

EVOLUTION OF COMPUTER GAMES

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ABSTRACT:

In today's era dominated by computer gaming, various elements such as style, montage, and the ways in which audiences engage with content have evolved significantly. However, one area that remains relatively unexplored is the potential rise of interactive or 'playable' films as a significant shift in cinema. While interactive film experiments do exist, they are still in the early stages and lack a consistent form. The labelling of diverse pieces as interactive films has led to confusion about what truly constitutes this genre. This raises the question of why interactive films have not gained cultural or economic traction, despite the widespread interest in interactive entertainment seen in the gaming industry. Examining notable examples of interactive films may shed light on their limitations and suggest potential new directions for this evolving form of storytelling

INTRODUCTION:

The history of video games traces back to the 1950s and 1960s when computer scientists began creating simple games and simulations on minicomputers and mainframes. One of the earliest games, Spacewar! was developed by MIT student hobbyists in 1962, marking the beginning of video games displayed on screens. The first consumer video game hardware emerged in the early 1970s, notably with the Magnavox Odyssey for home consoles and games like Computer Space and Pong in arcades. However, the rapid proliferation of Pong clones led to market saturation and subsequent cycles of success and failure due to lack of innovation.

Advancements in microprocessor technology ushered in significant shifts, including the introduction of optical media such as CD-ROMs and real-time 3D graphics rendering. These developments found their way into personal computers and consoles like Sony's PlayStation, which reshaped the console market landscape and marginalized competitors like Sega while challenging Nintendo's dominance. Concurrently, the widespread adoption of the internet in the late 1990s facilitated the integration of online elements into video games.

Microsoft entered the console market with the Xbox line in the early 2000s, aiming to counter Sony's multifunctional PlayStation and its potential to supplant personal computers. While Sony and Microsoft competed in enhancing hardware features, Nintendo focused on innovative gameplay, exemplified by the motion-sensing controls of the Wii,

which broadened the gaming audience and solidified Nintendo's position in the industry. This strategy continued with the release of the Nintendo Switch.

During the 2000s and 2010s, the industry witnessed demographic shifts with the rise of mobile gaming on smartphones and tablets, displacing handheld consoles, and the growth of casual gaming. Revenue models also evolved, with free-to-play and subscription-based games gaining prominence. Independent game development flourished, buoyed by the popularity of mobile and casual gaming and digital distribution platforms.

With the advent of 3D graphics and a focus on console gaming, smaller developers, especially those on personal computers, faced challenges in securing publisher support. Shareware emerged as a distribution method in the early 1990s, allowing consumers to try games for free before purchasing. This model evolved with the inclusion of demo versions on gaming magazine CD-ROMs and digital downloads from various websites.

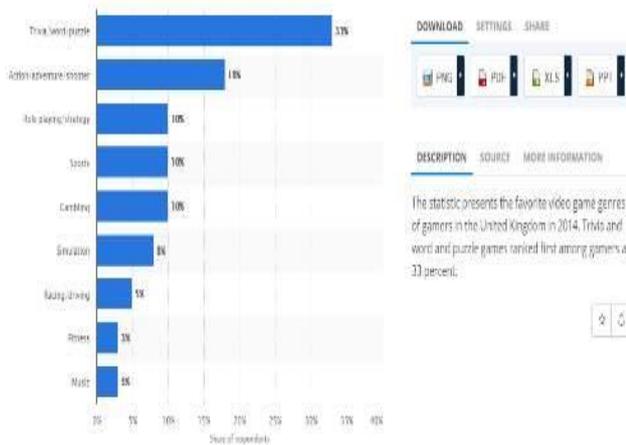
Regarding game classification, genres serve as a helpful but imperfect guide due to the dynamic nature of video games. Games span a wide range of genres such as trivia/word puzzles, action, adventure, shooter, role-playing, strategy, sports, gambling, simulation, racing/driving, fitness, and music. However, many games blur genre boundaries, leading to the creation of new genres. Despite the existence of sub-genres, the

discussion here will focus on a limited selection of game genres to avoid exhaustive categorization.

