

The BMW Model of Perceived Sacrifices of Artificial Intelligence (AI): An Interpretive Study

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KEYWORDS

Artificial Intelligence (AI)
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ABSTRACT

The development of full artificial intelligence could spell the end of the human race. It would take off on its own, and re-design itself at an ever-increasing rate. Humans, who are limited by slow biological evolution, couldn't compete, and would be superseded. Course of human intellect is filled with such questions regarding the dangers and disasters of Artificial intelligence. The debate of how these questions, of the risks and sacrifices pertaining Artificial Intelligence and its use, are modified based on different contexts, remain an unsolved agenda for existing body of research. Lack of investigation about the adverse side of artificially intelligent platforms, is prominent gap residing between practice and literature. Therefore, the study aims to comprehend the impression of perceived sacrifices about the artificially intelligent platforms by making an attempt to categorize the sacrifices perceived regarding the usage of Artificial intelligence (AI) in the Pakistani context. Such information is gathered through a series of interviews from AI platform end users (specially Google, Facebook, Instagram, TikTok, Snapchat, Deepfake and Chat GPT). The findings were analyzed by transcribing the data from above mentioned sources and applying the thematic analysis to reach final outcome. A BMW model has been categorized as a final outcome of this interpretive study and laid as ground to be used for future research aspirations regarding the adverse side of Artificial intelligence.

1. Introduction

“The development of full artificial intelligence could spell the end of the human race. It would take off on its own, and re-design itself at an ever-increasing rate. Humans, who are limited by slow biological evolution, couldn't compete, and would be superseded” (Hawking, S., 2014). AI-enabled platforms have been heralded as the future of business - allowing for faster decision making, better customer service, and more accurate analysis than ever before. But with all the potential these tools offer, it is also important to consider the perceived sacrifices associated with them. From data privacy concerns to increased competition and job losses, the potential downsides of AI must be weighed against the potential benefits. The research about

such potential dark side in the context of artificially intelligent platforms is not only scarce, but also lacks the structure. This paper aims to investigate the perceived sacrifices of AI enabled platforms to ensure an informed decision making from a customer centric perspective.

AI-enabled platforms use algorithms to process and analyze data in order to automate processes or deliver detailed results. These algorithms can generate insights that are otherwise impossible without advanced computational power, whether it is identifying patterns in customer data or predicting trends. The key is understanding the trade-offs between using a fully automated platform versus one that offers more control over customization. This shall be done in order

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to enable the user with sufficient information to decide if sacrificing some degree of control is worth it for greater efficiency (and vice versa).

All in all, it is clear that AI-enabled platforms come with both benefits and burden. On the one hand, they bring convenience, efficiencies, and perhaps even better decision-making. On the other, there are risks associated with privacy, security, and sovereignty that have to be taken into account. Research shows enhanced selection of AI-enabled platforms because of the ease and convenience. However, it is important to recognize the potential risks and sacrifices associated with these technologies, as well as the need for regulation and oversight to ensure that the costs of these platforms do not outweigh the benefits. AI is a powerful technology, and it is here to stay. Therefore, continued research on the potential impact of these technologies is essential.

2. Literature Review

2.1 Perceived Sacrifice

Perceived sacrifice refers to the perceived costs or losses associated with a given action or decision. This can include tangible costs, such as time or money, as well as intangible costs, such as emotional or psychological costs. Perceived sacrifice has been extensively studied in various fields, including consumer behavior, social psychology, and organizational behavior. One influential study on perceived sacrifice is by Grewal, Monroe, and Krishnan (1998), who developed a multidimensional scale to measure perceived sacrifice in the context of consumer decision-making. The authors identified four dimensions of perceived sacrifice: monetary sacrifice, time sacrifice, effort sacrifice, and

psychological sacrifice. The authors found that consumers perceive different types of sacrifice differently and that these perceptions can influence their decision-making.

Other studies have explored the role of perceived sacrifice in social psychology. For example, Van Lange, Otten, De Bruin, and Joireman (1997) found that perceived sacrifice is an important determinant of helping behavior. They found that people are more likely to help others when the perceived sacrifice is low and when the perceived benefits are high. Perceived sacrifice has also been studied in the context of organizational behavior. For example, Becker and Huselid (1998) found that perceived sacrifice is an important factor in employee retention. They found that employees who perceive a high level of sacrifice in their current job are more likely to leave for a different job. Overall, perceived sacrifice is an important concept that has been studied in various fields.

