

User-Generated Content and Copyright Liability: Assessing the Role of User in Copyright Infringement Detection

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Abstract: User-generated content (UGC) exists in various formats on digital platforms, including images, audio, and videos. The capital market has turned UGC into profitable products, benefiting content creators and game companies. This reciprocal relationship presents opportunities in the digital market. However, due to current legislation and public sentiment, UGCs lack sufficient protection under intellectual property laws. This research aims to investigate the copyrightability of user-generated videos in the game industry. Specifically, it seeks to justify the copyright protection of user-generated game videos and propose potential solutions. Furthermore, this paper acknowledges live streaming recordings as a distinct type of game video. The entertainment industry's exponential growth, especially in video games, has sparked a surge in game live streams and videos among gamers. However, this has also led to copyright infringement issues, particularly with fair use defenses. The Copyright Act of 1976 grants exclusive rights, and game videos and live streams infringe on reproduction, display, public performance, and distribution rights. While recognizing the social value, the current statutory framework, like the DMCA, is ineffective. Implementing improvements like a new compulsory license would address copyright issues and foster creativity. A flexible legal standard allowing commercial and fair use would promote economic development, social harmony, and cultural enrichment, while failure to do so could hinder freedom of expression and innovation.

Keywords: User-Generated Content, Game Videos, Copyright, Game Livestream Recordings.

1. Introduction

User-generated content (UGC) in the game industry, specifically videos and live streaming, has become a lucrative aspect of the thriving gaming market. Recognizing the potential profitability, the capital market has transformed UGC into viable products, generating substantial revenues for successful content creators. Moreover, UGC indirectly enhances the brand and copyright awareness of game companies, facilitating better interaction and understanding of their client base. This reciprocal relationship between UGC creators and game companies presents significant opportunities in the digital market. However, current legislation and public sentiment fail to acknowledge the value of UGCs in the game industry, resulting in inadequate protection of UGCs under intellectual property laws. This article aims to propose solutions to address this issue and support UGC creators. By examining the creativity, originality, and fixed forms inherent in user-generated content, this research seeks to justify the potential copyrightability of UGCs in the game industry. Employing a mixed-

methods approach, including both inductive and deductive methods, this study will conduct comprehensive library-based research. The research asserts that valuable user-generated content should be recognized as copyrightable works and practical methods for their protection should be implemented accordingly.

2. Literature Review

People love video games, thus UGC appears. According to Heitner (2018), ‘it costs 3 hours and 26 minutes on average for American gamers to watch game videos and live streams each week.’ [1] Folks tend to spend more time and money in the game industry.

2.1. Classification

Gameplay videos are typical UGCs in the game industry. Gameplay videos are classified as game live streams and pre-recorded videos on platforms such as YouTube and Twitch. In addition, game photography, game modding products (Modding is a slang term for user-generated modifications to the game) [2], and audiovisual works are also UGCs. Gameplay Livestream broadcasts gameplay in real-time through platforms. Gameplay live streams can be saved as temporary profiles and are called ‘videos on demand’ (VOD), which can be downloaded manually by audiences. [3] Let’s Play videos cover a substantial amount of gameplay footage of linear stories and simultaneous comments from Let’s Play producers. And Let’s Play videos could offer viewers a cinematic experience of playing games. How-to videos are made for guiding purposes in the game industry. For instance, DOTA 2, a competitive e-sports game, requires high gameplay manipulation. This will stimulate gamers to debate gameplay strategies and share them through game videos on platforms. Highlight videos are edited gameplay footage. The purpose of Highlight videos is to display sensational moments that might resonate strongly among gamer groups. Speed Run is a type of playthrough video. Covering substantial gameplay footage of the whole game, it will provide gamers with a unique angle to pass all levels of games as fast as possible. Game reviews are one of the most significant UGCs, and Game reviews usually represent the comprehension of game designs, reviewers’ conclusions, and suggestions.

2.2. Copyright Legality

From the perspective of legality, the U.S. Copyright Office also states that UGCs are copyrightable as long as they are made in tangible forms. [4] Game videos have fixed forms and creativity. Can we grant copyright to users? According to Circular 1, Copyright Basics, section “What Works Are Protected.”, [5] ‘Works that are not fixed in a tangible form’ are not protected by Copyright. Besides, ‘A work is original if the work evidences creativity and is formed independently’. ‘To constitute an independent creation, the work must not simply be wholesale plagiarized, though it can bear striking resemblances to preexisting works so long as the similarities are merely ‘fortuitous.’ [6] In the game industry, UGCs are mainly gameplay videos and VODs, which are respectively pre-recorded or archived afterward. Gameplay performance, users’ comments, game soundtrack, and game images converge on a UGC video. Therefore, UGCs have fixed forms. Additionally, The Copyright, Designs, and Patents Act 1988 (the CDPA) set out a list of eight different types of work protected by copyright (s.1); this list includes ‘sound recordings, films and broadcasts (s.1 (1) (b)).’ [1] UGC videos could be types of recordings, filming, and broadcasting works. Concerning originality, UGC is not a copy of original game ideas. Copyright laws protect the expression of ideas, UGCs are not new game programs that might substitute the original games. In contrast, UGCs express creators’ talents and ideas, which are based on prior game products. To this end, UGC works should be eligible for precise Copyright protection.

