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The Impact of Technology on a Salesforce:
Will Technology Eliminate the Need of Salespeople?

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ABSTRACT

This literature review analyzes multiple literature pieces to answer the research question: Will technology eliminate the need of salespeople? While some researchers believe technology will take over the world, others believe technology could never duplicate human qualities. This literature review goes over multiple sections of research, including the historical impact of technology on sales, the different types of sales technologies, the customer's perspective, the limitations of technology adoption, and the benefits of people in sales. One common theme is apparent throughout all of these sections, while technology has many benefits, technology is a lot more powerful (and ethical) when used alongside salespeople. This paper will demonstrate the many pros and cons of technology and salespeople and show how these two entities can complement each other to make for a more well-rounded sales experience.

INTRODUCTION

Throughout history, technology has transformed industries time and time again. Vehicles made the world a smaller place, the printing press changed the way people communicate, and power looms made textiles affordable (Dahlin, 2019). Recently, computing technology has been quickly evolving the workforce. One specific career has been adapting over the past 50 years due to technology, sales (Jones, Brown, Zoltners, & Weitz, 2005). With all these new technologies brought into the workforce, sales researchers must look at the inevitable question: will technology eliminate the need for salespeople?

Technology has already taken over a multitude of sales jobs. In 2020, an estimated million salespeople lost their jobs due to new technology investments (Cook, 2018). Other

research found that certain technologies do just as good a job as experienced salespeople and an even better job than inexperienced salespeople (Ullal, Hawaldar, Mendon, & Joseph, 2020). Another point to mention is that technology does not need human essentials like a salary, benefits, and time off (Morawska, Sulkowski, & Morawski, 2017). Looking at this research, it seems the answer to our question is simple. However, technology also has a handful of limitations and lacks the valued human touch that many researchers argue is irreplaceable in certain buying situations (Lux, 2000).

Not only is our research question essential to guide the future focus of sales research, but it is also vital for companies. In order to maintain a competitive edge in the future, companies need to evaluate if the shift to technology is inevitable or if they can keep unique benefits with their human salespeople. Due to the hefty price tag of implementing technology into organizations (Hunter & Perreault, 2006) and the high risk of failure (Bush, Moore, & Rocco, 2005), this is not a decision that companies can take lightly.

This literature review hopes to review multiple aspects that will help determine if technology will overtake sales careers. First, this paper will go over the historical impact technology has had on the salesforce. Next, it will dive into the most common technologies available to salespeople and describe each technology's pros and cons. I will also explain in this section the ability of each of these technologies to overtake salespeople. Then this paper will discuss the customer's role in technology and whether those trends can evolve into an all-technology sales future. After this discussion, I will address the common limitations to adopting sales technology. Lastly, I will go into the benefits that humans provide in sales that differentiate their efforts from technology alone. These sections: the historical impact of technology, common

technologies, the customer, limitations to technology adoption, and the benefits of people in sales will provide a well-rounded discussion to determine if technology will eliminate salespeople in the future.

REVIEW OF LITERATURE

Historical Impact of Technology

Before beginning a discussion concerning how technology may replace the sales profession, it is vital that this paper dives into how technology has impacted both the workforce as a whole as well as sales specifically. Over the past few centuries, multiple revolutions have occurred that have deleted old jobs and made new careers (Syam & Sharma, 2018). Yet, it is easy for humans to be short-sighted and forget the long-term benefits revolutions can bring. Due to this, evaluating the history of this topic is necessary before drawing conclusions about the future.

Workforce

As previously stated, according to Syam & Sharma, multiple Industrial Revolutions have transformed the way humans work (2018). The first Industrial Revolution came about when water and steam power replaced human labor. One example of this occurred around the 18th century when power looms replaced manual labor textile jobs (Dahlin, 2019). However, this is one of the first cases where job 'replacement' actually created even more jobs. According to Dahlin, because of the efficiency created by power looms, demand for textiles increased,

resulting in even more jobs (2019). Later on, more access to electricity resulted in increased factory production rates and the Second Industrial Revolution. More recently, computers and automation have contributed to the Third Industrial Revolution (Syam & Sharma, 2018).

Like Syam and Sharma, other researchers have predicted back in the 1960s that computers and automation will be involved in everything humans do. As we will discuss later, the high level of salesforce automation (SFA) that occurred as early as the 1980s confirms the third Industrial Revolution's existence (Singh et al., 2019). Another critical factor in the latter part of the Third Industrial Revolution is the ability to work from anywhere thanks to technology (Reed, 1998). Lastly, Syam and Sharma characterize the Fourth Industrial Revolution as a time where machines interact with machines (2018). An example of this is artificial intelligence. As research will demonstrate later, we are currently still in this revolution. However, this idea of artificial intelligence has been in the works for a long time. One of the first instances of this technology dates back to the Second World War, with AI being used to break code. Even further, commercial uses of AI occurred in the 1980s and helped propel modern-day AI (Lux, 2000).

While all four of these Industrial Revolutions have revolutionized the workforce, research from Reed and Dahlin shows contradicting results. According to Reed, with the advances in technology from these revolutions, less-skilled workers have lost their jobs, while higher-skilled jobs increased (1998). On the other hand, Dahlin's research examined three different scenarios and came to a different conclusion than Reed. The three different hypotheses that Dahlin researched included a negative, positive, and neutral relationship between technology and employment. This study found that a positive relationship, also known as the complementary view, existed between high and middle-skill jobs and technology (2019). This means, so far in

history, the more technology brought to the workforce, the more creation of new jobs. While this research focuses on the workforce as a whole, this paper will next evaluate the history of the salesforce specifically.

Salesforce

Sales is a profession that is no stranger to constant change (Jones et al., 2005; Syam & Sharma, 2018). While these changes occur because of multiple factors, including the economy, demographics, and evolving culture, technology has had one of the most significant roles in transforming the sales occupation (Syam & Sharma, 2018). Before the 1970s, sales solely involved outside salespeople going to meet customers. Salespeople were the only communication customers had to a company, and little technology existed outside of meeting face-to-face. Later on, in the 1980s, with the growing popularity of telecommunications, inside salespeople became more popular and acted as a customer service team (Thaichon, Surachartkumtonkun, Quach, Weaven, & Palmatier, 2018). This change in the salesforce also resulted in more adaptive selling in which companies tailored their strategies to different customers (Moncrief, 2017). In the 1990s, more advanced technology developments occurred, and inside salesforces were further expanded (Thaichon et al., 2018). For example, during the 1990s, IBM had 90 inside salespeople assigned to a single account worth almost a million dollars. These salespeople would rarely see their clients, and a majority of the contacts with the customer were made via phone, email, or chat to reduce costs (Tanner & Shipp, 2005). Surprisingly, relationship selling became an even bigger buzzword in this same period, and most companies still emphasized face-to-face contact (Moncrief, 2017). In the 2000s and 2010s, the internet, business intelligence, automation, and more customer-focused processes resulted in the growing popularity of online sales (Thaichon et

al., 2018). Social media also created a new way for companies to interact with consumers. The increasing market for sales force automation (SFA) software exemplified these technology changes, estimated to reach $4.05 billion in 2004 (Rangarajan, Jones, & Chin, 2005). Another study demonstrated salesforces' changes by the decrease in sales call cost and the increase in compensation. From 1993 to 2002, the average cost of a sales call decreased an estimated 15%, while annual payment to salespeople doubled this rate (Tanner & Shipp, 2005). Due to the past success seen with technology, in 2019, 30% of the world's leading companies employed a chief robotics officer (Cook, 2018). Within the last 50 years, sales went from face-to-face contact being the only way of selling, to online sales becoming extremely popular.