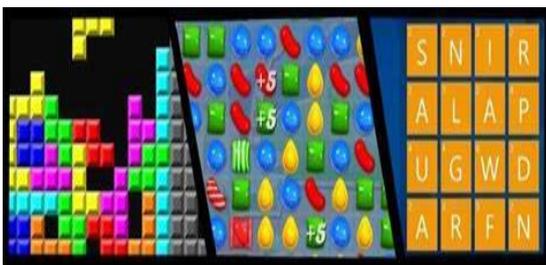
COMPUTER GAMES GENRES:

Various genres are used to classify games and aid in their categorization. However, it's important to note that these genres, while helpful, may not always accurately reflect a game's classification. As noted by Apparel, the market-driven genre categories developed within the context of video games can sometimes obscure the medium's essential defining characteristics.

Favorite video game genres among gamers in the United Kingdom (UK) in 2014



1. Trivia /Word Puzzles



This category encompasses various types of games but should be narrowed down to focus solely on puzzle games. Puzzle games centre around the solving of puzzles and come in various formats including strategic, tactical, logical, trivia, and word puzzles.

As mentioned earlier, puzzle games come in a wide variety and are relatively easy to develop and adapt. They can be found on numerous platforms such as arcade units, video game consoles, tablets, and mobile phones.

There are several subtypes of puzzle games. Action puzzles involve players moving game pieces to solve puzzles or clear a level. This category encompasses games with falling blocks (e.g., Tetris) or characters navigating through a level (e.g., Lemmings). Additionally, action puzzle games may include those that require players to use pattern matching or logic skills to progress.

Hidden Object games require players to locate a list of objects hidden within a scene. While popular among casual gamers, these games can become repetitive as they often involve repeating the same actions. To address this issue, creators of hidden object games have incorporated mini-games featuring different puzzle types to add variety and break up monotony.

Action Games/Adventure



[16]

Games categorized under the Action genre typically focus on testing the player's reflexes, hand-eye coordination, and reaction times. Players navigate through levels controlling a character or avatar, facing increasing difficulty as they progress towards the final level. Along the way, players encounter bosses and sometimes mid-level bosses to defeat. It's crucial to manage the character's health levels and lives, as taking multiple hits results in losing a life, and losing all lives ends the game. Some games offer health and lives to collect throughout the gameplay, though some variations exist on this reward system.

The Action genre is widely popular and available across various platforms such as gaming consoles, PCs, and mobile phones. Due to its popularity, the genre has diversified into several sub-genres as developers experiment with its basic formula. Sub-genres include Shooter Games, focusing on shooting opponents, featuring close-range melee attacks against multiple opponents; and Platform Games, where players navigate through levels filled with obstacles, floating platforms, enemies, and bosses.

Adventure games, being popular across multiple platforms including home computers, consoles, and handheld devices, have experienced a resurgence with the growth of the mobile phone market. They provide an enjoyable and easily accessible gaming experience that can be played in short sessions and saved for later.

Action-adventure games combine elements of both action and adventure, incorporating physical challenges and a faster pace compared to pure adventure games. They often include story elements presented through audio and video, with the player character's movement triggering story events and influencing the game's flow. The Tomb Raider series serves as a notable example of action-adventure games.

Strategy Games

Strategy games focus on planning and strategic thinking to achieve goals within the game. These games often present players with logistical and economic challenges, as well as opportunities for exploration. They can be categorized as either turn-based or real-time, and further subdivided into tactical and strategic sub-genres due to the vast number of games available.

In strategy games, players typically need to outthink their opponents rather than rely on physical prowess. Unlike action or adventure games where players may face numerous enemies, strategy games tend to emphasize equality between opposing sides. Each side usually has access to similar resources and actions, with strengths and weaknesses balanced to create a fair playing field. The scope of strategy games is often broad, and success relies heavily on the player's ability to plan and execute effective strategies.

Sports Games

Sports games present players with physical and tactical challenges, assessing their precision and accuracy. These games aim to replicate the athletic attributes necessary for the respective sport, such as speed, strength, and accuracy. Typically, sports games are set in stadiums or arenas with clearly defined boundaries.

