ANTHROPOMORPHIC ROBOTS IN RESTAURANT; THE EXPECTED PURCHASE BEHAVIOR OF GEN-Z

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Abstract
Purpose
The study aims to provide an insight of the opinion and expected purchase behavior of Gen-Z towards the restaurants where Anthropomorphic Robots are engaged for various services. Characteristics, traits, values, and trends of Gen-Z are already being tracked to develop in-depth statistics facts, and marketing strategies targeting what will soon become the largest cohort of consumers.
Research Methodology
The present study is conducted on Senior members (17 to 26) of Gen-Z. Semi-structured interviews were conducted using predesigned protocol. Grounded theory approach was adopted to comprehend the perceptions of Gen-Z. All the manuscripts were coded and analysed.
Result
Findings divulge that Gen-Z looks forward to experiencing the services of robots, at least for one time. There is a mixed response from the participants on the sustainability and long-term use of robots in restaurants. Most of the respondents were of the view that, all sections of a food service operation should not be managed by the robots.
Conclusion
The result of the study would be helpful for the restaurateurs in the development of new business models with anthropomorphic robots as the protagonists.

Key words: *Robots, Generation-Z, Anthropomorphism, Restaurants, Covid-19*

JEL Classification: *O-31, O-33*

I.PURPOSE OF THE STUDY

The Covid-19 pandemic has badly hit many industries world-over, but the hotel and restaurant industry are struck ruthlessly. The spread of COVID-19 has created a rapid, strong deficit in revenue for firms in many industries, one of the most distressing of which has appeared in the hospitality industry, since more than 100 countries declared partial or full lockdowns (Song, Yeon, and Lee, 2021). This has given rise to many questions on the operational style of food and beverage industry. Hospitality Industry is finding ways to recover from this damage and to survive, theoretic and practical observation preliminary in the hospitality industry indicate that business model innovation (BMI) may perhaps be a way out to recover from the COVID-19 crisis (Breier *et al.*, 2021). Intriguingly, some hospitality firms have by now began to adopt new innovative business models (Breier *et al.*, 2021). Another innovative model is the co-creation model to develop new products that can offer a unique and personalized experience to its customers. New products are developed using the conversation between the customer and the company e.g. Starbucks has developed nearly 277 such ideas, through its co-creation platform (Im, Qu, and Beck, 2021). Technology and the latest innovations of technology have always been providing solutions to the hurdles faced by mankind from time to time and the tech-savvy generations are bound to look for the solution to this pandemic as well. The restaurant industry is facing a financial crunch, but on the other hand, those who are willing to spend and would love to enjoy the food at their favorite joint or may like to try new food and new restaurant are afraid of getting infected from other human beings. Consumers under the narrative influence about the demand-driven scarcity cues: they believe limited hospitality businesses are not safe for consumption(Li, Yao and Chen, 2021). According to (WHO, 2020) Existing data indicates that the virus spreads by respiratory droplets between persons who come in close contact with the infected humans. Aerosol transmission happens in a particular setting, like in an indoor, place full of people and is ineffectively ventilated area, where infection carrier(s) have been present for quite some time with others, such as restaurants, fitness centers, clubs, offices, and/or places of worship. The virus can also

spread with the sneeze, cough, or the surfaces touched by the carrier, others may come under the influence of the virus by first touching the contaminated area and then touching their eyes, noses, or mouths without having washed or disinfecting their hands. As a solution to this problem of avoiding human-to-human contamination, scientists and doctors have opted for the use of robots from the very beginning of the Covid-19. Telehealth machine was introduced by Doctors for the care of the first person in the US that was hospitalized with novel corona vires 2019, this was a robot armed with a camera and microphone in addition to a stethoscope, this way the patient was able to consult the doctors without direct human contact (Chloe Kent, 2020). Apart from the US in China also, the quarantined people are being served food and medicine using robots. 300 people suspected of the virus were isolated in a hotel in Hangzhou, and robots were used to deliver food to their bedrooms (Chloe Kent, 2020). Under the light of above developments around the world it is assumed that the increasing use of robots in restaurants can certainly play as important role in avoiding the spread of Covid-19, through food and beverage outlets. The purposed of the study is to understand the viewpoint of the Generation-Z on adoptions of robots in restaurants for various services and how this would influence their choice of restaurants.