Sales Technologies

To answer the question "Will technology eliminate the need of salespeople?" it is crucial to analyze the technologies currently used in sales. Sales technology is a broad term that incorporates all types of IT that salespeople use to perform sales tasks (Hunter & Perreault, 2007). While expensive, these technologies aim to make the salesperson's job more efficient or take over the sales job altogether (Hunter & Perreault, 2006). The most common sales technologies researched include sales force automation, customer relationship management software, social media, and artificial intelligence. Next, we will describe each of these technologies while giving the pros and cons of each.

Salesforce Automation (SFA)

Salesforce automation, also known as SFA, was one of the first software systems implemented into salespeople's routines. The concept of SFA is to automate routine tasks for

salespeople so they can spend more time on less routine job demands (Hunter & Perreault, 2007). SFA makes daily tasks more efficient and makes the salesperson more productive (Hunter & Perreault, 2006). This logic uses two assumptions. First, the more administrative tasks that SFA can automate, the more free time the salesperson will have to contact customers and build relationships. When salespeople aren't doing routine tasks, they spend that time selling rather than doing unproductive work (Hunter & Perreault, 2007). The second assumption is that productivity is directly related to salespeople making more calls and putting in more time contacting customers (Ahearne, Hughes, & Schillewaert, 2007). However, in some cases, a salesperson may not see an improvement in selling productivity with increased effort and time.

      With this definition, I will now go over some of the capabilities of SFA. As the name "sales force automation" implies, this software can "automate" various routine tasks. When it comes to contacting customers, this software can manage leads, track communications, schedule follow-ups, and handle scheduling automatically (Hunter & Perreault, 2007). As for delivering products, SFA can place and track orders, view production schedules, and provide an efficient channel for communication between buyer and seller (Hunter & Perreault, 2006). Empowering customers to place online orders themselves is growing in popularity with SFA systems (Thaichon et al., 2018) and delivers time savings and efficiency that customers, especially B2B, are looking for (Rogers, Stone, & Foss, 2008). Lastly, when it comes to closing the sale, SFA software provides capabilities like creating presentations, providing data, and automating call reports (Sundaram, Schwarz, Jones, & Chin, 2007). Besides automation with specific parts of the sales cycle, SFA also helps companies be more accurate through automation. SFA increases accuracy by reducing manual input errors, increasing total profits through more accurate and timely pricing data, and improving closing rates due to fewer communication issues (Jones,

Sundaram, & Chin, 2002). IBM is an excellent example of implementing these SFA functionalities. In the early 2000s, IBM created a sales portal for their salespeople that helped plan and filter out unnecessary calls. Due to this implementation, sales reps saw a two-hour increase in productivity per week and a 45 percent increase in revenue per opportunity (Rogers et al., 2008). However, as we will discuss later, not all SFA outcomes are as positive as IBM's.

Other than taking over salespeople's routine tasks, SFA also augments salespeople's selling abilities. An article by Jelinek refers to SFA as "technology-enabled selling." It is important to note that while technology can boost a salesperson's abilities, it cannot turn a lousy salesperson into a good one (2013). However, technology can improve salespeople's already existing capabilities, organization, communication, and presentation. SFA does this by providing accurate data that enhances sales reps' knowledge and decision-making abilities (Rocco, 2009). SFA's data analysis examples include product pricing and availability, customer buying habits, sales figures, and product and competitive information (Mariadoss, Milewicz, Lee, & Sahaym, 2014). The more knowledgeable salespeople are, the more ability they have to persuade, negotiate, and meet the customer's needs (Jelinek, 2013). These improved decision-making abilities help improve customer's perception of the selling company (Roger, Stone, & Foss, 2008) and, therefore, deepen buyer-seller relationships (Baker & Delpechitre, 2013). Some researchers have found contradicting evidence. In one research study, researchers found that when SFA use increases, product knowledge and competitive intelligence are weakened (Mariadoss et al., 2014). This could perhaps be explained by salespeople relying on technology so heavily that they do not retain the information themselves. Regardless, this shift in consultative selling has contributed to an environment where selling firms are more focused on pleasing their customers rather than just selling a product (Thaichon et al., 2018).

While SFA has a lot of benefits, there are a lot of downfalls when implementing this software. According to researchers, 55-80% of all SFA implementations fail (Bush et al., 2005; Rocco, 2009). This is an alarming failure rate considering that implementing SFA can cost up to $18,000 per salesperson (Baker & Delpechitre, 2013). Even worse, SFA implementations that fail can make salespeople less efficient and harm customer relationships (Baker & Delpechitre, 2013). Companies must understand the difficulties in implementing SFA to avoid these potential downfalls.

Some common reasons for the failure of SFA include lack of training, workload increase, and unclear expectations. Considering "salespeople are among the most technophobic and resistant of all white-collar workers" (Baker & Delpechitre, 2013), it is astonishing that companies often provide inadequate training. According to Sundaram's research, with proper training and support given to salespeople, SFA can thrive (2007). This explains why salespeople with the highest technical abilities within an organization often observe the most significant benefits from SFA implementation. Workload increase is another reason for SFA failures. Early on in SFA implementation, it is hard for salespeople to see the benefits of the new technology, and therefore they can be slow in implementing SFA technology (Bush et al., 2005). Slow implementation is often because of data entry, unfamiliarity, and switching systems (Baker & Delpechitre, 2013; Jones et al., 2002). Declining product life cycles may also cause a heavier workload on salespeople. Encouraging employees to fit these tasks into their busy work routines that keep getting busier is difficult yet necessary (Jones et al., 2002). As technology becomes more popular, consumers are expecting companies to meet their demands faster. Lastly, unclear employee expectations can contribute to SFA implementation failure. Many employees may get overzealous about all the perks of SFA right away. Later, after going through implementation

and not seeing desired results right away, they may give up on the software and revert to their old ways. Companies need to help salespeople realize that the benefits of SFA may take a while to achieve, but if they keep inputting data, their ability to close deals will increase in the end (Jelinek, 2013).

