DO USER REVEAL THE NEEDS THAT MOTIVATE THEM TO WATCH GAMING
VIDEOS?:
A COMPUTATIONAL ANAYSIS OF GAMING VIDEO USER COMMENTS ON YOUTUBE

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ABSTRACT

Ji Ye Kim: Do Users Reveal The Needs that Motivate Them to Watch Gaming Videos?:
A Computational Analysis of Gaming Video User Comments on YouTube
(Under the direction of Dr. Francesca Dillman Carpentier)

The current study explored how viewers of YouTube videos of video game walkthroughs revealed the needs that motivated them to watch these videos through the public comments they left on the video pages. Informed by a synthesis of Self-Determination Theory, Acquired Needs Motivation Theory, and Uses and Gratifications Theory (UGT), comments were examined for evidence of affective needs, cognitive improvement needs, social interaction needs, sense of power needs, and tension release needs. Data included all public user comments from the most viewed gaming videos on YouTube with more than 2M views, based on a search of gameplay walkthroughs without commentary, gaming videos with commentary, and the compilation of the gameplay walkthrough samples and the gaming videos with commentary samples. Topic modeling using LDA2Vec, which is a combination of Latent Dirichlet Allocation (LDA) and Word2Vec models, was applied to the comments to identify major themes within the comments. Gaming videos with commentary only showed the valid, interpretable topic modeling result, having five topics. The comments included evidence of sense of power needs and social interaction needs accompanied with sense of power needs. Sense of power needs was the most dominant motivating needs among the users. However, affective needs, cognitive improvement needs and tension release were not found. I also identified examples of the motivating needs in

gaming videos with commentary samples from analyzing the most representative documents in the gameplay walkthrough samples and the compilation of gaming videos with commentary and the gameplay walkthrough samples. Findings of the current study can be used to understand the most salient motives people have for engaging with this popular form of media, beyond merely identifying their sentiments in the comments. This study can therefore inform entertainment and marketing research about video games and gaming videos and show to what extent topic modeling can be used to evaluate audiences on YouTube. This study can also provide a meaningful way of understanding the mixed media system of YouTube, which combines video viewing with communication between users through commenting.

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LIST OF ABBREVIATIONS

ANT   Acquired Needs Theory

SDT   Self Determination Theory

UGT   Uses and Gratifications Theory

LDA   Latent Dirichlet Allocation

CHAPTER 1: INTRODUCTION

The global video game industry is a far-reaching, billion dollar enterprise. One source says the industry worldwide made a revenue of 180.3 billion dollars in 2021, a number that has been increasing (Liquidweb, 2022). Another source says the global video game market was worth 178.37 billion dollars in 2021 and is expected to reach 268.81 billion dollars value in 2025 (Clement, November 19, 2021).

About 2.95 billion people are reported as active gamers in 2022 and expected to be 3 billion in 2023 (Carnahan, 2022). One commonly held expectation is that video games are an activity mainly for kids and teenagers, but the majority of gamers (79% of the total) in the US are adults. Across ages, 18 to 34 years olds account for the largest proportion of gamers (38% of the total) (Carnahan, 2022).

Beyond playing video games, people also enjoy watching others play video games on social media, such as YouTube (Sjoblom & Hamari, 2017). YouTube is one of the most popular social media platforms, having more than 2.6 billion monthly active users (social app report, August 24, 2022). This platform provides opportunities for users to create their own content (i.e., user-generated content) or consume content others have made. The platform has various categories of videos, such as Beauty (1.5 million subscribers) or Sports (75.1 million subscribers) (YouTube, September 4, 2022). Gaming is one of the popular video genres (videos related to video games are categorized as Gaming) on YouTube, with 92.9 million subscribers (YouTube

September 4, 2022). Two of the top five YouTube channels with the most subscribers worldwide are gaming-related channels (Petrova & Gross, 2017). In recent years, there has been a substantial increase in the viewing of gaming-related video content on platforms such as YouTube or Twitch. Over 944 million people consumed gaming videos in 2019, an increase of 5% from the previous year, and there are no indicators of slowing down so far (Kirkcaldy, June 10, 2022). The gaming video industry made 6.5 billion dollars in revenue in 2019, proving that it is more than just a few online videos. League of Legends is the most popular Gaming category on Twitch, with 63.65 million hours of video watched in January 2022, and Minecraft was the most popular game for YouTube videos in 2019, with 100.2 billion views in total (Kirkcaldy, June 10, 2022). PewDiePie was ranked first as the most popular YouTube gaming channel, which had 110 million subscribers in 2021, and Vegetta777 was ranked second with 32.6 million subscribers (Kirkcaldy, June 10, 2022). PewDiePie is a gaming channel mainly posting video game reviews of horror and action video games. Even though it expanded the content categories to vlogs or music videos, game review content is still the most popular on the channel. Vegetta777 is also known for posting game reviews of various video games, but mostly focusing on reviewing Minecraft gameplay. According to the statistics above, it is hard to neglect that gaming video has been growing as a popular trend in the gaming culture and social media (i.e., video streaming) market.

In this study, I described how gaming video viewers showed their needs that motivated them to watch gaming videos regardless of game genres in their comments from the videos. Gaming videos are classified into several sub-genres, such as video game streaming (videos that creators broadcast playing video games to others), video game streaming clips (videos that creators put together specific clips of game streaming videos), reaction videos (videos that

creators record their casual reactions while watching others playing games or playing games themselves), video game review (videos that creators play the game for the first time, or share tips or information related to video games), and gameplay walkthrough (videos that aim to develop a player's performance in a certain video game and are generally intended to aid players in completing the entire game or specific elements). The current study focused on "gameplay walkthrough without commentary" and "gaming videos with commentary" as samples of gaming videos to explore whether the motivating needs would differ depending on the gaming video's genres or a creator's presence in the videos. Gaming videos with commentary come with the creators' explanation of the gameplay or facial or vocal expression, such as a game review or streaming clips. The reason I separated gaming videos into two genres based on whether a creator's commentary appeared in the videos was to check the external aspects (i.e., creator's engagement) in the videos. I assumed that if creators were highly involved in gaming videos, users would be motivated to watch the videos under the creator's influence. Therefore, I selected gameplay walkthroughs without commentary and gaming videos with commentary as the samples in this study.

Across the sub-genres of gaming videos, gaming videos can be a mixture of hot media and cool media, which has unique characteristics compared to existing media platforms. McLuhan (1994) coined media types where the information is delivered in greater quantity and with less participation as "hot," whereas media types requiring a higher level of participation as "cool" (McLuhan, 1994). The mix of media types provides users not only a highly interactive experience (i.e., social interaction with other users through commenting) but also information from the comments or videos about the game and how to play (Sjoblom & Hamari, 2017). The point is the "hot" or "cool" definition of gaming video pages depends on how actively users

participate in commenting. If users are not likely to comment on the videos, the video pages will be closer to hot media, which I assume is used for information seeking. In contrast, if users prefer to actively engage in commenting on gaming videos, the video pages will be closer to cool media. Therefore, studying comments on gaming videos is an intriguing topic since the extent of users' participation in commenting can affect whether that particular media content is cool or hot. Since there is limited research on mixed media, and given the popularity of gaming videos on YouTube, exploring how viewers express themselves through user comments would provide a meaningful way of understanding the mixed media system.

Studying gaming video comments is also potentially insightful because comments are a medium for users to express their thoughts and feelings toward video games or videos (Madden & McMenemy, 2013; Jansen et al., 2009). I can learn more about why users consume certain media platforms by analyzing their comments on the media. Previous studies have shown people use comments on social media as a means of self-expression, emotional support, nostalgia, feedback, or direct reaction to the video they are watching (Madden & McMenemy, 2013). Madden and McMenemy (2013) conducted qualitative content analysis to classify the types of comments on YouTube and revealed 10 broad comment types: Information, Advice, Impression, Opinion, Responses, Expression of personal feelings, General Conversations, Site processes, Video Content Description, and Non-response comments. For instance, if they determined a comment expressed a user's personal feelings or emotional response, they included this sort of comment to "Expression of personal feelings." They categorized those taxonomy based on the motivation for leaving a comment and linked those comments types with their purpose of commenting. Their study was basically a replication of a previous study by Jansen et al. (2009), who identified nine comment types: information, impression, opinion, responses, expression of

personal feelings, general conversation, site processes, video content description, and non-response comments. To the extent that words in a comment reflect one or more of these comment types, an analysis of user comments on media can provide some insight into the motives people have for commenting and for media consumption.

Comments created on YouTube are a potentially rich source for revealing users' perspectives on the topics covered in videos (Thelwall, 2017; Teng et al., 2020). YouTube provides comment functions to users that include the ability to post their own comments on videos they watch, respond to other people's comments, and also rate other comments using thumbs-up or thumbs-down buttons. Viewers who watch gaming videos might reveal their needs that motivate them to watch gaming videos by using words that suggest information seeking or social interaction, both of which are functions that go beyond what playing the actual video game would offer (Sjöblom & Hamari, 2017). I also assume people who watch and comment on gaming videos have a deeper interest in the featured video games than others who do not watch videos of the game. If this is true, viewers who watch gaming videos on YouTube and leave comments on them might also reveal their needs that motivate them to play the featured game. Therefore, an analysis of comments on gaming videos could reveal how players' needs that motivate them to watch gaming videos are distinct from needs that lead them to play video games in a clearer way.

Finally, the information an analysis of comments reveals might be important for understanding the societal implications of gaming videos as a space for understanding the general well-being of a significant part of the population at the intersection of video games and social media. Numerous studies have associated social media use with mental health issues, such as anxiety and depression (Woods & Scott, 2016; Best, Manktelow, & Taylor, 2014; Kim, 2017;

Aalbers et al., 2019; Lin et al., 2016; Sehnsa et al., 2018; Twenge & Campbell, 2019). A different body of studies focusing on video games so far have focused on negative impacts of violence in video games on players' cognitions, emotions, and behaviors in the short term or long term (Anderson & Bushman, 2002; Anderson et al., 2004; Anderson and Huesmann 2003; Weber et al., 2006). From those perspectives, gaming videos on YouTube might be regarded as harmful to people. However, several studies have revealed positive effects of video games and social media. These studies have shown that video games promote players' acquisition of social skills or prosocial behavior and contribute to players' positive emotional states (Yee, 2006; Zhang & Kaufman, 2016; Granic et al., 2014). Przybylski et al. (2010) proposed video gameplay contributes to players' ability to satisfy basic psychological needs and improve their psychological and physical well-being. Likewise, user benefits of social media use have also been identified by multiple studies (Eldik et al., 2019; Valkenburg & Piotrowski, 2017; Antheunis et al., 2014; Liu & Brown, 2014; Mackson et al., 2019). For example, social media use is predicted to increase users' identity development, group self-esteem, psychological well-being, and sense of belonging. To sum up the findings above, the discussion of social media and video game's effects is still controversial. This study has the possibility of showing what positive and negative aspects of this gaming video space might be revealed through an investigation of the themes and valence of comments.

Due to the vast volume of comments, inconsistent quality in terms of spelling, grammar, and expression, and lack of structured organization, YouTube comments have, as yet, been relatively underexplored compared to other aspects, such as YouTube video content analyses (Madden & McMenemy, 2013). However, there is a lot of information that can be revealed from an analysis of these comments. The studies above indicate the potential of gaming videos as a

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space where users gain positive emotional or mental benefits from media consumption since gaming videos on YouTube contain both characteristics of social media and video games. Therefore, comments from these videos might show how the combination of social media and video games helps users satisfy their basic psychological needs and promote positive well-being (Rigby & Ryan, 2016).

In the current study, I used a computational approach to analyze user comments on gaming videos on YouTube to identify their desires (i.e., psychological needs) for watching those videos, identifying psychological needs based on Acquired Needs Theory (ANT), Self-Determination Theory (SDT), and Uses and Gratification Theory (UGT). ANT describes three emotional needs of individuals that shape their behavior or motivations: Affiliation (the need to make and maintain social relationships), Achievement (the need for mastery), and Power (the need to influence or control others). In the same manner, SDT describes the following three basic psychological needs that drive individuals' intrinsic motivations: Autonomy (the need to experience behavior as volitional), Competence (the need to experience behaviors as efficiently accomplished), and Relatedness (the need to interact or be connected to others in their group). Based on those identified psychological needs, I explored what needs users who commented on gaming videos have or were fulfilling by conducting an LDA2Vec, which is a combination of Latent Dirichlet Allocation (LDA) and Word2Vec, on user comments extracted from randomly sampled gaming videos.

In the rest of this paper, I discussed the theoretical frameworks of the study, covering SDT, ANT, and UGT. I reviewed the literature on needs that motivate users to play video games, that motivate them to use social media, and that motivate them to consume gaming videos. I next described the methods that were used to select and analyze user comments, including how I

gathered sample data and what criteria I used for the sampling. After addressing the study result, I discussed how to interpret the study result and identified the limitations of the analysis in light of the context and methods I used in this study. In the last section, I addressed the significance of the study and suggested further study.

CHAPTER 2: LITERATURE REVIEW

Theories of Motivation

Self-determination theory. Self-Determination Theory (SDT), developed by Deci and Ryan in 2000, proposes that people behave in certain ways, including selecting the media they consume, in order to fulfill particular needs (Deci & Ryan, 2000; Przybylski, Rigby, & Ryan, 2010). The promise of satisfying those needs provides motivation for people to perform certain behaviors. Motivations are divided into two forms: intrinsic and extrinsic (Deci, Koestner, & Ryan, 1999). Extrinsic motivation is a drive to perform a behavior in order to gain some desired outcome external to oneself or to avoid an unpleasant situation coming from outside oneself. Intrinsic motivation is a desire to act in order to meet an internal goal, such as personal growth, a feeling of affiliation or intimacy, a sense of contribution to one's community, or physical health. Research has demonstrated that these forms of motivation have highly distinct effects on individuals performing the same task. Compared to those who pursue an activity for extrinsic reasons, people who are intrinsically motivated enjoy the activity more, display better cognitive flexibility, handle information with greater accuracy, and experience higher psychological and physical well-being (Ryan & Deci, 2000; Deci, Koestner, & Ryan, 1999).

