



To what extent has technology facilitated advancements in the playing cards industry?

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Abstract

Playing cards have existed for many decades and so have card games. In the last few years, these have seen a great degree of change due to a variety of factors, one of the main being technology. In line with the aforementioned, this research paper aims to analyse how technology has impacted the industry in terms of the increasing availability of these once-offline games on online platforms. Research is conducted using a variety of sources in order to fully analyse how technology has made irreversible marks on the industry and to thoroughly evaluate the impact of the same.

Introduction

Who hasn't played card games? Playing cards have been around for decades. Whilst the precise origin of these remains debated, there is much evidence of their appearance in Europe during the late 1300s and 1400s. On the basis of speculation by researchers and academics, it has been concluded that the cards found their way to Europe from somewhere in the east - potentially the Middle East or China - via gipsies, crusaders and/or traders (Parlett, 2019). For example, some scholars believe that it was the Tang dynasty in China that invented playing cards around the 9th century AD (Roya, 2018). Regardless of when they originated, there is no doubt that playing cards have evolved greatly.

Card games are one of the oldest ways of entertainment still prominent in the modern world, with their popularity only increasing as time goes by. There are roughly 1000 to 10,000 card games officially released with many of these progressively becoming available online (Parlett, 1990). The most famous of card decks, however, remains to be that of playing cards, the standard 52-deck card with 4 suits 13 cards each, a market that individually earned almost 4000

million dollars in 2016 (DATAINTELO, 2022) and is one the main ways of gambling in casinos, prominent games being poker and blackjack. More than just a source of entertainment, in the modern world, card games can also act as a method of education and/or an instrument of trade. Ultimately, what makes these card games so popular is the fact that they cater to a very large audience - both younger and older players. Games such as Uno and Go fish, for example, provide younger audiences the opportunity to enjoy the thrill that one may experience from playing cards.

There is no doubt that card games have evolved and developed to a great extent, especially in the 19th century. This paper aims to delve into exactly how both playing cards and card games have changed in recent years by analysing the impact of the digital revolution and technological impact on the card gaming industry. The aforementioned will help in answering the research question, **“To what extent has technology facilitated evolutions in the playing cards industry?”**

The history of card games

As mentioned in the introduction, the classic 52-card deck that we popularly use does not have defined roots. However, there may be some agreement that the deck was heavily influenced by both the Middle Eastern countries and the Islamic Mamlūk dynasty in Egypt. Once again, these become increasingly popular when they found their way to Europe - with the majority of theories suggesting that this spread was facilitated by soldiers during the crusades, traders or just regular travellers who enjoyed the game and decided to bring it back with them (Wintle, 1998).



Regardless of their origins, it is evident that playing cards went through drastic changes through the ages to arrive at their current state with the idea of suits coming from the Mamlūk dynasty and changing in every region till finally settling at the ones used in modern times. The number of cards, however, was not fixed till much later; the Mamlūk sets consisted of 40 cards though with variations of 48 or 52; German sets consisted of 32 or 36 cards; Japan had 48 cards and India had up to even 120 cards with 10 or more suits (Nosowitz, 2020). Cards started being produced the way they are now around the 17th century, at least in some countries.

Before the invention of the printing press by Johannes Gutenberg in the early 15th century, these cards were made by hand and were therefore an expensive and time-consuming process. Due to this, it was largely restricted to wealthier individuals and a less widespread phenomenon - wealthy merchants displayed their wealth by commissioning luxury playing cards (Wintle, 1998). This all changed with the development and introduction of the printing press - quick and cheap production of these playing cards was enabled, making it much more popular in varying parts of Europe wherein it started to become greatly integrated into daily life and for activities such as gambling. Manufacturing of playing cards in large numbers primarily happened in Europe till the 19th century when it started getting produced in

the USA too, which is now the largest producer in the world of all types of cards with uncountable numbers being produced each year.

Similar to the actual origins of playing cards, even the beginning of card games is a much-debated topic by scholars and historians (Roya, 2018). Much of the literature suggests that these cards originally served the purpose of being 'play money' by representing the stakes that were used for some gambling games and eventually became the games themselves. Some of the oldest games that we know date back to the early 15th century. Karnoffel, for example, is a game that originated in Germany in 1426 and is interestingly still played in the current day using a deck of 48 cards (Dummett and Mann, 1980). Another famous game played by modern-day players and arguably one of the most famous games of all time is Blackjack, a game said to have originated in France in the 1700s and spread through the world by European colonization resulting in it now being played across 140 countries (Wintle, 2010). Other than Blackjack, even games such as Boston and Solo Whilst are said to have originated in France around 1760 and have some evidence of being played in the modern day - though not as popular as Blackjack. Overall, there are a lot of card games invented between the 15th century and 19th century that are still in play today though games earlier than that have been lost to time and we haven't been able to find concrete evidence pertaining to them.