2.3. Economic & Cultural Values

Today, high revenues make it possible for a user to make a living by making UGCs. Users attain an income from commercial advertisements of personal merchandise, commercial endorsements, viewers' generous tips, donations, and compulsory payments of memberships. [2] For instance, Liu Mou, the Chinese former E-Sport player of the League of Legends, became a UGC creator in DouYu afterward. He reportedly can earn around \$14,778 from live game streaming or gameplay videos. [3] Similarly, professional DOTA 2 player 'Arteezy' had three hundred thousand subscribers on the Twitch website. Each audience paid \$4.99 per month to watch Arteezy's live streaming. Generally, he could earn 1.5 million dollars per month from his subscribers on the Twitch platform. [4] Moreover, Felix Arvid Ulf Kjellberg, also known as 'PewDiePie' (A Swedish Let's Play YouTuber), is one of the world's most successful and prolific Let's Play video producers. Accordingly, his channel subscribers reached 111 million, and PewDiePie's viewership reached a total of 28.4 million in May 2022. [5] In addition, DOTA 2 had the highest prize pool of 47.79 million dollars in 2022. [6] Subsequently, the capital market will attract users to participate in the game competition and produce more UGCs. As Jenna had predicted in 2014, 'the revenues of the games industry could reach \$100 billion by 2018.' [7] It is estimated that the eSports & Games Streaming market will increase from \$2.3Bn in 2022 to \$7.2Bn in 2032. [8] Besides, 'Traffic is a key performance indicator (KPI) of great importance for marketers, but there must be a conversion for that traffic to be effective. Earlier, this study highlighted authenticity as a benefit of UGC, and this is precisely the type of content that serves as "social proof" for potential consumers. In other words, user-generated content speeds up the purchasing process, thus increasing your brand's conversions.' [9] Correspondingly, UGCs could improve the game company's official website engine search ranking. [10]

Shakespeare once stated, 'There are one thousand hamlets in a thousand people's eyes.' Game reviews and modified gameplay videos can appropriately conflate users' understandings and game designers' art ideologies. Game reviews and modified gameplay videos spread happiness to the gamer community and reflect the creator's transformative ideas to the public. Eventually, game reviews can greatly impact a video game's playability and marketing results.

2.4. Issues

The public sentiment and the blank IP law legislation from the perspective of UGC are two main causes of Issues discussed in this research. UGCs have an entertaining nature, but this doesn't deserve neglect or prejudice. This research prefers to do some case analysis. For instance, American game publisher Campo Santo sent one takedown request to YouTuber Felix 'PewDiePie' Kjellberg (one of the richest YouTubers in the world) in 2017. The game publisher asked PewDiePie to eliminate all his past and future videos featuring Campo Santo games. [11] Atlus, a Japanese game studio behind the game 'Persona 5', made a threatening announcement that any gamer's account would be suspended by the YouTube and Twitch platforms if users streamed or uploaded game videos featuring games from the Atlus studio. However, people condemned the plaintiff for ignoring the joy of sharing gameplay experiences and disrespecting personal creativity in the exploration of the game storyline radically. [12]

2.5. Potential Solutions

The core obligation of copyright protection is to encourage the production of new works. [13] According to the Copyright, Designs, and Patents Act 1988, 'property rights such as reproduction right, performance right, and distribution rights are exclusive.' [14] Additionally, under the current legislation Section 1 of Copyright, Designs and Patents Act 1988 (CDPA 1988), Copyright is property rights that include sound recordings, films, and broadcasts. [15] Therefore, this research will analyze

the following methods to solve copyright issues between UGC and game companies. For instance, Reform the Digital Millennium Copyright Act 1988 (DMCA), Unique Work, Joint Authorship, Compulsory license, no-action tolerated use, et al.