Intrinsic motivation can emerge from the desire to meet three basic psychological needs: Competence, Autonomy, and Relatedness. The need for competence is related to the experience that an activity has been efficiently carried out. The need for autonomy indicates the innate desire of humans to feel volitional and to possess a sense of control and psychological freedom

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when performing a task. The need for relatedness is the fundamental desire to communicate with other people, to feel connected, and to care for others (Gaggioli et al., 2017; Ryan & Deci, 2000).

From the perspective of motivations for video gameplay, video games have been related to all three of the basic psychological needs defining intrinsic motivation in SDT (Przybylski, Rigby, & Ryan, 2010). Game industries have developed video games that are customized to suit needs for competence by focusing on challenges and goals in gameplay. Video game design also has expanded to satisfy players' needs for relatedness by facilitating online conversations with other players during gameplay and offering the ability to team up and pursue a game goal together. In addition to satisfying needs for competence and relatedness, game systems and environments have been improved to address players' needs for autonomy by offering flexible goals, choices in what goals and storylines to pursue, and a high degree of freedom in their actions (Peng et al., 2012; Przyblyski et al., 2010; Rogers, 2017; Ryan et al., 2006). Taking into account the evidence that video games provide players with experiences meeting those basic psychological needs, I expected gaming videos might remind people about how the games themselves meet their needs and viewers of gaming videos might even meet some or all of these psychological needs just by being a viewer of these videos.

Acquired needs motivation theory. Acquired Needs Motivation Theory (ANT), which was developed by David Clarence McClelland in 1972, outlines the uniqueness of each individual's needs, demonstrating that the individuality of people causes each person to have a unique perspective of reality and varied emotional needs. ANT is based on the principle that each individual's behavior differs in individuality, regardless of how much the environment or other factors influence their behaviors (Baptista et al., 2021). McClelland (1972) stated individuals have three types of emotional needs, which are ranked differently by individuals: Achievement,

Affiliation, and Power. Individuals have a blend of those needs, though one is generally dominant. First of all, the need for achievement is related to the individual's introspective context. Individuals with this type of need prefer improving their performance, receiving proper feedback, attaining greater knowledge and engagement with learning, and reaching greater challenges with tolerable risks (Stoner & Freeman, 1999). The need for achievement is characterized as a pattern of motivation regarding feeling self-confident, having considerable ability, being driven by clearly stated objectives, accepting moderate risks and obligations, and choosing situations that offer feedback for performance enhancement (Loiola and Gondim, 2017). Next, the need for affiliation is related to friendly relationships and interactions with other people. Individuals with this need have a strong desire to be favored and accepted by their social group. The need for power, the third need, is the need to have influence over others. People who have this need aim to reach a particular level of authority, desire to be respected and admired by others, exert their power so that their claims are accepted, and control all related factors around them. According to ANT, the way each individual mixes their needs and decides which needs are more and less important will influence their behaviors and motivate how they act in the world (McClelland, 1984, 1987).

Uses and gratifications theory. Uses and Gratifications Theory (UGT) is a conceptual framework broadly used in media research that focuses on the question of why people consume media (McQuail, 1983; Kim, 2020). The three primary aims of the UGT framework are to illustrate how people use the media to satisfy their needs, reveal the motivations for media use, and address the positive and negative effects of media use (Khan, 2017). There are five main categories of needs for mass media consumption according to UGT: 1. Affective needs (experiencing emotional, pleasant, or aesthetic feelings); 2. Cognitive needs (acquiring

knowledge, information, and understanding); 3. Tension release (feeling escaped or diverse); 4.

Social integrative needs (improving relationships with family and friends); and 5. Personal

integrative needs (reinforcing stability, status, and credibility) (Katz et al., 1973; West & Turner,

2010). McQuail (1983) also suggested four main needs for media use: personal identity,

integration and social interaction, information, and entertainment.

I identified that all three theories discuss social interaction needs, cognitive improvement

needs, and a sense of power needs for media use. First, social interaction needs refer to the desire

to communicate with others and feel a sense of belonging to their community. Relatedness from

SDT, affiliation from ANT, and social integrative needs from UGT account for social interaction

needs. Second, cognitive improvement needs indicate the desire to acquire knowledge or

improve performance. Competence from SDT, achievement from ANT, and cognitive needs

from UGT are related to cognitive improvement needs. Third, sense of power needs reflect the

desire to feel proud of volitionally completing something challenging and worthwhile, or feel

smarter than others. Autonomy from SDT, power from ANT, and personal integrative needs

make up sense of power needs. SDT and ANT do not concern hedonic aspects of needs for

media use, such as emotional, aesthetic feelings, enjoyment, escape, or tension release. Even if

these hedonic needs (i.e., affective needs and tension release)   are not discussed in SDT and

ANT, those needs are so imperative in studying media use desire that they need to be included as

needs for watching gaming videos in the current study (Hamilton et al., 2014; Hamari &

Sj€oblom, 2017; Gros et al., 2017). Table 1 synthesized the needs for media use under each

theoretical framework and suggested the needs categorization used for this study. The current

study identified user motivations for watching gaming videos on YouTube by analyzing their

comments on the videos under the synthesis of the three theoretical frameworks regarding needs

for media use (SDT, ANT, and UGT).

Table 1: Classification of Needs for Media Use of SDT, ANT, UGT, and The Current Study

SDT	ANT	UGT	The current study
-	-	Affective needs	Affective needs
Competence	Achievement	Cognitive needs	Cognitive improvement needs
Relatedness	Affiliation	Social integrative needs	Social interaction needs
Autonomy	Power	Personal integrative needs	Sense of power needs
-	-	Tension release	Tension release

Motivating Needs across Research Studies

In the previous section, I reviewed the theories of motivation (SDT, ANT, and UGT) that illustrated the needs that drive individuals to consume media and why they are motivated to use media, as well as the definitions of the needs. Based on the needs revealed by the three theories, I synthesized those needs and proposed five types of needs for this study: affective needs, cognitive improvement needs, social interaction needs, sense of power needs, and tension release. The next section showed how these needs have been identified in research on engagement with video games, YouTube, and gaming videos specifically. Subsequently, I proposed research questions based on the synthesis of motivation theories and research identifying the needs to motivate media platform engagement.

Needs that motivate video game play. Previous research has identified a number of different motivations for playing video games of different kinds. Social interaction, competition, immersion, fantasy, challenge, escapism, identification, arousal, advancement, and passing time have been identified as motivations for video game play in general (Sherry et al., 2012; Vorderer

et al., 2003). Jansz & Tanis (2007) showed that players of First Person Shooter Game (FPS), specifically, were motivated by competition, enjoyment, social interaction, excitement, challenge, fantasy and interest. On the other hand, players who play sports video games were found to be motivated by competition, entertainment, social interaction, fantasy, diversion, knowledge application, and identification with the sport (Kim & Ross, 2006). Yee conducted a survey of 3000 MMOPRG players and identified 10 motivations in total for this type of game: advancement, mechanics, competition, socializing, relationship, teamwork, discovery, role-playing, customization, and escapism. Yee grouped these 10 motivations into three overarching components: Achievement, Social, and Immersion. In terms of competence needs, Grodal (2000) stated players play video games to feel in control and in power.

The motivations for playing different game types (i.e., MMORPG, FPS, and puzzle game) and motivations for video game play in general indicate that games are being used to fulfill psychological needs that have been discussed in ANT, SDT, and UGT theories. In fact, Rigby and Ryan (2016) argued that people enjoy playing video games because they can satisfy basic psychological needs by playing video games (i.e., competence, relatedness, and autonomy), which leads to their eudaimonic life achievement–their ability to find meaning in life. Specifically, Rigby and Ryan (2016) argued that some video games have components that can satisfy basic psychological needs, for example teamwork opportunities that can lead to relatedness satisfaction, moderate challenges and intensive feedback that can build competence, and multiple options and choices for performance to promote autonomy. They argued this satisfaction of basic needs is pivotal for future gameplay since those satisfactions influence users to keep engaging in video games.

Schuurman et al. (2008) distinguished four gamer types based on their motivations for the gameplay, which suggests individuals differ in how they prioritize their needs like ANT suggests. One type is the overall convinced gamer, who is highly motivated for a number of reasons. Another type is the convinced competitive gamer, who is highly motivated by a need for competition and challenge, which can be considered a combination of cognitive improvement and a sense of power, as well as achievement based on Yee's (2006) motivation typology. A third type is the escapist gamer, who is motivated by needs for freedom, being someone else, and experience of new worlds, which could be seen as affective needs and also needs for immersion as identified in Yee's motivation typology (Yee, 2006). The fourth type is the pass-time gamer, who is highly motivated by spending their time in a fun way,which can include a need for tension release.

Needs that motivate YouTube engagement. Multiple studies have identified needs that motivate social media use. These include social interaction, sense of belonging, shared identity, information seeking, information sharing, pass time, entertainment, relaxation, communicatory utility, convenience utility, expression of opinion, and surveillance/knowledge about others (Whiting & Williams, 2013; Waterson, 2006). Brandtzæg and Heim (2009) specified the components of "social interaction" motives for social media use as seeking new relations, communicating with friends or acquaintances, general socializing (e.g., sharing experiences, or commenting), and debating.

Social relationships (to satisfy needs for social connections) and information seeking (to fulfill the need to be informed and obtain information) have been identified as the most generally observed motivations in social media by other scholars (Sunder & Limperos, 2013). Kim and Lee (2016) showed that social relationship motivations was associated with a user's preference

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for symmetrical media, such as Facebook or Instagram, where the relationships are based on mutual agreement. In contrast, information-seeking motivations were associated with the preference for asymmetrical media, such as YouTube or Twitter, where individuals make relationships with one user without the consent of the other.

It is difficult to clearly classify media into symmetrical versus asymmetrical types since most social media platforms provide both asymmetrical and symmetrical types of relationships. People can establish both relationship types depending on other parties' relationship preferences. For example, YouTube reflects traditional mass media aspects by presenting a video from a single content creator to the masses. Viewing a video on YouTube would be like watching visual content on television, where motivations identified based on Uses and Gratifications Theory (UGT) to explain television use (entertainment, arousal, habit, pass-time, information, relaxation, and escape) (Rubin, 1983; Haridakis, 2002) would apply to watching videos on YouTube.

However, YouTube also has its unique characteristic, which is an affordance of interaction since people can communicate with other users through commenting on videos they are watching. YouTube provides a chance of forming relationships with like-minded people, because people who share similar interests may gather to specific video content to seek information they are looking for and share opinions through user comments. Therefore, YouTube can be used for social relationships as well as information seeking. Considering this interaction aspect, interpersonal motivations such as affection, control, or inclusion were suggested as motivations for YouTube use (Rubin et al., 1988; Haridakis & Hanson, 2009). Indeed, Haridakis and Hanson (2009) demonstrated that motivations of entertainment, information-seeking, watching videos with others, and social interaction contributed to their YouTube video consumption. In conclusion, we can identify that people watch YouTube videos because they are

willing to fulfill their needs to gain information (i.e., information seeking), be amused, and interact with others from watching the videos (i.e., social relationship).

Needs that motivate gaming video consumption. Watching gaming videos has a clear distinction from playing video games. Whereas video games are a multi-directional activity that requires active user participation, watching gaming videos is more passive than video gameplay, in that users spectate others playing games rather than playing the game themselves (Sjoblom & Hamari, 2017). Gaming videos also provide no agency over the game events compared to actual video gameplay, although the perceived and actual agency over game events depends on the type of video game and the player's game skills. At the same time, consuming gaming videos on YouTube is more active than consuming traditional media such as radio or television, in that users can comment on gaming videos and interact with other users through those comments. Users might also gain social gratifications from being a part of an audience or from being a commenter, that are different from gratifications that can be obtained by single-player experience with playing the actual video game (Hamilton et al., 2014).

One market research report has shown that people watch gaming videos for four reasons: community, inclusion, escapism, and improvement (Petrova & Gross, 2017). Petrova and Gross (2017) surveyed and interviewed 4,917 YouTube users between age 18 and 54 who watched gaming videos and examined their feedback for certain themes. About 56% of the respondents watched gaming videos to be connected with their gaming community. Female users (66% of them), especially, watched gaming videos to feel accepted by the people in the same gaming community. About 73% of respondents consumed the videos for relaxation or enjoyment and 74% of them watched the videos to learn how to get better at a game. Revisiting the theories reviewed above, this study identified needs for social interaction (community & inclusion),

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cognitive improvement (learning to get better), and tension release (relaxation, enjoyment) as motivating consumption of gaming videos.

Although few studies have been conducted regarding gaming videos, several studies about motivations for watching Esports streaming or video game streaming have been done by multiple researchers. Esports are defined as alternate sports for competition and a unique approach to participating in gameplay (Bányai et al., 2019). The popularity of First Person Shooter (FPS) games, Real Time Strategy (RTS) games, and Massively Multiplayer Online Role-Playing Games (MMORPGs) provided a foundation for the emergence of video game competition streaming services worldwide (Taylor 2012). The literature has identified motivations for video game streaming, including Esports streaming, as relating to social interaction, information acquisition and entertainment (Hamilton et al., 2014; Hamari & Sj€oblom, 2017; Gros et al., 2017). To be specific, Hamilton et al (2014) demonstrated that people watched video game streaming for two reasons: being attracted to the unique content of a certain streaming video and enjoying interacting with and being a part of that streaming video's community.

The main difference between video game streaming and gaming videos is whether the activity in the video is happening in real-time. Whereas video game streaming broadcasts their gameplay in real-time, gaming videos are recorded so that users can watch anytime or watch any scene they want within the video. However, what video game streaming and gaming videos have in common is the fact that people spectate others playing video games and interact with other spectators through commenting. Therefore, we can conclude that many of the same needs that motivate people to watch video game streaming would also apply to gaming videos, that is, social interaction, cognitive improvement, and tension release.

Research Questions

To sum up the needs to motivate users to consume video games, social media, and gaming videos, people play video games to satisfy their needs for social interaction, cognitive improvement & sense of achievement (i.e., power) (competition, identification, challenge, & advancement), tension release (escapism & pass time) and affective activation (arousal, immersion, & fantasy). People are motivated to use social media, and in particular YouTube, to satisfy their needs for social interaction (sense of belonging, shared identity, communicatory utility), cognitive improvement (information seeking & surveillance/knowledge), sense of power in the social area (information sharing, expression of opinion), affection (entertainment & convenience utility) and tension release (pass time, relaxation). People are motivated to watch gaming videos to gratify their needs for social interaction, cognitive improvement (information acquisition), and tension release (relaxation). From reviewing the needs for media use above, we can conclude all needs for media use, regardless of media platforms, are subsumed under the five classified needs (i.e., social interaction, cognitive improvement, sense of power, affection, and tension release) categorized in Table 1.