Customer Relationship Management Software (CRM)

Another type of technology deeply intertwined with SFA is customer relationship management, also known as CRM (Jelinek, 2013; Morawska et al., 2017). According to an article by Duffy, "IT leaders rank the customer experience as their top priority, and 77% of them are increasing customer experience" (2019). This statement demonstrates the growing demand for CRM technologies. However, because of its popularity and its broad scope of benefits, there are varying perspectives on the exact definition of CRM (Yim, Anderson, & Swaminathan, 2004). Some people refer to CRM as the technology used to find, create, and maintain relationships with customers (Hunter & Perreault, 2007). On the other hand, due to the significant movement of serving each customer uniquely (Yim et al., 2004), some people refer to CRM as a total philosophy of running their business and managing relationships (Hunter & Perreault, 2007). Regardless, the entire concept of CRM is to strengthen the buyer-seller relationship (Jelinek, 2013) and to treat each customer uniquely regarding their wants, needs, and concerns (Morawska et al., 2017).

Technology-wise, firms spend a tremendous amount of money ensuring their salespeople and marketing departments reach their goals (Thaichon et al., 2018). CRM assumes that as society advances, consumers will seek out firms that deliver excellent service, provide support, and listen to what their consumers want (Morawska et al., 2017). Thus, a company can utilize

multiple types of CRM software, including communication CRM, analytical CRM, and operational CRM. Communication CRM primarily includes customer support services. Analytical CRM focuses on data that helps automate and effectively target marketing plans (Morawska et al., 2017). Lastly, operational CRM, sometimes referred to as sales CRM, is used to automate some selling parts and provide relevant data about the customer and market (Rocco, 2009). While operational CRM is often most used by the salesperson specifically, all of these different CRM types play a part in making the sales cycle more efficient and managing customer relationships (Hunter & Perreault, 2007).

Now that CRM is defined, I will summarize the multitude of CRM benefits from multiple works of literature. The main benefits that researchers continuously point out are retaining existing customers (Loring, 2018), strengthening relationships, and increasing profitability (Yim et al., 2004). In any selling firm, customer retention is essential in maintaining steady sales growth (Yim et al., 2004). CRM helps customer retention by assisting salespeople in creating value for their customers. In a study done by Hunter & Perreault, they found that sales technologies that specifically help analyze and communicate data have a direct, positive effect on building customer relationships (2007). With the knowledge provided by CRM, salespeople can give more accurate and meaningful suggestions to their customers to help them understand their business (Rogers et al., 2008). By using past data stored in CRM software (Rocco, 2009), salespeople can help make their customers more profitable, which in turn makes customers want to keep doing business with the salesperson (Jelinek, 2013) and improves the company's standing by impressing the customers (Rogers et al., 2008). Salespeople often utilize this same data to predict their customers' needs better and create unique solutions (Yim et al., 2004). This capability is vital in B2B relationships (Rogers et al., 2008). Data provided by CRM also helps

salespeople understand their customer relationships better (Ahearne et al., 2007). In some instances, CRM may find that a customer is showing tendencies of leaving the selling firm. This knowledge would allow the salesperson to step in and alleviate any issues to reduce customer defection. Additionally, CRM technology (especially on mobile devices) enables salespeople to contact clients while traveling. This constant availability is important in creating value for customers through easy cooperation, trust, and efficiency (Thaichon et al., 2018). Lastly, the ability for CRM to develop communities by connecting people through the internet and social media (as we will discuss later) also increases customer retention (Morawska et al., 2017). These methods CRM provides to increase customer retention focus on delivering value outside of the company's product or service itself.

Another benefit of CRM is increased profitability. Because CRM concentrates a lot of its communication through technology, virtual relationships are becoming more popular between buyers and sellers because of the ease of communication and cost-efficiency. Even though people aren't meeting each other face-to-face, CRM software still allows salespeople to form strong relationships with customers (Thaichon et al., 2018). CRM will enable salespeople (especially in the B2B realm) to meet customers through technology and still create a positive selling experience because of the amount of data companies can collect on prospects (Andzulis, Panagopoulos, & Rapp, 2012). Because of how efficient it is to communicate with customers through technology, companies reduce costs, increase sales, and increase customer loyalty because of their responsiveness (Morawska et al., 2017). Combined with all the customer retention benefits, sales can grow even faster with CRM, as we discussed before. At another level, CRM technology can help calculate customer lifetime value (CLV) to help salespeople

more accurately target the most profitable customers (Jones et al., 2005). For all of these reasons, CRM can increase profitability when applied correctly.

While many researchers believe in the plethora of benefits CRM has to offer, many researchers are still cautious about implementing CRM. While Jelinek reports that the CRM software industry reached $14 billion in revenue in 2007 (2013), there are still quite a few risks along with a tremendous upfront cost (Morawska et al., 2017). One example of CRM disappointment is with the chocolate company Hershey. In the 1990s, Hershey invested over $100 million in a new CRM system that they thought would revolutionize their business. However, the opposite happened, and Hershey lost a lot of revenue in a year they were supposed to experience sales growth (Jelinek, 2013). This common for companies who don't implement CRM effectively. Since the beginning of CRM software, many companies have seen high failure rates that continue to stay high and disappointed employees and customers (Rogers et al., 2008). When companies implement CRM, it can often cost a lot more than companies budget. Bad CRM implementation can be a money pit if a company is not careful and mishandles customer information due to bad corporate governance (Rogers et al., 2008). Another downside to CRM is it increases customer's expectations of salespeople that salespeople may not be able to uphold due to intensive job demands (Jones et al., 2005). Considering in some cases, it can take up to seven years to see CRM benefits with certain systems (Rogers et al., 2008), salespeople may get burnt out. Inevitably, burnt-out salespeople and poorly implemented CRM systems result in unsatisfactory customer satisfaction ratings and worsening buyer-seller relationships (Jones et al., 2005). Lastly, it is important to keep in mind that, similar to SFA, CRM needs a human to utilize its functions (Hunter & Perreault, 2007). All in all, CRM has its downsides in addition to its many benefits of growing customer relationships.

Social Media

Another sales technology that has changed a salesperson's role in a selling situation is social media. Social media has been utilized as a marketing and sales tool ever since Facebook became popular worldwide (Andzulis et al., 2012). Social media includes blogs, photo and video sharing, live broadcasts, social and professional networking, and many other communication methods (Moncrief, 2017). A few popular social medias in 2021 include Facebook, Twitter, Instagram, TikTok, YouTube, Reddit, Pinterest, and LinkedIn. A more specific definition of social media is "the production, consumption, and exchange of information through online social interactions and platforms" (Andzulis et al., 2012). Compared to CRM and SFA, social media is a relatively new technology and is increasing in popularity for selling, but more commonly at an individual sales level (Moncrief, 2017).