In sports games, players can either control individual athletes or entire teams, depending on the type of game. Action-oriented sports games allow users to directly control players, while strategy-based games put players in the role of a manager overseeing team operations.

It's worth noting that sports games often blend elements from various genres to create a comprehensive gaming experience. Therefore, sports games should be viewed more as a sub-genre of multiple genres rather than a distinct genre in themselves, as indicated in the chart provided earlier.

Gambling Games

While gambling games are categorized as a genre in the list from [statista.com](https://www.statista.com), they are more accurately considered as sub-genres that intersect with puzzle and strategy games. These games offer a variety of casino-style experiences, including slot machines, card games, and sports betting, to users. Some gambling games allow players to wager real money on outcomes and are typically developed by established gambling operators. Others, particularly those on mobile platforms, use virtual currency for gambling, often with the option to purchase additional virtual currency.

Although gambling games enjoy popularity, they also spark controversy due to their accessibility, potentially enabling underage individuals to gamble. Despite age restrictions, many games lack built-in safeguards to prevent underage gambling, raising concerns about their impact on vulnerable demographics.

Simulation games

Simulation games aim to replicate real-life activities within a gaming environment. These simulations serve various purposes, including training, analysis, and prediction of events, in addition to offering typical gaming benefits.

Some simulation games are designed for practical training purposes, such as simulating flying a plane or operating a train, focusing on providing a realistic experience rather than prioritizing user enjoyment. These simulations aim to offer a safe learning environment where users can gain practical skills.

On the other hand, other simulation games, like The Sims, blend gaming mechanics with real-life situations to create an enjoyable gaming experience. While still simulating aspects of daily life, these games prioritize user enjoyment by incorporating traditional gaming elements to make controlling characters in realistic scenarios more entertaining rather than purely educational.

Social Impact:

Today, some of the most popular games worldwide include titles like Counter-Strike, Call of Duty, PUBG, Fortnite, and GTA V, which predominantly revolve around online warfare scenarios, emphasizing violence and criminal activities disguised as action and adventure. The depiction of violence in these games raises concerns similar to those surrounding domestic violence, as prolonged exposure to violent content may influence players to either become perpetrators or victims. This exposure can desensitize gamers to violence, distorting their perception of the world into one that is more hostile and dangerous than reality. Studies suggest that exposure to game violence correlates with increased tendencies toward aggression and violence, both immediately and over time.

Another significant consequence of gaming is game addiction, which can profoundly impact players' lives. Games provide a sense of comfort, freedom, social interaction, and accomplishment that players may lack in the real world, leading to addictive behaviours. This addiction can disrupt daily activities, resulting in decreased productivity and absent-mindedness. In

severe cases, excessive gaming has led to divorce, job loss, and even death due to sleep deprivation or malnutrition. Video game addiction has also been linked to various mental health issues such as attention-deficit hyperactivity disorder, impulsiveness, depression, anxiety, heightened stress, and poor social skills, potentially evolving into a psychological disorder.

Despite these negative effects, gaming can also be leveraged for educational purposes. Game-based learning is emerging as an effective educational tool, integrating fun, adventure, action, and learning in an interactive format. Children often learn more effectively through audio-visual effects and reward-based systems, and there are games specifically designed to challenge their cognitive abilities and foster critical thinking, strategic planning, and decision-making skills. These skills acquired through gaming can translate into real-world applications, benefiting individuals both personally and professionally. Thinking and strategy games, in particular, can enhance problem-solving abilities that are valuable in various aspects of life, including the workplace.

CONCLUSION:

The gaming industry's future appears promising, propelled by the widespread availability of streaming services, social media games, and smartphones. The industry seems to be progressing positively, with an estimated 2.7 billion gamers worldwide as of 2020.

Gamers today enjoy unprecedented levels of choice and accessibility, particularly those with disposable income. They have access to a diverse array of video games and are increasingly drawn to the allure of emerging technologies like virtual reality (VR) consoles. The evolution of gaming continues to evolve and adapt, reflecting the dynamic nature of the industry.

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