The current study explored user needs for watching gaming videos by analyzing their comments on the videos based on the five needs for media use stemming from the combination of ANT, SDT, and UGT. I identified what types of needs were present in gaming video's comments and grouped the relevant topics into the five needs that motivated gaming video watching by conducting topic modeling. The following research questions are addressed:

RQ1: What types of needs, if any, are present in comments on gaming videos?

RQ2: Is there evidence of affective needs in topics, in that there are words and the representative document (comment) in the topic that are related to affective needs?

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RQ3: Is there evidence of cognitive improvement needs in topics, in that there are words and the representative document (comment) in the topic that are related to cognitive improvement needs?

RQ4: Is there evidence of social interaction needs in topics, in that there are words and the representative document (comment) in the topic that are related to social interaction needs?

RQ5: Is there evidence of sense of power needs in topics, in that there are words and the representative document (comment) in the topic that are related to sense of power needs?

RQ6: Is there evidence of tension release needs in topics, in that there are words and the representative document (comment) in the topic that are related to tension release needs.

CHAPTER 3: METHOD

Overview

The current study sampled gaming videos on YouTube in order to trace user comments. I trained three corpuses for the study: (1) a comments compilation of gaming videos with commentary, (2) a comments compilation of gaming video walkthrough (i.e., without commentary), and (3) a combination of these two compilations (i.e., a compilation of (1) and (2)). Only comments written in English were considered for sampling. Topic modeling method was used to analyze the comments for common themes based on the clustering of frequently co-occurring words. Word2Vec with the skip-gram model was used to cluster similar words in comments. Latent Dirichlet Allocation (LDA) was performed based on the clustered words. The optimal number of latent topics was determined by adjustment between perplexity score and topic coherence score, and the top 50 most frequent words of each topic were grouped and presented to demonstrate what each topic represented. I performed data-cleaning procedures to enhance the interpretability of the topic modeling results.

Study Sample

For the sample, I selected gaming videos on YouTube, two gaming video genres, gameplay walkthrough and gaming videos with commentary. The reason I chose these two genres was to check any influence of the celebrity status of the video content creator or the creators' characteristics on users commenting. Investigating the evidence of users' motivating

needs for watching gaming videos with commentary in their comments was imperative since this type might reveal another motivation that could not have been identified in comments on gaming video walkthroughs. The combination of (1) and (2) was also essential to check if the same or similar evidence of the motivating needs was found regardless of the gaming video type. I searched for "gameplay walkthrough without commentary" on YouTube for sampling gameplay walkthrough videos and "gameplay with commentary" for sampling gaming videos with commentary, sorted the videos by views in descending order, and selected videos with the highest view counts regardless of the upload date. Gaming videos that had more than two million views and consisted of over 90 percent of gameplay scenes were chosen. The gameplay walkthrough sample did not show a creator's face or have external commentary. In contrast, the gaming videos with commentary samples showed a creator's face on screen or included external commentary, either voice or text narrations. I followed the detailed sampling criteria for selecting gameplay walkthrough samples as shown in Table 2. I used the sampling criteria to choose gaming videos with commentary samples, which are listed in Table 3.

Table 2: Criteria for Gameplay Walkthrough Sampling

Criteria	Explanation
1	Video shown as a result of "gameplay walkthrough without commentary" is selected as a sample.
2	Video with more than 2M views is selected as a sample.
3	Over 90 % of the video should be gameplay.

4	Video playing any type of game that can be played on any electronic device, including computer, console, and smartphone, is selected as a sample.
5	Video which shows a human face (creator's face) on screen during gameplay should be excluded from the sample group.
6	Video with intros or outros in which the creators speak to the audience but do not involve actual gameplay should be excluded from the sample group.
7	Video having external commentary (audio narration or text narration), other than in-game audio, should be excluded from the sample group. (For example, creator's audio or text reaction inserted into the video is an external commentary.)

Table 3: Criteria for Gaming Video with Commentary Sampling

Criteria	Explanation
1	Video shown as a result of "gameplay walkthrough reaction" is selected as a sample. **unavailable to find gameplay walkthrough videos including creator's narratives if "gameplay walkthrough with commentary" was searched.
2	Video with more than 2M views at least is selected as a sample.
3	Over 90 % of the video should be gameplay. **Reaction videos without gameplay were excluded (i.e., only reaction to the video gameplay)
4	Video playing any type of game that can be played on any electronic device, including computer, console, and smartphone, is selected as a sample.
5	Video having external commentary (audio narration or text narration) created by creators were included in the sample group.

The current study traced comments from the selected gaming videos based on Table 2 and Table 3. Comments written in English were only selected for analysis. Comments consisting only of emojis or other languages were excluded from the sample. I used the Selenium package from Python to scrape the comments, number of likes, and user names from the selected videos (Lawson, 2015; Yoon & Kim, 2021; Fu et al., 2021). The Chrome browser was controlled through the web driver API, and the HTML structure with text will be collected by visiting the web page through the URL. I used the package "Beautiful Soup," parse HTML pages, and save the compilation of comments as a CSV file.

For the analysis of gameplay walkthroughs without commentary, I examined a total of 25 videos covering 23 different video games (two games were featured twice in the sample) (see Appendix 6). I tallied the genres of video games that were reviewed in these samples. I classified the genres of the games based on information from official game websites of corresponding video games and Wikipedia which cited the information from each game developer's website. Some games fell under multiple genres (see Table 4). The most commonly featured genre was Action-Adventure, with 15 videos, followed by Shooting (as in, First-Person Shooter or Third-Person Shooter) with six videos.

For the analysis of gaming videos with commentary, I examined a total of 30 videos, which covered 27 distinct video games (two games were reviewed twice in the sample) (see Appendix 7). The genres of video games that were in this sample are shown in Table 5. Certain video games were categorized under more than one genre. Action-Adventure was the most dominant genre among the samples (17 videos), followed by Shooting (5 videos) and Survival Horror (4 videos).

In summary, a total of 55 videos were analyzed, 25 without commentary and 30 with commentary. Although other video game genres were present in the samples with commentary and without commentary, Action-Adventure was the most popular genre in both samples, followed by Shooting. Shown in Table 6, a total of 56,752 comments were drawn from these videos, 25,814 from videos without commentary and 30,938 from videos with commentary. Described below, a smaller number of actual comments were analyzed after data preparation.

Table 4 Sample Statistics of Video Game Genres (Gameplay Walkthroughs without Commentary)

Game Genre		Count
Action - Adventure		15
Action Role Playing		1
Shooting	First Person Shooter	2
	Third Person Shooter	4
Fighting		2
Graphic Adventure		2
Puzzle		1
Sandbox		2
Survival Horror		2
Strategy - Social Deception		1
Total Number of Genres		32

Table 5: Sample Statistics of Video Game Genres (Gaming Videos with Commentary)

Game Genre		Count
Action - Adventure		17
Action Role Playing		3
Shooting	First Person Shooter	3
	Third Person Shooter	2
Fighting		1
Puzzle		1
Role Playing		1
Survival Horror		4
Strategy - Turn Based		3
Total Number of Genres		35

Measurement

Before topic modeling was performed, the comments were preprocessed to increase the interpretability of the topic modeling results. I used only comments written in English and deleted hashtag symbols and hyperlinks (HTMLs or URLs) in the comments. I also eliminated game titles from the comments that include sentiment words in order to decrease possible confusion regarding the result interpretation (e.g., call of duty). Next, I tokenized the comments, transformed all characters to lowercase, removed punctuation and special characters, deleted stop–words, lemmatized the words, removed highly frequent and infrequent terms, and discarded the comments with only numbers or with few words less than 4 words following published guidelines for data cleaning (Maier et al., 2018). The preprocessing filtered out 24,715 comments from gameplay walkthroughs without commentary and 30,046 comments from gaming videos with commentary, for a total of 54,761 comments from the compilation of two corpuses. As a result, 1099 comments from gameplay walkthrough samples, 892 comments from comments

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from gaming videos with commentary, and 1991 comments from the compilation of two

corpuses were used for the analysis (see Table 6).

Table 6: Sample Data Statistics (The Number of Comments Before & After Preprocessing)

	Total number of videos	Total number of comments	Number of comments analyzed after preprocessing
Gameplay Walkthroughs without commentary	25	25,814	1099
Gaming Videos with commentary	30	30,938	892
Compilation of Two Corpuses	55	56,752	1991

I performed topic modeling to explore themes in the comments that might reflect user

needs that motivate them to watch these gaming videos. Topic modeling is a computational

analysis method that identifies clusters of similar documents by extracting the topic of them

based on the frequency of words in the documents (Toussaint et al., 2022; Maier et al., 2018;

Hofmann, 2013). Since words that are related to the topic of the document will appear in it more

often than other words do, the words appearing simultaneously can be grouped into one topic.

I used LDA2Vec which is a combination of Latent Dirichlet Allocation (LDA) and

Word2Vec for the topic modeling. LDA is a generative probabilistic model that is employed to

identify latent topics from observable documents (Kim & Cho, 2020). The document weights are

derived from a Dirichlet distribution (a distribution that creates other distributions) and used to

assign the document's words to the topics of the collection (Ramamonjisoa, 2014). LDA has

been employed to analyze topics in many document types, such as research articles or comments

on social media (Kim & Cho, 2020; Cho et al., 2021). Word2Vec is a word embedding technique

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that transforms words into a numerical representation (i.e., vector) to estimate words' meaning based on their occurrences in the text and returns word associations with other words in the corpus (Mikolov et al., 2013; Ma & Zhang, 2015; Ling et al., 2015). Word2Vec is a neural network comprised of two learning models: Continuous Bag of Words (CBOW) and Skip-gram (Ma & Zhang, 2015). Whereas CBOW starts with the surrounding words to predict the word in the middle, Skip-gram uses the word in the middle to predict the surrounding words which are defined by the window size. By providing text data to one of its learning models, Word2Vec generates word vectors that can represent a significant section of text or an entire article.

The current study performed LDA2Vec which integrates LDA and Word2Vec, extracting word and document topics since it has been revealed by several studies that LDA2Vec surpasses LDA and is more reliable for implementation (Hasan et al., 2019; Luo & Shi, 2019). LDA2Vec generates a word vector and document vector into the same vector space to get a context vector, which is used to predict context words on documents and generate word sets as topics (Luo & Shi, 2019; Xin & Lee, 2020). Word vectors are created at the word level by Word2Vec training. The LDA model is employed at the document level to map the latent semantic space into the document vector. The semantic similarity between articles is calculated in the semantic vector space (Xin & Lee, 2020). The document vector consists of a document weight vector and topic matrix. The document weight vector indicates the proportion of different topics, and the topic matrix is composed of the different topic vectors. Consequently, a context vector is the integration of several topic vectors contained in a document and LDA2Vec is a collection of sparse document weight vectors and easily interpretable topic vectors (Moody, 2016). LDA2Vec uses modified Skip-gram Negative Sampling (SGNS) to employ document-wide feature vectors

while simultaneously exploring the constant charging of document weights on the topic vector (Hasan et al., 2019; Moody, 2016).

The current study chose the optimal number of latent topics using a perplexity score. The perplexity metric is used to evaluate how accurately a specific probability model predicts the observed value (i.e., statistical goodness of fit of a topic model) (Blei et al., 2003). A low perplexity score indicates the probability distribution is good at predicting the corpus (Chang et al., 2009; Yoon & Kim, 2021). However, a low perplexity score does not always guarantee that the result of topic modeling will be highly interpretable (Chang et al., 2009). Therefore, a Topic Coherence measurement is frequently used to evaluate whether a topic modeling result with a certain number of topics has a high interpretability. Topic Coherence assigns a score to a single topic based on the degree of semantic similarity between high-scoring words in the topic. This measurement helps with the assessment of the semantic interpretability of topics, since highly interpretable topics will include semantically similar words more than less interpretable topics (Chang et al., 2009). A high topic coherence score indicates high semantic similarity between words in the topic (Newman et al., 2010). Therefore, the current study employed Coherence Model from the gensim module in Python to measure topic coherence.

In order to determine the optimal number of topics, I set a search space as 0-20 topics for the perplexity and topic coherence score calculation. I drew a plot where the x-axis was the number of topics (range from 0 to 20) and the y-axis was the perplexity score. Also, I drew a plot where the a-axis was the number of topics (range from 0 to 20) and the y-axis was the coherence score. These two plots were compared to extract the optimal number of topics. The number which had the lowest perplexity score and highest coherence score among other numbers on the x-axis was selected as the number of topics.

With the determined number of topics from the perplexity and coherence metric, I performed LDA2Vec to identify the topics, which could include words that were related to the five needs that motivated people to watch gaming videos. I set two prior parameters, α as 1/k (the number of topics) and β as 0.01, following the suggestions of previous studies (Lin & He, 2009; Steyvers & Griffiths, 2007; Ghézala et al., 2017; Zhao et al., 2015). Next, I grouped the top 50 most occurring words of each topic to illustrate what each topic represented and explored the words in the topic that would be related to specific needs that I have classified in the literature review section. The LDA2Vec package and gensim module in Python would be used to identify the topic modeling structures.

I took three steps for the topics inclusion and exclusion: 1. Manually evaluate the topics; 2. check the most frequently occurring words in each topic's wordlist; and 3. Find the most representative document for each topic. First, I excluded the topics whose words were not related to each other, making the topics hard to interpret. I also dropped off the topics that did not reveal a coherent semantic meaning or whose top-word lists are unconnected to the theoretical concepts. Second, to facilitate the topic inclusion process, I drew a plot that counted the number of occurrences of the words in each topic, the words that had been extracted from the LDA2Vec training. Third, I extracted the most representative document for each topic to understand the context of the words (terms) in topics and then help label them. If the most representative document did not indicate a meaning that was consistent with the theoretical concepts, I discarded the topics from the topic list. Through these three steps, I selected the topics, interpreted and then labeled them.