As stated before, primarily individual salespeople use social media(Moncrief, 2017), yet it is revolutionizing these individuals' sales process. Salespeople can use social media to simplify processes like solving customer issues, resolving public crises, and effectively targeting consumers cheaply (Andzulis et al., 2012). One example of how social media can help target customers is with Stitch Fix and Pinterest. Stitch Fix is a company that offers outfits to consumers each month based on their preferences. To provide outfits their customers like, they allow customers to link their Pinterest social media to Stitch Fix. Stitch Fix will then utilize machine learning to carefully select the perfect outfits for each consumer (Davenport, Abhijit, Dhruv, & Timna, 2020). Social media also helps salespeople qualify leads and gather information on customers before their first interaction. In an interview conducted by Marshall and others, one salesperson discussed how his company uses social media before interacting with

a new client. In one scenario, the salesperson talked about how they planned to meet with a B2B customer and found out she was very affluent in purchasing from her previous job. Because of this knowledge they found on LinkedIn beforehand, the salesperson changed their entire selling approach to make the sale (2012). Social media also allows salespeople to gather more info on each of their customers. If a salesperson meets someone in real life, they can search their name on social media, connect, and enter all of that potential customer's data into their CRM system (Andzulis et al., 2012). Companies elevate this function when utilizing automated chatbots on social media to interact with customers and gather opinions (Cook, 2018). Some salespeople have even found that only reaching out to people on LinkedIn is enough to help build a book of business (Marshall, Moncrief, Rudd, & Lee, 2012). While social media has revolutionized the sales process on an individual level, it has also transformed the buyer-seller relationship.

Since social media, especially Facebook, became popular in the early 2000s, the interactions between buyers and sellers began to shift to creating covalue (Moncrief, 2017). Covalue means that both parts of the buyer-seller relationship add value to the relationship. Traditionally, the salesperson was always the communicator, but now with social media, customers have an avenue to give feedback and interact with companies (Moncrief, 2017). While some salespeople believe that social media can complicate the buying process due to too much information (Ahearne & Rapp, 2010), other researchers believe social media empowers customers (Andzulis et al., 2012; Marshall et al., 2012). With social media, customers can voice their concerns or praise a company they have done business with. This outreach is both good and bad because customers can reach many people very quickly through social media (Marshall et al., 2012). Regardless, social media also allows companies to address these customer concerns rapidly, tell their own story about their products or service (Andzulis et al., 2012), and add

credibility through quality posts (Marshall et al., 2012). While older team members may be more resistant to the use of social media (Marshall et al., 2012), salespeople should embrace the value that social media can provide them on an individual sales level.

Artificial Intelligence

Nowadays, you can find artificial intelligence (AI) used in vehicles, the medical field, and many other industries. One industry artificial intelligence is taking over more and more is sales (Dahlin, 2019). Over 40% of enterprise companies are utilizing AI (Cook, 2018; Duffy, 2019), and almost 70% of all companies claim that AI has transformed their business in some way (Duffy, 2019). In an article by Dahlin, he claims "it is only a matter of time before robots will rule the earth" (2019). s

So, what is artificial intelligence? Artificial intelligence is a type of algorithm implemented in technology with a set goal or goals to achieve (Lemley & Casey, 2019). The algorithm accomplishes these goals by evaluating historical inputs and judgments to reach the desired outcome (Shichor, 2018). This is why the algorithm is known as an "optimizing function" (Lemley & Casey, 2019). Through this AI algorithm, its optimizations are supposed to be similar to human decisions (Shichor, 2018). However, it is important to note that people often group augmented intelligence with artificial intelligence. While both may use similar machine learning algorithms, these two terms are different in one distinct way. Augmented intelligence enhances human decision-making, while artificial intelligence totally replaces the need for human intervention (Pavlou, 2018). It is crucial to keep in mind that many researchers refer to these two technologies as the same. In the following paragraphs, I will summarize the benefits and weaknesses of AI and talk about if this technology can replace humans.

While there are many benefits of artificial intelligence, two of the most prominent benefits of AI are improved efficiency through automation and elevated decision making. First, we will discuss how AI makes sales more efficient. Studies show that 40% of the sales cycle can be automated, and with the growing use of AI, this number will increase to 50% (Singh et al., 2019). AI is helping automate the sales cycle by automating lead generation and qualifying leads (Moncrief, 2017; Singh et al., 2019). One example of this is from an insurance company that found success in using AI to split customers into two categories: those likely to buy and those unlikely to buy (Davenport et al., 2020). With these two categories, salespeople can more efficiently target consumers likely to buy. AI technology can also sort other data within the firm to make salespeople more efficient. Certain AI technologies can filter out unnecessary details, while others can sort data from phone calls automatically (Keane, 2017; Loring, 2018). With data that is ready to be quickly analyzed, firms can update prices fast (Davenport et al., 2020) and spend more time meeting with customers (Keane, 2017). In 1984, Collins published research on CRM technology that printed out pages upon pages of customer data for salespeople (1984). Nowadays, AI can filter this information automatically, so salespeople don't have to read through several pages of information on each customer. Other than organizing customer data, AI also helps connect with customers as well. Chatbots are a ubiquitous AI tool that automatically replies to customers' questions and concerns. One study found that 80% of sales teams found improvements in customer retention after implementing chatbots powered by AI (Singh et al., 2019). As for LG Electronics, they recently implemented chatbots into their company after realizing that 80% of user problems were simple fixes that AI can handle (Syam & Sharma, 2018). Century Link took a similar approach to address customer concerns. The telecommunications company implemented a system named "Angie" that effectively managed

95% of customer emails. Not only did Angie free up time for Century Link agents, but it also had a 20-fold return on investment (Davenport et al., 2020). The last way AI increases efficiency for salespeople is through training and feedback. Certain AI technologies will give salespeople selling simulations that will help prepare them for upcoming clients. These simulations will help salespeople make their sales pitch more effective by providing feedback (Singh et al., 2019). AI technologies can also give salespeople feedback on their sales calls by utilizing data from other salespeople's practices, what part of the sales process they are in, and other historical patterns (Keane, 2017; Moncrief, 2017). This feedback makes life easier for the salesperson and helps sales managers increase their effectiveness. All in all, artificial intelligence has an excellent ability to automate parts of the sales process to enhance salesperson efficiency.

The second major benefit of artificial intelligence is improved decision-making. AI technologies help predict customers' needs to help salespeople make future decisions (Singh et al., 2019). AI helps with decision-making by using company data and sometimes even third-party data (Loring, 2018) to predict changes in the marketplace, consumer buying patterns, and competitor behavior (Dickie, 2018; Syam & Sharma, 2018). While humans are good at collecting and analyzing information, it is hard to beat how well AI can handle and analyze large quantities of data all at once (Lux, 2000). Research from Robinson shows that salespeople who try to implement AI technology into their routine also see more adaptive selling tendencies and in turn, have better job performance than their counterparts (2005). Large companies are realizing these benefits and implementing AI into their organizations. For example, IBM implemented their machine learning to help their salespeople make more informed decisions for their customers (Pavlou, 2018). AI also improves decision-making by predicting customer defection. Some AI technologies can analyze customer tone and realize if there is still an unresolved issue that the

salesperson may need to address (Davenport et al., 2020). AI also uses past purchase data and timing of purchases to sense when a customer may consider defecting from the company (Singh et al., 2019). This is exceptionally helpful in B2B sales, where it is costly to lose a client. Lastly, artificial intelligence helps salespeople decide on accurate pricing in B2B buying situations. One study by Shichor found that after implementing AI into a B2B sales company, the technology helped generate profits 5.3% higher than the salespeople making decisions independently. After an adjustment for when salespeople unnecessarily overpriced their clients, this statistic was even higher at 6.8% (2018). All in all, AI proves to be advantageous to helping salespeople in decision-making.