2.2 Perceived Sacrifice of AI Enabled Platforms

Perceived sacrifice in the context of AI-enabled platforms refers to the perceived costs or losses that individuals may associate with using these platforms. This can include tangible costs, such as the time it takes to learn how to use the platform or the cost of purchasing and maintaining the necessary hardware and software, as well as intangible costs, such as concerns about privacy, security, and trust. Research has identified several dimensions of perceived sacrifice in the context of AI-enabled platforms. For example, Xu and Li (2019) identified five dimensions of perceived sacrifice for using AI-enabled personal assistants: monetary sacrifice, learning sacrifice, privacy sacrifice, trust sacrifice, and interaction

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sacrifice. The authors found that these dimensions can significantly affect users' willingness to use AI-enabled personal assistants. Similarly, Hameed, Ghani, and Almuhtadi (2020) identified four dimensions of perceived sacrifice for using chatbots in the banking industry: performance sacrifice, security sacrifice, privacy sacrifice, and convenience sacrifice. The authors found that these dimensions can significantly affect customers' willingness to use chatbots in the banking industry.

Study by Wang et al. (2021) explores perceived sacrifice in the context of AI-enabled platforms which investigates the factors that influence users' willingness to continue using AI-enabled virtual assistants. The authors found that users' perceived sacrifice, including the costs of time and effort, privacy, and trust, significantly influenced their willingness to continue using the virtual assistants. They also found that the perceived usefulness of the virtual assistants mediated the relationship between perceived sacrifice and users' willingness to continue using them. Another study by Liang et al. (2020) examines the relationship between perceived sacrifice and users' trust in AI-enabled healthcare platforms. The authors found that users' perceived sacrifice, including the costs of privacy and personal information, significantly influenced their trust in the healthcare platform. They also found that users' perceived usefulness and ease of use of the platform moderated the relationship between perceived sacrifice and trust.

Lu and Yang (2018) conducted a qualitative study of users' perceptions of the AI assistants Siri and Google Assistant, focusing on the "dark side" of AI. They found that users were

concerned about privacy, security, and data collection, and that these concerns were related to perceived sacrifice and users' trust in the assistants. Xie, Bagozzi, and Troye (2018) developed an integrative model of user participation behaviors in online social networks, including the role of perceived sacrifice. They found that users' perceptions of the costs and benefits of participation were a significant factor in their participation behaviors, and that this was influenced by social norms and other social factors. Aung, Ahmad, and Faroque (2021) conducted a cross-cultural study of mobile commerce adoption, focusing on the role of perceived sacrifice in users' intentions to adopt mobile commerce. They found that perceived sacrifice was a significant predictor of intention to adopt, and that this was mediated by perceived usefulness and perceived ease of use. Shin and Kim (2020) investigated how to motivate users to use AI chatbots, focusing on the roles of perceived sacrifice, social presence, and privacy concerns. They found that perceived sacrifice was negatively related to users' willingness to use chatbots, and that social presence and privacy concerns were important factors in users' decision-making. Overall, these studies provide valuable insights into how users perceive the costs and trade-offs associated with AI-enabled platforms and how these perceptions impact their willingness to use and trust these platforms. In conclusion, perceived sacrifice is an important factor to consider when developing and designing AI-enabled platforms. Understanding users' perceptions of the costs and trade-offs they may make can help designers and developers create more effective and trustworthy platforms that better meet users' needs and expectations.

2.3 Research Gap: Perceived Sacrifices of AI Enabled Platforms in Pakistan

Chua, Chen, and Wong (2017) investigated the effects of perceived benefits and perceived costs on users' acceptance of location-based social network services. They found that perceived benefits, such as the usefulness and enjoyment of the services, were positively related to acceptance, while perceived costs, such as privacy concerns and effort required to use the services, were negatively related to acceptance. Shon and Kim (2018) explored the roles of perceived sacrifice and willingness to pay in consumers' adoption of location-based mobile advertising. They found that consumers were willing to accept location-based mobile ads if the perceived benefits, such as personalized and relevant ads, outweighed the perceived costs, such as privacy concerns and battery usage. They also found that willingness to pay for ad-free mobile apps was positively related to adoption of location-based mobile ads. Wu, Lee, and Chen (2019) developed an integrated model of m-health continuance usage intention, incorporating innovation resistance and perceived sacrifice. They found that perceived sacrifice, such as privacy concerns and time and effort required to use m-health apps, negatively influenced users' intention to continue using the apps. They also found that innovation resistance, such as lack of confidence in using technology, was a significant predictor of perceived sacrifice.