3. Methodology

This is library-based research. Key resources are from Google Scholar, JSTOR library, Westlaw, law reports, journal articles, etc. There is an interview with UGC creators in the game industry and professional IP law researchers. This interview could be questionnaires and video recording methods. In general, this quantitative research's philosophy is interpretivism, and it adopts a deductive approach. Most data will be collected from the articles, journals, and cases. So, this is also a type of historical research. If there is an interview in the future, this research will respect others' privacy, intelligence, and objectivity. To analyze the data of this research, this paper will refer to the UGCs category, Copyrightable legality, Copyright issues, and relevant ideas from academic dissertations.

4. Results

4.1. Statute is not Comprehensive Enough (DMCA Example)

Digital Millennium Copyright Act 1998 (DMCA 1998) is one important part of the U.S. copyright law. Title two of DMCA 1998 is the 'Online Copyright Infringement Liability Limitation Act'; this provision focuses on copyright infringement and online service providers in certain areas. [16] According to the regulation of DMCA 1998 takedown notice, an online service provider must take down related materials expeditiously when he receives the takedown notification under the penalty of perjury. If an online service provider receives takedown notices from copyright holders, he should remove or block access to the material identified in the notification in time. As a result, he will be exempt from the monetary culpability for copyright infringements. To be exempt from copyright infringement liability, a service provider must meet some preconditions. [17] Firstly, the provider must not have enough knowledge of infringing ability. Secondly, infringing activity must not benefit directly to service providers' financial interests. Thirdly, once receiving the notification under the penalty of perjury, service providers must take down or block access to the material as soon as possible. In addition, provisions of the DMCA 1998 have created a safe harbor for online service providers (OSPs). OSPs can be exempt from blame in four cases. (1) Acting as a conduit for transmitting material through its system or network. (2) Temporarily storing material for transmission (caching). (3) Storing material at a user's direction. (4) Providing links or other tools for locating material online. [18] In practice, YouTube and Twitch provide users with streaming platforms. Then, some users' game videos and live streams might include copyrighted game content. In this case, game publishers might file a takedown notice to platforms. Once those OSPs receive that claim, they are supposed to eliminate all illegal content by users as soon as possible. As a result, YouTube and Twitch platforms can be exempt from responsibility. In short, DMCA monitors online service providers (OSPs) and protects copyright holders.

What is the problem with the DMCA? Game companies always put too much emphasis on their commercial profits. Their claims of copyright infringements are hypocritical in some cases. When a game reviewer makes positive comments on games, those comments can increase the sales of games. Enjoying the profits, some game companies stay in silence and tolerate those game videos. In the reverse situation, game companies often claim copyright infringements against negative comments from game videos or live streams. The DMCA takedown notice is abused by a game company in the above cases. This article shows the matters of the DMCA 1998 in effect to reflect the argument that the current statutes are not comprehensive enough to protect underdogs, powerless game video makers, and live streamers. Compared with famous game publishers and game studios, a regular user

and gamer of game video platforms is usually helpless. The DMCA might lead to unfair results in practice. There is always a controversy existing under the provision of DMCA 1998 safe harbor, and many game publishers attempt to silence all critics who have produced review videos of their games. In other words, game publishers file takedown notices only if videos or stream threaten their product reputation and subsequent financial benefit. To sidestep the issues of copyright litigation, the popular platform YouTube created the 'Content ID' system, which allows copyright holders to register on YouTube to monitor the use of their game content on YouTube. [19] To be exempt from copyright infringement, Content ID filters videos infringing copyright automatically. This automatic system detects copyrighted materials in users' gameplay videos and it will remove all series of users videos in the end. Nevertheless, the Let's Play video usually includes a series of content on YouTubers' channels. And those game videos are usually connected to copyrighted gameplay images and footage. To avoid infringing liability, platforms have to remove all infringing videos, which will lead to extremely unjust results. Since game content creators have their legitimate creation of in-game videos, which should make them copyrightable. Besides, freedom of speech is also hampered by those takedown claims. In general, DMCA abuse and Content ID stifled the creativity of game videos and subjective comments. For instance, John Bain, also known as TotalBiscuit, is a professional game critic whose commentaries are very objective on his YouTube channel. In October 2013, he uploaded a negative game review about the game 'Day One: Garry's Incident' (A video game from Wild Game Studio) onto YouTube. Thereafter, Wild Game studio filed a takedown notice alleging that Bain illegally used the game's footage and images and illegally acquired revenues from an advertisement at the beginning of his review video. [20] TotalBiscuit's video was finally taken down by the YouTube platform. TotalBiscuit thought the game 'Day One' was indeed garbage and explained many reasons in his videos. Hence, many gamers watched TotalBiscuit's game review videos and then they didn't want to purchase the game 'Day One'. Subsequently, game publishers disliked TotalBiscuit's comments, which are supported by many gamers. Then, the game company required YouTube to take down videos. The game company is a hypocrite in that it hates objective comments showing people the true quality of its products. All the game company cares about is its sales.