With the benefits of AI in mind, I will give a brief overview of the weaknesses of AI. I have gathered three common themes of weaknesses through research: customer resistance, salesperson resistance, and lack of control of AI. It is crucial to address these issues to avoid major technology implementation failures that other technologies like CRM experienced(Dickie, 2018). As for the first weakness, customer resistance, it is apparent that this barrier may fade over time as humans get more accustomed to AI. However, in a study on Indian consumers, when researchers revealed to consumers that they were talking to an AI-powered machine rather than an actual human salesperson, sales dipped by over 85%. In the same study, research showed that AI was just as good as top salespeople when consumers weren't aware that AI was being used (Ullal et al., 2020). This study shows how much distrust consumers still have with AI customer communication and how AI can decrease the optimistic perception consumers have of a company (Davenport et al., 2020; Ullal et al., 2020). High consumer expectations for products are also a symptom of customer resistance. For example, in vehicles powered by AI, drivers should be happy to be far less likely to get in an accident. However, consumers have the

perception that they don't want to use the vehicle unless it is guaranteed they won't get in an accident (Davenport et al., 2020). This demand shows the extremely high standards consumers set for AI.

Another weakness of AI is salesperson resistance. One reason salespeople are resistant to artificial intelligence is due to algorithm aversion. If a salesperson previously had an instance where the algorithm may not have been correct, that salesperson is likely to limit their use of AI even if it is right more often than a human (Shichor, 2018). Salespeople resistant to AI also may think that adopting AI will eliminate their job (Dickie, 2018). This way of thinking is in line with an article by Reed where he suggests that AI adoption could lead to high unemployment or an increase in jobs with little autonomy (1998). Lastly, in research done by Shichor, even when salespeople trusted AI, many of the salespeople felt that AI could not understand their "unique" clients, even though research proved this wrong (2018).

The last weakness of AI is the lack of control humans have over technology. Since AI finds its own solution to optimize outcomes, this can often be a risk if companies do not use proper data sets. In these instances, existing biases and wrongful causations can be shown as the answer to the problem when they are not (Lemley & Casey, 2019). AI can also incorrectly interpret human intention due to how complex the human language can be in conversation and text (Shichor, 2018). An example of this is the Twitter robot "Tay", which was released and shortly abolished. Tay was supposed to be a robot to help Twitter conversations stay friendly. However, on the day it was released, Twitter users began tweeting inappropriate comments at the robot. Due to this, the robot quickly went from being friendly to being extremely rude and harming Twitter's reputation (Lemley & Casey, 2019). This unpredictability is a prime example

of humans not being able to control AI's outcome. While this is just a brief overview of AI's weaknesses, later in this paper, I will discuss the ethical issues of AI and other technologies further.

The last topic regarding AI that research has extensively discussed is the ability for AI to replace humans. By definition, artificial intelligence technologies use machine learning to autonomously perform a task (or at least part of a task) (Singh et al., 2019). While salespeople often believe a machine could never do their jobs due to personal bias, there are multiple arguments from researchers that suggest AI both can and cannot replace sales careers (Orlob, 2017). In history, implementing AI into organizations often ends up in both positive and negative task changes between humans and robots (Singh et al., 2019). As for positive changes in the workplace, some researchers believe that now is the best time for salespeople because of the advances AI brings to the sales profession. Not only are these advances increasing process, metrics, and ethical standards (Singh et al., 2019), but they are also encouraging and helping salespeople to become true value creators to customers. Consumers no longer need salespeople who just communicate information, but they need salespeople who create value for them. This need gives salespeople great at creating value a powerful edge in the workplace (Orlob, 2017). According to Dahlin, not only will AI allow some salespeople to flourish, but it will also create new high and middle-skill jobs (2019). For example, many of the world's top companies have made a new role, "chief robotics officer," that did not exist 20 years ago (Cook, 2018). These new jobs, specifically in sales, will have more work that relies on human intangibles like creativity, strategy and managing people (Pavlou, 2018).

While there are many positive effects of AI on the workforce, there are also adverse effects. Even though some researchers claim AI will increase sales jobs, others say AI will eliminate millions of sales professionals (Cook, 2018). One software firm in Texas has even replaced its entire sales staff with an online AI robot that automatically scans and replies to customer emails (Tanner & Shipp, 2005). Research validates this change by showing that in specific scenarios, AI can perform just as well as the best salesman and nearly three times better than less experienced salespeople as long as consumers are unaware that they are interacting with a machine (Ullal et al., 2020). However, many researchers claim that AI will only be great at replacing those salespeople that spend most of their time doing routine tasks like scheduling, emailing, prospecting, and cold calling (Cook, 2018). AI is exceptionally good at taking over these tasks because it can more accurately gather and analyze information while making fewer mistakes. An example of this is the IBM Deep Blue chess player that can beat the world's best chess players (Cook, 2018). AI thrives in areas of set rules and outcomes. While AI is a very powerful tool that could overtake many jobs, it is just another piece of technology that challenges humans to adapt (Singh et al., 2019)

The Customer

With all of these technologies available to salespeople, it is vital to acknowledge relevant consumer trends in sales. Consumer trends are essential in evaluating if technology will replace salespeople because it provides information on the buyer's wants and needs. A few consumer trends I collected from multiple references include more knowledgeable consumers, interactions through technology, and increasing consumer expectations.

One of the most prominent consumer trends that technology has had is creating more knowledgeable consumers (Marshall et al., 2012). Especially in the B2C realm, consumers are looking online to evaluate their wants and needs and learning more about the products and services available to them (Cook, 2018; Marshall et al., 2012). In most cases, consumers enjoy how independent doing research can make them (Cook, 2018). When consumers approach a salesperson, they already have most of the information needed, their opinions formed, and they know what they want (Marshall et al., 2012). Suppose a company wants to have a say in the opinion that the consumer forms, it is crucial to have a robust online presence that can persuade before the consumer makes the purchase (Andzulis et al., 2012). Especially in B2C transactions, this makes the window for salespeople intervention extremely narrow since customers can now do product/service research quicker than ever before (Marshall et al., 2012). According to an article from Orlob, consumers in a simple buying situation do not need a salesperson to explain to them everything they already know, so there is no need for a sales professional (2017). Simple buying situations occur when consumers thoroughly understand the product due to high access to information, have little purchasing risk, and there is no value salespeople can provide the consumer. However, not all buying situations are so simple, especially B2B transactions. B2B transactions are often complex, high risk, and have a lot of customization available for buyers. Consumers doing research can be more confused in these buying scenarios. In this situation, salespeople add value because of the clarity they can bring consumers (Marshall et al., 2012). While consumers are more educated than ever, the buying scenario strongly influences the value salespeople can bring to a consumer.

