Collaborative Intelligence: Integrating Artificial Intelligence with Emotional Intelligence for Enhanced Customer Experience

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ABSTRACT--This paper explores the prospect of amalgamating artificial intelligence with emotional intelligence for attaining higher customer satisfaction. The paper delves to fathom how technology can overture personalization in selling process and thus create enhanced customer experience. The paper highlights various touch points in a retail setting in conjugation with the complementary benefits sales force can harness by the aiding technology of artificial intelligence. It throws light on the paradigm shift brick and mortar stores are experiencing with the advent of digitalization. It blankets the change of a retail store blueprint to a digitized blueprint along with the change of retail servicescape to a digital servicescape. Resultantly, the paper proposes a conceptual framework featuring Collaborative Intelligence through delight maximization in customers with respect to their interaction with retail sales associate, as a result of integrating effect created by emotional intelligence and artificial intelligence. It is a unique paper pioneering in showcasing various technologies that can be used by retailers for intensifying customer engagement and for creating memorable experiences for greater customer satisfaction, delight and positively impact the bottom line.

Keywords-- Artificial Intelligence, Emotional Intelligence, Intelligent Retail, Customer Experience, Experiential Marketing

I. INTRODUCTION

Service sector occupies a conspicuous space in the world economy. It attributes to sixty-three percent of the total global wealth and thus is the largest sector of the world. India ranks eighth in GDP contribution through service sector to world economy [1]. The Indian economy is analogous to the world economy and is also steered by the service sector. The service sector in India contributes to 54.17% of the country's Gross Value Added for the year 2018–2019. It is the largest contributor to the country's GDP, foreign investment, and employs 31.45% of the Indian population (2018) [2]. The Indian service sector encompasses an extensive array of activities including – transportation, financing, real estate, hotels & restaurants, business services, storage & communication, retail, social & personal services, community, and services allied with construction [2].

The service industry is a people-oriented industry and retailing is no exception to it. Services are performances delivered by people [3]. Consequently, people in service organizations must be empowered and enabled to make a remarkable impact in service encounter with customers. Customer today has evolved from seeking customization

to expecting personalization. Accordingly there is a paradigm shift in the offering of marketer to the customer – the marketer traditionally targeted product, from there the concept of marketing a branded product became popular, soon only branding ceased to give a sustainable source of competitive advantage, so the marketer started offering services to create differentiation, with the rise is competition and introduction to digitalization in service industry offering personalized experiences have become the defining factor to ensure success of the organization.

The same phenomenon is witnessed by the retail sector. It is expected that a whopping 63 percent of retail brands are planning to harness artificial intelligence in some way in the coming two years [4]. Further, the retail sector is by standing the third phase of competition. The competition in retail stores has shifted from the local store to the branded store, now to the ultimate level of competition – the experiential store [5]. Technology will largely define in–store customer experience and will be a critical juncture in determining retailer's relationship with its customers. An enormous 70 percent of customers expect retail stores to integrate augmented reality in their stores, a generous 61 percent of customers will prefer to visit store that overtures shopping experience using artificial intelligence, and 40 percent of them are willing to pay extra for the experience of technology packed retail stores [6].

1.1 Overview of the Problem:

The brick and mortar stores face–off both direct and indirect competition. The direct competition is from physical stores operating under the same retail format, and indirect competition threatens retail stores with a two–face sword. On one had they contest with physical stores selling the same merchandise through a different retail format, and on the other hand online stores, with easy access irrespective of location, are squeezing in the profit margins of brick and mortar stores [7]. In the effort to stand out, physical stores are largely upgrading themselves to become retail destinations [8]. They are making an arduous attempt to position themselves as a haven for customers to hang out and spend quality time. In conjugation with creating an expansive ambience, retailers are permeating the power of artificial intelligence in the stores. It is a step towards creating a personalized, hassle free, and engaging experience for customers [9].

Hence the bi–fold challenge that retail stores experience today is: how to positive engage a customer? And what level of artificial intelligence integration may be done to enhance the emotional intelligence of retail force? Both these questions seek to enhance customer experience and make a memory connection with the customers. This paper seeks to provide answer to the bifold dilemma of retailers. It explains various forms of artificial intelligence retailers can infuse in their stores to empower the front-end retail sales force with emotional intelligence and resultantly give customers an enhanced experience which is personalized and thus profoundly exceptional.

