Acceptance of a concept of self driving cars for luxury guests in the city of Dubrovnik

Orhanović, Tin

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RIT Croatia

Author: Tin Orhanović

Instructor: Professor Rebecca Charry

Mentor: Professor Kevin Walker

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Abstract

Autonomous technology is gaining more attention and interest during the last few years. Many big companies are investing in development of fully autonomous vehicles to provide their customers a transport service from one location to another. The purpose of this research paper was to find the level of demand for that kind of technology in Dubrovnik area and survey was chosen as appropriate method. The survey was distributed to 108 participants who were guests of luxury 5-star hotels in Dubrovnik and it measured their level of concern, interest, and willingness to pay for autonomous technology and what are the deciding factors when it comes to autonomous vehicles. Results suggested that there is moderately high interest for autonomous vehicles, especially for younger participants which indicated the highest interest among all age groups .Additionally, results also indicated that males were more interested in autonomous vehicles than were females. There is still high level of concern among participants and based on these findings, future researches should focus that those concerns are resolved so the transition to autonomous vehicle becomes quicker.

Keywords : autonomous ,vehicle , luxury , transport , tourism , taxi , authenticity , experience , service

__Introduction__

__Tourism__

Tourism involves the movement of people to one certain destination in which tourist spends at least one overnight while being able to enjoy fundamental destination experiences (Kovačić, 2016).According to Kovačić, what that destination makes a touristic place is its attractions which can be built, natural, cultural and also intangible, following with the amenities, destination accessibility and finally its image and characteristics. Transport as an element is core requirement for tourism to even occur because it connects the destination with the guests and also allows guest to travel to various locations within the destination. According to Kovačić (2016) physical structure (roads) is a prerequisite for the development of the transport in a tourist destination but that doesn't always mean that desired destination is accessible, therefore it means that the destination needs to have available organized transport for guest to access the destination.

When the development of the tourism started to happen, transports main goal was to get the guest to the destination as soon as possible .Today transport has a different role while following three main aspects and those are: transport provides traffic accessibility of tourist destinations, transport provides mobility within tourist destination and finally some types of transport are a tourist attraction. (Master Plan and Development Strategy of the Croatian Tourism, 2011). Transport itself can be a part of touristic experiences where driver interacts with the guests so they feel welcomed and part of the destination .During the transport, tourists can be given various offers and that can play an enormous role when it comes to tourists preferences of their

attractions. According to Master Plan and Development Strategy of the Croatian Tourism, (2011) offers that can be given to tourists may be such as: offer including service facility near the road, offer at airports and other passenger terminals and within public transport, which also includes provision of various information during a trip, following with possibility of reservations and finally sightseeing of tourist attractions. Most of the transports in tourism destination are focused on individuals or small groups (2-4 people) to whom they propose the stated offers for the reason of making more revenue.

When speaking about categories within transport, Horak (2014) stated that we can divide that into 4 separate ways of transportation: luxury transportation, adventurous transportation, nostalgic transportation, nautical transportation and other active transportation. Nautical tourism has three forms with which you can operate and those are: yachting, cruising and chartering (Horak, 2014).Following with luxury transportation which is unique and expensive and only small percentage of guest can afford memorable experience and one of the example of luxury transportation is Orient Express train, which is considered one of the most luxurious experience of railway transport. (Horak, 2014). When it comes to nostalgic transport , Horak named old sailing ships, such as Karaka in Dubrovnik, as tool for providing trips to guests and to trigger the sense of nostalgia .Second example is the Lufthansa 45 minute flight in a World War II bomber in which you can experience the beautiful landscape of the London from above .The adventurous transport became popular in the last few years because it is a stress free program which is popular way of reducing stress and pressure for many managers , entrepreneurs and other business people.(Kovačić, 2016).This type of transport usually consist of terrain vehicle riding ,raft riding and boat rafting and users for one day travel their problems and stressful situations and its popularity in the last few years is also due to saturation of abundance and elegance

(Kovačić , 2016). Finally, other attractive transports have few different forms and those are : taxi , boats and sightseeing buses, glass bottom boats ,trams, road trains and horse – drawn carts .(Kovačić ,2016).

In the last few years, technology companies started offering app based on demand transportation platforms such as Uber or Lyft, becoming worldwide popular in a very short period of time (Henao, 2017).According to Henao, one of the main reasons why people use Uber or Lyft is because the users wants to escape the parking and to replace social trips, such as going out and drinking or when going to the airport.

Luxury

"Luxury is hard to define because it is relative, but for many people it is a state of great comfort or elegance, especially when involving great expense "(Thomas, 2014). In the past, luxury was connected to the concept of spending enormous sums of money. According to Thomas(2014), the word luxury comes from the French word "luxurie" which represents lust, therefore having something valuable during the Middle ages was considered a bad term . During that time, luxury was mostly connected to foreign goods which were expensive to import and to clothing because rules existed to define which classes were privileged to wear what. According to Thomas (2014), in the 17th century the world "luxury" began to lose its negative meaning due to established trade routes and the world's increasing desire for exclusivity and that shaped the term to a more accepting viewpoint. In the 19th century luxury became what it still represents in today's world and the main reason for that was the connectivity between the continents and the development of technology such as mass production. With the beginning of the World War II this has changed, because people just couldn't afford or even access to their desires anymore. With this

acknowledgement, brands focused on making smaller items which people could afford in those times, such as handbags, perfumes and shoes.

According to Popescu (2014) luxury tourism is present at today's market and the demand is high because there are financially stable guests that are willing to pay enormous sums of money to fulfill their desires at the vacation and that those clients needs to be treated different, makings specialized offers directly for them and providing enough consideration when it comes to clients desires and needs. When looking at the global scale, there are different scales of trends in the evolution of luxury tourism that need to be adjusted and researched, making it possible to be prepared for clients desires. As stated by Popescu (2014), one the most important factors when it comes to luxury tourism is that they can gain social recognition and at the same time to achieve open manifestation of their social status in front of their closest friends, families or colleagues and that is now easily shareable through social media. To achieve that, luxury destinations are usually places where celebrities can be seen or exotics islands untouched by humans.