II. INTRODUCTION

Robots In Restaurants: Artificial intelligence (AI)-based robots have been deployed by many industries across the world (Lim Jeong-yeo, 2020). The restaurant industry is also attracted towards these smart machines as a solution to the troubles faced by them, which include rising minimum labour costs, rentals, overhead and material costs etc. This is assumed that the utilization of robots in restaurants will gradually increase (Lee Ji-won, 2019). Tourism and hospitality are usually referred to as a "people business" – primarily services provided by human include receptionists, housekeepers, waiters, cooks, bartenders, guides, drivers, sales agents, event organizers, supervisors, managers, etc., for human customers (Stanislav and Craig, 2019). The technological developments in the area of the internet, social media, mobile applications, chatbots, robotics, and self-service kiosks (Benckendorff, Xiang, & Sheldon, 2019), has developed an important linkage between Tourism, Travel and Hospitality companies and their customers (Benckendorff, P. J., Xiang, Z., & Sheldon, 2019). More and more travel and tourism-related companies are adopting RAISA (Robots, Artificial Intelligence, and Service Automation) to reduce their operating cost and improve overall financial viability (When, 2020). In addition to the efficiency of these machines, one more crucial factor behind the use of robots in restaurants is the fact that human touch is already known as a significant source of contamination in the food processing industry, and to comply with health

safety regulations, the US food industry has been experiencing a huge growth in the adoption of robots in all major sectors (Rokonuzzaman M., 2020). Another attribute in favor of the robots is their consistency, most of the times restaurants use robots to cook and serve food since robots are programmed in such a way that they perform the task exactly in the same manner, contrary to that humans are often inconsistent (Cohen Aaron, 2019). Human resource supply is posing a great challenge for the restaurant industry (Kidd Birgit, 2018). Based on such factors some reports serving robots are becoming a great source of attention among local restaurant owners who have difficulty in manpower supply (When, 2020). Moreover, serving robots have proven to be more efficient when it comes to the speed of serving (When, 2020). With the fast growth of technology, Robotics and Artificial Intelligence (AI) are becoming an indispensable part of all three levels of services i.e. industry, professional, and personal (Murphy, Hofacker and Gretzel, 2017). Huge investment is done worldwide in Robotics and AI. Robots are being adopted from retail stores to restaurants in addition to all the major industries (Joshi, 2020). The engagement of robots in various industries is displayed in the figure-1
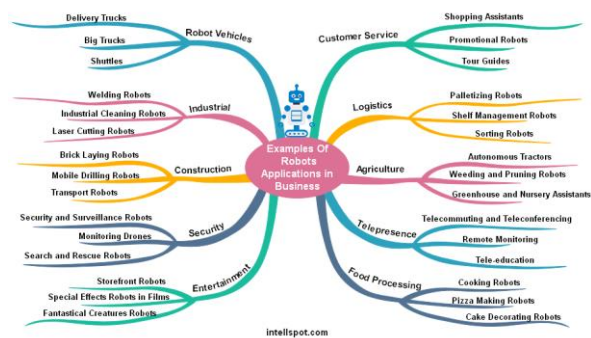

Figure-1 (Intellspot, 2020)

Artificial Intelligence and Robotics: "There is a big difference between a robot programmed to say hello and a robot that learns from your needs. The latter is A.I., and this can improve the guest's experience"(Pouliot, 2016). There has been confusions about these two fields of study and many times they are assumed to be the same, but the two are almost entirely different fields (Owen-Hill, 2020). The difference of AI, Robots and Machine Learning is displayed in the Figure-2 and Figure-3. Britannica defines Robotics as "design, construction, and use of machines (robots) to perform tasks done traditionally by human beings" (Britannica, 2020). The definition of Artificial Intelligence as per Encyclopedia Britannica is "the ability of a digital computer or computer-controlled robot to perform tasks commonly associated with intelligent beings, such as the ability to reason, discover meaning, generalize, or learn from experience" (Copeland, 2020). Today's modern dictionary define