II. THEORY

There is a splurge in technological advancements that retailers can harness to their advantage. Artificial Intelligence has transformed the way retail organizations function [10]. With the advent of artificial intelligence there is a disruption in traditional ways of dealing with the retail customer. The new decade concretizes way for technologically aided stores that can develop intimate relationship with the customers. In the new era of experiential marketing retailers have increased their spending on technology – AI assisted techniques [11].

Technology invariably alters marketing environment. Further, it also has a dramatic impact on communication interface between the front-line employees of a retail store and its customers, in terms of – customer engagement and patronage decision of customers. There is a striking difference in the approach, today, the retail front line adopts for serving customers, promoting products and services to them, and creating value propositions for them [9]. In this section application of Artificial Intelligence harnessed by the retailer along with touchpoints of a retail transaction will be dwelled upon.

2.1 Artificial Intelligence:

Artificial Intelligence enables computer machines to perform tasks that we assumed only humans could perform till date. It overcomes the constraints of human mind and has the ability to record and process zillion zettabytes of data in fraction of seconds and facilitate better decision making which overcomes the shortcomings of the intuitive human mind that make split second decisions which may carry a huge price for the organization [10] .

Artificial intelligence enables itself through Machine Learning followed by Deep Learning. Machine learning is an enabling branch of AI. It enables the machine to learn ways of running a function. Deep Learning goes a step further, it is a Machine Learning technique or algorithm that permits the machine to analyze data and learn patterns in it [12].

1.1.1   Artificial Intelligence Application in Retail

- In–Store and Out–Store Personalized Recommendations – Artificial Intelligence enabled store applications are a very smart way to personally target the customers both in–store and out–store. Inside the store they can assist customers to find the exact and real time location of a merchandise. It also helps in tracking customer behavior and actions when the customer is inside the store [13]. This enables customer data collection for future decision making along with devising out–store personalized recommendations. With what the machine has learned and deep learned about the customers, a Buyer Persona is created, this enable creation of personalized marketing campaigns for customers.

- Intelligent Experience to Customers – AI- Enabled devices such as digital signages, kiosks, automated assistants and check out devices capture humungous customer data and adapt to tailored needs of customers. Shoppers' "in – the moment" emotions and reactions can be captured by using AI-Enabled cameras that can facilitate appropriate interaction with the customer.

- Visual Listen & Visual Search Assistance – Image recognition is a massively growing area in Artificial Intelligence. Customers can exactly find the location of a merchandise in store using AI- Enabled kiosks. The benefits of the virtual mirror go beyond how the customer will look in an outfit, to suggesting the customers complimenting accessories that will go along with it. Visual Listen goes as step beyond and scans the social media presence of a customer and gives information on customer lifestyle, tastes, and preferences.

- Voice Aides – The shelf, try room, and self–check-out experience can largely be enhanced by AI- Enabled voice assistants. The one on one communication with them has a positive impact on customer experience [14].

1.2   Emotional Intelligence:

It is not mandatory to replace human touch with introduction of Artificial Intelligence, AI power can very well be harnessed by front line employees to emotionally target the customers [15]. Although the concept of humanoids and bots is fast pervading in the service sector [16] nevertheless amalgamation of human intelligence with artificial intelligence can be the most favorable combination to target customers intelligently [17]. In the next section, the paper dwells on various touchpoints in a retail organization where Collaborative Intelligence (amalgamation of Artificial Intelligence and Emotional Intelligence) can work and enhance customer experience.

1.2.1   Retail Touchpoints:

These are points of service encounter in which the front-line employees of a retail store interact with its customers. These are moments of truth when the actual service promise must be performed and is evaluated by customers for satisfaction or dissatisfaction. The most relevant touchpoints in a typical retail store include: customer billing, marketing communication, point of sale assistance, sales person recommendation, retail stories, and in – store event experiences [18]. The power of Artificial intelligence can be harnessed at each of these touchpoints to enhance customer experience and increase probability of patronage intention.