Goals of today's luxury hotels are more focused on realizing different concepts based on experience and authenticity rather than financial value (Bakker 2005). Bakker also pointed that tourism industry is an exception because the intangibleness and the experiential factor of the service is one of the major reasons of client's satisfaction that have high demand. According to Tsyaganok (2013) the accommodation industry can be broadly divided into three categories: Traditional accommodation, supplementary accommodation and new accommodation concepts. Traditional accommodation consists mostly of hotels and motels, with a greater number of stars indicating greater luxury. There are two examples of seven star hotels, Emirates Palace in Abu Dhabi and Burj Al Arab in Dubai (Tsyaganok, 2013).

However, luxury is evolving more every day and adapting to the needs of people. Thomas (2014) stated that: "old luxury is a thing of the past, and that people now want to be 'emotionally touched by their experiences' along with maintaining strong ideals of sustainability and ethics". In today's world we have new trends of luxury tourism; authentic and experiential experience. Authenticity means that you need to provide a service which is believed to be true and to make sure that you as a destination can satisfy the people who want to spent large sum of money and receive the highest and most authentic quality service in return (Gilmore and Pine, 2007).Guests wants to buy more things that are authentic from genuine seller, than to buy false from the dishonest seller. (Gilmore and Pine, 2007).Authenticity is not something that you can touch, a tangible object, it is a combination of all social interactions and emotional experiences that guest receive while in destination (Kolar and Zabkar, 2010).

When a guest reserves a luxury transport to the hotel from airport, driver greets him while holding a sign with his name, then driver introduce himself and proceed to take their luggage and guide them to car. During their drive, beverages and snack are provided to the guests while the driver gives useful information and tips about the destination, and what to avoid, giving them authentic experience during their drive .Driver provides them with various information, such as what place should you go if you want to try local cuisine and wines, what time of the day is the best when visiting attractions and what traffic pattern is the best to get there or what to avoid when visiting the destination. Also some interesting history facts about the destination are being said and those facts are mostly unknown to foreign guests who usually just come with the knowledge that they could find on the internet. The guests feel special because they felt what is to see and experience the destination from the inside. That is an example of constructed

authenticity, or what MacCannell (1973) calls "staged authenticity", and it is an influential factor and benefit that captivate guests.

Autonomous vehicles

"When applying the term" autonomous" to the technological context, then it is explained as a system which is computer controlled but that system make the important choices about their own action with no or little human intervention . (Surden, 2016). In the context of autonomous vehicles, car itself can steer, accelerate, brake, position itself in lane and can follow traffic rules and signal all on its own. Technology for fully autonomous vehicles has gone far and it can be said that is just matter of time when they will hit the roads. There are examples of tests, such as all electric Chevrolet Bolts which are currently being tested in San Francisco and Phoenix, and results is that those autonomous cars have successfully driven over one million kilometers on the public roads, entirely on their own, stated by Surden, (2016). In the tests, cars needed to drive from point A to point B, while following all the driving rules and street regulations. Trucks are also becoming more automated and they just need to follow the given route, but the goods inside need to be manually checked and unloaded (Surden, 2016).In autonomous vehicles humans have the role of passengers and there are several benefits; reducing the number of possible car accidents because most of those accidents are caused by human error (Surden, 2016). They also give comfort to the passenger who can do other things while being transported to the destination. Finally, autonomous vehicles offer increased mobility to those who are unable to drive.

According to Bainbridge (2018) autonomous vehicles will be the next big industry – wide invention that will have several impacts on tourism industry. Bainbridge pointed out that there will be new sightseeing opportunities, such as personalized tours on demand. There will be also

available multi-day tours that will cover several locations during certain period and for attractions new entry areas will need to be reconfigured. Retailers will have a new role, to know much more information about customer than they currently know, for the sake of personalized experience. Finally, hotels will be able to retail autonomous vehicles sightseeing tours directly from the concierge and that opens new interesting ways for spending points in loyalty program (Bainbridge, 2018).

There is an example of Ford Motor Company in which they want to launch a self driving taxi service by the year of 2021 and test will start soon in Miami. The focus of the test won't be only to get you from A to B. It will be also on maintaining and operating the armada of robot delivery cars that get your things from A to you (Marshall, 2018). Also Toyota launched a $2.8 Billion Self-Driving Car Company that will focus on building software for self driving cars, with the indication of that the autonomous vehicles in development might come with AI services that could facilitate communication between vehicles and passengers (Gohd, 2018).

Another example of the incoming autonomous vehicles technology is from the General Motors, where they stated that they are making autonomous vehicles without a steering wheel and pedals for the purpose of using it for taxi services. Those cars would be fourth generation of autonomous vehicles and with that move they want to shape the future of autonomous vehicles so the other car manufactures adjust to their standards. (Davis, 2018). Finally, with the Rimac Concept Two being recently unveiled, the world got a preview of what cars will be like in the future. According to the Savov (2018), Concept Two is a car alive with technology and its level 4 autonomous driving is possible because of the 12 ultrasonic sensors, eight cameras, six radars and a LiDar, which is a technology that detects pedestrians. Newest feature is that the car recognizes the driver face and that is used for unlocking and starting the vehicle. It can also scan

your face to determine your mood so the vehicle can adjust the speed to the driver's desired ride. (Savov, 2018)

Other technologies are also mentioned as possible additions to autonomous cars, for example, augmented reality. Augmented reality techniques employ a device to continuously providing a driver with needed information through the 3D transparent display and controlling it with gesture recognition without using any kind of glasses (Kim, 2015). In Kim case, a system includes a head front display device, a camera that tracks movement of a driver's eyes ,front view camera which takes picture of the driver's front view ,a head front display device controller for the angle change (forward movement, backward, upward, downward, leftward and rightward movement of the head display device, then an image adjuster which adjust the object which is displayed through the device in association of the actual view seen through the front window of the vehicle. That is configured to display information to the driver who can almost carefree check what it wants to know and at the same time look at the road.