AI as a sub-field of computer science and how these machines can imitate human intelligence, (being human-like rather than becoming human)" (Bernard Marr, 2018).
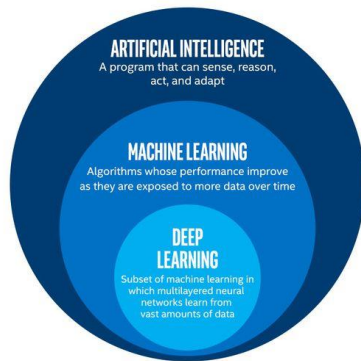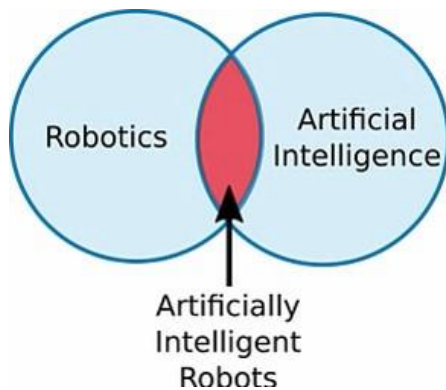
Figure-2 (Intellspot, 2020)

Figure-3(Owen-Hill Alex, 2017)

III.LITRATURE REVIEW

Adoption of Technology by Hospitality Industry:
Technology has long been a strategic asset for a hospitality business, for boosting the performance and winning over the competition in the market (Law, 2005). Academicians and Industry experts have been enthusiastically drawn to research technology adoption in hospitality (Wang Youcheng, 2007). (Ivanov and Webster, 2017) emphasized that the usage of new technologies such as robots, artificial intelligence, and service automation (RAISA), leads to extraordinary changes in the way hotels cater to their guests. RAISA has opened huge prospects to improve functioning style, increase efficiency and ensure a steady level of quality. In addition to efficiency and competitive advancement, technology is considered the key to creating a unique hospitality experience (Yu and Ngan, 2019).

Attributes for selection of a restaurant: Much research has been undertaken in the past to evaluate the determinant attribute that plays a major role in the selection of restaurants by the diners, with a purpose to suggest the restaurateurs and managers for sustainability and development of the business (Abel Duarte Alonso 2013). The variables of the study have not been limited to customer loyalty (Kim 2008), ambiance (Rowe 2010), pricing strategy (Pedraja 2001), location (Buchtal 2006), menu variety (Choi 2010), food type, and food quality within "occasion" (Auty 1992), consumer demographics (Bareham 2004), nutritional content (Wootan 2006), and service and/or product quality (Fu 2001). (Srivastava 2015) suggested that the attributes that customers look for in restaurant are the taste, comfort, speedy service, professionalism in staff and environment of the restaurant. Whereas (Hyewon Youna 2019) argued that the individuals' traditional values, beliefs, and moral obligation meaningfully affect their dining intention and the diners are inspired to select a traditional restaurant for dining. (Jalilvand *et al.*, 2017) studied and concluded that the quality and value of restaurant products/services are the main backgrounds of Word-of-Mouth behavior of customers and the Relationship Quality dimensions play a critical role in their linkages. (Pantelidis, 2010) Examined and found that the Online Rating/ feedback has a great impact on guests' determination of whether to visit a particular restaurant. In turn, each has presented evidence to support the proposition that the variables investigated are critical to informing the consumers' choice set and ultimate decision as where to eat out.

Robots in hotel and restaurant: It is believed that Service robots will be the future workforce of the hospitality sector and are expected to replace or aid humans, resulting in reduced cost of labor (Rodriguez-Lizundia *et al.*, 2015). Artificial intelligence (AI) is the imitation of human intelligence processes that allows computer systems to mechanically learn from experience and perform human-like tasks to improve the efficiency of daily tasks (Frankenfield Jake, 2021). The best feature of artificial intelligence is its capability to justify and take actions that have the best chance of accomplishing a precise goal. Machine learning is a subsection of artificial intelligence, this refers to the model where a computer programs on its own learn from and adjust to new data without the help of humans (Frankenfield Jake, 2021). The expectation from the service robots is to deliver consistent, appropriate, and efficient services (Mooney and Johnson, 2014). Numerous innovative hotels have lately started using service robots to provide distinctive experiences to their guests and the humans are being replaced with a robot having anthropomorphic figures (NAGAO RIHO, 2018). Robotics, AI, and service automation are generating new business opportunities, pointing to future growth prospective (Lee & Lee, 2015). The adaptation of robots, AI, and service automation by the

travel, tourism, and hospitality industries has increased dramatically in the past decade or so (Ivanov and Webster, 2017). Scientists foresee that service robots will be an enormously efficient platform and will increase efficacy and lowering labour costs in the service industry (Rodriguez-Lizundia *et al.*, 2015).