Based on the wordlist, the count plot showing the word occurrences in the wordlist, and the most representative document (comment) in each topic, I explored whether comments could

provide evidence of user needs that motivate them to watch gaming videos. A topic was interpreted as reflecting a need listed in Table 1 if the topic contained any words that were semantically related to the corresponding need or if the most representative document in the topic was relevant to the corresponding need.

I took four steps to evaluate if the topic words and the representative documents reflected the certain needs. First, I used OneLook Thesaurus dictionary to find the relevant words of the topic words which comprehended the words the most. Those words were used to understand the topics' context. Next, I searched the topic words in the corresponding corpus to understand the context of words qualitatively, looking at how those words were used in comments and identifying the needs reflected in them. Third, I determined what needs were reflected in the representative documents qualitatively. Fourth, I labeled the topics based on the needs reflected in the words and the most representative document for each topic. The validity and the interpretation of each topic were determined in discussion with a second coder. The result showed, as detailed in the result section, not all topics appeared to be cohesive in reflecting a single need. A mixture of several needs was found in a topic (see Table 4). The topics that reflected incongruent needs between the words and the representative topics or included semantically inconsistent words were dropped off from the topic result. In addition, the topics unrelated to the study objectives (i.e., video games) were eliminated from the topic result.

CHAPTER 4: RESULTS

Gaming Videos with Commentary

Ten topics were extracted from comments of gaming videos with commentary (excluding gaming video walkthroughs without commentary). Five of these topics (Topics 1, 6, 7, 8, and 10) were determined to be invalid because their wordlist, plot and the most representative document were not semantically consistent. Addressing the research questions, sense of power needs and social interaction needs were evident among the words and most representative documents across the five remaining topics that could be interpreted (see Table 4). More detail about each of these remaining topics (Topics 2, 3, 4, 5, and 9) is presented next.

Topic 2. The theme of Topic 2 seemed to be about advancing in the game and advancing one's ability to play the game. In comments, users showed their awareness of how good they were at playing games, and users also encouraged other players' gameplay. 'Skills,' 'encourage,' and 'activity' were among the most frequently occurring words in the wordlist for this topic (see Appendix 1). These words were interpreted as being about promoting and motivating gameplay activity. For example, comments with the word "skills" were related to gaming skills that were needed to advance through the game, with emphasis on the user having those skills. Comments using "encourage" expressed how the video affected the user's own gameplay or described how certain in-game action brought about a particular outcome. Similar to comments using "skills," comments using "activity" were about efficient game strategy. The most representative document of Topic 2 was an inquiry, in which the user asked for others to comment about

technical problems the user was having. This document was interpreted to be about gameplay advancement, this time seeking help from fellow viewers. Considering the words in Topic 2 wordlist and the most representative document, Topic 2 had both evidence of social interaction needs (RQ4) and sense of power needs (RQ5). Social interaction needs were reflected in the most representative document of Topic 2 in asking for help from the community. Sense of power needs were reflected in this topic through comments in which users shared game-related information with other users, with the emphasis being on skills the users already had. No other needs were clearly represented in the topic's most frequent words or in its most representative document.

Topic 3. The theme of Topic 3 was about having command of the game, in terms of its story and its meaning. The words 'wisdom,' 'techno,' 'conduct,' 'dominate,' 'supervisor' and 'extinction' were among the most frequently occurring words in this topic. Comments using these words were often related to the evaluation of someone (e.g., a user, oneself) who stood over other users in terms of video gameplay. Sense of power needs (RQ5) were reflected in the topic through comments using 'wisdom' that shared game tips with others and comments with 'dominate' that explained why a creator whose video they were watching was superior to other video creators or how a user completed the game successfully. Furthermore, comments using 'techno' explained the game stories to other users (e.g., "people were frightened for the new techno advancements"). Comments with 'supervisor' and 'extinction' illustrated the game scenarios and the user's interpretation of the scenarios for others. Sharing game tips or a user's own interpretation of the game story with others indicates attempts to put oneself in the position of teaching, evaluating, or judging, which relates to sense of power needs. The most representative document also represented sense of power needs, in that the user intended to show

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their successful gameplay to others and give game tips to others. Other needs were not clearly represented in this topic.

Topic 4. The theme of Topic 4 was about the actual interpretation or exposition of the game story. The most frequently occurring words in the topic included 'prophecy,' 'proven,' 'teaching,' 'justify,' 'info,' and 'beget,' which were interpreted as indicating expectations about the games or sharing of game-related information with others. Sense of power needs (RQ5) were reflected in the Topic 4 wordlist, in that sharing game tips or a user's own interpretation of the game story indicated authority to judge the game. Indeed, comments with 'prophecy' and 'justify' expressed users' own interpretation of game stories for others to read. Comments with 'proven' provided rationales for arguments regarding the interpretation of games. Comments with 'beget' described how certain in-game actions brought about certain outcomes. Sense of power needs were also reflected in comments that criticized the game series. 'Aidens' is a name of a game character and 'rayman' is a franchise of platform video games. Both of these words were among the most frequent words used in criticizing comments. The most representative document was about a user's interpretation of the game story and therefore also represented sense of power needs. No other needs were clearly represented in the wordlist or most representative document.

Topic 5. The theme of Topic 5 was about moral evaluations, based on the words in the topic and the most representative document of the topic. The wordlist of Topic 5 related to ethics or violation of moral code and included 'corrupt,' 'greedy,' and 'attitude' among the most frequent words in the list. Sense of power needs (RQ5) were reflected in this wordlist, given the words were used to criticize games or creators. Criticism of games or creators might be driven by thoughts that one is skilled enough in gameplay to assess the quality or value of the video games

or of the players who created the video. Indeed, comments using the word 'greedy' criticized the games or the video creators for being vulgarian. Comments with 'corrupt' explained the game stories to others (e.g., "fighting against a corrupted organization"). Comments with 'attitude' evaluated the video creators, mostly to compliment those creators, again suggesting the user was in a position of power to judge the creator and grant the compliment. The most representative document also represented sense of power needs, in that the user criticized the video creator and his content. No other needs were clear from the topic wordlist or most representative document.

Topic 9. The theme of Topic 9 was about symbols relating to game characters or game stories. Most frequent words in the topic wordlist were names of game characters, in-game locations, or metaphor-related terms. For example, 'onix,' 'aidens,' 'vas (vass),' 'church,' 'metaphorical,' 'absence,' and 'theoretical' were among the most occurring words. 'Onix,' 'aidens,' and 'vas (vass)' are the names of game characters. 'Church' was used in comments to indicate an in-game location. Comments using the words 'metaphorical' and 'theoretical' described user interpretations of the game stories (e.g., "the darkness in both literal and metaphorical sense."; "Time would end because he's traveling to the future, it's a theoretical idea of time."; "I think this game may be what is responsible for the absence of the Mario and Sonic game for the 2018 Winter Olympics."). Because of the focus on users' interpretations that were shared with others, these comments were interpreted as reflecting sense of power needs (RQ5). In the same manner, the most representative document represented sense of power needs because its comment described the user's interpretation of the game story. No other needs were clear from the wordlist or representative document.

Table 7: Topic List of Gaming Videos with Commentary

Topic	Label	Words	Frequently occurring words among the topic words	The most representative comment
2	Social interaction needs & sense of power needs	skills, encourage, activity	encourage, activity	Gaming video related inquiry
3	Sense of power needs	wisdom, techno, conduct, dominate	supervisor, extinction	Display of how he made a successful gameplay
4	Sense of power needs	prophecy, proven, teaching, justify, info, beget	aidens, rayman	Personal interpretation of game story
5	Sense of power needs	corrupt, greedy. attitude	greedy, attitude	Critic of the creator and his content
9	Sense of power needs	onix, aidens, vas (vass), church, metaphorical, absence, theoretical	Aidens, theoretical, church, metaphorical	Personal interpretation of game story

In summary, sense of power needs (RQ5) was the most clear need reflected by users in their comments. Social interaction needs (RQ4) were only apparent in comments where a user asked for help from others to be able to advance in the game. Cognitive improvement needs (RQ2), affective needs (RQ3), and tension release needs (RQ6) were not found in the comments.

Gameplay Walkthroughs without Commentary

Ten topics were extracted from the comments of gaming videos with commentary (excluding walkthroughs without commentary). The results of this modeling were determined to be invalid because the topics extracted were not distinct from each other. Topics shared similar word lists, and only the words' beta values differed (i.e., different word rankings across 10 topics), even if several parameters were tuned to decrease the number of overlapping words across the topics (see Appendix 2). In addition, the words within the topics were not semantically consistent with each other, which means they did not have coherent meanings.

The most representative document for each topic was used to look for evidence of motivating needs from the comments, despite the quality of extracted topics (see Appendix 4). Documents from Topics 9 and 10 could not be examined because they were not written in English. Topics 2 and 8 were discarded since their most representative comments were not related to the game or content.

Sense of power needs were apparent in 4 of the 10 representative documents (from Topics 1, 4, 5, 7). The comments from these documents included users demonstrating how they completed the game mission, users criticizing the company that made the game being played, and users criticizing the video content. These commenting behaviors were interpreted as being driven by putting oneself in a position of authority to evaluate game-related objectives or to teach game skills to others. These types of motivations therefore reflect sense of power needs, based on the study's theoretical framework. Sense of power needs appeared with affective needs in one document (from Topic 5), which addressed the love for the game and the interpretation of the game at the same time ("I love how shinnok looked like he was unbeatable at the start of the game…MAybe mk11 will explain shinnok having been weakened in some crazy way…"). The expression of loving the game was interpreted as indicating affect.

In addition to the document from Topic 5, another of the 10 representative documents (from Topic 6) suggested evidence of affective needs, as the comment was of a user showing gratitude to the creator (e.g., "it says playthrough, so it hasnt to be perfect- ease up on the man and thank him for a 10 hour long entertainment."). Expressing gratitude was interpreted as coming from a motivation to address affective needs. Defending the video creator might also suggest a feeling of anger or hurt over a perceived insult and a need to address that negative affect with a protective comment.

Evidence of social interaction needs was reflected in the representative document from Topic 3. This evidence was in sub-comments nested under the main comments in this document.   In several of these sub-comments, users interacted to discuss the game (e.g., First comment: "This is how many people watched it?" | 1388: "Hi my friend, this game is available for android yes or no" (replied to the first comment) | 1389: "I at my grandma house" (replied to the first comment)). Responding to another's comment can be assumed to have been motivated by a desire or need to interact with others.

In conclusion, the most representative comments in gameplay walkthrough samples consisted of critics of the game content, game tip sharing, nested comments with several sub-comments in which users interacted with one another, expression of personal feelings toward the game or the creator, or interpretation of the game content. Those comments provided examples of sense of power needs, affective needs, social interaction needs. No other needs were clearly seen in the most representative documents. However, because the topic model did not produce valid results, these interpretations should be taken with caution.

The Compilation of the Gaming Videos with Commentary and without Commentary

The compilation of the gaming videos with commentary and without commentary (video compilation) contained 13 topics in total, however, these topics also did not show meaningful and interpretable outcomes. Therefore, this analysis was also determined to have invalid results (see Appendix 3). Even though several parameters were adjusted to reduce the number of overlapping words across the topics, it was difficult to distinguish one topic from another based on the wordlist because all topics shared similar word lists; the only difference was in the words' beta values (i.e., different word rankings across 13 topics). Additionally, none of the words in

any of the topics were consistent with one another, showing that they did not have coherent meanings. The most representative document for each topic was used to find evidence of needs (see Appendix 5). Topic 4 and 9 were dropped off from the topic list since their comments were not written in English.

Seven of the 13 representative documents (from Topics 1, 3, 6, 10, 11, 12, 13) appeared to contain evidence of sense of power needs because their most representative documents were either comments in which a user shared game tips, strategy, or game-related fun facts with others or comments in which a user criticized the game, such as a game character's portrayal. For example, the most representative document of Topic 3 shared how to upgrade a game character ("There is a way to upgrade the zor but its a glich what do you need is find a gun…").

Two of the 13 representative documents (from Topics 4, 8) have evidence of affective needs, as shown in comments where a user expressed love for the game or for a favorite part of the game. For example, one user created a timestamp to identify the game part they liked the most and described the reason they loved that moment ("42:00-43:00 is my favorite part of the game."). Expressing pleasant feelings in comments was interpreted as reflecting affective needs, according to the study's theoretical framework.

Evidence of social interaction needs were reflected in two representative documents (from Topics 2, 7) through comments where a user talked about game-related memes or jokes and expressed their anticipation of a game update. For example, the most representative document from Topic 2 was the comment where a user made a joke about the game, possibly to get laughs from other users ("Godzila: oh, so I see mech me is here. Mech godzila: better scramble like a egg before you get folded like a omelet."). The comment where a user expressed

their wish for a game version update that they played was interpreted as a motivation to seek

agreement from other users regarding the future game update, which was related to a desire to

interact with others."

To summarize, the most representative comments in the video compilation samples

mostly reflected sense of power needs, with some reflection of affective needs and social

interaction needs. The comments did not appear to show any evidence of cognitive improvement

needs or tension release needs.

CHAPTER 5: DISCUSSION

The current study investigated how user comments on YouTube gaming videos could reveal motivating needs that drove users to watch these videos. Comments were analyzed using a topic modeling procedure, specifically using LDA2Vec to seek evidence related to motivating needs in the comments. I interpreted and labeled the topics using each topic's most frequently occurring words and representative document (comment) extracted from the topic modeling. The validity of the topic results was determined through discussion with a second coder. Three gaming video samples were used: gaming videos with commentary, gameplay walkthroughs, and a compilation of the two samples. The video compilation and gameplay walkthrough samples did not yield meaningful and interpretable topic modeling results. Only the gaming videos with commentary showed meaningful results, and many of these topics had evidence of sense of power needs, with some comments also providing evidence of social interaction needs. Indeed, most comments expressed opinions about the game, criticized the gameplay or the game itself, shared personal interpretations of the game, or shared game tips with others. These types of comments suggest the user felt like they were in a position of authority or were knowledgeable enough to share their thoughts with others, and the act of sharing to educate others indicated social interaction. Affective needs, tension release needs, and cognitive improvement needs were hard to be identified in the comments. The reason for not seeing evidence of these needs might be that users seldom expressed in the comments how much they learned from the game and how they felt the game or video helped them escape from the real world. Second reason might be that

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the preprocessing of comments eliminated most of the short comments, some of which might have been short interjections that might have indicated affect (e.g., a heart emoji), tension release (e.g., "whew"), or cognitive improvement (e.g., "aha"). Instead, only long sentences were extracted, and these were mostly written by users to demonstrate their opinions regarding video games. Other methodologies, such as survey or interview, might reveal more affective needs, cognitive improvement needs or tension release needs. Given that Action-Adventure and Shooting games (including both Fist Person Shooter and Third Person Shooter) were the most popular genres in both gameplay walkthroughs without commentary and gaming videos with commentary (see Tables 4 and 5), it is possible that the prevalence of these genres contributed to the prominence of the sense of power need in the findings. This could be attributed to the fact that these two genres require a high level of strategic thinking and planning by users in order to achieve success in gameplay. The competitive and strategic aspects of gameplay in these types of games might explain a tendency for individuals watching videos about these particular game genres to communicate about game skills and strategies, compared to those watching other game genres.