There are several examples of survey that have been conducted on public acceptance of the autonomous vehicles such as " A Survey of Public Opinion about Autonomous and Self-Driving Vehicles in the U.S., the U.K., and Australia" written by Schoettle and Sivak in 2014 . This survey was conducted in the three major English speaking countries –the U.S ,the UK and Australia . The main findings of this survey were that major of participants heard of autonomous vehicles and had positive first impression and high expectations. Still most of the people indicated immense levels of concern riding in autonomous vehicles for a reason that they fear that the vehicle will not perform as good as a driver (Schoettle and Sivak, 2014). Also Schoettle and Sivak stated that participants expressed concern about the vehicles without driver controls because of the reason that the vehicle can move while unoccupied but majority of respondents of

this survey feel that want to have this technology in their own vehicles, without paying extra money for it. Next survey" Towards Autonomous Cars: The Effect of Autonomy Levels on Acceptance and User Experience" written by Stadler and Tscheligi (2014) shows that having a previous experience with the model of autonomous vehicle have a positive impact on user. Additionally, demographics play a meaningful part in building the future of autonomous vehicle where they will be adjusted to the driver's needs in terms of pleasure and authentic experience (Stadler and Tscheligi, 2014). Final example of survey named "Attitudes Toward Autonomous on Demand Mobility System: The Case of Self-Driving Taxi ", written by Zach and Tussyadiah in 2017 investigated participants acceptance of autonomous vehicle as taxi service at home and while traveling and their attitude towards using new technology. Participants responded with positive attitude towards technology and have high faith for autonomous taxi. Negative aspects of this technology are that it can be dehumanizing while positive aspects are assumption of reliability, functionality and helpfulness of autonomous taxi (Zach and Tussyadiah, 2014). The higher level of intention to use autonomous taxi for travel implies a major impact of this development on tourism. Portraying self driving taxi service to the people who are innovative or people who often use taxi service will make it easier for adoption and open a room for new marketing materials as a novel experience (Zach and Tussyadiah, 2014). "As autonomous technology is an arising topic in tourism research, future research should focus on ethics, privacy, values, and other issues beyond system-like expectations that are relevant to consumers' attitudes toward self-driving vehicles and likelihood for adoption in various tourism settings." (Zach and Tussyadiah, 2014).

This paper's goal, as no current related research exists, is to perform an exploratory research pertaining to the acceptance of self driving cars for luxury guests in the city of Dubrovnik.

Additionally, this research seeks to determine the level of demand for that kind of transfer service and to explore what are the deciding factors for obtained level.

Method

The purpose of this research paper was to find the level of demand for autonomous vehicles for luxury guests in Dubrovnik and what are the main reasons and benefits when implementing that kind of service in tourism. The participants were foreign guests of four or five star hotels in Dubrovnik (Villa Dubrovnik, Hotel Bellevue, Hotel Excelsior and Sun Gardens Dubrovnik.) Survey was completely anonymous and the participants of the survey were not screened based on gender, age, nationality, or any other demographic variable. The results will only be used for the purpose of this research project.

In order to find the most relevant data the survey method was chosen to collect information. Survey was written in English because of the general worldwide recognition of the English language. The survey was given to total of 108 participants and all of them were guests for at least one night at the aforementioned luxury hotels. Some of the questions (general knowledge and socio-demographic questions pertaining to age and gender), were adopted from another research paper related to this topic named „Survey of public opinion about autonomous and self driving vehicles in the U.S., The U.K., and Australia "by Brandon Schoettle and Michael Sivak in 2014. The response sets to the questions were constructed as one yes/no question and others were constructed as a 5 Point Likert Scale. Some of the survey was distributed in personal and

some of them were given to Destination Management Company as a drop off method in the time period from the fourth April to the sixteenth of April.

The survey is divided into 5 parts, the first part is general knowledge about autonomous vehicles and participants concern about the technology and that part consist of 3 questions. Second part is about how interested is participant in booking a autonomous vehicles as a Transport service in comparison to traditional transport and how much is he willing to pay ,in total of 3 question for this part . Third part is participant's opinion on what impact will autonomous vehicles have on the current state of luxury tourism, consisting of 2 questions. Fourth part of the survey is about benefits of implementing the autonomous vehicles for transport service and how important are they, in total of 3 questions. Final, fifth part, is demographic information, including age and gender.

Results

This survey was conducted to see what is level of demand for autonomous vehicles as a part of transport service from the hotel and what the reasons for that level of demand are. The response rate was 108 participants and all of them were guests of the 5 star hotels in Dubrovnik, of which 60 were men and 48 were women (see Graph 1). The survey was given only to adults, starting with the age group of 18-24 to 70 years and older (see Bar chart 1.) And there is at least one survey collected for every age group and given the limited number of survey participant, amount of age categories have been reduced to three (18-34 , 35-44 , 45-70+) from the original eleven. Even if they never heard for autonomous vehicles or self driving vehicles before, they could participate in this survey.

Data analysis

Survey had total of 13 questions ,of which one was yes and no question ,and ten questions were constructed with Likert scale ,ranging from 1 to 5 ,where 1 stands for strongly disagree and 5 for strongly agree .The final two questions were demographic oriented , pertaining to gender and age .

With first question "Have you ever heard of autonomous vehicles" to measure the awareness of a concept for this kind of transport service where no surprisingly ,89 participants said yes and only 19 participants said no, of which 15 were women .

Second question (M = 3,57 , STD =1,04) "What is your general opinion regarding autonomous" participants mostly answered positively, where 22 % strongly agreed, 34 % agreed, 16 % neutral, 13 % disagreed and 15 % strongly disagreed.

In question 3 (M= 3, 32, STD =1, 41) "How concern would you be while riding in autonomous vehicle "55% of participants stated that they have slight concern or no concern at all as pertaining to being driven in autonomous vehicle, while 21 % of participants stated neutral and 24% stated that they would be moderately or very concern when driven in autonomous vehicle.