Anthropomorphic Robots and their Preference in Restaurants

The hospitality industry has the responsibility to present pleasurable experiences to its customers and under normal circumstances, the industry relies on human interactions, which has become a challenge and ae left with options to request its customers to interact with robots, few of which bear a resemblance to humans.(Christou, Simillidou and Stylianou, 2020). The number of anthropomorphic robots being designed for restaurants have already started to escalate and the demand for research on robots for hospitality has started to increase too(Tung and Law, 2017; Stephy, 2018; Christou, Simillidou and Stylianou, 2020). (Tung Vincent Wing, 2018) emphasized that evidence is available to support the fact, that people are either ready to or would like to pursue a social relationship with robots. Robots have entered our society and specifically the services industry, consequent to the progression in technology (Tuomi, Tussyadiah and Stienmetz, 2021). They are used broadly in areas where they may ease the shortage of labour, the task performed by them range from simple to complicated in areas, like restaurants, bars, kitchens, housekeeping, front offices, airports, and airlines (Wirtz *et al.*, 2018; Zhu and Chang, 2020). (Mori, MacDorman and Kageki, 2012) established that people have a positive response if the robot resembles humans, this positivity turns into negative at a certain point in case the robots have a weak resemblance to humans and leads to cause uncanny feelings. In situations where the appearance is less difference between the robot and human, the positivity of emotions increases.

Purchase behavior of Generation-Z: Researchers have concluded that many features of the decision-making of consumers are strongly influenced by 'shopping orientation' right from identification of the need to assessment after the consumption (ALICE S. Y. HIU, NOEL Y. M. SIU, 2001). Considered as the digital natives, Generation -Z has been the focus of study for many businesses, which are developing their digital strategies to gain some understanding of their purchase behavior and their anticipations in the

workplace. A lot of research has been done and is still ongoing research at various platforms to understanding Generation- Z's attributes, there is still a lot to be explored in various nations and different contexts (Ameen and Anand, 2020). (Anil Bilgihan 2014) studied the behavior of Gen -Y and reported that, Generation Y, seek and shares their dining experience on social networking sites (SNS) and recommended that the Opinion Leaders be targeted by the restaurants. (Puiu 2016) and (Desai 2017) in their study established that Gen Z demonstrates consumer values, inclinations, and beliefs that are different from the generations older to them, which makes it crucial to recognizing the consumption attributes of Gen Z. Whereas extensive research has been done on the decision-making approach of generations other than Gen Z (Gen X and Millennials), we need to focus on studying the purchasing style of Gen Z, as they are the rising customer division (Thangavel, Pathak and Chandra, 2019). This is believed that Gen-Z can contribute a lot to the restaurant industry and make it experience terrific heights. The reason is their tendency to spend the majority of their income on dining out. As per the surveys around 8% spend $10-20 per meal and 17% spend more than $20. These are impressive figures, especially considering that Generation Z will account for up to 30% of the entire population of India in the next year. These figures have the potential to dramatically transform the restaurant industry (https://eagleowl.in/, 2019). The survey conducted by (Accenture, 2017) asserts that Gen Z is considerably influenced by social media in comparison to Gen Y, and their purchases are largely built on trio factors i.e. smallest price/best deal, an exhibit of the products, and previous reviews of consumers. The Adaptation of Technology has been the driving force, that is pushing
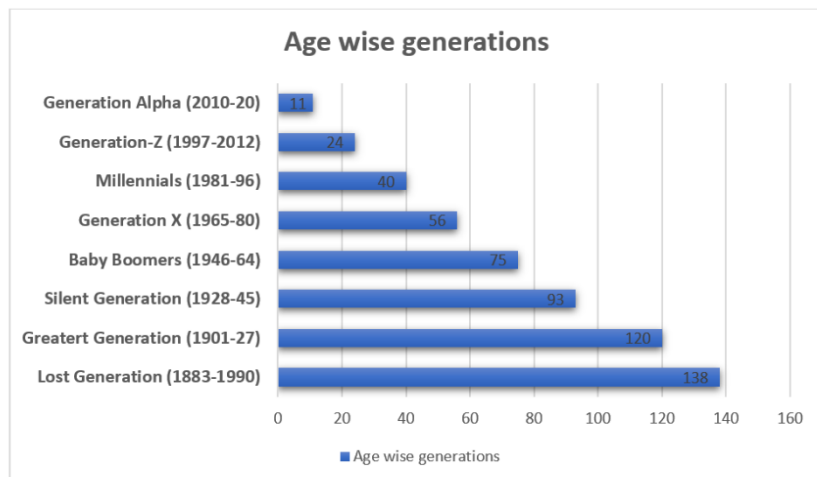

