baggage by printing off tags at a kiosk does not match the trend reflected across the other age groups – it is unknown why 31-40 year olds in particular prefer this method, and the literature relating to this study generally does not include any theories revolving around age. Also, the proportions of respondents across different age groups who prefer the use of electronic bag tags do not show any visible pattern. It seems that for airport planners, age is not an appropriate method of planning airport services for passengers, and demand should perhaps be judged on the overall findings (Table 14).

When breaking down the sense of safety that passengers feel after the implementation of advanced airport security technology, we can see that once more the changes between age groups are not linear, but rather they fluctuate. The 61-70 age group should be the group of most concern to airport planners, as this age bracket has the only mean below 3, at 2.43. However, there is also room for improvement in all age groups. Nijhuis (2012) outlined that security is seen as an invasion of privacy, and new technological measures have sought to counteract those feelings. It appears that these measures have only had a negative impact on the 61-70 age group when it comes to perceptions of safety. That same age group also rated timeliness of service as being 'important', so it is a possibility that for many of the passengers in this age bracket, the faster service that comes with technologised security is an acceptable offset for security that they perceive as being less safe than in the past. While the importance of timeliness across all age groups remains high, it is unlikely that there will be any issues of widespread dissatisfaction towards airport security. However, if airport managers and customs officials wish to make airport security satisfaction as high as possible, then perceptions of safety will play a significant role in that. As with other elements of the airport experience, passenger perceptions can potentially be changed

through educational methods, such as explanations of the security process via video or signage as passengers approach security measures. For example, this is used in Australia, where video screens display information to passengers as they proceed through the quarantine and immigration areas (Australian Department of Agriculture, 2013).

Interpreting a relationship between age groups and the level of interest in mobile phone-airport integration is more straightforward compared to the other age group results. Again with the exception of the one 81+ respondent, the level of interest peaks with the 31-40 age group, then diminishes as the age groups get older. We can make a couple of conclusions using these results; firstly, the 18-30 and 31-40 age groups contain the passengers who are generally the most interested in using mobile phones as a part of their airport experience. As the age level of passengers increases, they become less likely to be interested in mobile phone-airport integration. These findings indicate that airports and airlines will need to keep a simultaneous presentation of services available: through both mobile phones and traditional methods, so as not to alienate passengers, especially those aged 41 and over, who do not want mobile-phone integration replacing human contact. Furthermore, mobile phone services offered to passengers, such as smartphone applications and online bookings, should be tailored in a way which targets younger passengers as they are likely to be the predominant user base of these services. It is possible that the younger passengers are more in favour of mobile phone-airport integration because they have had more exposure to mobile phone technology in their everyday lives (Alleyne, 2011). As the younger passengers get older, and the older members of society become more accustomed to technology in everyday life, it is likely that there could be a shift which would see older passengers becoming more accustomed to the idea of mobile-phone integration.

An age group breakdown of passengers' preferred method of navigating an airport terminal reveals that in all age groups, the vast majority prefer to be guided by static signs throughout the terminal. However, some of the survey participants aged 60 and under indicated that they would prefer to use technological options such as touchscreens and personal devices. While most of the responses from people aged 61 and over showed a preference for static signs, the rest of the responses showed a preference towards asking customer service agents for directions. In other words, none of the survey participants aged 61 and over preferred technologised methods of terminal navigation. Although the younger

age groups are more open to technology as a means of navigation than older age groups, the dominance of static signs as a preference in the 18-30 and 31-40 age brackets means that there is not likely to be any shift from this in the foreseeable future. However, as passengers become more technologically adept, there could be a gradual shift towards depersonalised methods of navigation.

5.9: Overall Perceptions

Passengers' responses when asked for their overall feelings of airport depersonalisation tend to reiterate the need for balance. A spread of positive, neutral and negative responses indicate that a blanket approach is not going to work. Given the other survey results and supporting literature (Chang and Yang, 2008; IATA, 2006; Rostworoski, 2012), it is unsurprising that time efficiency is consistently cited by respondents as the major positive to come out of depersonalisation. Something which the literature did not cover was a passenger's self-consciousness of their own mood when dealing with airport staff. Highlighted within the results, some respondents said that they prefer using machines rather than communicating with airport staff because the respondents do not see themselves as desirable to talk to, due to the airport environment causing them to become fatigued and stressed. Another factor which was not discussed in the literature was a sense of sympathy among some passengers towards airport staff for having to carry out monotonous work and dealing with unpleasant passengers. This was also mentioned by participants within the context of parking gate attendants. For the first time in the field of this research, we are seeing passengers act in a manner which is not self-motivated. There is also a touch of irony that these interpersonal feelings are contributing to depersonalisation.