Results from the next question, question 4 (M =3, 44, STD = 1, 22), "Would you be interested in booking a fully autonomous vehicle for transportation to your hotel from the airport" are that 60% of participants either agree or strongly agree as pertaining to being interested in booking a fully autonomous vehicle, while 25% stated neutral about that topic, and 15% of participants either disagree or strongly disagree.

When asked "How much money would you be willing to pay for autonomous vehicle transport", in question 5 (M= 3, 22, STD=1, 24), 48 % of participants stated that they would pay much more or more than traditional transport, while 27 % of participants stated that they would pay same amount of money as traditional transport and 25% of participants stated that they would pay less or much less than traditional transport.

Sixth question (M =3,32 , STD= 1,30) in which participants were asked "Would you rather book a transport of a fully autonomous vehicle or traditional transport with chauffer / driver" , 53% of respondents either strongly agree or agree as pertaining to booking a fully autonomous vehicle , while 27% are neutral and finally only 20% of respondents either disagree or strongly disagree .

 When asked "Do you think that autonomous vehicles will become the new symbol of transport luxury within the next five years", the seventh question (M=3,39 , STD=1,21)   , fully 55% participants answered strongly agree or agree, while 35 % of participants answered neutral and 20% answered either disagree or strongly disagree.

Eight question (M = 3, 48, STD=1, 12) asked the participants to indicate their agreement or disagreement with the following statement: "The authentic experience will be lost with the implementation of the autonomous vehicles for transport services to the hotel" and 56% of participants either agree or strongly agree with the statement, while 24% of participants responded neutral and finally 20% of participants either disagree or strongly disagree with the statement.

Next three questions stated to the participants certain benefits of implementing the autonomous vehicles for transport service and how important are they when determining to book a fully autonomous vehicle. First was "privacy", question 9 (M =3,13 , STD =1,18) , and 41% of

participants responded either agree or strongly disagree ,while 25% of participants responded with neutral and 34% of participants either disagree or strongly disagree with the statement that privacy is one of the reasons to book a fully autonomous vehicle .Next question, question 10 (M =3,41 , STD =1,22) , was "the inclusion of an interactive information system" as one of the reason to book a fully autonomous vehicle and 55 % of participants responded either agree or strongly agree ,while 26 % of participants responded with neutral and other 19 % responded with either disagree or strongly disagree .Fully 50% of participants in final question, question 11 (M = 3,29 , STD = 1,26) , is entertainment (video games, movies, augmented reality) important when determining to book a fully autonomous vehicle , either agree or strongly agree ,while 28 % of participants stated neutral and finally 22% of participants stated either disagree or strongly disagree .

The lowest mean of all the questions (see Bar chart 2) was for the question 9,regarding privacy, with the score of 3.13 (male mean was 3.23 and women mean was 3.0) and the highest mean of all the question was for the question 2 ,general opinion regarding autonomous vehicles ,with the score of 3.57 (see Column 1) and interestingly , women are more concern about the autonomous technology than men (male mean was 3.87 while women mean was 3.2) . In correlation of question 2 and question 3 we have correlation coefficient of 0, 76 which means that there is a strong linkage between opinions of autonomous vehicles and concerns about riding in an autonomous vehicle. Pertaining to the most important questions (question 4 regarding interest in booking an autonomous vehicle and question 6 regarding interest in booking an autonomous vehicles in comparison to a traditional transport vehicle), T- tests were conducted in order to determine if males and females have significantly different opinion .T-test revealed that men and women do have different opinion regarding autonomous vehicles and the difference was

significant (P=0,001). Women are generally more uninterested and not fond of the autonomous vehicle technology and mostly have lower mean scores in the most important questions of the survey (see Table 1, 2, 3). In the question 4 we can see that female mostly answered neutral (see Column 2) and in question 6 (see Column 3) so the correlation between those two questions is 0.83 which is even higher than correlation between questions 2 and 3.

Interestingly, there is a significantly different interest for autonomous vehicles between those three age groups. First age group, younger participants (age 18-34) and second age group, middle age participants (age 35-44) showed generally high interest in autonomous vehicle while the third age group , older participants (45-70+) showed generally low interest and high concern when asked about autonomous vehicle technology . Younger respondents, especially males, have higher mean scores than older respondents which suggest that young males are the initial target market for autonomous vehicles as a transport service.

Discussion

Results of this survey indicated that level of demand for autonomous vehicle as transport service in Dubrovnik is still moderate, but there are several factors to that. Most of the participants have heard of autonomous vehicle and they have somewhat positive opinion about them but their level of concern is still high, .Older people generally have more concern about the technology, because they tend to distrust „machines". According to Ho (2007) , older adults may be less familiar with computer technology and less aware of the potential unreliability and also have limited working memory, while on the other hand younger participants have high trust in

technology as they are familiar and keen with it . Contrary to older adults, Millennials are very comfortable with technology and understand it quite well (Rodriguez, 2014).Pertaining to their interest to book a fully autonomous vehicle to the hotel, males showed higher results than females and that is probably because females are not generally interested in automobile vehicles while males generally are interested in the newest technology when it comes to automobile vehicles. Through the history, cars are widely marketed as being more attractive to men, suggesting that males are more invested with cars than females. (Wachs , 2000). When pertaining to their willingness to pay for autonomous vehicle ,males again gave higher scores ,because they will generally spend more money on this kind of luxury than females .Survey also showed which driving factor is the most important among people when considering to book a fully autonomous vehicle and that is interactive information system which is something that people are not familiar with and it sounds interesting to use ,while providing experience that only the newest technology can give to them. According to this study, concerns associated with autonomous vehicles must be overcome before adoption of the technology occurs as evidenced by fact that those high concerns for autonomous technology expressed the least interest in using autonomous vehicles.