Figure-4

Generations according to birth year

Source: https://commons.wikimedia.org/w/index.php?curid=91612069

Generation Z to stay close to and experience the latest innovation in all dimensions, including the Acculturation which is Self-Identification to Global Consumer Culture, (Merriman, 2015). (Dewi and Aprilianty, 2019) in their study also concluded that

Generation -Z wants to stay updated and move along with it. To win over the loyalty of Gen Z, adapting the latest technology could be very helpful. They are speed lovers, even in the case of shopping they are interested in services that make shopping easier and faster (Accenture, 2017).

IV. METHODOLOGY

The study is conducted using a qualitative methodology approach to explore the perception of Gen-Z about the use of anthropomorphic robots in restaurants. After the selection of the age group, which are mostly students, purposefully only the students who are undergoing either some technical or hospitality courses were invited to participate in the study since the two major components of the study are 'technology' and 'restaurants'. Students of reputed technical and hospitality courses including both genders were invited. This study was intended to examine the behavior of Gen-Z, born between 1997-2012, since the youngest member of this generation is still 09 years, and to have mature responses from the participants, the members of Gen-Z falling in the age group of 16-26 years were invited to participate in the study. The purpose of the study was explained to the participants and only those willing to participate and were appropriate according to the sample parameters were invited to participate. In-depth interviews were conducted on the Zoom video platform, all interviews were recorded. Each interview lasted for 25 to 30 minutes. The exploratory and phenomenological approach (Christou, Hadjielias and Farmaki, 2019) was implied since it allows the in-depth examination of complex phenomena by exploring the experiences of the person being studied. As established by (Yeong *et al.*, 2018) Pilot testing of the interview protocol was done to ensure validity and was refined accordingly. Questions of the interview protocol, were developed in line with the research questions (Yeong *et al.*, 2018), and in addition to the predesigned interview protocol, interviewees were prompted to share their experiences and stories that come to their mind. The participants were persuaded to reveal their opinions about anthropomorphic robots and to reveal their opinions and emotions on the probability of confronting a robot that highly resembles a human being (Christou, Simillidou and Stylianou, 2020) and whether it should be made a regular feature for the restaurants to avoid the spread of the virus through human interaction. Data collection lasted for 24 interviews until it reached saturation (Yeong *et al.*, 2018) All these recordings were converted into transcripts for further analysis. The data were coded, categorized, and the codes were compared to one another. At the second level, the Cycle Pattern Coding Method (Saldana, 2009, p. 48) was used to recognize similarly coded data which was further summarized into sub-categories. At the third level, the Axial Coding Method was applied to further examine results from the first two stages to discover how the categories are interrelated with one another(Johnny, 2017). Key findings of the research are presented along with the supporting quotations from the coded manuscripts.

After the thorough review of literature relevant to the present study, it was observed that lot of studies and research are being conducted to gain better insight in the purchase behavior of generation-Z. In order to fill in the gaps and to contribute to the existing knowledge following questions were drafted. These questions guided the study and were the foundation of the interview protocol:

Q1:   The impact of using Robots on the purchase behaviour of Gen -Z's Restaurant Choice Making.
Generation-Z is born and is growing, under the shadow of high-tech technologies and using gadgets in their day-to-day life, in comparison to the generation older to them (Seymour Emily, 2019), this is bound to have a major effect on the way they react to the deployment of robots in restaurants.

Q2:   Will the use of robots help in overcoming the fear of virus infection in the restaurant?
In the hard times of the Covid-19 pandemic, hospitals have utilized technology in the best possible way including robots and drones for delivery and other services for the patients and affected areas (Jain *et al.*, 2021), so the idea of utilizing the services of the robots in restaurants needs to be studied for the psychological and practical implications.

Q3:   How favourable are diners to the anthropomorphic robots?
Robots, especially the one that has to interact with humans and are anthropomorphic, are likely to get a positive emotional behaviour from the humans (Złotowski *et al.*, 2015). This question is drafted to explore whether the efficiency of services or the appearance, which one has more importance for the generation-Z.