It is interesting that the gameplay walkthrough (without any commentary from video creators) and video compilation (videos with and without commentary) samples did not bring meaningful and interpretable outcomes. Topics for each corpus shared a lot of overlapping words across the topics. These two corpuses also shared similar word lists (see Appendix 1). I assume the main reason for the invalid results of these two corpuses might be due to the commenting environment among users who watched gameplay walkthrough videos without any commentary. In these videos without commentary, users were only able to hear in-game sound, but the video creator did not offer any explanations, emotive interjections, or other voice to their video. This

silent environment, silent as in the video creator was not talking while also playing the game, might have attracted people who were motivated to only watch the gaming videos and who felt any commentary would be a disruption. These types of people might also be the kind of people who were only interested in the game play and not interested in having social interactions with other viewers or seeking other game-related information from other users.

The silent environment might have also created as a social norm by suggesting talk during gameplay was unwanted. This might have indirectly encouraged users to only express their feelings or thoughts in short sentences, emojis, or through the use of timestamps on the video to indicate the parts of the video they thought was most useful. Short documents or documents with only emojis or timestamps make it difficult for researchers to extract meaningful and consistent terms from them with topic modeling techniques. For this reason, it was difficult for the topic modeling to identify clear topics and difficult for me and the second coder to clearly identify needs being reflected in these comments.

Yet another reason for the difficulty in identifying topics and needs could be that users of the gameplay walkthroughs were not consistent in the themes they discussed because the video creators themselves did not provide any guidance for what to discuss via commentaries. It is possible that commentaries provide some focus for what to pay attention to in the gameplay, and without any commentary, users of the gaming videos were not focused enough in their comments for the topic modeling to find clear topics. Therefore, topics of the gameplay walkthroughs might have varied too much, yielding ambiguous topic modeling results from the comments. As a result, I had to look into the most representative comment on each topic for the gameplay walkthrough and video compilation samples to look for clues about needs being fulfilled by the video or game. Although these results were not valid to confirm the needs'

presence in comments, these explorations at least showed a hint of sense of power, affective needs, and social interaction needs in these comments.

In contrast, users heard both in-game sounds and commentaries from creators if they watched the gaming videos with commentary. In these types of videos, creators provide their own interpretation of the games or actively react to the video games while they are playing. The creators might therefore perform as an agent that facilitates communication among users in their videos. To be specific, users might express their opinions about the video games or the video content or share their own interpretation of the game with others through commenting because they have as a model the video creators' own spoken emotions and interpretations. The open communication environment established by the video creators might motivate people to actively express their thoughts or opinions, leading them to write lengthy comments. Documents that contain a number of terms might be more appropriate for analysis using topic modeling because the modeling process is able to adequately extract meaningful words and interpretable topics. In addition, the focus of commentaries on certain aspects of the gameplay or interpretations might have helped focus users, so that their comments reflected this more consistent focus, resulting in clear topic modeling results. Indeed, sense of power needs was the most dominant needs identified in the gaming videos with commentary samples. Considering that a mixture of several needs was also found in the samples, users might be motivated to satisfy multiple needs at once by watching the videos where creators act as interaction mediators.

The current study's findings support the synthesis of the following three needs-related theories for purposes of understanding video game users: Self-Determination Theory (SDT), Acquired Needs Theory (ANT), and Uses-and-Gratifications Theory (UGT). ANT argues that individuals have a mixture of needs depending on their personalities, but one need is salient in

general. SDT does not suggest the possibility of people having several needs at a time. UGT covers hedonic needs for media use (affective needs and tension release) that are not identified in ANT or SDT. This study showed that sense of power needs and social interaction needs could be the most important motivating needs for gaming video watching, particularly gaming videos with commentary. The most dominant needs found in this study was about a sense of power. If ANT is used, this study suggests users of gaming videos with commentary might be similar in terms of sense of power being their dominant need. Hedonic needs were not clearly found in the topics, based on the topic modeling results. Thus, ANT and SDT seemed to be better than UGT for explaining results, although findings might be limited due to the use of topic modeling and the way comments were preprocessed (see Limitations discussion below). Because of the co-occurrence of social interaction and affective needs with sense of power needs in a number of the comments analyzed, I suggest ANT is the most useful framework for understanding needs of these users because ANT includes the possibility of users having multiple needs for consuming media.

I have found sense of power needs to be the most salient motivating need for gaming video watching, apparent from comments that did the following: criticized game-related objectives, shared users' own interpretations of game stories, and shared users' own game skills with other users. However, none of the three theories has yet attempted a thorough exploration of the need for a sense of power. Future research is therefore needed have a deeper understanding of what sense of power needs actually means in terms of gaming video viewing.

Limitations

The current study has several characteristics that limits its findings and its interpretation of findings. First, topic modeling might not be the most appropriate tool to explore the motivating needs for watching gaming videos via user comments. First, it was hard to capture sentiment words and symbols in comments, which would have been the imperative clues to identify the users' affective needs. The act of preprocessing the comments eliminated many emotional words or emojis from the documents that users used to express their feelings, such as "wow," "oh no," "LOL," "hahaha," and pictorial expressions of emotions, such as ":)" or "<3" to signal a smile and a heart, respectively. Removal of those emotional words likely contributed to an underrepresentation in the analysis of affective needs and possibly tension release. Instead, most of the words that were retained for analysis were related to the game-specific terms or the game itself, hardly reflecting the users needs or emotions.

Second, LDA2Vec is unable to bring about meaningful outcomes with documents that contain few words. Many of the comments in the corpus had fewer than five to ten words. Five to ten words are not enough to yield interpretable results from the topic modeling process. Therefore, only long comments consisting of more than 10 words were extracted from the preprocessing. Thus, the elimination of short comments might be another reason that sense of power needs were the most dominant motivating need among the users because the long comments were likely to be written by users willing to express their opinions, share game tips, and justify their arguments in comments.

Furthermore, after conducting this study, I would argue that prediction-based word embedding (i.e., Word2Vec) is not adequate for analyzing a corpus of this nature because it is

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not able to handle rare or out-of-vocabulary words. To be specific, the documents analyzed in this study contained rare words that appeared only once or twice in a large corpus (e.g., game-specific terms), for which Word2Vec was unable to generate a vector representation. Considering the noisy and sparse nature of the current study's data, frequency-based word embedding techniques such as Bag of Words or TF-IDF might have been a better fit.

Another limitation was that this study did not separate the corpuses based on the games themselves, which could have contributed to the blurred results. As I mentioned above, extracted words were mostly game-specific terms, such as game character names or game locations. A different type of methodology, such as a content analysis or sentiment analysis, might be more suitable for this type of study because a method is needed that can handle short comments or comments with a single word, comments with rare words, and comments with symbols and emojis.

Regarding the sampling, the current study did not classify or examine variation in gaming video genres and only focused on gameplay walkthroughs and gaming videos with commentary. However, it is important to note that needs that motivate people to watch gaming videos are likely to vary based on the gaming video genres that they watch, such as First Person Shooter games (FPS) or simulation games. Therefore, it is difficult to generalize the results across all video game genres, since not all genres may be represented in the sample. It is also difficult to know if the results are specific to particular genres because comments were not linked to specific genre categories. Similarly, the study did not differentiate between video game platforms. Users might differ depending on the platforms they use for gameplay, for example XBox, PS4, computer (PC), or smartphone. Differences in users based on gaming platforms might be related to the needs that motivate them to watch gaming videos.

Furthermore, this study was limited to an analysis of YouTube comments. User demographics cannot be determined through these comments. Users might have distinct needs based on their age, gender, or other demographic differences. I was only able to identify user needs that were revealed in the comments. There might be other latent needs that would not be detectable through comments. Also, people who watched gaming videos but did not comment would not be represented in the sample. These non-commenters might differ from individuals who were willing to interact and who left comments on videos. Consequently, I might have detected more social interaction needs from the comments because those users who chose to participate in the comments had stronger social interaction needs than users who did not choose to comment. Finally, although sense of power needs and social interaction needs could be the motivating needs to watch gaming videos on YouTube, it is difficult to determine whether those needs were the motivating needs to watch gaming videos or to leave comments on gaming videos using only topic modeling. Another methodology, such as interview, would be needed for the determination.

CHAPTER 6: CONCLUSION

The current study explored comments of users who watched gaming videos on YouTube for signs of psychological needs being met by this viewing. Three needs-related theories were synthesized and applied to the study: Self-Determination Theory, Acquired Needs Motivation Theory and Uses-and-Gratification Theory. The topic modeling technique, LDA2Vec, was employed to find evidence indicating needs in the comments. Only the gaming videos with commentary brought out meaningful and valid topic modeling results, whereas gameplay walkthroughs without commentary and the compilation of gaming videos with commentary and gameplay walkthroughs without commentary did not. Sense of power needs were most apparent in the comments for gameplay videos with commentary. Evidence of social interaction and affective needs were also found in some of the comments for these videos. Beyond these findings, the commenting environments seemed different between comments for videos where the video creator was providing discussion and focus through their own commentary and comments for videos where users only watched gameplay with the video creator remaining silent. This unexpected difference has important implications for the use of topic modeling to analyze user comments, in that the topic modeling produced invalid results for samples of content that included comments from gameplay walkthroughs without commentary. More research is needed to better understand the distinct communication environments and social norms between gaming videos with commentary and gameplay walkthroughs without commentary.

This study extends the understanding of motivating needs for watching gaming videos by identifying the strongest need for users–sense of power–that motivates users to watch gaming videos with commentary, in addition to showing that comments can reflect multiple needs (e.g., sense of power and social interaction) at the same time. Furthermore, the results of this study indicate that studying user comments is a useful way of learning more about psychological needs and motivations for consuming this popular media content. This study therefore contributes to entertainment and marketing research regarding video games and gaming videos and helps explain the mixed media system of YouTube, which integrates video viewing with communication among users.

Video game use is a multi-billion dollar industry, and the viewing of gaming videos on social media platforms has also been soaring. These videos are worth studying because they integrate old media and new media characteristics (video games and social media), hence the potential of giving rise to new motivations that have not been documented yet. This study shows the potential for expanding three needs-related theories to explore new motivations for new media (i.e., gaming video) for use in further studies that look at how to better serve this community or harness the motivations of this community for marketing reasons, community-building reasons, or even reasons related to health and emotional well-being.

Further study should consider the user communication environments depending on gaming video's characteristics. As I mentioned above, there might be fundamental differences in communication styles between users who watch gameplay walkthrough videos without commentary and users who watch gaming videos with commentary from the video creators. In addition, different research methods are needed to delve into users' motivating needs of watching gaming videos and possibly to disentangle motivating needs for watching the videos, playing the

featured video game, and participating in user comments. Using a topic modeling approach with

an additional interview method or more traditional content analysis would provide a better

understanding of needs, which I was not able to capture in the comments solely with the topic

modeling method. The current study therefore provides a new research avenue that explores the

benefits and limits of using topic modeling in the rich and complex communication

environments in the area of gaming videos.

Count Plots of Occurrences of Word in the Topic Wordlist for Gaming Videos with commentary