Implementation of the autonomous technology as a transport service should wait for at least few more years so the people become more familiar with this technology for the reason of lowering the level of concern while riding in autonomous vehicle. Also , the older participants who are still travelling will be outnumber by the younger participants who feel „hyped“ for this kind of technology . Automation of hospitality is becoming a reality and it is only matter of time when will this technology overlap the traditional service and information gained through the results showed that there is interest in the Dubrovnik area already.

Limitations of this study were relative small sample size and lack of representation of all the age groups. Another limitation of this study is that cultural considerations were not included; therefore information of which nations are more accepting of this concept is missing.

For the future research, I would recommend them to focus on the younger participants as they have indicated that they are most open to the concept and by focusing research on them, one could conceivably uncover their most oppressing concerns. If those concerns could be understood and addressed, then the transition to autonomous vehicles would occur much more quickly. Also, focus on the models of autonomous vehicle that participants have highest trust to prevail possible negative attitude.

References

Master Plan and Development Strategy of the Croatian Tourism (2011). Retrieved from http://www.azrri.hr/fileadmin/dokumenti-download/STRATE%C5%A0KI_PLAN_MINT-a_2010-2013.pdf .

Marijana Kovačić (2016) .Interdependence of Transport and Tourism. Retrieved from https://search-proquest-com.ezproxy.rit.edu/docview/1903816140/fulltextPDF/CAE38C6B91274D0CPQ/1?accountid=108 .

Valeria Popescu (2014). Luxury Tourism: Characteristics and Trends of the Behavior of Purchase. Retrieved from https://doaj.org/article/9234372d0ee148adbdfb94e668f70628 .

Martine Bakker (2005). Luxury and Tailor-made Holidays. Retrieved from https://www.researchgate.net/publication/299533702_Luxury_and_Tailor-made_Holidays .

Hugh Tomas (2014) .A Brief History of Luxury .Retrieved from https://trulyexperiences.com/blog/brief-history-luxury/ .

Alex Bainbridge (2018). Autonomous vehicles will reshuffle the travel industry. Retrieved from https://www.phocuswire.com/Autonomous-vehicles-impact-tourism .

 Siniša Horak (2014) .Tourism and Transport .Retrieved from https://library.foi.hr/m3/kd1.php?B=20&sqlx=58891&ser=&sqlid=20&sqlnivo=&css=&H=&U=*CESTE .

I.Tsyaganok (2013). Accommodation as a Basic Component of Tourism. Retrieved from http://dspace.nuft.edu.ua/jspui/bitstream/123456789/8801/1/Accommodation.pdf .

Gilmor and Pine (2007) . Determinants of Authentic Experiences.Retrieved from http://www.emeraldinsight.com.ezproxy.rit.edu/doi/pdfplus/10.1108/IJCHM-06-2015-0284 .

Aarian Marshall (2018). Ford's Miami Self Driving Cars. Retrieved from https://www.wired.com/story/ford-miami-self-driving-cars/ .

Alejandro Henao (2017) .Impacts of Ridesourcing-Lyft and Uber - on Transportation . Retrieved from https://search.proquest.com/openview/5486ff6cc229889a3cdf2df1cd3993cb/1?pq-origsite=gscholar&cbl=18750&diss=y .

Chelsea Gohd (2018). Toyota's $2.8 Billion Self Driving Company .Retrieved from https://futurism.com/toyota-self-driving-car-company/ .

Alex Davis (2018). GM Self Driving Car. Retrieved from https://www.wired.com/story/gm-cruise-self-driving-car-launch-2019/ .

Vlad Savov (2018). Rimac Concept Two: Preview of the Future. Retrieved from http://www.futurecar.com/article-2046-1.html .

Woo Kim (2015) . Augmented Reality Display System and Method for Vehicle .Retrieved from https://patentimages.storage.googleapis.com/6e/93/db/82555b176ab642/US9075563.pdf .

Schoettle, Sivak (2014). Survey of the Public Opinion about Autonomous and Self – Driving Vehicles in the U.S, The U.K, and Australia, .Retrieved from https://deepblue.lib.umich.edu/bitstream/handle/2027.42/108384/103024.pdf .

Stadler ,Tscheligi (2014). Towards Autonomous Cars: The Effect of Autonomy Levels on

Acceptance and User Experience. Retrieved from https://dl-acm-

org.ezproxy.rit.edu/citation.cfm?id=2667330 .

Zach, Tussyadiah (2017). Attitudes Toward Autonomous on Demand Mobility System: The

Case of Self-Driving Taxi. Retrieved from

https://www.researchgate.net/publication/312046864_Attitudes_Toward_Autonomous_on_Dem

and_Mobility_System_The_Case_of_Self-Driving_Taxi

Martin Wachs (2000). The Automobile and Gender: An Historical Perspective. Retrieved from

https://www.fhwa.dot.gov/ohim/womens/chap6.pdf .

Geoffrey Ho (2007) . A Model of Trust and Reliance of Automation Technology for Older

Users. Retrieved from https://www.cs.cmu.edu/~khaigh/papers/05-Ho_Trust.pdf .