Another consumer trend that is influencing sales is the type of interactions buyers are wanting. With the advent of the internet, social media, email, and phone, consumers demand far

less personal contact with salespeople (Marshall et al., 2012). These communication methods are popular among companies because of cost savings but preferred by consumers because of convenience and increased efficiency (Ahearne & Rapp, 2010). An example of a company taking advantage of customers wanting increased convenience and efficiency is Amazon. With Amazon, customers require no salesperson interaction and can buy all their products online without coming into contact with anyone else (Ahearne & Rapp, 2010). Another example of a company decreasing the need for salesperson face-to-face contact is a small Texas software firm previously mentioned. This firm successfully replaced its entire sales team with an online AI system that automatically replies to emails and customer issues (Tanner & Shipp, 2005). These examples highlight the changing types of interactions consumers are demanding.

The last consumer trend that was prevalent in my research is increasing consumer expectations. Duffy's survey shows that customer experience is IT leaders' top priority and that 77% of companies actively try to improve customers' experiences (2019). This effort is well justified considering that consumers' expectations of companies and salespeople are skyrocketing (Jones et al., 2005). Customers are increasingly expecting more cost savings, time savings, and overall efficiency from companies (Rogers et al., 2008). They can tell hundreds of online customers about a positive or negative experience they have (Marshall et al., 2012). While online posts also give the company direct feedback, this factor further increases consumer expectations. When a company does not utilize online platforms to resolve issues and interact with customers actively, customers will likely be disappointed. In contrast, this was a factor companies did not have to worry about in the past(Andzulis et al., 2012). Consumers also expect companies to use online platforms to educate themselves. If a company does no prior research on an important client before the first sales call, this can make consumers feel unimportant and hinder business

relationships (Jones et al., 2005). Customers expect salespeople to add value by offering customized solutions (Jones et al., 2005), strategic business knowledge (Rogers et al., 2008), and autonomy in the buying process. It is not uncommon for companies to develop complete IT solutions that allow consumers to go through the buying process online (Ahearne & Rapp, 2010; Rocco & Bush, 2016). Ultimately, consumers expect to be in charge of the sales process (Cook, 2018). Overall, these three consumer trends: more knowledgeable consumers, increased online interactions, and escalating expectations, are important topics to consider in evaluating if technology will eliminate the need for salespeople.

Limitations to Technology Adoption in Sales

Even though technology is becoming very prevalent in sales and taking over some sales jobs, there are still many limitations to technology adoption. These barriers include inefficiency, inadequate training, and ethical issues. Although most barriers indicated in this research fall into only three categories, they run a significant risk in successfully preventing technology adoption. As we noted previously, SFA and CRM implementations have a 55-80% failure rate (Bush et al., 2005). Artificial intelligence runs this same risk of failure if it is not correctly implemented (Dickie, 2018). This risk of failure is a big deal when initial investments of technology in a salesforce are costly (Morawska et al., 2017; Rogers et al., 2008). Some researchers believe that allowing these high levels of failure could lead to companies failing (Jones et al., 2002). However, a survey of executives showed that technology implementations fail due to flawed execution plans (Buehrer, Senecal, & Pullins, 2005). It is essential to understand these execution difficulties to evaluate if they can be overcome and lead to a future where technology replaces salespeople.

Inefficiency

One of the three limitations to adequate technology adoption is the lack of efficiency of the technology. This barrier includes the actual lack of efficiency of technology and the perceived lack of efficiency and benefits of new technology systems. Multiple researchers claim that a big reason technology implementations into sales divisions fall short of expectations is the low usage by sales teams (Rocco, 2009; Sundaram et al., 2007). Building technology into a salesperson's routine and getting them to use the technology consistently and efficiently has a direct positive effect on better sales performance (Sundaram et al., 2007). So, what is keeping salespeople from using technology efficiently? In an article by Rogers and other researchers, they claim that it can take nearly seven years for technology to be successfully implemented into an organization (2008). Considering the amount of extra work technology implementations put on salespeople due to routine changes, additional requirements, and learning new complex tasks, this can be very draining for salespeople (Bush et al., 2005; Rangarajan et al., 2005). An example of these time-consuming activities includes call documentation. While call documentation and reporting are vital to get SFA, CRM, and AI technologies working correctly, it is very time-consuming for salespeople. Call documentation and reporting can often see it as counterproductive if the benefits are not fully understood (Baker & Delpechitre, 2013). Doing these extra activities is even more challenging with how connected salespeople are to other people. While connectivity can be beneficial, some view it as a distraction because of constant interruptions (Marshall et al., 2012). Connectivity is just another factor that can create the sales job more stressful and prevent salespeople from utilizing new technologies (Rangarajan et al., 2005). In return, when salespeople build a negative attitude towards technology, their perception of the technology's usefulness decreases. This is a big issue because multiple studies show that

technology's perceived usefulness is one of the most significant predictors of technology acceptance and success (Avlonitis & Panagopoulos, 2005; Rocco, 2009). Companies need to recognize and handle the inefficiencies technology can add to the salesforce initially to reap the benefits of new technology in the long term.

Inadequate Training

Inadequate training is another barrier to technology adoption within an organization. According to research by Baker & Delpechitre, salespeople are some of the least tech-inclined, white-collar workers (2013). This finding is alarming considering the lack of support salespeople get from their organizations during technology implementations (Buehrer et al., 2005; Jones et al., 2002). However, we know that increasing proper technology training for salespeople can have a huge benefit. In three separate studies, researchers found that sales training effectiveness directly correlates with sales technology use (Hunter & Perreault, 2007; Jones et al., 2002; Rocco, 2009). As previously discussed, getting salespeople to use technology is one of the biggest battles in an organization seeing technology success (Rocco, 2009). Investing in and encouraging sales reps to use technology not only cause the representatives to use the technology more, but also gives the salespeople more realistic expectations (Hunter & Perreault, 2006). When salespeople receive new technology, they can forget how long the implementation process can be. With adequate training and communication, this problem can be resolved by setting realistic expectations for salespeople (Avlonitis & Panagopoulos, 2005). Lastly, once salespeople receive sufficient training, it is essential to constantly monitor this training by setting metrics and goals for utilizing technology (Rogers et al., 2008). One example given is that of a US company that decided to focus on the quality of their order information filled out by salespeople. Before

focusing their salespeople on this metric, 700 forms were incomplete per month in their system. After focusing on this metric, they were only having 250 incomplete records per month. This was a massive benefit in collecting critical information on their customers (Rogers et al., 2008). In summary, providing adequate technology training for salespeople and enforcing this training by utilizing proper metrics will eliminate some of the limitations of technology adoption.