Furthermore, game companies are unwilling to see Let's Play video producers or live game streamers being successful by using their games' content. Game companies could be jealous of a regular user in some cases. This sentiment finally hurts the fans' community. Once again, American game publisher Campo Santo sent one takedown request to YouTuber Felix 'PewDiePie' Kjellberg (the richest YouTuber in 2016) in 2017. The publisher asked the platform to eliminate all of PewDiePie's past and future videos featuring Campo Santo games. [21] In this case, the game company was uncomfortable with 'PewDiePie' 's enormous wealth based on prior games. At the same time, PewDiePie said some incorrect words about black people in his game videos. Hence, Campo Santo claimed that PewDiePie was a racist to destroy his reputation in the fan community. Finally, PewDiePie's video was taken down, and he made another video apologizing. A takedown notice under the DMCA 1998 was a games company's legitimate excuse to intrude on popular game videos. Atlus, a Japanese game studio behind the game Persona 5, made a threatening announcement that any gamer's account would be suspended by the YouTube and Twitch platforms if they streamed or uploaded game videos featuring games from the Atlus studio. However, this restriction under DMCA 1998 Safe Harbor was criticized by fans on social media. Most fans argued that the company was only worried about the negative impact of game sales. In contrast, the joy of sharing gameplay experiences and the personal perspective of games' storyline exploration for unsuspecting gamers were ignored radically. [22] Finally, Atlus apologized to the gamers' community and backed down on its restriction on game videos. The Atlus case is very similar to the previous case (Campo Santo case); in both cases, game publishers abused the DMCA, but the result is different. By taking down pre-recorded game videos, game companies also abused statutes by banning live game streaming

activities. On October 18, 2013, UMG Gaming (a game tournament organizer) broadcast a Dallas tournament for Call of Duty: Black Ops 2 on Twitch.t v. All income was to be donated to the Children's Miracle Network Hospitals. Nevertheless, this livestream was blocked by a DMCA takedown notice from 'Activision, the game publisher of Call of Duty'. [23] This gave rise to heated debates in the fan creation community and charity areas. Notably, the public protests against the abuse of the DMCA 1998 takedown notice, and the removal of all game videos reflect how a powerful game company can make use of copyright law to infringe on game video producers' freedom of speech in effect to sway people's opinions on defective products. [24] In practice, no gamer wants a bad game experience after spending his time and money on game products. The gamer community needs some volunteers to do gameplay reviews and to share feedback, which benefits gamers and fans in the long term. The cases above echo some sentiments of current legislation and large game companies. John Bain's case indicates that game companies didn't accept any negative reviews from professional game commentators because they put their sales above freedom of speech and consumers' experience. Additionally, in other practical cases, only a few game developers have reached a settlement with popular game streamers in the past. And their deals have always been accompanied by the same condition: the review must cast the game in a positive light.[25] PewDiePie's case indicates that game companies can be jealous of a user's success based on their products, even if their activities have caused no harm to the company. Atlus' case indicates how a large game studio abuses its copyright protection. There is no law mechanism deciding which types of videos are permissible. Subsequently, YouTube has no alternative but to comply with the DMCA takedown notice by removing all users' videos. Inefficient parts of current statutes such as DMCA and CDPA led to unjust results, which ignored legitimate and valuable criticisms and personal creative ideas of game videos.[26] Unlike large game companies, the sheer number of content creators in the YouTube and Twitch platforms typically operate individually without business sophistication, market power to negotiate with plaintiffs, and legal resources to justify their partial copyright. Therefore, game content creators stay in an inferior position.

To sum up, current statutes such as CDPA and DMCA pay too much attention to game publishers' copyright protection, the liability of OSPs, and the basic copyright of copyright holders. There is no clear mechanism to decide why kinds of videos should be permissible. In the next part, this article tries to demonstrate why they have partial copyright and propose how to protect them better.