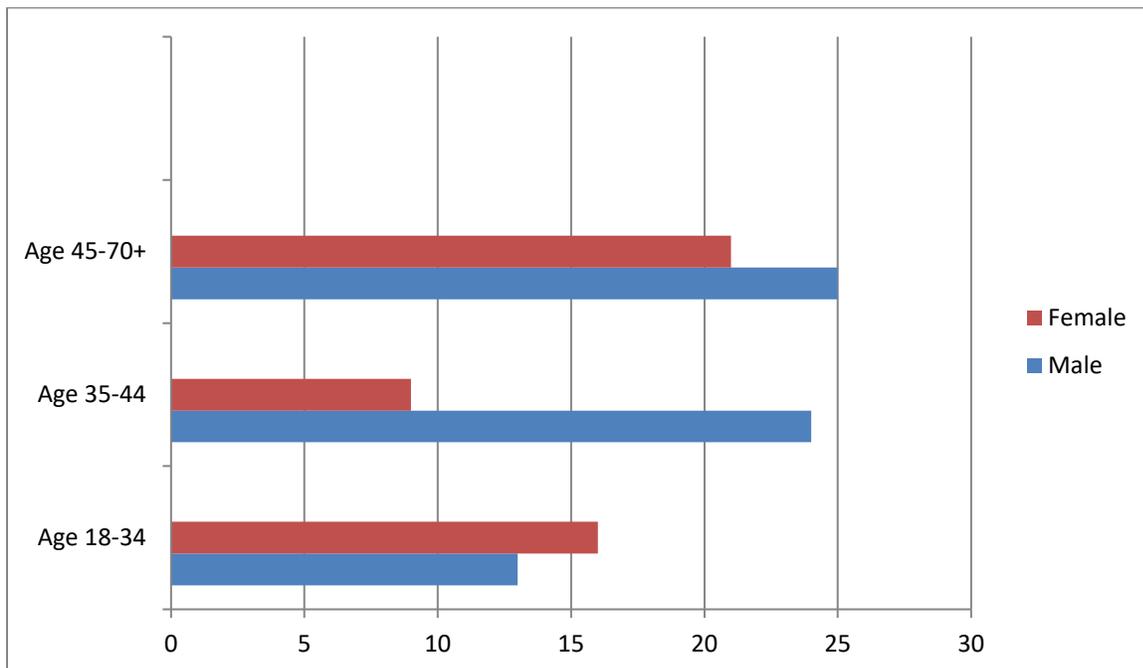Michael Rodriguez (2014) .Using Technology to Engage and Improve Millennial Students'
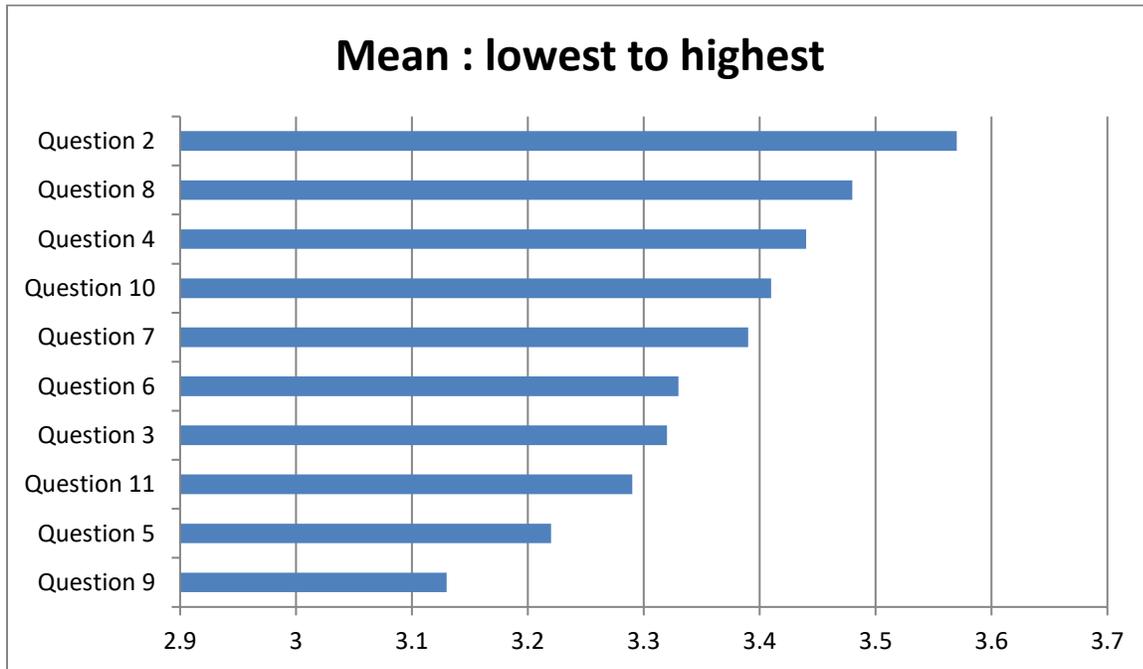
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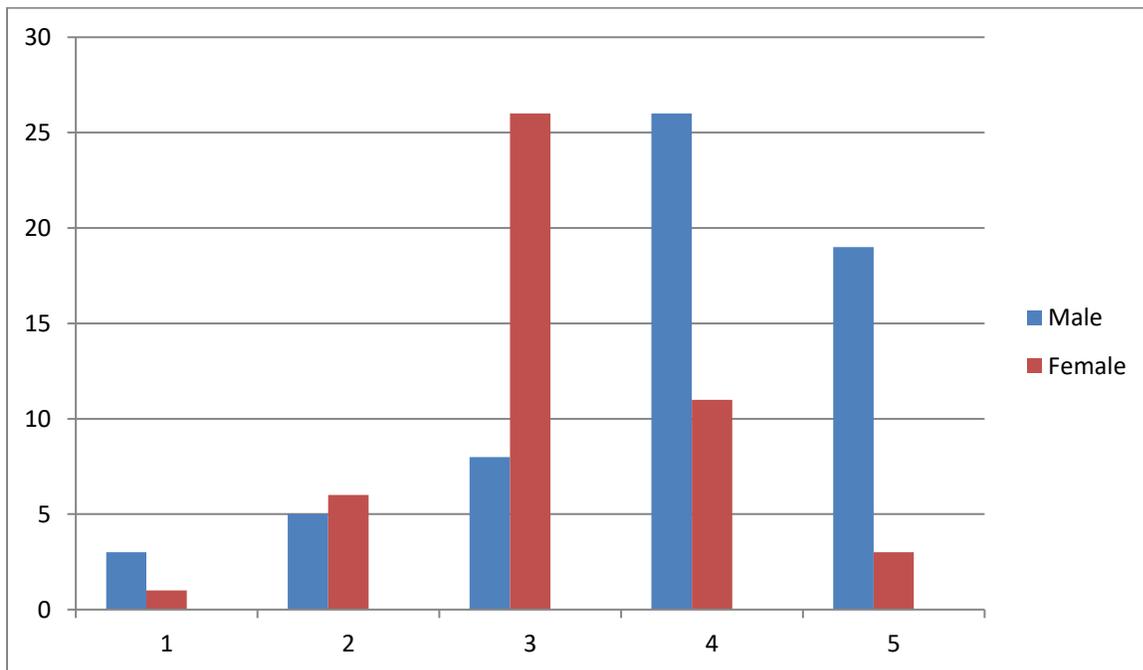https://pdfs.semanticscholar.org/f1c1/2e65fd598cb89569c12a2ea27c4b9220b35c.pdf