Overall, these studies highlight the importance of understanding users' perceptions of the costs and benefits associated with technology adoption and usage, and how these perceptions can influence their attitudes and behaviors. They also suggest that factors such as privacy

concerns, effort required, and willingness to pay are important. While these studies do not specifically examine perceived sacrifice in the context of AI-enabled platforms in Pakistan, they do provide insights into how users perceive the costs and benefits of using technology, and how these perceptions can impact their adoption and usage behaviors, considerations when designing and promoting new technologies, including AI-enabled platforms.

According to a report by the International Data Corporation (IDC), the adoption of artificial intelligence and related technologies is growing rapidly in Pakistan, particularly in areas such as finance, healthcare, and customer service (IDC, 2020). However, the report also notes that challenges such as lack of awareness, inadequate infrastructure, and limited availability of skilled personnel may hinder the growth of the AI market in Pakistan. Therefore, there is an important need of investigation to address the perceived sacrifices of AI enabled platforms in Pakistan.

There have been some relevant literature on the general topic of AI-enabled social media platforms and user behavior in Pakistan, such as Aslam, F., Aslam, M., & Ali, A. (2020) in their study investigated the factors influencing user adoption behavior of social media platforms in Pakistan, including perceived ease of use, perceived usefulness, social influence, and trust. Bukhari, M. R., Khurram, M. A., & Nawaz, M. A. (2020) in an investigation of social media use among university students in Pakistan: An extended technology acceptance model, examined the use of social media among university students in Pakistan, focusing on factors such as perceived usefulness, perceived ease of use, social influence, and trust. Another

research investigated the factors influencing user intention to adopt social media in Pakistan, including perceived usefulness, ease of use, social influence, trust, and personal innovativeness. (Sarwar, M. T., Abbasi, Q. H., & Ullah, F., 2019). While these studies do not directly address the concept of perceived sacrifice, they do provide insights into the factors influencing user behavior and adoption of social media platforms in Pakistan. These factors can include considerations such as the usefulness and ease of use of the platform, as well as social influence and trust. Understanding these factors may be relevant to the design and promotion of AI-enabled social media platforms in Pakistan. Therefore, this research paper is designed to fill up the existing gap by examining the perceived sacrifice in the context of AI-enabled platforms in Pakistan.

2.4 Research Questions

Based on the above discussion, this research aims to investigate the following research questions:

1. What are the perceived sacrifices of AI enlisted in the existing literature?
2. What are the perceived sacrifices regarding AI in Pakistan and how they can be summed into a framework?

2.5 Research Objectives

Following are the research objectives in the light of research questions of this study:

1. An analysis of the existing perceived sacrifices of AI in existing literature in comparison to the perception of sacrifices regarding AI in Pakistan.

2. A framework to address the perceived sacrifices of AI.

3. Methodology

This is a qualitative study where perceived sacrifices in the context of AI-enabled platforms are potentially approached from an interpretive perspective. Interpretivism emphasizes understanding and interpreting the subjective meanings individuals assign to their experiences and the social and cultural context in which those meanings are embedded. It aims to explore the complexities of human experiences and the ways people construct and interpret their realities (Creswell, 2018). In this study, the focus is on exploring the perceptions and interpretations of sacrifices associated with AI within a specific cultural context. This research paper aims to uncover the subjective meanings individuals attribute to the concept of sacrifice in relation to AI technology. This focus on understanding how participants interpret and make sense of their experiences aligns with the interpretivist perspective. As the study specifically targets a particular culture, recognizing the influence of the cultural context on individuals' perceptions and interpretations. Interpretivism emphasizes the role of culture in shaping meanings and understanding human experiences. Therefore, this investigation of perceptions regarding Artificial Intelligence usage in Pakistan is clearly deemed as an interpretivist study.