Technological evolutions in card games

While many of the original card games were played in person using varied card decks, online card gaming became an increasingly popular way of engaging with playing cards as a result of the advancements facilitated by the digital revolution. So, where did online card gaming begin? The first online trading cards were started in 1997 with the release of Chron X and Sanctum which marked the beginning of complete digital collectable card games without physical counterparts. Since then, hundreds if not thousands of games have been produced for a variety of devices such as gaming consoles, phones and laptops.

Online gaming is very prevalent in modern society. The main reason for its popularity boils down to the convenience it offers; friends, for example, are not required to meet in person anymore to enjoy these games and can instead do so from the comfort of their homes at whatever time works best. Furthermore, even on a professional front, online card gaming platforms provide stakeholders such as live dealers the flexibility of working at hours which work best for them without having to make an effort to travel great distances (QRIUS, 2022). Many of the games available online are digitized versions of actual offline card games including Solitaire, tabletop simulations of casino card games etc. With regard to casino and card games on mobile and online gaming platforms, this subcategory made up more than 19 per cent of the total revenue on Ios devices in 2021 (Knezovic, 2019) - evidencing their popularity. Once again, many people who have traditionally enjoyed playing these games offline have started to take advantage of their availability on online platforms because it does not require additional spending which one may incur when wanting to reach casinos or even hubs such as Las Vegas.

Whilst at one point the introduction of such digital platforms was deemed life-changing, the innovations are continuing in the playing sector and show no sign of slowing down. Nowadays, lots of games are tailored particularly for the online space without even having a real-life version of them. Hearthstones, for instance, is a game that only exists online, and had 23.5 million players in 2021 (Hearthstone, 2022), a figure showing the number of people participating in online gaming. Furthermore, as a result of technological advancements, many of these online card games also combine cards with other mechanics to make further innovations in the game which allow players access to more complex and challenging games, ensuring they remain entertained. Pokemon Go, for example, made a total of \$915 million in 2020 (Clement, 2023) and implements both augmented reality (AR) and collectable cards in gameplay (Bannerflow, 2016). Additionally, the implementation of virtual reality (VR) in card gaming is a technological advancement that has facilitated many innovations in both the software and hardware of these online card games. One example of this is the greater flexibility players are being given to customise their games as they would like - this is seen in the ability to customise one's online avatar, for instance, as well as in modifying the atmosphere to very closely mimic settings such as casinos, a living room or a basement (Kovacevic, 2022). As technology advances, it becomes more and more able to mimic real life and give a realistic experience to players.

This intersection of technology and card games has also had several indirect benefits for many other people. For example, online competitions for card games are also gaining fame along with online gaming and transforming them into a sort of spectator sport (Kovacevic, 2022) - gaming platforms such as Twitch give streamers the opportunity to turn a hobby of playing card games into an earning occupation with people signing up to watch them play these games. Moreover, there has also been opportunities for individuals to make a living by putting guides and tutorials for various games on the internet, on platforms like Youtube, with the aim to help people understand the games better. Lastly, technology may not only be used to create innovations in the game but also as a tool to advertise online games to a much larger audience, arguably making it easier to continue attracting old and new players.

An evaluation of technology's impact on card games

There is no doubt that technology has had major impacts on card gaming as a whole including innovating new ways to implement, approach and play the games. It can be said that card gaming has undergone irreversible changes, particularly in the last 20 years. These changes are only expected to continue in the future with many more innovations being expected particularly with the growth of VR - one of the largest growing fields that has massive potential to transform card games.

There are many advantages of technology evolving the card gaming space. For instance, people were once limited to enjoying card games with only those around them, including family and friends. Now, however, technology has made card games accessible via platforms that enable individuals to get involved with players all around the world. To

make this experience even more enjoyable, there are websites, such as Board Game Geek and Playing Cards Forums, which have been created to allow people to find leads to online games and interact with fellow players. This 'globalisation' in card gaming also implies that people now have increased exposure to an array of games which they may potentially never have heard of or played before.

On the other hand, due to an increase in online gaming, face-to-face gaming has reduced and will probably reduce further as newer technology makes online gaming more and more realistic. Gamers are no longer restricted to their circles, both geographically and socially, meaning that gaming could be becoming more impersonal - something many may argue would differ from the original purpose served by card games. Furthermore, it is vital to acknowledge that as has been with many other industries, eventually, card games will also start to be produced solely for online play and fewer physical games will be available. This is likely to leave many with no choice other than to get involved in the online side of gaming which can present some dangers. People who are addicted gamblers, for instance, can now indulge in this form of card gaming from their homes and not have to make any physical efforts to reach specialised venues or even make active efforts to control themselves and their game (Jamieson, 2020). This can cause great financial problems for those who are addicted in addition to hurting them socially, with their lack of availability for family and friends, for example. Mobile gaming addiction has also come up as a problem as people get addicted to the dopamine rush they get from playing games. These are very hard addictions to break as they're literally available everywhere on one's devices.