4.2. Transformative Products and Fair Use

In contrast to the DMCA's approach, fair use creates an area for game video producers to apply some copyrighted content to their videos and streaming. Online service provider YouTube should claim the fair use defense in many situations in effect to detect true violations of game developers' copyrights. According to Richard, S., [27] fair use is built to protect 'transformative' copy action in the general sense. Transformative content grants the possibility of copyright to game video creators and live game streamers. In practice, fair use defense also comprehends commentary, criticism, and parody on copyrighted materials, which are prominent characters in-game videos and live game streaming. Those works should be protected by fair use defense even though they are built upon the prior copyrighted works. They are entertaining and transformative, which have positive contributions to many groups of people. Gameplay videos and live game streaming are valuable from an economic perspective. Reviews and Let's Play videos provide significant benefits to consumers by allowing them to discover new games that might appeal to them and assess the merit of a particular game they are purchasing in the future. Gameplay videos and live game streaming allow viewers to experience a game to an extent. Many professional players' gameplay videos also have an instructional function in fans' and gamers' communities. Concerning game publishers, game review videos and live game streaming can be effective propaganda, which can promote their sales. Fair use protects the fan

creation community and encourages gamers to share their experience and opinions by live game streaming and uploading game videos. Subsequently, fair use, a defense against copyright infringement claims stifling the creativity of works, seems to be an appropriate and significant legal framework to justify the partial copyright of game video makers. Codified in Section 107 of the U.S. copyright, the applicability of fair use defense has four factors: (1) the purpose and character of the use, including whether such use is of a commercial nature or is for nonprofit educational purposes; (2) the nature of the copyrighted work; (3) the amount and substantiality of the portion used concerning the copyrighted work as a whole; and (4) the effect of the use upon the potential market for or value of the copyrighted work.[28]

In practice, there are two typical ways of making gameplay videos and live game streaming standing within the scope of fair use defense. Keep them transformative enough to be considered as copyrightable work. Work such as parody containing critique and comments on the original work—a work with totally different purposes. Review videos can guide many new players and consumers in the free market. The purposes of video elements, such as comments and criticisms, usually do not harm a game company. According to the landmark case *Folsom v. Marsh*: ‘no one can doubt that a reviewer may fairly cite largely from the original work if his design is really and truly to use the passages for fair and reasonable criticism.’[29] This case justifies the purpose of game review videos, including a large amount of copyrighted game footage. On the other side, this case indicates that game videos will be impermissible if they copy a lot of copyrighted content to supersede the original product. [30] That is to say, the criticism and the use of original game footage will be permissible as long as the game video is not going to substitute the game. In other words, the purpose of game videos should produce no recognizable harm to the original game under the Copyright Act. For instance, John Bain’s review of *Day One: Garry’s Incident*, a video full of harsh critics, did not supersede the game *Day One*. Review video containing gameplay footage and John Bain’s comments did no harm that was actionable under copyright law in this case. Simply, harsh comments on review videos can’t replicate the experience of playing video games with a short excerpt of game footage. Those critical review videos make up a large portion of the works at risk in the current DMCA notice-and-takedown system. Many YouTube channels are devoted to creating critical game review videos and live game streaming. [31] As this study discussed in John Bain’s case, the game publisher abused current statutes such as DMCA. The game publisher has the power to silence all critical reviews indefinitely. Therefore, this article suggests the law protect those legitimate comments and review videos by applying the fair use defense to those works. Besides, more and more consumers and fan communities need the discovery of creative ideas and gameplay strategies concerned with certain types of games, such as MOBA games and RPG games. By providing criticism, Let’s Plays and livestreams serve a similar purpose to book reviews, which not only help present-day consumers make decisions but may eventually provide a unique glimpse into what the medium was like in its current state of flux. They might also allow younger gamers to see older games from the past that they may not have access to so that they might further appreciate the medium.

According to commentator Miller. C, [32] ‘there is a kind of open philosophy in gaming culture fostering a readiness to share strategies, knowledge, and secrets in effect to expand gameplay skills, game plot exploration and how to counter particular characters in games.’ For instance, multiplayer online battle arena (MOBA) games, such as Valve company’s *DOTA 2*, design a wide variety of items, complicated skills of each hero, and in-game resources. *DOTA 2* system is similar to playing chess; players in MOBA games can come up with innovative ‘builds’ and gameplay strategies. Besides, the game community often provides specific patterns made by other players as the best guide to help players win the game. Therefore, some passionate gamers share their standalone ‘builds’ and gameplay strategies by uploading gameplay footage to YouTube or live game streaming on Twitch. Game videos and live game streaming calculate the most efficient ways to play *DOTA 2* in different