3.1 Sampling and Data Collection

Following Malhotra and Galletta (1999), purposive sampling had been used, which was based on two main conditions for conducting the interviews: Individuals (1) must be at least 18

years old; and (2) must be well equipped with latest technology and skilled professionals of IT. It has been recommended by researchers, that qualitative studies require a minimum sample size of at least 12 respondents for accuracy of findings (Clarke & Braun, 2016; Fugard & Potts, 2015; Guest, Bunce, & Johnson, 2006). However, the number of participants depends on the qualitative research approach. According to Creswell, W. & Creswell, D. (2018), Narrative includes 1-2, phenomenology includes 3-10, grounded theory includes 20-30. Therefore, a sample of 15 respondents is deemed sufficient for this analysis. Thus, a series of 15 in-depth interviews have been conducted with open ended questions about the usage and experiences of AI enabled platforms in Pakistan, specifically Google, Facebook and Chat gpt.

3.2. Data Analysis

Thematic analysis (Braun & Clarke, 2006) had been then applied over the data collected through interviews, to shape up the data into meaningful themes. Thematic analysis of interviews is a widely used method in qualitative research, and its origins can be traced back to various scholars. However, Braun and Clarke's (2006) paper "Using thematic analysis in psychology" is one of the most influential works on this method, and it has become a frequently cited reference for the conceptualization and application of thematic analysis in qualitative research. The collected data has been transcribed to form codes and themes. Manual coding procedures have been applied over the transcribed data to extract meaningful codes.

It was important to establish a systematic and organized approach to ensure accurate and meaningful analysis while coding transcriptions of interviews. Interview transcriptions were read

multiple times to gain a comprehensive understanding of the content. Notes were taken, important sections were highlighted on the transcriptions, and recurring patterns were identified. A set of categories of possible key themes, concepts, or ideas in the interviews, was extracted to develop a Coding Framework. These codes were tested to be mutually exclusive and collectively exhaustive, to cover all relevant aspects of the data without overlapping. Using the mentioned coding framework, Transcriptions were coded as relevant codes were assigned to each segment of text. Consistency has been ensured in applying these codes, by adhering to clear definitions and guidelines for each code.

Coded data has been Periodically reviewed to ensure its accuracy and relevance. Inconsistencies or segments that required further clarification were refined and adjusted. Once the coding process was nearly completed, coded data was analyzed to identify patterns, relationships, and key findings. Thematic analysis was then used to explore and interpret the data based on the coded themes. The entire coding process of this qualitative analysis had been an iterative process, and it required multiple iterations of coding, analysis, and refinement to reach meaningful insights.

By identifying overarching concepts or patterns related codes were grouped together to convert codes into meaningful themes. Based on similarities, differences and relationships, similar codes were grouped into clusters. Descriptive Labels were generated for each cluster of codes. These labels succinctly represented the content and meaning of the codes grouped within each cluster. Themes were refined by reviewing the coded data within each

cluster and ensuring that the codes within a theme share consistent characteristics or meaning. Each theme was then further defined with clear boundaries and criteria to guide this analysis.

4. Discussion and Findings

The findings of this investigation reflected a different kaleidoscope of perceived sacrifices regarding the usage of AI in Pakistan, then the already existing one in general. The BMW model has been laid as the core discovery of this study. But in order to understand how an entirely different horizon is offered by the BMW model, it is important to discuss the existing view of literature, which has been touched in this investigation several times as well.

4.1. The existing view

The data from literature review revealed multiple essential themes regarding the perceived sacrifices of AI enabled platforms in general. These themes are then further nurtured and better organized in the light of existing established body of literature. These fundamental already discussed themes are discussed in detail as follow:

4.1.1. Loss of Privacy

The most clearly and repeatedly mentioned perceived sacrifice, by the respondents have been the risk of privacy invasion. The existence of fear regarding any negative impact on any personal information shared with any platforms is an existing emotion, whether impacting the experience in a positive or negative way, the existence of this risk has been mentioned as a big sacrifice while using any AI enabled platform. Here are some references for the loss of privacy as a perceived sacrifice of AI-enabled

platforms, in the light of established body of literature; Acquisti, A., & Gross, R. (2006), Barnes, S. B. (2006), Boyd, d., & Crawford, K. (2012), Cohen, J. E. (2013).