III.   RESULTS & DISCUSSIONS

The future of brick and mortar stores looks gloomy with the rise in e-tailers. In US alone approximately twelve thousand physical stores shut down their operations in the year 2019 succumbing to e-tailing competitive pressure [19]. To keep the stores running the retailer needs to understand shopper behavior better, this can be done using historical data of individual customers. It is imperative that human intelligence alone could not sustain the profitability of retail stores, therefore falling of AI could be a better way of making predictions on consumer tastes, preferences and forecasting sales [19]. Fifty one percent of customers claim that their patronage intention for a retail store is largely driven by whether or not a store is using AI and forty eight percent of customers expect personalized offers resulting from AI [20]. Millennials and Generation Z are heavy users of technology, they are two time more likely than other generations to use AI applications like voice assistance [20]. These figures hold a promising future for brick and mortar stores, with heavy inclination of millennials and generation z towards consumption of AI technology can be a game changer for physical stores [21]. According to a survey done by Sales Force throws light on the most appreciated aspects of AI technology that consumers love and like.

Figure 1: AI Driven Experience Winning Over Customers

Source: [20]How the future of AI will impact business. Retrieved from https://www.salesforce.com/blog/
2019/04/future-of-ai-artificial-intelligence-business-impact.htm

Based on available literature, the paper proposes a conceptual framework showcasing how Collaborative intelligence can enable front line retail employees and facilitate deeper bonds with customer along with experience of technology. it proposes that the thus empowered relationship creates higher customer satisfaction and patronage intention. It is proposed that Collaborative Intelligence results from amalgamation of artificial intelligence and emotional intelligence designing engaging retail experience.
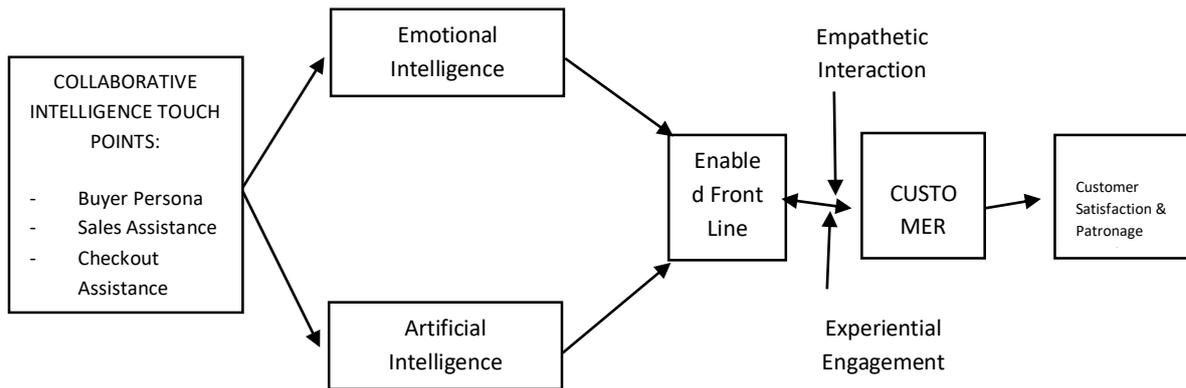

Figure 2: Conceptual Framework of Collaborative Intelligence Developed by the Researcher for Doctoral Work

The touch points indicated in Collaborative Intelligence require a blend of emotional intelligence and artificial intelligence in order to enable front line employees to target customers in a personalized manner.

IV. CONCLUSION

This paper outlines the importance of collaborative intelligence for successful functioning of brick and mortar retail stores. It highlights the challenges faced by physical stores and illustrates how Artificial intelligence can be used to enhance emotional intelligence of retail salesforce and enable them to serve the customers in a more competitive way. The paper examines various applications of artificial intelligence at important touchpoints of a retail store and illustrates how each touchpoint can be made more interactive and more engaging for the customers. Consequently, the bottom–line of the firm can be positively influenced in terms of – increased store sales, repeat purchases, order size and customer satisfaction. The paper gives valuable content for retail store managers and retail entrepreneurs by highlighting ways in which potential of AI can be explored for survival and success of physical retail stores.

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