Topic 1

with_topic_10_top90_10_E_TOPIC_NUM : 2

Topic 2

with_topic_10_top90_10_E_TOPIC_NUM : 3

Topic 3

with_topic_10_top90_10_E_TOPIC_NUM : 4

Topic 4

with_topic_10_top90_10_E_TOPIC_NUM : 5
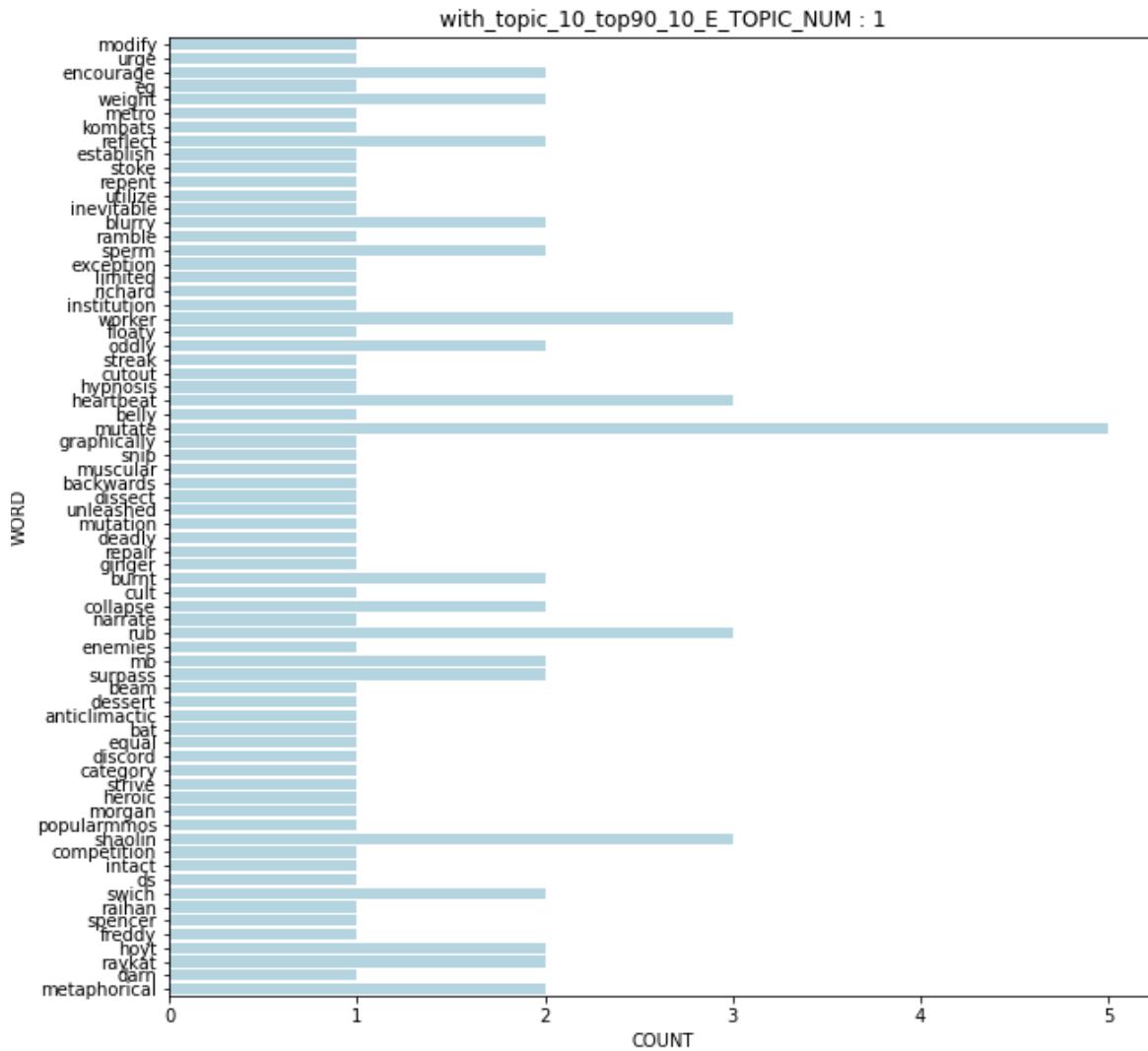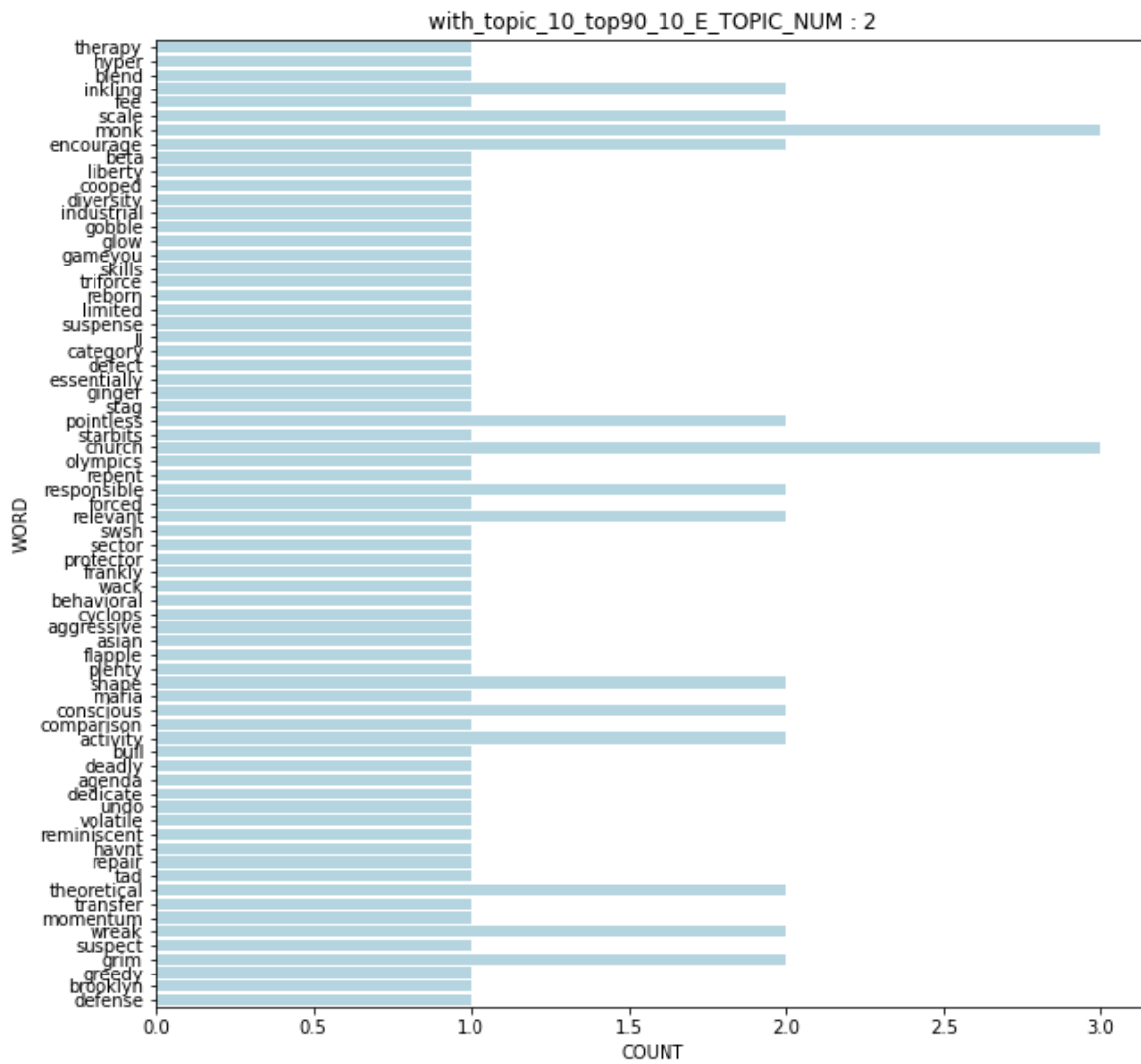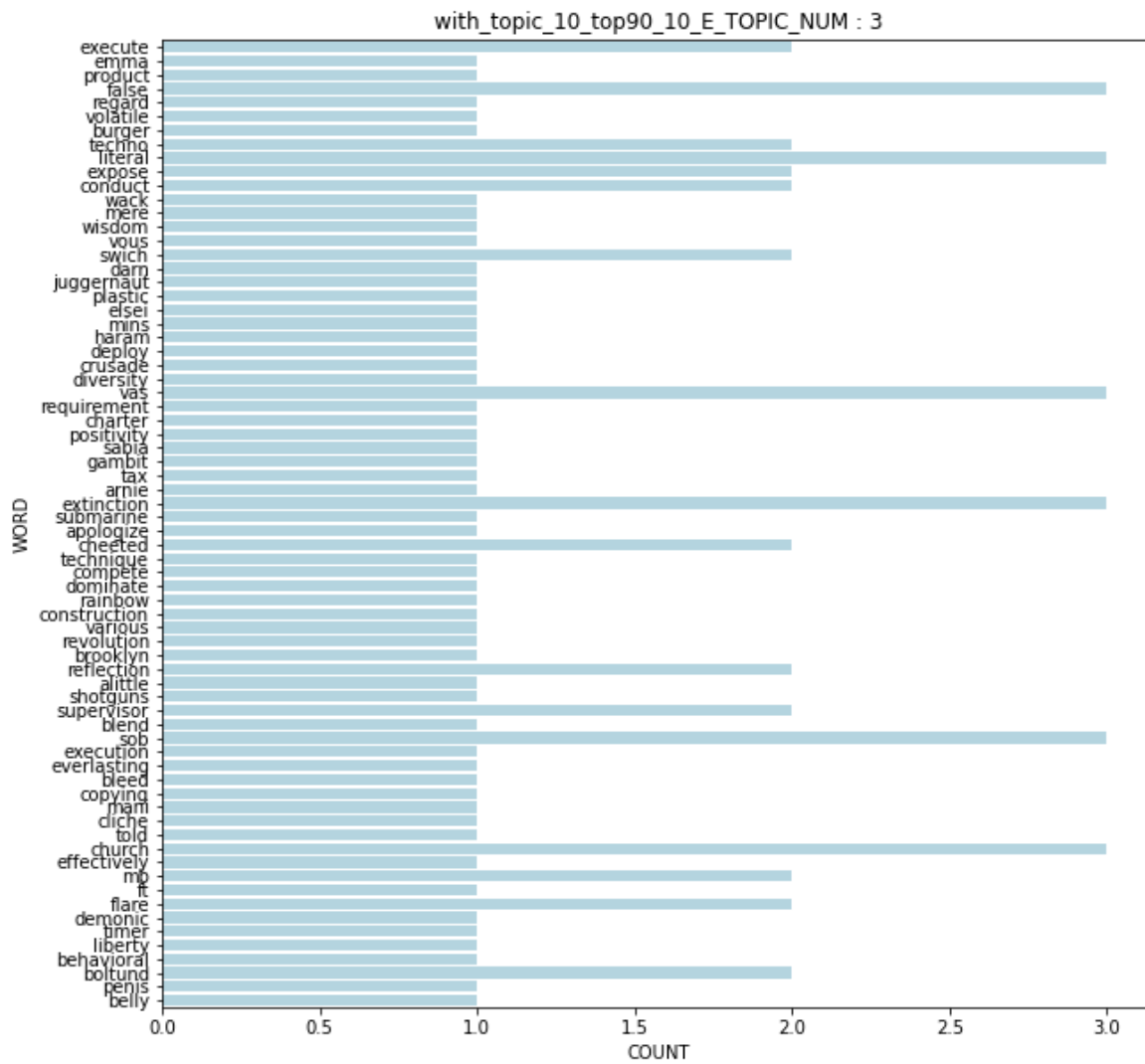
Topic 5
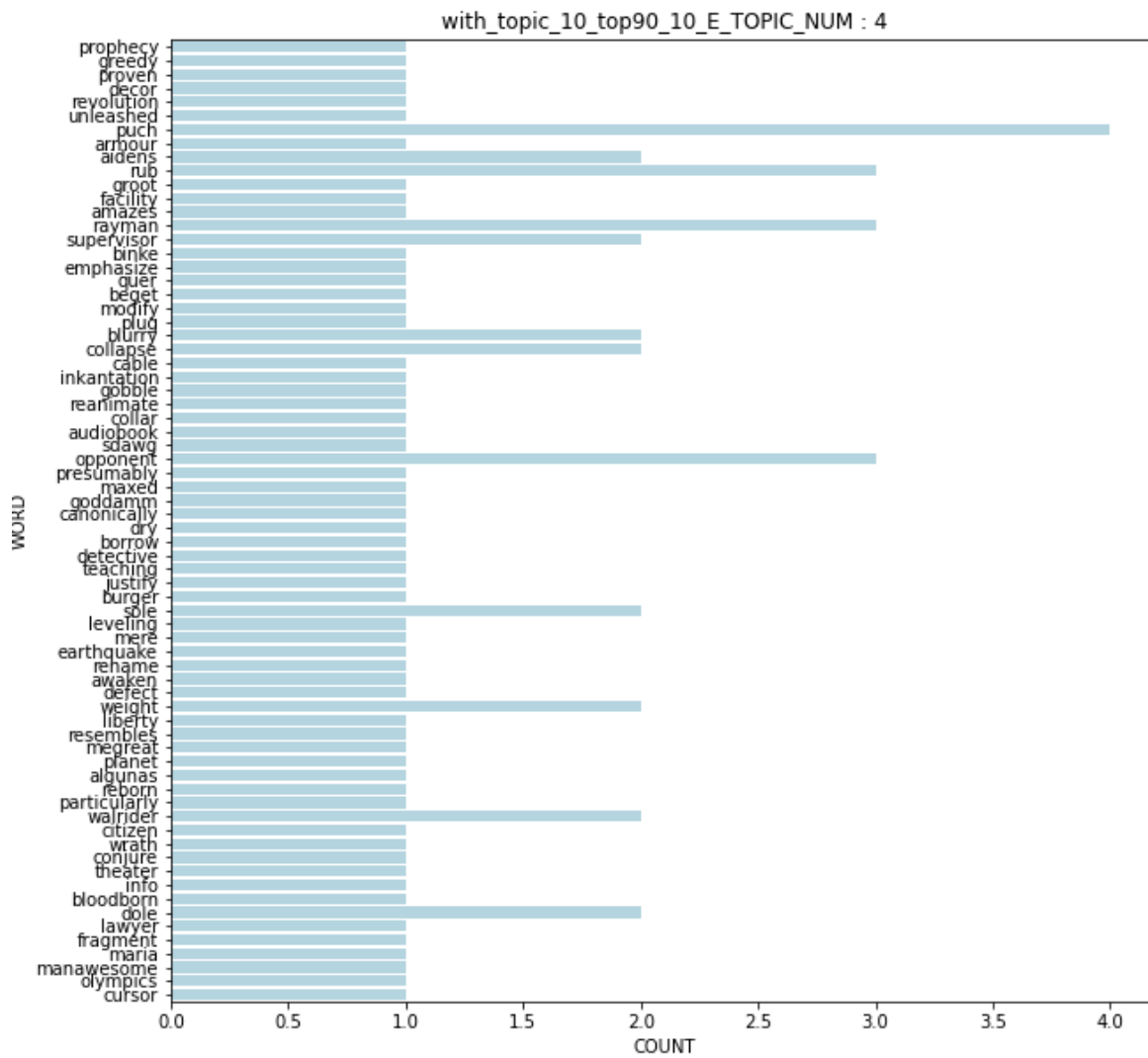
with_topic_10_top90_10_E_TOPIC_NUM : 6
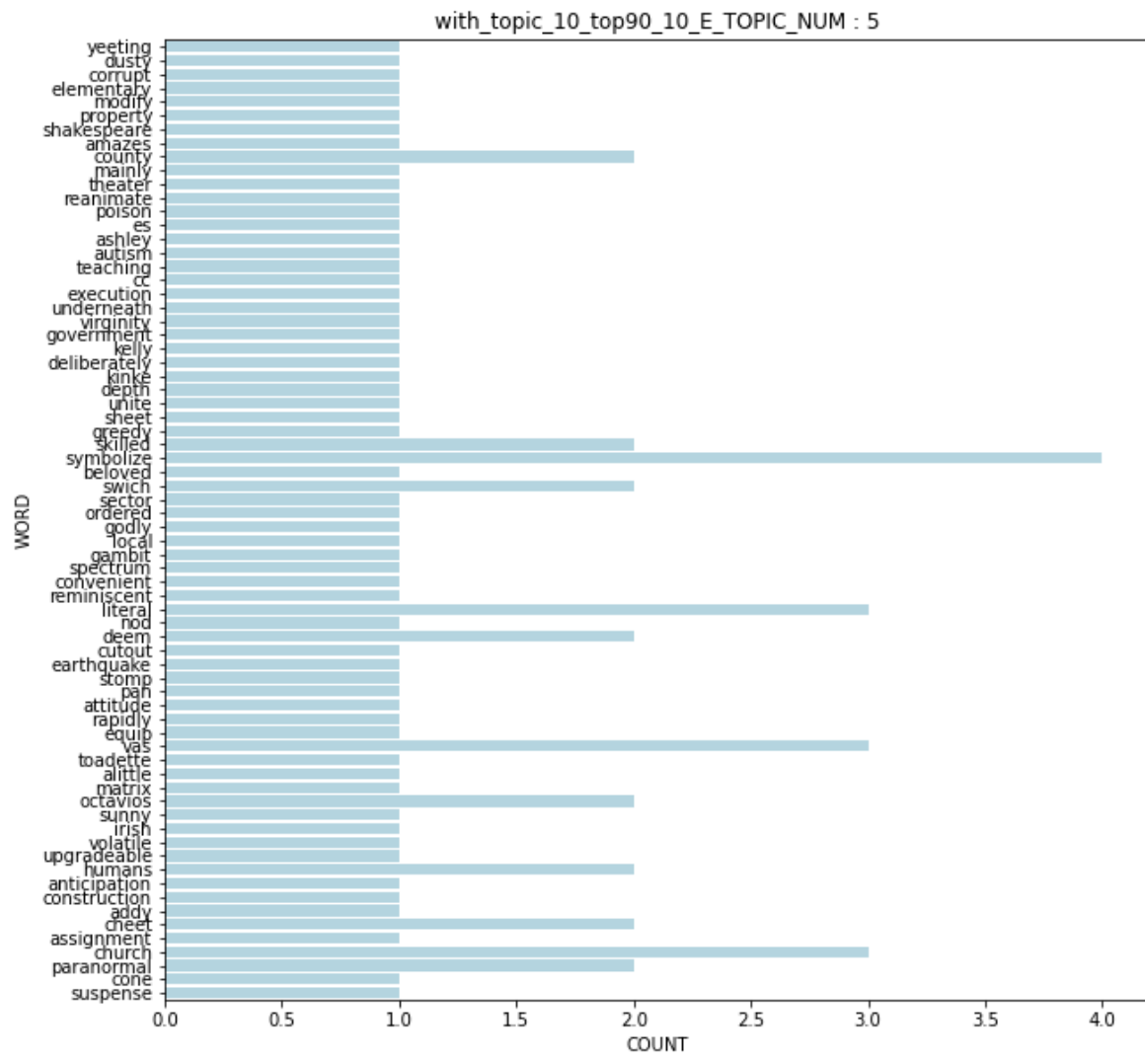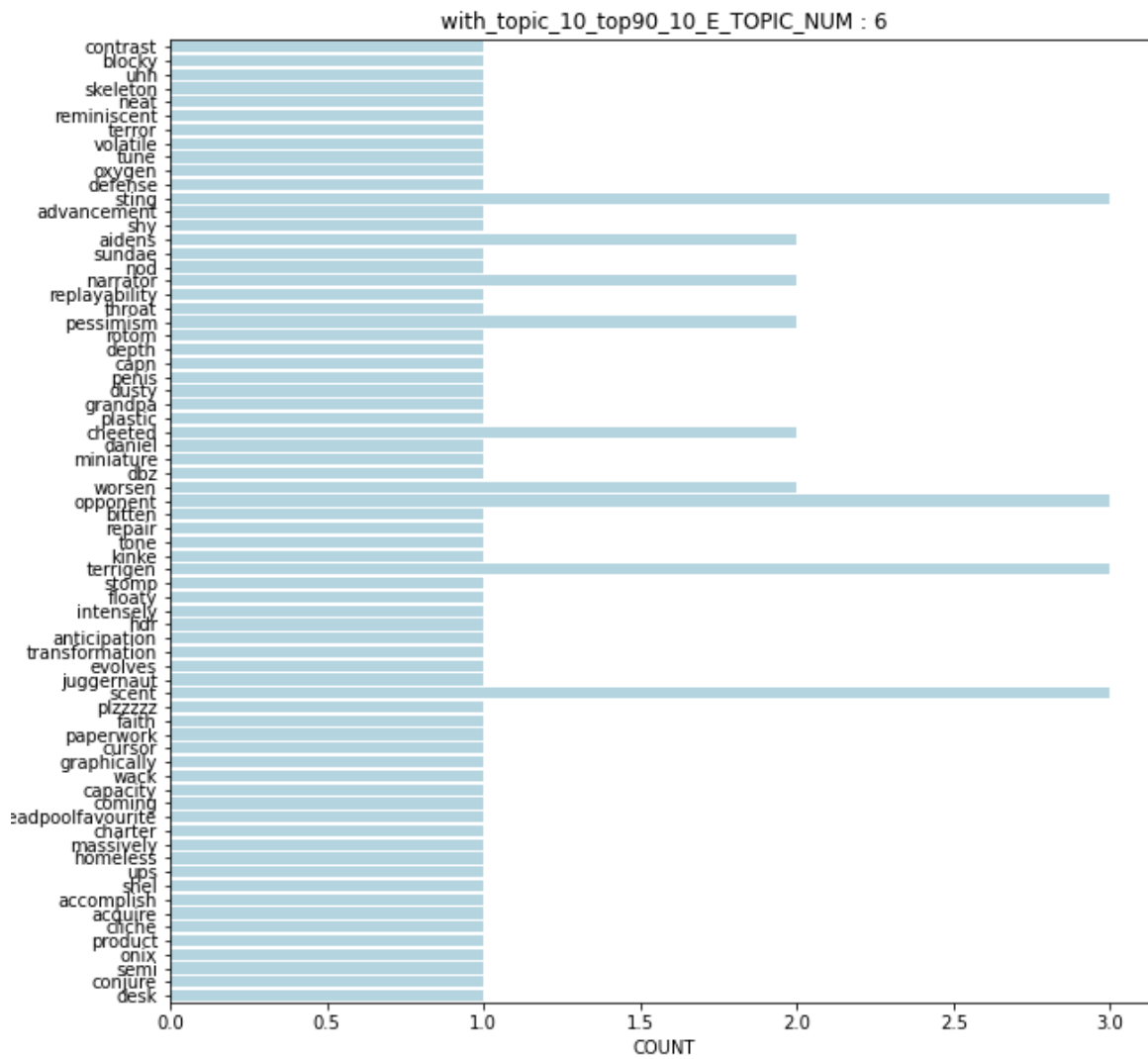
Topic 6