For some passengers who feel indifferent towards airport depersonalisation, they prefer not to think about depersonalisation because there is nothing they can do about it anyway, and thinking about it would only cause extra stress – something which passengers try to avoid in an environment they already perceive as being stressful enough. There is an interesting point raised when passengers say that they cannot do anything to change airport depersonalisation, because this is something which disputes some of the main literature on this topic. Rostworoski (2012) believes that the self-service revolution has been brought

about by consumer demand. The demand for airports to provide a more passenger focused service that allows for personal control has also supposedly been in response to consumer pressure (Independent Social Research, 2009).

Despite passenger control theoretically being a catalyst for change in the airport environment, some passengers feel that they have no control whatsoever (see page 48). Two individual respondents are quoted as saying that depersonalisation is simply "the way of the future". This could allude to one of two things: either some passengers are unaware of the control that they really do have, or passenger control within an airport terminal is merely perceived control. Airport terminals are heavily controlled environments, and passengers still have to proceed through the boarding process exactly how an airport and airline will allow. For example, passengers have to begin with check-in, and they have to be checked-in within a set time before departure. Passengers then have to proceed through security; even though passengers are often given the choice of whether to be processed by a kiosk or customs officer, both options are controlled by customs. Although a passenger acts as an operator of a passport kiosk, the extent of control stops there because for a passenger to proceed they have to meet the requirements set by customs. Indeed, it could be argued that passengers do have more control than in the past, as they now have more options (including kiosks and digital applications) and can operate those options themselves. Whether or not this could be described as 'passenger control' evidently varies, and is left open for further debate and acts as a potential direction for future research.

Many of the respondents who feel negatively about depersonalisation encounter technology anxiety, and thus TA among passengers is a major obstacle for airports and airlines wishing to further implement technology within the passenger's experience. Some passengers do not trust kiosks with their personal information as they do not know where the information will end up (Meuter, et al., 2003); however going back to the comparison ratings between kiosks and staff members, self-service passport kiosks were actually rated higher than customs officers in terms of privacy, whereas the privacy of check-in kiosks was only rated slightly lower than that of customer service agents. It seems that in general, technology is viewed as respecting privacy as much as staff members do, but among those who have technology anxiety the issue of privacy cannot be ignored. As shown by the survey results, the amount of TA cases amongst passengers is more than a mere few, and

therefore the issue should not be ignored by the aviation industry. Some form of kiosk education or advisory to let passengers know why the information they input is necessary and what happens to the information after the passenger has been processed could be a good starting point for reducing privacy-induced TA (Meuter, et al., 2003).

Airlines also need to address perceptions that kiosks are not accessible to wheelchair-bound or elderly travellers. Several survey respondents shared concerns over the ability of others to operate self-service technology (see page 49). Something not addressed in the literature are the physical obstacles of kiosks, such as the screen being too high for those in wheelchairs, or the screen being too small for those with frail hands. Furthermore, those passengers with minimal experience of technology may get extra stressed by having to operate technology in an already stressful check-in environment. Other negative perceptions given were because some passengers just want a human touch when they travel. These passengers will be the most difficult to convert to using self-service, and will likely require extra incentive to choose technology over human contact.

5.10: Conclusion

Overall, we can observe a generally positive attitude amongst passengers towards airport depersonalisation. The importance that passengers' have placed on timeliness of service and the ability to process requests correctly, combined with their perception that kiosks are fast and reliable means that passengers generally see an advantage in using self-service. In regards to most other airport services, there is such a mixture of passengers who prefer traditional or depersonalised methods that airports must invest in both types if they want to maintain high customer satisfaction. Approximately half of passengers still prefer checking-in their baggage at a check-in counter, and on average, passengers feel generally neutral towards mobile phone-airport integration. Passengers also feel approximately neutral when it comes to feelings of safety surrounding the implementation of airport security technology. Another finding that could be decisive for airport managers is the high proportion of passengers who prefer to navigate terminals being guided by static signs, indicating that this traditional method still requires a high level of attention in an age of airport technologisation.