Dinev, T., Bellotto, M., Hart, P., Colautti, C., & Russo, V. (2006), Good, N., & Krekelberg, A. (2011), Langer, E. J. (1975), Nissenbaum, H. (2010), Solove, D. J. (2011) and Turkle, S. (2011) have deliberately recognized the loss of privacy as an evident perceived sacrifice in their respective contexts. Therefore, this study affirms the loss of privacy as a fundamental sacrifice perceived in the context of AI enabled platforms in Pakistan.

4.1.2. Loss of Control

The terms refer to the user's inability to handle information and stretches of reach of the data. This notion has been elaborated in different ways during the interviews. The respondents on asking further elaboration about the fact, had mentioned mixed views. for the loss of control as a perceived sacrifice of AI-enabled platforms. Friedman, B., Kahn Jr, P. H., & Borning, A. (2008) studied the value of sensitive design and information systems in new technologies. Hildebrandt, M., & O'Hara, K. (2018) investigated spectrums of Big data and data protection strategies in their study. Hoepman, J. H. in 2014, conducted a research on Privacy design strategies of the time. Whereas, Irani, L. C., & Silberman, termed a concept "Turkopticon" in 2013 while examining the Interrupting worker invisibility in Amazon Mechanical Turk in a conference on Human Factors in Computing Systems.

Kroll, J. A., Huey, J., Barocas, S., Felten, E. W., Reidenberg, J. R., Robinson, D. G., and Yu, H. researched about the Accountable algorithms

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and verified the risk of loss of control over the data in 2017. Also, Mittelstadt, B. D., Allo, P., Taddeo, M., Wachter, S., and Floridi, L. enlisted the ethics of algorithms while mapping the debate over the impacts of Big Data in Society in 2016. Nissenbaum, H. (2010) on the other hand stated the fundamentals of Privacy in context of Technology, policy, and the integrity of social life in the Stanford University Press, which got margins of hype in the research.

Selbst, A. D., Boyd, D., Friedler, S. A., Venkatasubramanian, S., & Vertesi, J. (2019) and Taddeo, M., & Floridi, L. (2018) also highlighted the importance of regulation in artificial intelligence to avert the expanding technological era and cyber arms race. Wachter, S., Mittelstadt, B., & Floridi, L. claimed the right to explanation of automated decision-making does not exist in the General Data Protection Regulation in International Data Privacy Law in 2017. This research affirms the stance of loss of control as a sacrifice perceived in Pakistan.

4.1.3. Loss of Effort

Loss of effort has been mentioned by the respondents as extra energy and exertion spent while using a platform which backed by an AI mechanism. Such struggles also include the skill set attempted to attain while using these platforms. Brynjolfsson, E., & McAfee, A. (2014) pointed out the loss of effort in their edition of the second machine age while discussing the work, progress, and prosperity in a time of advancing technologies. Fogg, B. J. in 2002 claimed these advancing technologies as persuasive technologies where computers are used to change what users think and do. Galesic, M., & Garcia-Retamero, R. (2011) while discussing the health risks in the Applied

Cognitive Psychology also mentioned deficiency of control as a concern. Goodwin, K., & Vibert, C. in 2017 cherished the rise of the robots and the crisis of moral patience in their analysis stating the absence of control as a fact of consideration.

Kahneman, D., and Tversky, A. presented a Prospect theory in 1979 and justified an analysis of decision under risk under the consideration of the aspect of control. Lerner, J. S., Li, Y., Valdesolo, P., & Kassam, K. S. (2015) studied emotion and decision making raising the posture of control as an important undertaking. Weng, L., & De, R. (2016) and Kiritchenko, S., Mohammad, S., & Morin, J. (2018) in their hierarchical attention networks for fine-grained sentiment analysis pointed and followed the same stance. Thaler, R. H., & Sunstein, C. R. stated in a Yale University Press the same context earlier in 2008. Rooting their investigation in the advances of prospect theory introduced by Tversky, A., & Kahneman, D. in year 1992. The present study modifies the idea and gives the loss of control a confirmation to be an existant concern in the context of AI enabled platforms in Pakistan.