Ethics

The last but most complex barrier of technology adoption is the ethical concerns. Because of the rapid increase and innovation of new technologies in the salesforce, society has been slow to keep laws and regulations up to date (Bush, Bush, & Orr, 2010). The two main ethical issues that arise from new technology adoption include data privacy and lack of human control.

Data privacy is a very prominent issue when it comes to the ethical implications of new technology. In a Bush survey, multiple executives expressed that the relationship and confidentiality with a client are the most important things in their business (2010). However, protecting a client's data can be extremely challenging when so much data is collected on customers and shared across many organizational devices (Pavlou, 2018). For example, a lot of Amazon users have a Ring device with video capability. If Amazon starts to use facial recognition software and shares this with other parts of the organization, customers can feel extremely violated and could cause legal trouble for Amazon (Davenport et al., 2020). Additionally, customer data reporting could feel like an invasion of privacy for both the salespeople and their customers and cause distrust. If salespeople have to share their insider information with other employees, they may become distrustful within organizational teams

(Bush et al., 2005). While data privacy is a huge ethical issue, technology also provides a few ways to combat privacy issues. A few examples of these protective technologies include 3rd party software services, network security systems, and software that tracks employee technology use (Bush et al., 2010). While data privacy is a growing issue, technology is slowly growing to handle this risk and mitigate client concerns.

Another one of the most prevalent ethical issues with technology includes the lack of human control. This problem is most evident with artificial intelligence because it produces a result based on a machine learning algorithm. This allows for a lot of automatic compliance for AI users without thinking of the consequences (Lemley & Casey, 2019). This compliance is concerning because there is no real way to "punish" a machine, only the company behind the algorithm. Even if the algorithm comes to an optimal answer to help salespeople optimize profits, it could still emphasize biases that already exist in the real world from past wrongdoings. Lemley and Casey provide an example of these negative feedback loops. In this study, researchers found that AI algorithms tend to charge higher insurance premiums for lower-income individuals because of their economic status. However, these high insurance premiums lead to even more debt and declining credit scores. Increased insurance premiums can even affect their ability to find a quality job. Due to these reasons, they receive even higher premiums and continue the negative cycle (2019). These findings show how easy it could be for salespeople utilizing AI to keep these negative feedback loops alive. Another example of technology not doing what humans expect is with the Twitter robot mentioned previously in this paper. The twitter robot "Tay" took an unexpected turn when it started getting angry with Twitter users who were tweeting inappropriate comments at it (Lemley & Casey, 2019). Due to AI's nature, placing constraints on the algorithm can cause the algorithm to be no good and serve no benefit to the

salespeople (Lemley & Casey, 2019). Overall, the lack of control humans have over artificial intelligence and the multiple data privacy issues that arise from technology cause various ethical issues.

The Benefits of People in Sales

While sales has evolved tremendously thanks to the technology we have discussed, salespeople are still heavily involved in selling within certain situations. Multiple researchers argue that while technology has provided a lot of advancements, salespeople have certain intangible qualities that technology can't replace (Ahearne & Rapp, 2010; Cook, 2018; Dahlin, 2019; Lux, 2000; Reed, 1998; Rocco, 2009; Singh et al., 2019; Thaichon et al., 2018; Yim et al., 2004). I will compare multiple literature pieces to highlight the advantages people can still provide in the salesforce today, including relationship building and negotiation.

Relationship Building

In an era where so many companies have realized the benefits of solid buyer and seller relationships (Rocco & Bush, 2016), companies are now emphasizing building relationships. Technology has many advantages, but when it comes to personal interactions, the human touch is still seen by some as the best relationship-building mechanism (Thaichon et al., 2018). Even though people rely on technology more, people still want personal connections (Cook, 2018). The human touch in relationship building is hard for technology to mimic due to its intangible qualities (Singh et al., 2019). In research done by Ahearne & Rapp, they concluded that humans work better with "ambiguity, vagueness and incomplete information" than machines do (2010). Even though technology may do a better job with hard-coded facts and finding patterns, great

salespeople use intangible skills to read the audience they are selling to (Shichor, 2018). In optimistic scenarios, with these soft skills, salespeople build relationships with a strong foundation of trust. Through trust, more knowledge is learned about the customer that technology would not have the opportunity to gather (Singh et al., 2019). Humans also have the unique capability to comfort one another. As Dahlin puts it, "Although computers can pick stock portfolios, financial advisors provide reassurance when markets are down. Although computers can recommend which products to buy, salespeople understand consumer needs and inspire confidence that unforeseen contingencies will be handled fairly. Although computers can make accurate medical prognoses, they don't yet have the bedside manner to guide patients through difficult medical choices" (2019).

Walmart exemplifies the value of humans that Dahlin points out. Walmart has technology that allows their stores to automatically place orders depending on what is in and out of stock. Regardless of this ability to automatically place orders, many companies who sell their products through Walmart still have salespeople building relationships with Walmart to ensure a cohesive partnership (Tanner & Shipp, 2005). Even though placing an order is all automatic, the relationship-building job is still essential. This philosophy is in line with what an interviewee stated during research done by Reed, "If the computer could sell, I would send a demo disk to the customer and wait for the call" (1998). Even nowadays, where technology is becoming more advanced, research suggests that these technologies make the salesperson-customer relationship even more robust due to how quickly and efficiently the information can be exchanged (Ahearne & Rapp, 2010).

Salespeople's unique relationship-building qualities provide value to their clients (Yim et al., 2004). For example, several large international firms use salespeople to differentiate their products from their competitors. Salespeople within these firms add value by providing consultative services to their clients and strengthening their relationships (Hunter & Perreault, 2007). Like in this case, salespeople are usually the main person from the company that clients interact with, so they are the means of companies adding value. Because of this, salespeople are often called "the face of the company" (Rocco, 2009). As long as this salesperson is with the company, this is a great advantage for that company. The (hopefully) long-term relationship built with clients may often lead to the salesperson learning personal information about the client, building the relationship even deeper, and making the salesperson even more irreplaceable (Shichor, 2018). These deep relationships often have the most significant impact in reducing client defection (Yim et al., 2004). In research from Reed, a company had sales representatives switch territories when they purchased computers. Because of this territory switch, many of the buyer-seller relationships were ruined and negatively affected the company (1998). This indeed shows how much value the buyer-seller relationship can bring to both sides of the relationship.