Conclusion

The existing issue of passenger criticism of depersonalisation at Dunedin Airport has brought to light a significant knowledge gap within the field of airport research – not much is known about how passengers perceive airport depersonalisation. Previous literature on the subject spoke positively of depersonalisation without conducting a study to back-up their claims (Adderley, 2012; Nijhuis, 2012; Rostworoski, 2012). Chang and Yang (2008) did conduct a study on what passengers value in self-service kiosks, but there was not a significant focus on airport depersonalisation. The aim of this research was to establish passenger perceptions of airport depersonalisation, which was fulfilled through the use of an online survey. It was found that passengers value reliability and time efficiency the most within their airport experience. Kiosks are perceived by passengers to perform better in the aspects that mean the most to them, therefore kiosks are generally preferred. When breaking down results by age, it was found that older passengers place a higher value on being treated as an individual and a lower value on time efficiency than younger people, but older passengers still prefer interacting with kiosks over staff members as shown through their ratings of both.

In saying that, there were still respondents who prefer personalised methods; the most popular method of checking-in baggage is the traditional method of checking it in with a customer service agent. While the average passenger feels slightly safer after the implementation of technologised security within an airport terminal, there is still a significant portion of passengers who feel less safe. A similar proportion is shown for interest in mobile-phone airport integration – although the average passenger is slightly in favour of it, a significant portion of passengers are uninterested. Older passengers also showed that they are less inclined than younger passengers to use a mobile phone within an airport terminal.

Something which passengers favour overwhelmingly is navigating airport terminals using static signs, rather than using technology or even asking customer service agents. When passengers were asked to explain their feelings for depersonalisation in their own words, some reiterated their preference for fast service and were therefore in favour of it. Other respondents prefer depersonalisation because they do not like communicating to staff

members, or they feel sorry for staff members working in monotonous roles. Some passengers have not noticed depersonalisation or choose not to think about it, and then some participants expressed their concerns for the inability of themselves or others to operate the technology.

These results can contribute greatly to existing research and aid in filling the knowledge gap. While the results show that there is an abundance of passengers who prefer depersonalisation, importantly, they also show that there are passengers who are not in favour of airport depersonalisation. Responsibility will lie with airport and airline managers to develop their products and services in a way which is appropriate for the ratio of passengers who do and do not want depersonalisation; these results add greater depth to Rostworoski's (2012) 80/20 rule and can assist managers in realising that optimal ratio. Significantly, this study also creates a platform for other studies to build off; further contributions can be made in sampling a larger and more diverse group of respondents. Doing so would allow further confidence in the results of this study and enable future understanding of depersonalisation as the airport environment continues to evolve.

References

Adderley, N. (2012). Making every journey better: Putting passengers at the heart of Heathrow's decision-making. *Journal of Airport Management*, *6*(2), 141-150.

Airport Technology (2013). *Incheon International Airport*. Available at: http://www.airport-technology.com/projects/incheon-international-airport/. Accessed on 23rd November, 2013

Alleyne, R. (2011, 19 April). The young generation are 'addicted' to mobile phones. *The Telegraph*. Available at: http://www.telegraph.co.uk/technology/8458786/The-young-generation-are-addicted-to-mobile-phones.html. Accessed on 15th February, 2014.

Australian Customs and Border Protection Service (2013). *SmartGate – Frequently asked questions*. Available at: http://customs.gov.au/site/page5555.asp. Accessed on 20th November, 2013.

Australian Department of Agriculture (2013). *Arriving in Australia – Declare It!*. Available at: http://www.daff.gov.au/biosecurity/travel/cant-take. Accessed on 18th February, 2014.

BBC (2007). *Enfield's cash gift to the world*. Available at: http://www.bbc.co.uk/london/content/articles/2007/06/26/cash_machine_feature.shtml. Accessed on 6th December, 2013.