situations. Furthermore, videos and game streaming focusing on gameplay instruction and strategic analysis of a particular game, such as DOTA 2, only benefit the gamers' community and consumers who have already purchased the game. There is no negative effect on game publishers' sales and 'market for or value of the copyrighted work.' [33] Current statutes ignore game video makers' partial copyrights, and fair use is a good defense against copyright infringement. Fan videos such as DOTA 2 gameplay videos guide gamers in strategies and should be regarded as new products. Providing personal strategies, analysis, and comments on DOTA 2 matches, skilled gamers can share interesting insights that can improve all viewers' gameplay experience. Besides, some fan-created products such as gameplay videos and live game streaming include artistic merits, developing into Internet sensations with cult followings large enough to support mainstream television shows and feature-length films. [34] One of the most magnificent cultural 'spillover effects' phenomenon is the sharing of video game footage or live game streaming in online communities. [35] 'Replayable' game can be played multiple times, and the player will have different insights and new experiences each time. For instance, DOTA 2 is a 'replayable' game like playing chess. Every player plays with five different allies against five different rivals in the same arena map. Players may choose different heroes each time. They may play with different builds and strategies each time. Significantly, DOTA 2, one of the most famous MOBA games in the world, is a typical 'replayable' game in online communities. DOTA 2 has one of the biggest esports prize pools and has held many tournaments, which allowed international gaming organizations to compete with each other. If DOTA 2 prohibited people from making game videos with gameplay footage or live game streaming, the phenomenon of video games played as a sporting experience would never have developed. Furthermore, 'replayable' game videos containing substantial numbers of gameplay footage should be qualified as permissible use as long as they are transformative enough. Unlike some games focusing on linear storylines, gameplay videos of 'replayable' games are only used. necessary footage. In other words, the 'amount and substantiality of the portion used concerning the copyrighted as whole' [36] is not important here. Those user-generated videos are popular for criticism and analysis of gameplay strategies. Hence, the fair use doctrine should grant them partial copyright protection, which can encourage more people to make transformative works with 'replayable' value to the players' communities. Apart from the aforementioned cases, the Let's Play video is another typical case. Let's Play video usually contains a large amount of game footage, even the whole game in some situations. One of the Let's Play videos is a humorous 'reaction' video. This type of game showcasing player's personal experience in playing scary and difficult games is more and more popular. Besides, humorous reaction videos are often accompanied by fanciful editing and entertaining comments by the content creators. For instance, PewDiePie recorded his gameplay streaming of the horror game P.T. (a psychological horror *game* developed by Kojima Productions) and uploaded it to the YouTube channel in 2014. In this horror gameplay video, PewDiePie kept talking with his viewers to minimize his fear. Sometimes, he was scared by ghosts in P.T. and shouted out some Swedish words, which were his mother language. Both his humorous reaction and crazy comments contributed to the 12,901,037 viewership. [37] Apart from P.T.'s gameplay footage, PewDiePie's funny reaction, humorous comments, and editing make his Let's Play video transformative enough. According to Reid, [38] 'even before the advent of popular gameplay videos in YouTube platform, many commentators supported the idea that fair use doctrine should be applied to artistic projects involving the use of in-game models, and gameplay footage to create gamer-made cinematic gameplay videos. The precondition is they are transformative enough.' In general, gameplay videos are transformative products made by gamers. Compared with playing games themselves, watching others' gameplay experience with excellent editing and comments can provide viewers with an extremely different social experience. Furthermore, transformative gameplay videos focus primarily on the personality of the YouTuber or Twitch.tv users, featuring humorous performances and critical comments associated with the gameplay footage they recorded. But a game

video including large portions of gameplay footage without creative expression and editing will not be seen as transformative. This video is just a copy of game footage, which affects the viewers' exploration of the original by viewers.

Game videos and live game streaming can benefit independent game publishers as free propaganda and advertisements. According to Kain, [39] ' a lot of independent game developers admitted that their games' sales significantly increased by the popular YouTubers' game videos.' This also indicates that transformative gameplay videos and live game streaming can have a positive effect on 'the potential market for or a value of the copyrighted work' [40]. Therefore, fair use defense should be applied to them. Some counterarguments believe that copyright holders have exclusive rights to decide on the distribution of their works and marketing. [41] Nevertheless, plentiful evidence of economic benefit justifies that game videos and live game streaming can incentivize new game companies to create better games, which also contributes to the general purpose of intellectual property law to promote science and the arts. [42] In addition, the Supreme Court in the U.S. has indicated, that the use of copyrighted work should not be prohibited as long as it has no demonstrable effect on the potential market for or the value of the work it used. Moreover, this will encourage authors to create better works.' [43] In addition, this article believes that game video makers can prove their videos positively affect original game publishers' commercial benefits. Let's Play videos and critical game review videos inform both sellers and buyers in the free market. Due to information providers, the game market will be more efficient, and a buyer can know better sellers' products before purchasing them. Finally, all transactions will benefit to sellers. In other words, YouTubers and Twitch streamers allow game consumers to purchase their favorite games for their personal preferences. Again, DOTA 2 is one of the most popular MOBA games in the world. As mentioned, playing DOTA 2 is accessible on the Steam platform. It has the largest prize pool in the eSport area. The publisher, Valve company actually, needs more players to play this free MOBA game through its Steam platform. There are different online services all around the world; international people can join the arena through local services. How can DOTA 2 attract people to play this free MOBA game? The answer is that the developer Valve cooperates with groups of players by live game streaming on Twitch or creating DOTA 2 gameplay videos on YouTube channels. Outside the game videos or live game streaming, viewers can communicate with each other in online chatrooms, improving DOTA 2's public exposure and fostering a vibrant DOTA 2 community of gamers. Furthermore, DOTA 2 is the most popular game on Twitch in July 2022. [44] In addition, there is another instance that can prove game videos and live game streaming can have a positive effect on game developer's revenues. Several game companies compile a list of Let's Play permission policies through the website Who Let's Play. Ninety percent of those companies in the list grant game video licenses to users on different platforms. [45] The above cases should justify that video makers and live game streamers should have copyrights for their transformative and positive products. In addition, game videos and live game streams can increase the user base of games, generate free publicity, drive sales, and foster groups of players who share their gaming experiences. These communities are especially lucrative for advertisers, video game makers, and streamers. [46] Hence, they should be regarded as a positive complement to the original copyrighted game.