with_topic_10_top90_10_E_TOPIC_NUM : 7

Topic 7

with_topic_10_top90_10_E_TOPIC_NUM : 8

Topic 8

with_topic_10_top90_10_E_TOPIC_NUM : 9

Topic 9

with_topic_10_top90_10_E_TOPIC_NUM : 10
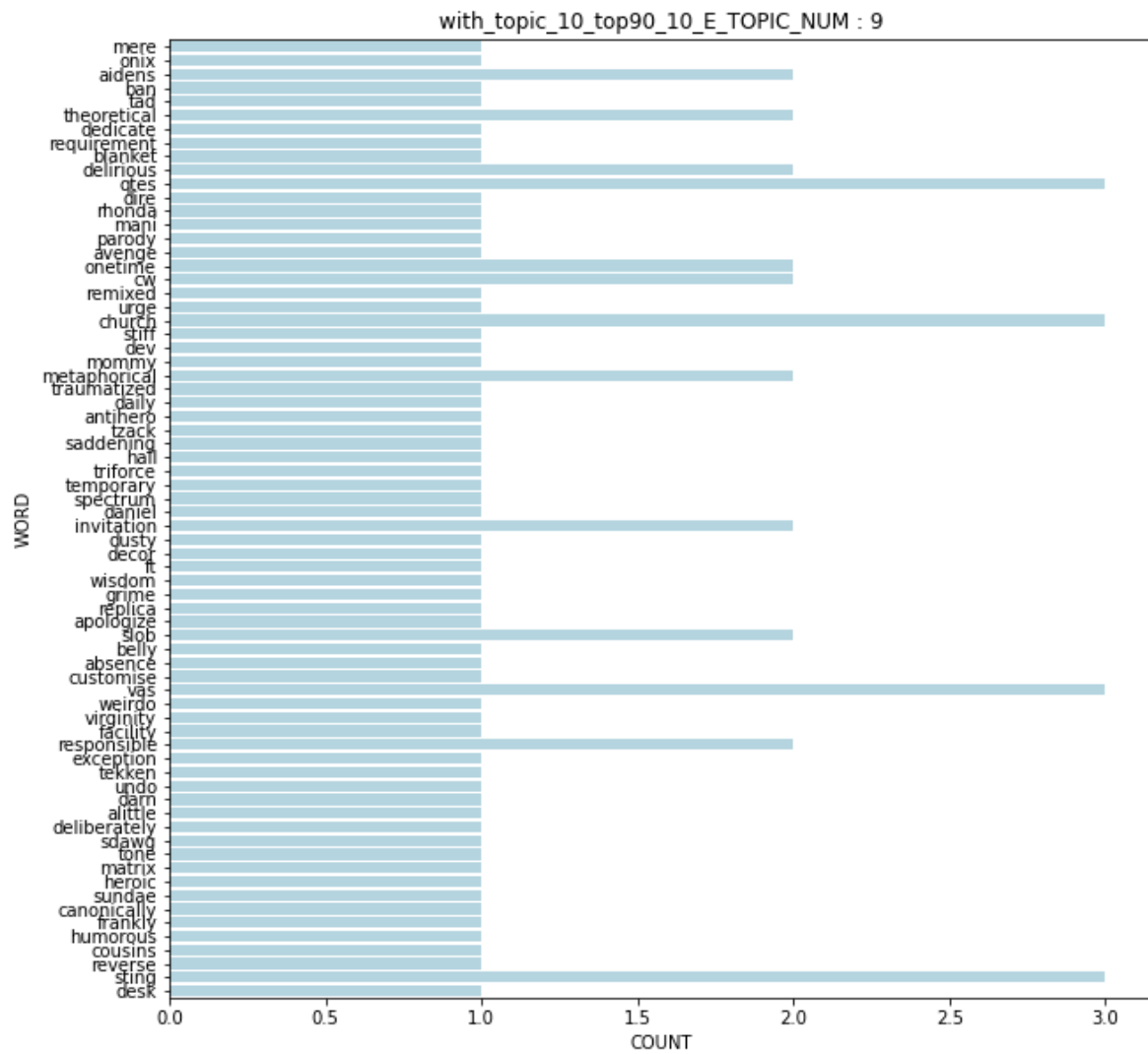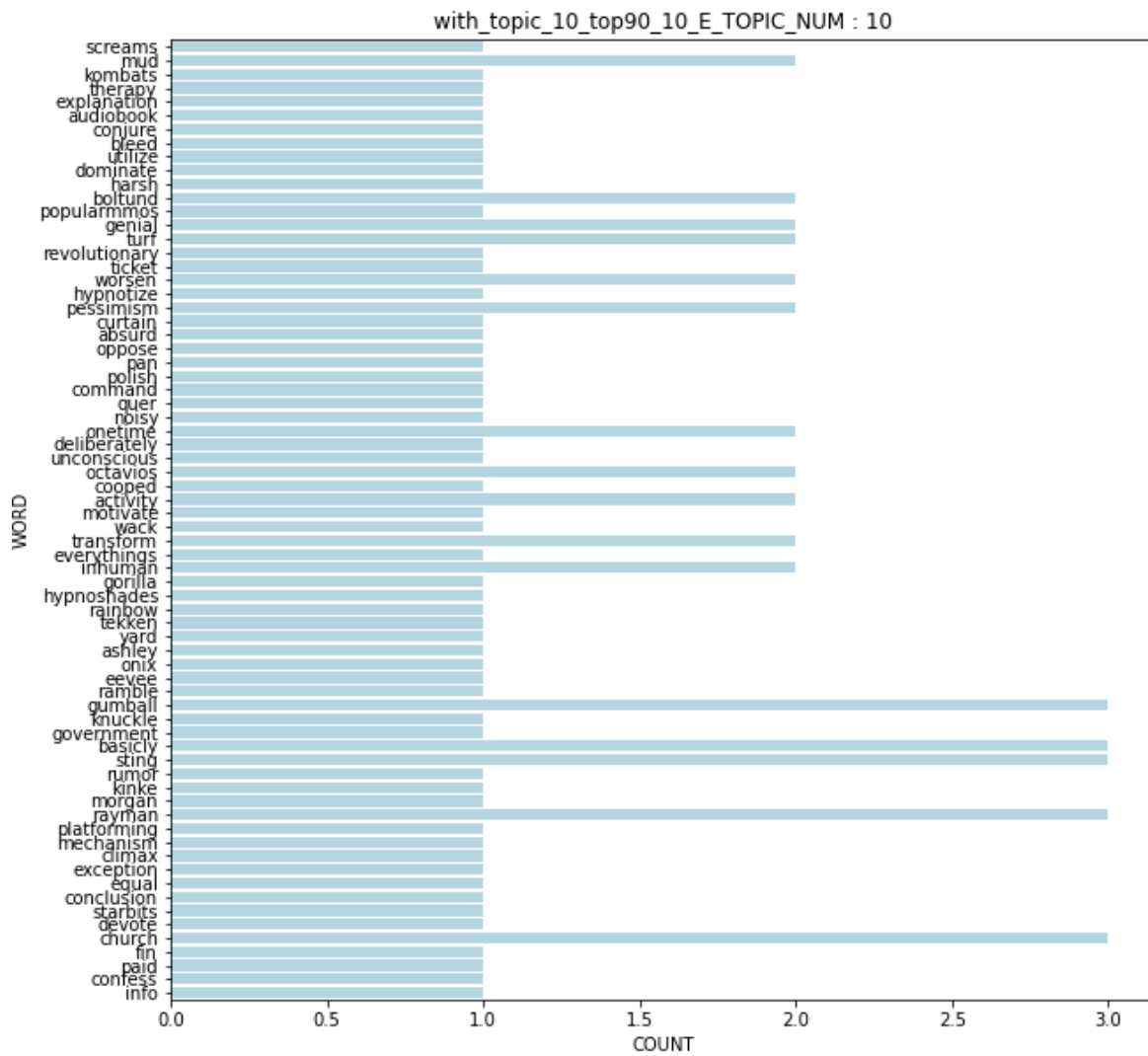
Topic 10