Bitner, M. J., Brown, S. W., & Meuter, M. L. (2000). Technology infusion in service encounters. *Journal of the Academy of marketing Science*, *28*(1), 138-149.

Correa, T., Hinsley, A. W., & De Zuniga, H. G. (2010). Who interacts on the Web?: The intersection of users' personality and social media use. *Computers in Human Behavior*, *26*(2), 247-253.

Chang, H. L., & Yang, C. H. (2008). Do airline self-service check-in kiosks meet the needs of passengers?, *Tourism Management*, *29*(5), 980-993.

Churchill Jr., G. A., & Surprenant, C. (1982). An investigation into the determinants of customer satisfaction. *Journal of Marketing Research*, 19(4), 491-504.

Coomber, R. (1997). Using the Internet for Survey Research. *Sociological Research Online*, 2(2), available at: www.socresonline.org.uk/2/2/2.html.

Coutu, P. (2012). Let us advocate a more meaningful, customer-centric approach. *Journal of Airport Management*, *7*(1), 4-7.

Eastlick M. A. (1996). Consumer intention to adopt interactive teleshopping. *Marketing Science Institute*, Report No. 96-113, Cambridge, MA.

Frederickson, H. G. & LaPorte, T. R. (2002). Airport Security, High Reliability, and the Problem of Rationality. *Public Administration Review, 62*, 33-43.

Goodrich, J. N. (2002). September 11, 2001 attack on America: a record of the immediate impacts and reactions in the USA travel and tourism industry. *Tourism Management*, *23*(6), 573-580.

Hainmüller, J., & Lemnitzer, J. M. (2003). Why do Europeans fly safer? The politics of airport security in Europe and the US. *Terrorism and Political Violence, 15*(4), 1-36.

Hof, R. D. (1999). A new era of bright hopes and terrible fears. *Business Week,* 4, 84-98.

IATA (2006). *Simplifying the business: 2006 StB horizontal campaign*. Montreal: International Air Transport Association.

Independent Social Research (2009). Understanding Airport Passenger Experience. Available at:
www.dft.gov.uk/pgr/aviation/airports/reviewregulatioukairports/understandingexperience.pdf. Accessed on 20th November, 2013.

Johnson, R. B., & Onwuegbuzie, A. J. (2004). Mixed methods research: A research paradigm whose time has come. *Educational researcher*, *33*(7), 14-26.

Lott, S. (2005). IATA, Sydney sign deal to test common use kiosks. *Aviation Daily, 362*(11), 3.

Lovelock, K. (2013). *Dunedin International Airport: Traveller Insights*. Department of Preventive and Social Medicine, University of Otago.

Meuter, M. L., Ostrom, A. L., Roundtree, R. I., & Bitner, M. J. (2000). Self-service technologies: understanding customer satisfaction with technology-based service encounters. *Journal of Marketing*, *64*(3), 50-64.

Meuter, M. L., Ostrom, A. L., Bitner, M. J., & Roundtree, R. (2003). The influence of technology anxiety on consumer use and experiences with self-service technologies. *Journal of Business Research*, *56*(11), 899-906.

Moutinho, L., & Meidan, A. (1989). Bank customers' perceptions, innovations and new technology. *International Journal of Bank Marketing, 7*(2), 22-27.

New Zealand Customs Service (2012). SmartGate. Available at:
http://www.customs.govt.nz/features/smartgate/pages/default.aspx. Accessed on 29th May, 2013.

Nijhuis, J. A. (2012). Creating the i-Port: Innovative strategies to enhance efficiencies and the passenger experience. *Journal of Airport Management*, *7*(1), 8-12.

Oxford Dictionary (2013). Depersonalization. Available at:
http://oxforddictionaries.com/definition/english/depersonalization. Accessed on 27th October, 2013.

Pels, E., Nijkamp, P., & Rietveld, P. (2001). Airport and airline choice in a multiple airport region: An empirical analysis for the San Francisco Bay area. *Regional Studies*, *35*(1), 1-9.

Prensky, M. (2001). Digital natives, digital immigrants: part 1. *On the Horizon*, *9*(5), 1-6.

Qantas (n.d.). Permanent Bag Tags – The Q Bag Tag. Available at: http://www.qantas.com.au/travel/airlines/q-bag-tag/global/en. Accessed on: 29th November, 2013.