There is no limit to human creativity with card gaming as it is an industry with a lot of potential and progress is unlikely to stagnate in the coming future though we will have to be careful about the different problems that can be caused and deal with them. Technological advancements in AI also pose a threat to competitive play as they are built to be smarter and in a lot of cases even outplay real experts. If systems aren't developed to combat cheating using artificial intelligence then online competitive gaming can be undermined and experts might feel cheated as their effort in specialization has been defeated by AI.

Conclusion

Regardless of the exact origin still being undefined, it is quite evident that playing cards have existed for several years. From once being handpainted and representing a sign of wealth, playing cards have become greatly mass-produced and widespread in the last few years as a result of advancements in technology and the printing press. When considering card games, particularly, the origins of these may also be debated greatly but at today's date, this industry proves to be quite large and one that is incurring continuous innovations.

Whilst playing cards have most popularly been used in games which require one's physical presence, technology has facilitated the advent of online and mobile gaming which has given rise to several platforms which now offer the

originally offline games online in addition to many new games curated for only digital platforms. There are evidently many advantages of such platforms including; the convenience it presents to both players and game hosts, who can now engage from the comfort of their own spaces; the ability for players to connect with people all over the world and learn and participate in card games they may never have been acquainted with; and the additional revenue stream that online streamers can tap into by engaging in online card competitions as well as creators who may make helpful tutorial videos navigating players through the complexities of said platforms.

Based on all the above, it can be said that technology has facilitated advancements in the playing cards industry to a great extent - both in terms of the actual availability and variability of these cards as well as the innovations being made using technology such as VR, AR and AI. It must, however, be highlighted once again that such innovations may come at a cost of the original card games being replaced by online versions of the same and the ability for such platforms to take advantage of vulnerable players who may become addicted to playing card games and subsequently be put at risk of losing a sufficient amount of money. On the whole, if online card-playing platforms can be carefully regulated and controlled, there is much opportunity for them to become one of the biggest industries in the world and continue to provide entertainment as original playing cards and card games had intended to.

Bibliography

Bannerflow (2016). *How Pokemon GO and Augmented Reality are changing marketing*. [online] Bannerflow. Available at: <https://www.bannerflow.com/blog/pokemon-go-augmented-reality-changing-marketing/>.

Clement, J. (2023). *Pokémon GO revenue worldwide 2022*. [online] Statista. Available at: <https://www.statista.com/statistics/882474/pokemon-go-all-time-player-spending/>.

DATAINTELO (2022). *Global Playing Cards Sales Market by Type (Cardboard, Plastic-coated Paper, Cotton-paper Blend, Plastic, Others), By Application (Home Entertainment, Casino, Other) and Region (North America, Latin America, Europe, Asia Pacific and Middle East & Africa), Forecast From 2022 To 2030*. [online] Dataintelo. Available at: <https://dataintelo.com/report/global-playing-cards-sales-market/>.

Dummett, M. and Mann, S. (1980). *The Game of Tarot*. U S Games Systems.

Hearthstone (2022). *How Popular Is Hearthstone in 2022?* [online] Hearthstone Top Decks. Available at: <https://www.hearthstonetopdecks.com/how-popular-is-hearthstone-in-2022/>.

Jamieson, A. (2020). *Online Gambling, Gaming Addiction Has Increased During COVID-19*. [online] Healthline. Available at: <https://www.healthline.com/health-news/online-gambling-gaming-addiction-has-increased-during-covid-19-tips-that-can-help>.

Knezovic, A. (2019). *Mobile Gaming Statistics: 85+ Statistics for 2020*. [online] Udonis. Available at:

<https://www.blog.udonis.co/mobile-marketing/mobile-games/mobile-gaming-statistics>.

Kovacevic, A. (2022). *Technology's Reinvigorating and Reinventing Playing Card Games*. [online] TechLoot. Available at: <https://techloot.co.uk/gaming/technology-reinventing-playing-card-games/>.

Nosowitz, D. (2020). *Playing Cards Around the World and Through the Ages*. [online] Atlas Obscura. Available at: <https://www.atlasobscura.com/articles/history-of-playing-cards#:~:text=Some%20sources%20cite%20a%20Chinese>.

Parlett, D. (1990). *The Oxford Guide to Card Games*. Oxford University Press, USA.

Parlett, D. (2019). Playing cards | Names, Games, & History. In: *Encyclopædia Britannica*. [online] Available at: <https://www.britannica.com/topic/playing-card>.

QRIUS (2022). *How Technology Continues to Improve Card Games*. [online] Qrius. Available at: <https://qrius.com/how-technology-continues-to-improve-card-games/>.

Roya, W. (2018). *The History of Playing Cards: The Evolution of the Modern Deck*. [online] PlayingCardDecks.com. Available at: <https://playingcarddecks.com/blogs/all-in/history-playing-cards-modern-deck>.

Wintle, S. (1998). *The History of Playing Cards*. [online] The World of Playing Cards. Available at: <https://www.wopc.co.uk/history-the-history-of-playing-cards/>.

Wintle, S. (2010). *History of Blackjack*. [online] The World of Playing Cards. Available at: <https://www.wopc.co.uk/history-the-history-of-playing-cards/blackjack/blackjack>.