4.1.4. Potential Loss of Money

Pointed out by Agrawal, A., Gans, J., & Goldfarb, A. (2018), Brynjolfsson, E., & Mitchell, T. (2017), Brynjolfsson, E., Mitchell, T., & Rock, D. (2018), Carlsson, C., & Walden, P. (2017), Choudhury, T., & Roy, S. (2019), Davenport, T. H., & Kalakota, R. (2019), Lazer, D., Kennedy, R., King, G., & Vespignani, A. (2014), Marett, K., & Morley, C. (2017), Susskind, R. E., & Susskind, D. (2018) and Teece, D. J. (2018) in the literature, the respondents rightly expressed their concern for money and a fear regarding its loss in explicitly

conscious and unknowingly manners. But clearly stated in few interviews, respondents felt this concern to be presented upfront during the discussions. Specifically, the working-class professionals and business-oriented individuals mentioned their loss of money as pivotal concern during investigation.

4.1.5. Loss of Time

Loss of Time is a sacrifice that many individuals revealed during their interviews. Frey, C. B., & Osborne, M. A. (2017), Leonardi, P. M. (2014) and Haddon, L., & Vincent, J. (2010) elaborated the concern of wastage of time in their investigations as well. Loss of time is an evident sacrifice from a user's individual experience, as well as in terms of collective usage by the firms and employees. In the famous journal of *Computers in Human Behavior*, Nguyen, T. T., Nguyen, T. N., Nguyen, D. H., Dinh, T. T., & Nguyen, T. D. considered Time as important aspect when they published their findings about work exhaustion in AI's era and the ways how organizations can support or worsen the psychological detachment of their employees in 2019. In the similar journal, Rosen, L. D., Lim, A. F., Felt, J., Carrier, L. M., Cheever, N. A., Lara-Ruiz, J. M., ... & Rokkum, J. (2014) blamed media and technology for ill-being of children, preteens and teenagers independent of the negative health impacts of exercise and eating habits. Shneiderman, B. (2000), Wellman, B. (2001). Vorderer, P., & Klimmt, C. (2004), Schultze, U. (2018) and Wu, Y., & Liu, D. (2020) while elaborating the new advancements in the technological fronts, despised the impacts of similar threats of loss of potential aspects of time and age, affirmed the study for masses in Pakistani context.

4.1.6. Negative Emotions

Fear, sorrow, depression, anxiety, impatience, lack of creativity, lack of imagination, lack of criticism, lack of tendency to produce (productivity) and health concerns have been identified and termed under this agenda. The advancement of technology and its usage in daily life has been considered a threat on nature of human lifestyle by majority of senior respondents. Such negative emotions have not only been established in the present context of Pakistan, but also have been timely addressed by researchers.

Such as Brouwers, S. A., Tomico, O., & Sengers, F. (2019) discussed the emotional burden of AI. Cao, X., Sun, Y., & Liu, Y. (2021) apprehended Consumer emotional experience of artificial intelligence-based e-commerce platforms in their elaboration about evidences from China. D'Angelo, J. D., & Ryan, R. M. elaborated the emotionally loaded nature of automated social support system in 2017 while commenting on Facebook's self through shared groups. Huang, L., & Zhang, Q. in the healthcare investigation in 2021 established and explained the relationship between users' perceived sacrifice and adoption of AI-enabled platforms in online healthcare.

Kim, J., & Kim, J. H. (2019) while looking at the antecedents and outcomes of consumers' perceived sacrifice in the context of mobile apps, Xu, H., Zhang, Y., & Chen, Q. (2018) investigating the social media activities and Wang, C., & Lu, Y. (2017) in their expression of the effects of perceived sacrifice and benefits on customers' behavioral intentions in the internet of things (IoT) services elaborated the similar incidents.