Quinn, J. B. (1996). The productivity paradox is false: Information technology improves services performance. *Advances in Services Marketing and Management*, 5, 71-84.

Rendeiro Martín-Cejas, R. (2006). Tourism service quality begins at the airport. *Tourism Management*, *27*(5), 874-877.

Rogers, E. M. (2010). *Diffusion of innovations*. Simon and Schuster: New York.

Rostworowski, A. (2012). Developing the intelligent airport. *Journal of Airport Management*, *6*(3), 202-206.

Schiphol (2013). *What is Schiphol Innovative Gate?* Available at: http://www.schiphol.nl/Travellers/AtSchiphol/G7/WhatIsSchipholInnovativeGate.htm. Accessed on 4th June, 2013.

SITA and Airline Business Magazine (2011). Airline IT Trends Survey 2011. Available at: http://www.sita.aero/knowledge-innovation/industry-surveys-reports/airline-it-trendssurvey-2011. Accessed on 29th May, 2013.

Skyes, P. (1991). Automation and non-professional staff: the neglected majority. *Serials: The Journal for the Serials Community, 4*(3), 33-43.

Surprenant, C. F., & Solomon, M. R. (1987). Predictability and personalization in the service encounter. *The Journal of Marketing*, *51*(2), 86-96.

Appendix A - Survey

1. Have you noticed your airport experiences becoming depersonalised? Please explain how. (Open ended question)
2. When using self-service check-in kiosks, how would you rate the following? (out of 5, with 5 being the best)
    a. Queuing time / timeliness of service
    b. Friendliness
    c. Treating you as an individual
    d. Privacy
    e. Ability to process your check-in request correctly
    f. Not applicable – I have never used self-service check-in kiosks
3. When checking-in with a human customer service agent, how would you rate the following? (out of 5, with 5 being the best)
    a. Queuing time / timeliness of service
    b. Friendliness
    c. Treating you as an individual
    d. Privacy
    e. Ability to process your check-in request correctly
    f. Not applicable – I have never checked-in with a human customer service agent.
4. When using self-service passport scanning kiosks, how would you rate the following? (out of 5, with 5 being the best)
    a. Queuing time / timeliness of service
    b. Friendliness
    c. Treating you as an individual
    d. Privacy
    e. Ability to process your passport correctly
    f. Not applicable – I have never used a self-service passport scanner.
5. When being processed by a human customs officer, how would you rate the following? (out of 5, with 5 being the best)
    a. Queuing time / timeliness of service
    b. Friendliness
    c. Treating you as an individual
    d. Privacy
    e. Ability to process your passport correctly
    f. Not applicable – I have never been processed by a human customs officer.
6. How important do you think it is that airport facilities have the following qualities? (out of 5, with 5 being very important)
    a. Low queuing time / quick service time
    b. Friendliness
    c. Treating you as an individual

      d. Privacy

      e. Ability to process your request correctly

7. How would you prefer your baggage to be checked-in?

      a. At a check-in counter with airline staff.

      b. Printing off a bag tag at a self-service kiosk, and dropping off your baggage at a bag drop counter.

      c. An electronic bag tag fixed to your baggage, which contains your passenger details much like a barcode would.

8. Have you ever used an automated parking kiosk?

9. If yes, do you prefer using the kiosks or paying a toll to a parking officer at the carpark exit? Please explain why. (Open ended question).

10. Does technologised security make you feel safer than in the past?

      a. Much less safe

      b. Less safe

      c. Neither safer nor less safe

      d. Safer

      e. Much safer

11. Are you interested in using mobile phone applications to speed up your airport experience, at the expense of human contact?

      a. Very uninterested

      b. Uninterested

      c. Neither interested nor uninterested

      d. Interested

      e. Very interested

12. How would you prefer to find your way through an airport terminal? (choose one)

      a. Guided by signs within the terminal.

      b. Touchscreens throughout the terminal offering directions.

      c. Asking customer service agents.

      d. Using a personal device (e.g. phone, laptop)

13. What is your age group?

      a. 18-30

      b. 31-40

      c. 41-50

      d. 51-60

      e. 61-70

      f. 71-80

      g. 81+

14. What is your nationality?

15. What is your occupation?