Appendix A

Graph 1
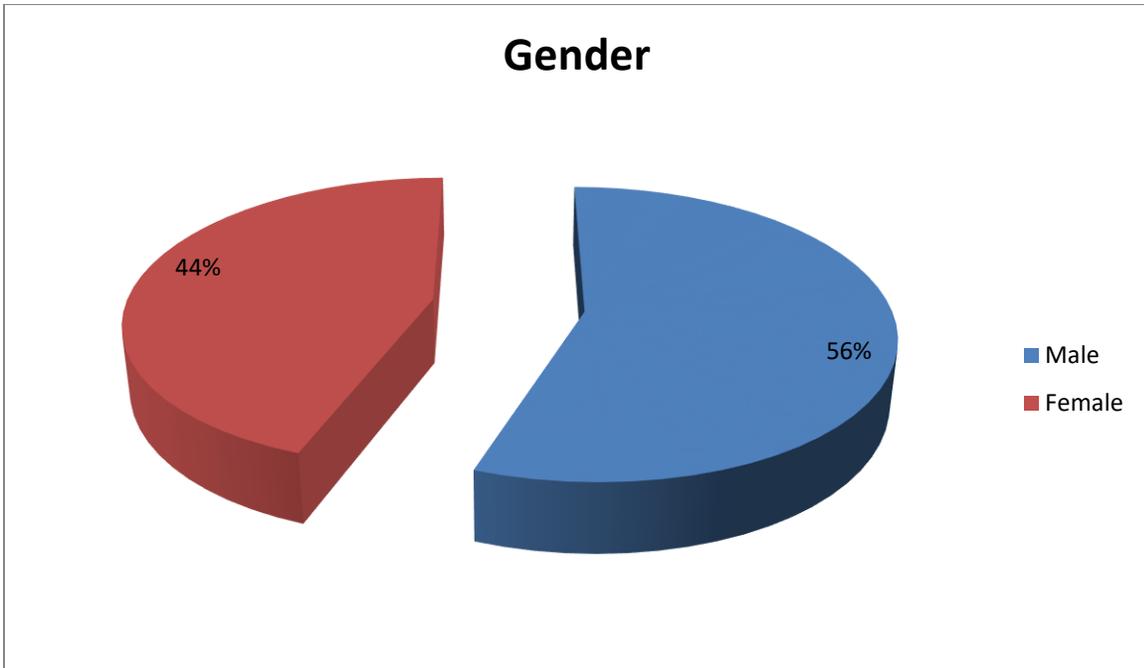
Bar chart 1

Bar chart 2

Mean : lowest to highest

Q2) What is your general opinion regarding autonomous and self-driving vehicles? Please circle your answer. (1 is strongly disagree and 5 is strongly agree, n = 108) Column 1

Q4) Would you be interested in booking a fully autonomous vehicle for transportation to your hotel from the airport? Please circle your answer. (1 is strongly disagree and 5 is strongly agree, n=108) Column 2
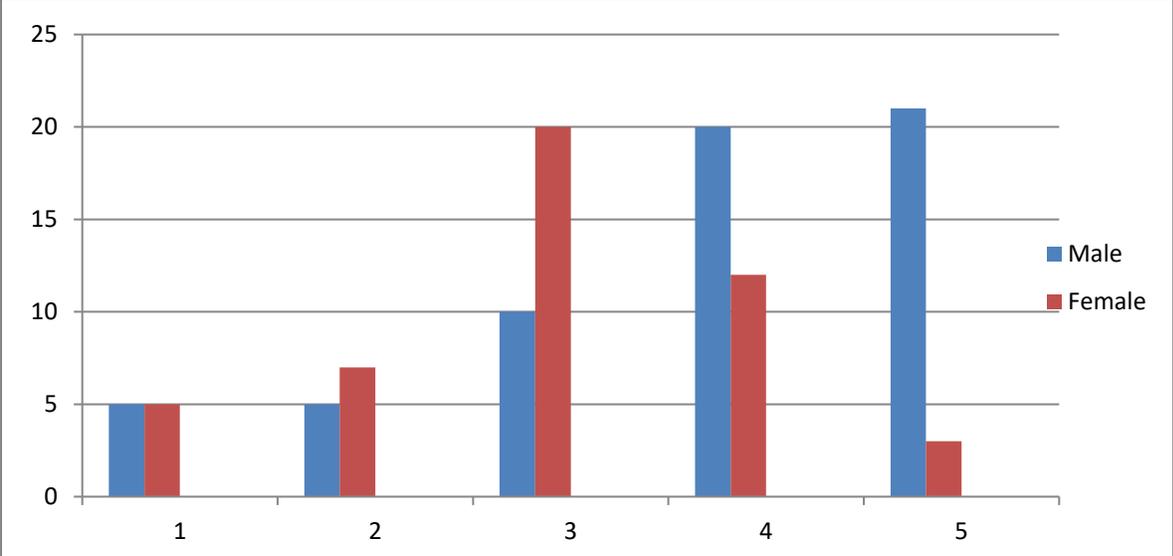
Q6)Would you rather book a transport of a fully autonomous vehicle or traditional transport with chauffer / driver? Please circle your answer. (1 being traditional transport and 5 being autonomous vehicle, n=108) Column 3
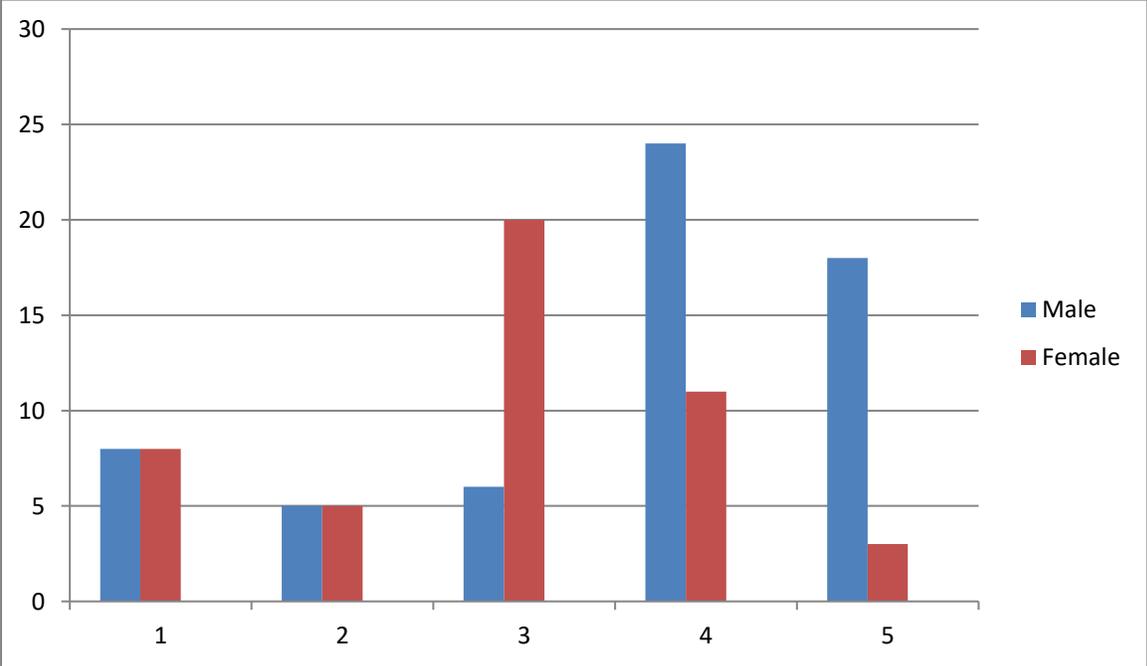
Table 1