Q4:   Do they see robots as replacements for humans in a restaurant?
Many researchers have already predicted that robots will replace many jobs being done by humans today (Morgan Blake, 2018), but since human emotions have a deep impact on the overall experience of the diners during the services provided by the restaurant's staff (Alhelalat, Habiballah, and Twaissi, 2017)
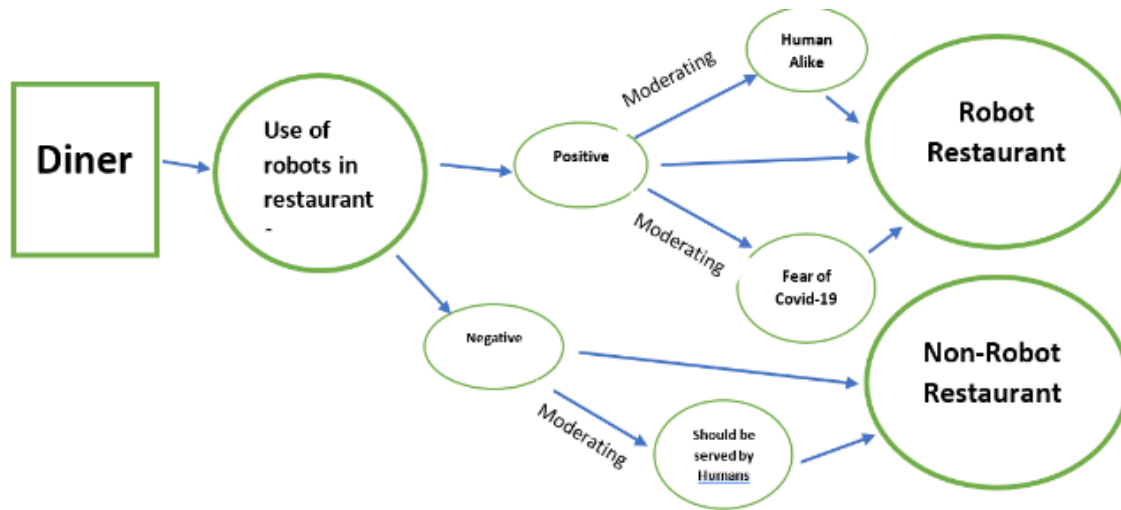
Theoretical Model based on research questions

V. FINDINGS

Thematic analysis was applied to the data. Three key dimensions emerged from the data, relating to the purchase behavior towards the restaurants using robots for service and other jobs in the restaurants. The themes and sub-themes within these key dimensions are presented below.

R. Question-1: The impact of using Robots on the purchase behaviour of Gen Z's Restaurant Choice Making.

Almost all respondents voiced positive towards the engaging robots in restaurants and wished to experience the services of smart machines and the food prepared by them. Few of them even suggested that, given a chance, most of the people would at least visit the robot restaurants once. The concern expressed by most of them was that enough testing of robots must be done before engaging them, since they will be handling food and the scope of malfunctioning or faulty functioning is negligible, because the negative result would lead to a bigger problem and would eventually shut the possibilities of increasing the business using robots.

> "Since this would be a new concept people will visit to have the new experience, and if it is good the massage would spread, and more people will start visiting. If asked personally or I come to know of a restaurant where robots are serving and things are working smoothly, I will visit. If the technology is good and there are no snags and the robot can perform all the functions that human/ waiter performs, such as cancellation of orders or changes/modification of the order then the chances to its working for the long term are there and they will be able to attract more diners" (Respondent-4).

R. Question 2: Help in overcome the fear of virus infection in the restaurant.

Respondents had disparity in the opinion on the above question, though almost all the respondents believe that the use of robots will help in reducing the fear of the virus and based on their extent of the agreement the participants are divided into three groups.

Group-1: The use of robots will help, as the major carriers are the humans, and this is the major reason for the utilization of robots in the hospitals and isolation canters during Covid-19.

> "It will be psychologically very good and have a positive impact, people prefer to be served by humans, but because of virus fear robots are better and if they give a feeling of humans, it will be a positive move." (Respondent-22).

Group-2: The use could be helpful, but the robots would also need to be tested for Virus resistance, to ensure they do not act as a carrier since these machines will be supported by humans at the backend and the other concern would be the procedure and schedule of sanitization of the robots.

> "The virus can stay on the surface also, it is not that it only spreads through humans it can spread through robots also, and especially when the robots are going to be controlled by humans, yes it can be controlled to some extent using robots, but I am not sure it can be very effective "(Respondent-10).