5. Discussion

The current statutes need to be more comprehensive to balance copyright protection. The aforementioned sentiment of the society and the legislation shows the imperative ignorance in protecting game videos and livestreams. This article proposes some methods to protect transformative game videos and livestreams with good faith and values.

5.1. Reform the DMCA

DMCA safe harbor and takedown notice indeed protect game publishers' copyright. However, the ambiguity of materials detection and definition harmed the innovative works with good social values, such as transformative Let's Play and live streams. 'The original purpose of the DMCA was to address the exponential growth of technology and safeguard rights holders' interest; it has been argued that the DMCA ultimately harms fair use.' Additionally, Professor Miriam Bitton also stated, that the DMCA's protection measures focused on technical measures to protect digital copyrighted information, and they were not designed with fair use defense in mind. [47] In other words, DMCA safe harbor mainly protects online service providers (OSPs), and DMCA takedown notice protects game publishers' copyrights. This article suggests DMCA update some proper functions in effect to fit in with the post-YouTube world. DMCA needs to improve its flexibility and accuracy to avoid rigid policies and DMCA abuse. Both improvements can encourage innovation to grow. Furthermore, the DMCA needs to make a precise definition of 'expeditiously' in its takedown notice provision. Then OSPs will know how to take down illegal videos in time. By considering two factors of fair use, 'the purpose and character of the use' and 'the effect of the use upon the market', the DMCA needs specific provisions for materials detection systems for OSPs. Specific materials legislation will show OSPs and content makers the copyrightable types of videos and live streams that are not within the scope of the takedown notice. This will reduce takedown notice abuse and help people distinguish transformative game videos, and livestreams with good value from illegal materials.

Fair use is a good defense to protect transformative game videos and livestreams. However, it has limits and less power than other statutes. To break through the Fair use defense's limit range, some measures should be established to ensure that game videos and live streams are no longer regarded as infringing. To sum up, it is efficient to reform the DMCA takedown notice by making an explicit definition of 'expeditiously' to the current statute and providing OSPs with a clear standard to assess the materials.

5.2. Unique Work

Transformative game videos and live streams are regarded as unique works. They are not secondary works or derivative works. Game video content makers and live streamers do not need any license as long as their works are creative. This radically put them out of the category of copyright infringement. How do we define transformative enough? Firstly, video games are interactive and protected as software codes and programs under copyright law, transformative game videos, and livestreams are not programs and software codes. Secondly, they are unique products made by editorials, footage, personal comments, and entertaining performances. Compared with original video games. Transformative game videos and live streams should have wholly different functions and purposes. Thirdly, game videos and livestreams are different products with different purposes, which share strategies, skills instruction, and personal reviews. In this case, they are out of the scope of game adaptation. Finally, transformative game videos and live streams should have a positive effect on society. They will not overlap or supersede the original games. In this case, streamers' and game video makers' commentary, personalities, wisdom, interactions with the game communities, and conversations will be worthy of copyright protection.