Question 2	Mean	Standard Deviation
All	3,57	1,04
Male	3,87	1,10
Female	3,19	0,82
Younger participants	3,83	1,17
Middle age participants	3,94	0,85
Older participants	3,15	0,93

Table 2

Question 4	Mean	Standard Deviation
All	3,44	1,22
Male	3,77	1,24
Female	3,21	1,05
Younger participants	3,72	1,28
Middle age participants	3,76	1,04
Older participants	3,04	1,16

Table 3

Question 6	Mean	Standard Deviation
All	3,32	1,31
Male	3,64	1,34
Female	2,91	1,14
Younger participants	3,83	1,17
Middle age participants	3,94	0,85
Older participants	2,85	1,22

Table 4

	Mean	Standard Deviation
Question 2	3,57	1,04
Question 3	3,32	1,41
Question 4	3,44	1,22
Question 5	3,22	1,24
Question 6	3,32	1,30
Question 7	3,39	1,21
Question 8	3,48	1,12
Question 9	3,13	1,18

Question 10	3,41	1,22
Question 11	3,29	1,26

Appendix B

Even if you had never heard of autonomous or self-driving vehicles before, you can participate in this survey.

Q1) Have you ever heard of autonomous and/or self-driving vehicles before participating in this survey?

Yes

No

Q2) What is your general opinion regarding autonomous and self-driving vehicles? Please circle your answer.

Very negative

Somewhat negative

Neutral

Somewhat positive

Very positive

Q3) Autonomous vehicles are expected to provide complete self-driving automation. The vehicle will be designed to perform all safety-critical driving functions and monitor roadway conditions for an entire trip. The autonomous vehicle will provide destination or navigation input, but will not be expected to be available for control at any time during the trip. By design, operation rests solely with the automated vehicle system.

How concerned would you be about riding in a vehicle with this level of self-driving technology? Please circle your answer.

<div align="center">

Very concerned

Moderately concerned

Neutral

Slightly concerned

Not at all concerned

</div>

Q4) Would you be interested in booking a fully autonomous vehicle for transportation to your hotel from the airport? Please circle your answer.

1	2	3	4	5
Not interested				Very interested

Q5) How much money would you be willing to pay for autonomous vehicle transport? Please circle your answer.

<div align="center">

Much less than traditional transport

Less than traditional transport

Same as traditional transport

More than traditional transport

Much more than traditional transpor

</div>

Q6)Would you rather book a transport of a fully autonomous vehicle or traditional transport with chauffer / driver? Please circle your answer.

1	2	3	4	5
Traditional transport				Autonomous vehicle

Q7) Do you think that autonomous vehicles will become the new symbol of transport luxury within the next five years? Please circle your answer.

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

Q8) Please indicate your agreement or disagreement in the following statement: The authentic experience will be lost with the implementation of the autonomous vehicles for transport services to the hotel. Please circle your answer.

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

Q9) Privacy is one of the reasons that would make you more likely to book a fully autonomous vehicle. Please circle your answer.

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

Q10) The inclusion of an interactive information system is one the reasons that would make you more likely to book a fully autonomous vehicle. Please circle your answer.

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

Q11) Entertainment (video games, movies, augmented reality, etc.) is one of the reasons that would make you more likely to book a fully autonomous vehicle. Please circle your answer.

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

Q12) What is your gender?

Female

Male

Q13) What is your age? Please circle your answer.

18 to 24

25 to 29

30 to 34

35 to 39

40 to 44

45 to 49

50 to 54

55 to 59

60 to 64

65 to 69

70 or older