G-3: This situation and the related events have created a fear of uncertainty and have affected people so badly that they are not at all ready to take any chance. Since the chances of such people visiting the restaurants are very remote so the effect of using robots will not be much visible until the situation improves. But of course, this fear will help after the situation improves and they start visiting the restaurants, then they might prefer robots' restaurants, out of the fear.

> "As far as I and my family are concerned, we have lost a few of my very close friends and we have decided not to take any chances, until

things become normal, only after observing for sometimes, we might plan for some outing" (Respondent-14).

R-3: How favourable are diners to the

overall experience and the customized taste that the chefs add to the dishes according to the demand of different customers. The essence of the statement of the respondents indicates that this transition would happen

Distribution of keywords (No of words)
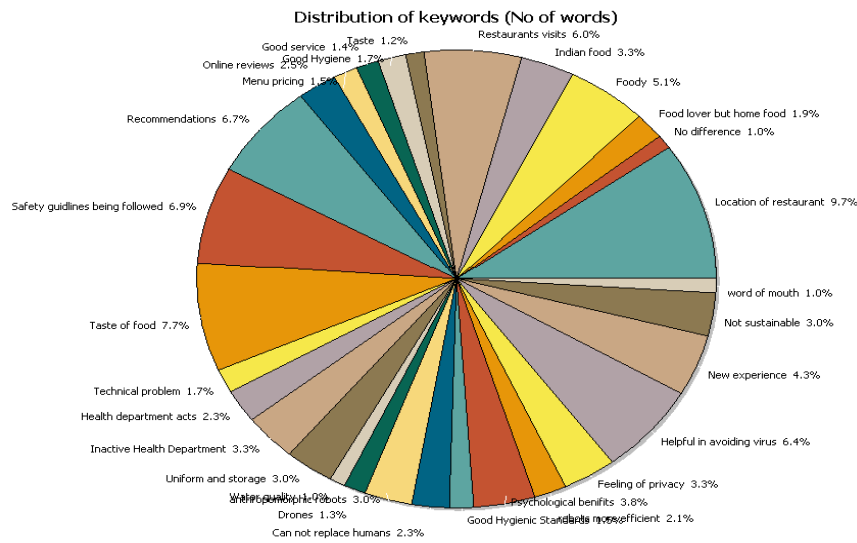
anthropomorphic robots?

From the versions of respondents, it became evident that generation-Z was of the opinion that serving robots should be anthropomorphic, else it would give a feeling of the vending machine. The robots in restaurants are engaged in cooking, serving, and interacting with guests as well which includes listening to the complaints, suggestions, and answer queries. Furthermore, since the robots are intended to replace the humans, while reduce the missing human element from the overall experience of the diners, it would be better to have the human look alike robots. Foremost factor for many diners, visiting a restaurants is to enjoy the overall experience, eating is one of the activities, and in the overall experience, the human element plays a crucial role.

"If they robots look like humans, it would be wonderful, and it will be a good experience and batter if they are not like just a simple machine" (Respondent-18).

"Yes, they should look like humans for making the diners comfortable and feel at ease" (Respondent-21).

"Yes, since the human touch would be missing in case the robots are deployed in place of humans, so the anthropomorphic robots will at least compensate the experience to some extent" (Respondent-7).

R-4: Do they see robots as replacements for humans in a restaurant?

The pace with which, industries are adopting machines and AI, Generation-Z is quite confident that robots are the future of restaurants, though they feel it is going to take time and the delay would mainly be because of the human-to-human interaction which contributes to the

in phases starting from cleaning, billing to service of food, and finally, the food processing and customized taste would be the biggest challenges.

"I think at the moment they are good for cleaning and billing part and the foodservice part is yet under trial but will improve soon" (Respondent-19)

"Robots will be a common feature of our daily life like other machines, they are bound to replace humans in many industries, especially in production. In the case of restaurants, I think there will be different types of restaurants in the future like partially managed by robotics and fully managed by Autobot" (Respondent-5).

VI. DISCUSSION AND CONCLUSIONS

Interviews with generation-Z have revealed the perception of Generation-Z in context to the deployment of robots in various operations of the F&B service industry. Because of the open-ended questions and insistence to the interviewees to speak out whatever comes to their mind and to share relevant experiences, many interesting points also came to light. One such point is that since photography and selfie clicking is a ritual for every dining out event (for generation Z), so this restaurant must qualify to be a place where good selfies can be clicked and shared on social media for being selected by this generation apart from all other attributes. For few of the respondents, who have a taste of food and quickness of the service as the sole criteria of selection of a restaurant thought that the service should be efficient, and it does not matter "whether the

service robot is two-legged or four-legged as far as the food is served fast".