4.1.7. Lack of Human Intervention

The aspect of energy crises in Pakistan, imperative and unavoidable policy changes and political emergencies have been a thorough consideration of this deliberation. Rightly pointed by majority of respondents during the interviews, lack of human interaction is a vital concern when the skills and essentials of usage of these platforms are discussed. Adapa, S., & Tripathi, N. K. (2019) in study of Online customer service chatbots and Büyüközkan, G., & Çifçi, G. (2021) in the Investigation of the effect of chatbots on customer experience and satisfaction, signaled the similar concern

Gao, J., & Wang, W. (2020), Kim, J. H., & Oh, J. (2021), Lam, S. S., & Shankar, V. (2016), Lee, J. H., & Kim, D. J. (2019) and Spohrer, J., Maglio, P. P., Bailey, J., & Gruhl, D. (2007) encountered and mentioned the similar agendas of lack of human interaction as an aspect of this phenomena in their examinations and findings of the respective researches.

4.2 The BMW Perspective

The BMW model stands for Bafflement, Motive and Wastage. This BMW model of perceived sacrifices of AI incorporates all the existing perceived sacrifices in literature, along with a variety of new reflections over the concept in Pakistani context. These new ideas, views, experiences, descriptions and anticipations in Pakistan regarding perceived sacrifices of AI could not have been possibly adjusted in the existing themes of Perceived sacrifices of AI in literature.

4.2.1 Bafflement

In this model, bafflement is defined as any aspect linking to psychology and emotions of the

user that is perceived about the usage of AI, that may contribute negatively to the entire experience of AI. The following notions have been coded and recorded under this theme during the interviews: Confusion, irritation, damaging, puzzles, complexities, inability to control (mentioned in literature already), tricky, exhaustive, hurtful, social isolation, disturbing / disturbance, lack of communication, anxiety, lack of human interaction (mentioned in literature), distraction, addiction, undue necessity, high dependence, obsession, habit, stress, hobby, delusion etc

4.2.2. Motive

Motive in this model is defined as any negative image of AI perceived by the user that he/ she associates with the AI without clarity, certainty or authentic ground. The following notions have been coded and recorded under this theme in the collected data: Hidden agenda, question on privacy (mentioned in literature), cult/ dark practice, non-religious, linked to dark web, big data, surpass human, degrade humanity, question on human intellect, dark plot, power gain, indulgence, motive of distraction, means of benefit to any specific entity, conspiracy etc. The most common aspiration under this segment has been a comment “AI yahoodi sazish hy” meaning “AI is a conspiracy”. This notion has been recorded at such a large intensity, that prevails in to a whole school of thought.

4.2.3. Wastage

The dimension of Wastage in BMW refers to users’ perception of fear associated with any undue loss through usage of AI. The following notions have been coded and recorded under this theme during the interviews and data collection: Loss of time (mentioned in literature), loss of

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money (discussed in literature), loss of skill, loss of memory, loss of life, loss of social circle, loss of energy, loss of productivity, loss of value, loss of integrity, loss of effort (mentioned in literature), loss of connectivity, loss of control (mentioned in literature), loss of resources etc. It is important to note that all the aspects of this model depend on the connotation of perceptions. The meanings attached to every perception gives a reasonable ground for a satisfactory allocation of notion into one of the dimensions of the model. Since the study is an interpretive offering in nature, therefore, the final outcome, the BMW model of perceived sacrifices of AI, is based on the context.

5. Conclusion and Research Limitations

The study concludes its findings and results with a provision of a more comprehensive and flexible BMW Model of perceived sacrifices of AI. The BMW Model entertains a much larger spectrum of sacrifices perceived regarding AI in Pakistani context as compared to seven potential perceived sacrifices discussed in literature, mentioned as the Loss of Privacy, Loss of Control, Loss of Effort, Loss of Money, Loss of Time, Negative emotions and lack of Human Intervention (and possible dangers of isolation).

This study merits its scope to qualitative research and urge the researchers to investigate the BMW model from different quantitative approaches too. The BMW model can be further nourished and nurtured through the development of measuring scales after application of quantitative techniques such as CFA. Adding the quantitative aspect to this model can fuel up the research pace for future researchers. Also, the generalization of results is limited to the ratio of working class and educated well equipped users of these platforms. For future research perspectives, it is recommended that different class segments must be interrogated for better clarity of information. Another limitation of the research is cultural and geographical representation. When talking in terms of generalizability, the geographical and cultural aspirations of Pakistan must be catered strategically, to comprehend more precise and accurate results. Since the study is limited to Pakistani context, investigation of the BMW model of perceived sacrifices of AI on different other countries and cultures of the world can add more value to the authenticity, generalizability and reliability of this model.

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