5.3. New Compulsory License

If the game was published and uploaded to the internet for people to purchase and download. Consumers have the license to make game videos and live streams automatically. This automatic license grants buyers the right of public performance, the right of display, and the right of reproduction. In addition, video creators and streamers have independent copyrights for their videos

and live streams. However, all users must pay remuneration to the game publisher in regulation. The names of works and authors should be significantly noticed on streaming platforms. With regards to the rights of game publishers, game publishers have ‘opt-out right’, remuneration, and ‘right of cancellation’. 1) Opt out right. In this case, the compulsory license will not be valid automatically if the game company has announced it prohibited any consumers from making new game videos or live streaming. The notice must be announced before the infringement happens. 2) Right of cancellation. If the game videos and live streams libel the game company and game products. The game company has the right to cancel the license by sending a notice to the creators directly. Nevertheless, this right needs to respect the truth, or a game company might abuse it. To distinguish takedown notice abuse from libel, this case needs the court to participate in an investigation among the public, such as the gamers’ community, if the lawsuit occurs. 3) Remuneration. Game video creators and live game streamers must pay remuneration to the game company if users want to upload those new products to YouTube or Twitch. And the remuneration can be collected from the video platform or stream platform. The remuneration should be 15% of the streaming income or video income. One user who creates game videos and makes livestreams at the same time should pay remuneration to the game company twice separately.

To sum up, this automatic license only applies to the situation that the game was uploaded to the Internet by the copyright owner independently and directly. If the user indeed libels the game company, the game company holds the right to cancel his license. If the company has declared that streaming and game videos are not permissible or has used technical measures to limit access to the game, the game company can opt out of the new compulsory license. For instance, DOTA 2 is a free game published by Valve company on Steam. Anyone can download DOTA 2 from the Steam platform and install it by signing a subscriber agreement with the Valve company. Since the Valve publisher did not declare streaming and game videos are prohibited, and there was no technical measure to limit access to DOTA 2, a new compulsory license should be valid automatically. Topson, a professional DOTA 2 player, uploaded his gameplay videos on the YouTube platform sometimes. His videos and live streams include a substantial amount of DOTA 2 footage and DOTA 2 models. Under this new compulsory license, Topson’s gameplay videos will not infringe on the right of reproduction, right of adaptation, and right of public performance and display. This license permits him to perform the DOTA 2 gameplay through game videos or live streaming. However, under the current British copyright law, ‘the playing or showing of the work in public is an act restricted by the copyright in a sound recording, film, broadcast or cable program,’[48] the Valve company has the copyright to prohibit Topson from making gameplay videos or live streaming. [49] In contrast, under the new compulsory license, Topson can make a living by making gameplay videos and live streaming DOTA 2. Topson should also pay the remuneration to the Valve company.

5.4. No-action Tolerated Use

Tolerated use is infringing usage of a copyrighted work of which the copyright owner might be aware yet has done nothing to it. Tolerated use reasons can cover laziness, copying by goodwill, financial benefits to owners, and the cost of litigation. In addition, the tolerated use concept is very similar to fair use. ‘Many of the uses that fall into the category of tolerated use might also arguably fall close to, if not within, the category of fair use.’ The reasons include innate ambiguity in the concept of fair use, the cost of litigation, and the contour of fair use for casual infringement, which has rarely been solved. [50] Hence, an alternative way to discuss how to deal with current copyright issues is substantially legal exploitation of the fair use doctrine. This article proposes a method to harmonize the environment of video makers, live streamers, and game publishers. It is recommended that game publishers take no action to claim the creative video makers and live streamers because no-action tolerated use will save the cost of litigation and avoid reputation damage.

6. Conclusion

The exponential growth of the entertainment industry, particularly in the realm of video games, has led to a rapid increase in the popularity of game live streams and video productions within gamer communities. However, this surge in activity has also given rise to numerous copyright infringement issues, particularly in cases involving fair use defenses. There is much debate around whether Let's Play videos and livestreams of video games break copyright laws.

In light of the exclusive copyrights granted by the Copyright Act of 1976, which encompass the rights of reproduction, display, public performance, and distribution, it is evident that live streams and game videos do, in practice, infringe upon some of these rights. For instance, the fixed form of game videos inherently infringes upon reproduction rights, public performance, and display. Additionally, live streams infringe upon the right of distribution. The primary argument posits that game videos containing substantial amounts of game footage infringe upon the copyrights held by game publishers.

However, it is crucial to recognize the significant social value and positive impact that game videos and live streams have within the gamer community. While the current statutory framework, such as the Digital Millennium Copyright Act (DMCA), has proven to be inefficient, the fair use defense allows for the consideration of factors such as the purpose or character of the use. Implementing improvements, such as the application of a new compulsory license, would effectively mitigate copyright infringement issues.

In practice, a more flexible legal standard that permits commercial use and fair use would foster a spirit of creativity. Under these new proposals, game videos and livestreams would promote economic development, social harmony, and cultural enrichment. Failure to adopt such measures could result in the abuse of statutes and the erosion of freedom of expression, as well as hinder the spirit of innovation.

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