Cleanliness, sanitation, hygiene, social distancing has emerged as one of the key attributes being considered by gen-Z for selection of restaurant, respondents have expressed that even the taste comes after this. For a few the ambiance of the place has a great value, as one of the respondents said "I keep ambiance very high in my list, it is like the place should have positive vibes after that is the hygiene. The attribute that has been mentioned by almost all the respondents is the distance to be travelled for the restaurants, this is to avoid traveling by public transport because of the fear of the virus. From the responses, it seems that generation-Z are very fond of eating out and most of them do not hesitate in calling them foodies, to the tune that some believe that visiting food joints and exploring new foods is like an adventure. This generation is guiding the trends in the restaurant industry, and making the managers rethink and redesign the menu to stay ahead (McSweeney Ryan, 2019). This tech-savvy generation has high value for online reviews and feedbacks and is a strong base for finalizing the place of dining. Even in the case of deploying robots in restaurants, the review of the performance of these robots and the ratings given by those who have experienced them will have a major role in the decision making (Thangavel, Pathak and Chandra, 2019).

Robots are being developed almost identical to humans, notably on phone and text interactions. In a study conducted recently, it was observed that 38 percent of people on chat, could not establish whether they interacted with a human or chatbot, and 18 percent predicted incorrect (Wuenderlich and Paluch, 2017). The making of humanoid robots was initiated for a better understanding of making improved prosthetics for humans, and gradually it has escalated to the development of robots for entertainment, to work as a health worker at homecare, at a manufacturing unit, and more. Artificial intelligence aids humanoids listen, recognize, and react to their environment and interactions with humans(Marr Bernard, 2020). The future of industries is expected to have a dominating role of robots and will affect the employment of humans, but as (Casey Marcus, 2020) noted that "Robots Kill Jobs But They Create Jobs, too" alongside the development of robots, many new technologies will also grow, which will generate new jobs that can be better performed by humans and will enhance the future of the workers. The outcome of this study supports previous studies that robots could be an attraction, for increasing the number of diners at restaurants, a device to help humans in overcoming the fear of the virus and control the spread of contamination through human interaction(Christou, Simillidou and Stylianou, 2020), respondents were of the opinion that human should handle the jobs that require personal interaction, and the human emotions are involved for the overall experience. Respondents were of the view, that the services of robots will be helpful for the employees of the restaurants also, as they can avoid the risk of coming in direct contact with diners, though it can be treated as a temporary or long-term deployment depending on the type of restaurant and plan. Most of the respondents recommended the robots deployed in service-related jobs should have human looks for the sake of positive emotions.

VII. RECOMMENDATIONS AND IMPLICATIONS FOR THEORY, RESEARCH, AND PRACTICE IMPLICATIONS

In the light of the results of the study, the restaurateurs can development new business models with a mix of anthropomorphic and non-anthropomorphic robots as the protagonists. Though the type of robots to be deployed would depend upon the type of restaurant, however the favorable factors that have emerged from the study are that the gen-Z would welcome this new development, at least at the onset and the performance of these machine would decide the future of such business model. Another important factor that needs attention of the managers are the reviews and online feedbacks since the purchase behavior of gen-Z is deeply influenced by the reviews and ratings by those who have personally experienced any such service. Deploying robots is an expensive affair and would be sustainable only if adopted for a prolonged use and not as a solution for an immediate problem at hand.

VIII. LIMITATIONS AND RECOMMENDATIONS FOR FUTURE STUDY

This research was conducted during many restrictions of movement, because of covid-19, selections of the respondents were done through social networks and the snowball method was adopted. The population for the study was the members of generation-Z and since this generation has members starting from 9 years of age, so the senior segment i.e., above 16 years were invited to participate in the study. The opinion of other generations such as gen-X and Gen-Y should also be studied for their perception for the use of robots in restaurants. The purpose of studying gen-Z is to understand how the future generation will react to the increased use of robots, whereas the opinion of other generations such as gen-X and Gen-Y, that are the major contributors to the present restaurant business cannot be ignored. Moreover, only the students undergoing hospitality and technical courses were invited for this study, whereas the opinion of other members of the generation must also be studied for generalization.

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