Negotiation & Persuasion

Negotiation and persuasion are other areas of focus where researchers believe humans outdo technology. Due to the complexity of some sales, especially in the B2B realm, soft skills are highly sought out in some sales situations (Singh et al., 2019). With the advancements in artificial intelligence, many people may wonder, can't technology persuade customers? According to Ahearne & Rapp, "technology alone does not have the ability to persuade a potential customer" (2010). They provide a few reasons to justify this statement. First, due to the

complexity of human interactions and nonverbal cues like tone and body language, it is unlikely that a machine would pick up on each cue and act accordingly from the information (Ahearne & Rapp, 2010). Next, the amount of knowledge that the salesperson has from past interactions with the customer helps the salesperson persuade the customer because of anticipated concerns and motives. While a machine may eventually collect this information and help give suggestions, this information often comes from the salesperson (Ahearne & Rapp, 2010). The first sale any machine, specifically AI, can make must first be made by a salesperson (Dickie, 2018). Lastly, the salesperson offers knowledge to the consumers that would be more difficult to explain through a machine. Especially with B2B transactions that are new buy situations in which the customer is not familiar with the product, salespeople use a tremendous amount of communication, company knowledge, and relationship knowledge to help persuade the customer and close the sale (Ahearne & Rapp, 2010). They help educate consumers in these situations by helping them realize the pros and cons, avoid foreseen problems, and challenge concerns (Orlob, 2017). All in all, negotiation and persuasion and relationship-building qualities are key attributes of salespeople that technology would have difficulty replicating.

RESEARCH IMPLICATIONS

Before drawing conclusions on the research provided, it is important to acknowledge where further research should be done. While there is a lot of research on implementing technology, research on the types of technology in organization implementation is lacking. Separately evaluating SFA, CRM, social media, or AI implementations may provide more insight on what companies should focus on implementing. In addition to looking at these

technologies separately, it may also be beneficial for sales researchers to look at the effects of artificial intelligence versus augmented intelligence. While these two technologies are often lumped together because of their machine learning abilities, they still have different usages that sales journals overlook. Lastly, while my literature search was not comprehensive, it was plentiful. Yet, only one article included research on the customer view of sales technology implementation within the company (Rocco & Bush, 2016). With the transformation of the buyer-seller dyad, this topic should be more deserves to have more attention. I hope this literature review helps steer research towards the issues I have suggested.

DISCUSSION

Throughout this paper, I have discussed the history of technology in sales, different sales technologies, the customer's influence on technology, the barriers to tech adoption, and the value of people in sales to answer one question… will technology eliminate the need of salespeople? This question is critical in today's world because not only does it help steer sales research towards humans or technologies, but it also provides companies with insight as to whether or not technology will overtake their salesforce. From the literature review, it is evident that there are varying opinions from researchers. On the one hand, some researchers believe technology will soon rule the world (Dahlin, 2019), and on the other hand, some researchers believe technology cannot compare to human abilities (Lux, 2000). However, most research shows that while technology is excellent at improving the sales process, it is only strong enough to replace simple sales processes. In most cases, technology and salespeople provide the best sales solution when they effectively work together.

The evaluation of the historical impact of technology on sales explained how much sales has evolved. Sales went from being a very transactional career with one salesperson to being based on quality relationships between an entire sales team and a customer (Thaichon et al., 2018). These once one-sided relationships have evolved into unique relationships based on added value for both the buyer and seller (Moncrief, 2017). New technologies like email, cellphones, and social media also made communication more efficient and increased salespeople's production (Tanner & Shipp, 2005). From this, it can be inferred that not only has technology allowed salespeople to create more value for their customers, but it also has allowed them to be more efficient. This thought is in line with how technology has impacted the workforce as a whole. Although some researchers still believe technology only increases high-skilled jobs (Reed, 1998), other researchers have found that middle and high-skill jobs have increased thanks to technology (Dahlin, 2019). It can be assumed that sales will follow the same trend as the rest of the workforce.

Next, this paper evaluated the different types of sales technologies. While all four of the technologies we discussed, SFA, CRM, social media, and AI are all valuable sales technologies, only one AI is programmed to work without salesperson intervention (Hunter & Perreault, 2007). This paper also established the difference between artificial intelligence and augmented intelligence, even though most researchers refer to both of these technologies as AI. In artificial intelligence, technology overtakes the sales process without human intervention (Pavlou, 2018). It was discussed that while this is effective in simple sales processes, like with B2C companies like Amazon, it is not ideal for complex buying situations (Marshall et al., 2012). However, augmented intelligence's ability to deal with factual information and human intuition blend fantastically together to create an optimal sales environment for both salespeople and their

customers (Dahlin, 2019; Pavlou, 2018). Once again, this section shows the benefits of salespeople and technology working together.

After discussing the most common technologies, this paper evaluated consumer trends and their impact on technology eliminating salespeople. Research on consumers has shown that consumers want quicker interactions with salespeople (if at all). Consumer expectations from companies keep on rising in terms of efficiency and communication (Ahearne & Rapp, 2010; Jones et al., 2005). While these two factors show a strong implication of technology being more effective than salespeople, the last trend showed otherwise. Consumers are becoming a lot more knowledgeable on simple purchases. Still, in complex buying situations, the research found that all the available knowledge through technology can complicate the selling process (Orlob, 2017). In most B2B transactions or complex B2C transactions, salespeople can genuinely add value to consumers by simplifying the sales process and being a source of knowledge.

The limitations of technology adoption in sales were also a meaningful discussion. Although sales technology can be very beneficial, it does not come without a price tag or a high risk of failure (Bush et al., 2005). While technology can overcome the lack of efficiency and inadequate sales training in some instances (Rogers et al., 2008), the ethical implications seem to be a significant barrier that fully automated AI will have difficulty overcoming. In this section, research by Lemley & Casey shows the risks that people run by adopting AI. Not only can there be data privacy issues, but AI can also exaggerate biases that are already prevalent in our world due to past injustices. In addition, the lack of human control over technology is problematic for many customers and companies to buy into (2019). This section again showed that while some limitations can be overcome, the lack of human control barrier is still very prevalent.

The last section highlighted the benefits of people in sales, many of the advantages of people in the sales process. Even though AI is programmed to make human-like decisions (Tanner & Shipp, 2005), it still lacks many of the vital components needed to fully take over complex sales processes like relationship building, negotiation, and persuasion (Ahearne & Rapp, 2010). In an era where people are meeting face-to-face less, salespeople are still "the face of the company" thanks to their unique human-like qualities (Rocco, 2009).

All in all, with the literature provided, I conclude that technology will not eliminate the need for salespeople. Based on my research, I believe technology and salespeople work best when used together. The ability for technology to analyze factual, hard-coded information and humans' power to interpret various nonverbal cues makes for an astounding salesperson or, perhaps, sales team. Humans must continue to evolve and find ways to elevate their careers using technology, especially in the sales realm. While salespeople may experience a lot of change within the next few years with new technology adoption, it is vital to recognize technology as a beneficial tool to elevate a sales career, especially in complex selling situations.

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