APPENDIX 2: GAMEPLAY WALKTHROUGH TOPIC RESULTS

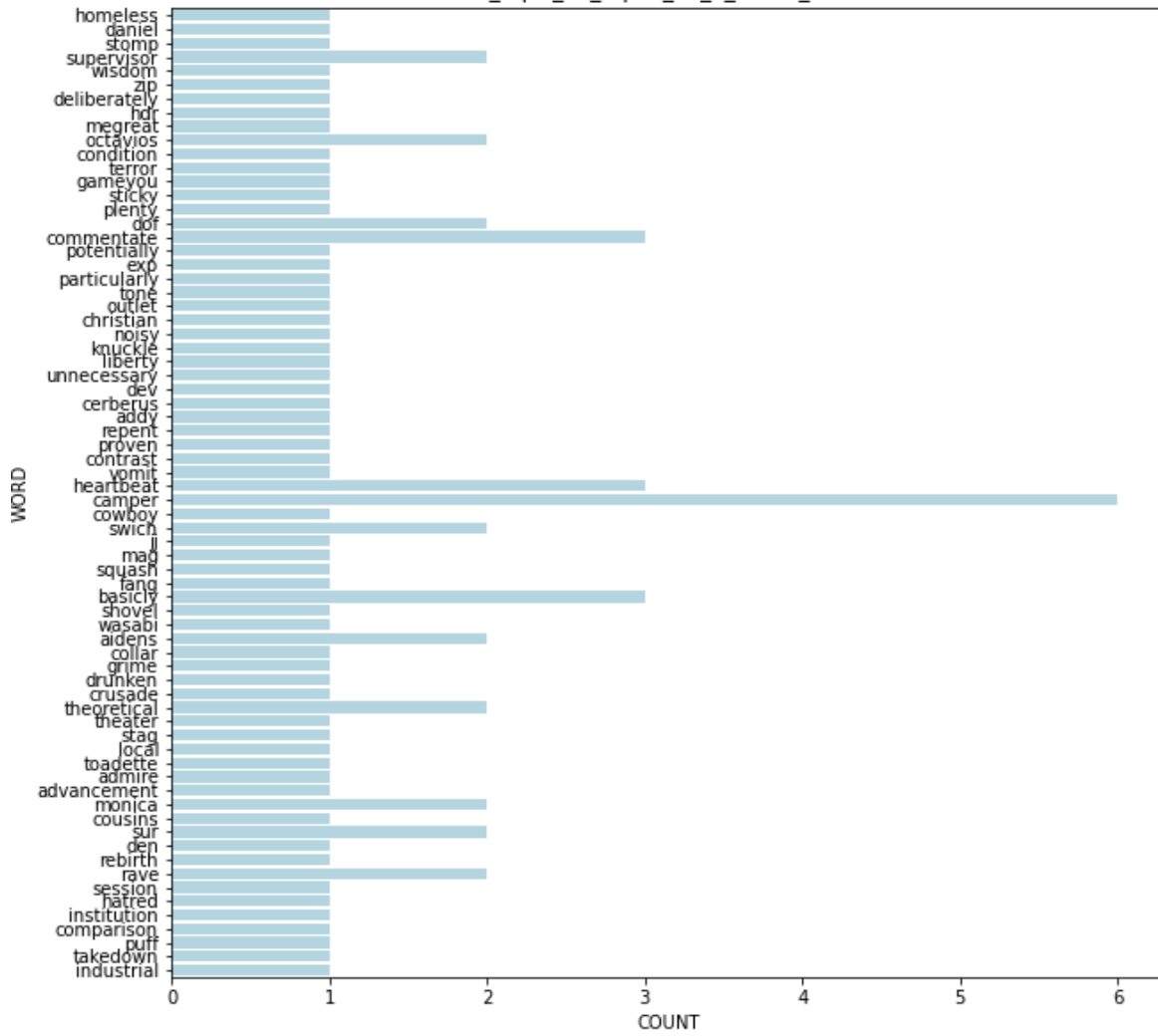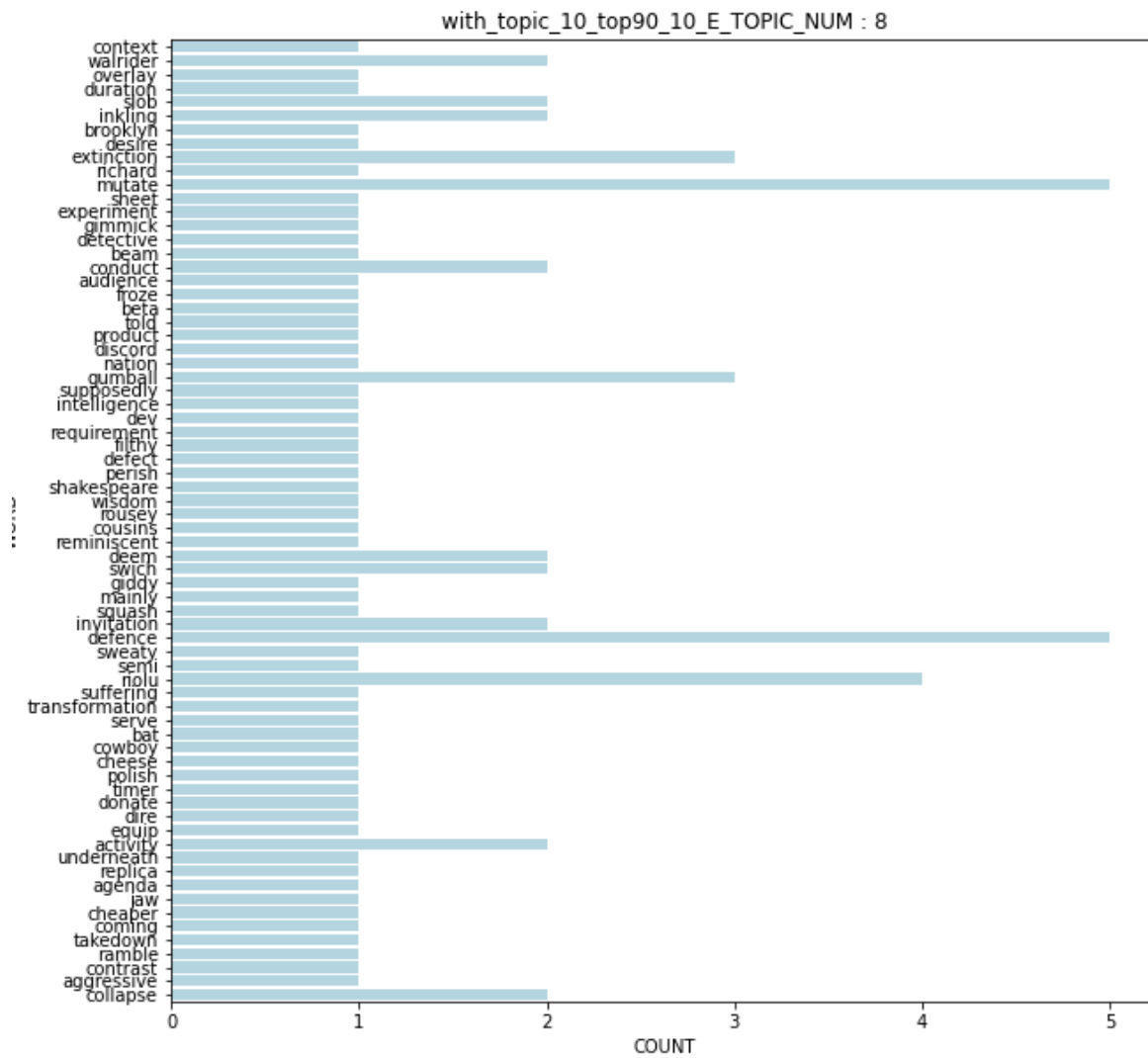|	Topic1	Topic2	Topic3	Topic4	Topic5	Topic6	Topic7	Topic8	Topic9	Topic10
0	krdistan	krdistan	krdistan	krdistan	krdistan	krdistan	genial	remote	krdistan	krdistan
1	remote	genial	remote	occur	genial	desliga	krdistan	krdistan	fare	remote
2	desliga	remote	desliga	turk	remote	liga	inn	serpent	genial	genial
3	genial	desliga	genial	genial	desliga	genial	desliga	genial	remote	desliga
4	liga	occur	liga	remote	occur	remote	remote	desliga	desliga	inn
5	inn	inn	occur	anuncios	liga	inn	liga	liga	liga	liga
6	uma	anuncios	uma	uma	inn	occur	uma	inn	aimbot	uma
7	occur	liga	inn	eject	uma	uma	mech	occur	fvcking	occur
8	turk	uma	sayin	desliga	serpent	fare	occur	uma	inn	turk
9	fare	turk	turk	liga	turk	serpent	motor	fare	occur	motor
10	anuncios	fare	serpent	inn	fare	turk	anuncios	anuncios	uma	anuncios
11	publisher	serpent	anuncios	fare	anuncios	anuncios	fare	turk	anuncios	fare
12	serpent	motor	fare	krds	publisher	eject	turk	aimbot	serpent	eject
13	motor	eject	isso	serpent	motor	aimbot	serpent	motor	turk	serpent
14	eject	aimbot	motor	aimbot	aimbot	motor	isso	eject	che	aimbot
15	aimbot	publisher	eject	motor	isso	che	aimbot	isso	motor	isso
16	isso	isso	aimbot	isso	eject	fvcking	fvcking	sayin	eject	sayin
17	karal	sayin	publisher	publisher	che	isso	eject	publisher	publisher	mech
18	shafer	mech	che	sayin	sayin	publisher	godzila	fvcking	sayin	publisher
19	sayin	fvcking	fvcking	fvcking	mech	sayin	sayin	che	isso	ajudou
20	fvcking	ryu	mech	che	fvcking	mech	che	mech	mech	fvcking
21	che	che	iin	mech	krds	krds	publisher	shafer	cuando	che
22	mech	manila	youreurbanlee	ele	ele	shafer	are	drawer	samus	krds
23	benefit	drawer	oyunu	are	sheep	godzila	ele	krds	krds	ele
24	marlene	krds	krds	benefit	elfs	cuando	krds	karal	benefit	iin
25	krds	picaxe	are	shafer	benefit	benefit	shafer	velin	netheareal m	godzila
26	cuando	benefit	band	karal	godzila	ele	voc	ele	ele	benefit
27	frontier	ele	ele	bussiness	are	karal	marlene	godzila	godzila	retreat
28	goon	shirai	karal	godzila	drawer	are	karal	are	shafer	drawer
29	ele	godzila	shafer	cuando	ryu	drawer	iin	benefit	karal	marlene
30	drawer	karal	welli	drawer	cuando	iin	samus	cuando	are	oyunu
31	are	shafer	ederim	goon	shafer	oyunu	cuando	marlene	iin	shafer
32	godzila	cuando	benefit	ryu	iin	marlene	benefit	iin	oyunu	karal

33	phil	iin	drawer	manila	karal	samus	bem	manila	drawer	are
34	iin	oyunu	godzila	ajudou	ajudou	picaxe	drawer	samus	voc	cuando
35	ryu	marlene	cuando	marlene	oyunu	manila	picaxe	phil	youreurbanlee	tiene
36	samus	are	wrist	youreurbanlee	voc	ryu	soviet	ajudou	marlene	immer
37	tiene	samus	samus	voc	manila	voc	oyunu	oyunu	manila	manila
38	manila	frontier	ajudou	samus	marlene	ajudou	ajudou	ryu	ryu	samus
39	oyunu	youreurbanlee	manila	oyunu	samus	goon	goon	goon	goon	minha
40	ajudou	ajudou	ryu	picaxe	goon	youreurbanlee	dairy	voc	floyd	youreurbanlee
41	picaxe	phil	voc	iin	youreurbanlee	band	ryu	youreurbanlee	picaxe	picaxe
42	voc	band	marlene	band	separate	phil	manila	picaxe	dissappointed	ryu
43	secure	voc	kaisa	phil	shirai	nethearealm	youreurbanlee	bussiness	ajudou	band
44	band	goon	sheep	frontier	frontier	sheep	phil	tiene	phil	goon
45	bem	bussiness	bussiness	sheep	band	bussiness	band	frontier	allanatra	voc
46	youreurbanlee	bem	goon	bem	phil	frontier	frontier	band	frontier	ederim
47	sheep	ederim	picaxe	shirai	bem	minha	nethearealm	sheep	undead	frontier
48	elfs	sheep	bem	tiene	bussiness	ederim	shirai	bem	band	perfeito
49	barricade	tiene	phil	faculdade	picaxe	apropiate	bussiness	shirai	tiro	bussiness

APPENDIX 3: FULL SAMPLE TOPIC RESULTS

Compilation of Gameplay Walkthrough Samples and Gaming Videos with Commentary Samples

	Topic 1	Topic 2	Topic 3	Topic 4	Topic 5	Topic 6	Topic7	Topic8	Topic 9	Topic 10	Topic 11	Topic 12	Topic 13
0	uma	camper	puch	camper	defence	camper	krdistan	genial	fare	camper	camper	remote	camper
1	fvcking	mech	krdistan	genial	camper	symbolize	occur	liga	che	genial	motor	camper	attacker
2	genial	genial	occur	manila	havoc	genial	turk	camper	camper	attacker	eject	genial	genial
3	camper	remote	genial	commentate	genial	remote	genial	desliga	genial	krdistan	inn	serpent	krdistan
4	remote	infection	camper	havoc	anuncios	band	camper	gumball	mutate	remote	genial	beside	remote
5	isso	godzila	remote	krdistan	bendy	motor	remote	publisher	karal	goon	remote	havoc	aimbot
6	nethearealm	krdistan	worker	defence	remote	benefit	krds	mutate	shafer	are	ajudou	krdistan	occur
7	krdistan	serpent	ryu	remote	krdistan	krdistan	defence	remote	krdistan	soviet	uma	defence	uma
8	ele	havoc	uma	isso	kaisa	inn	depth	krdistan	isso	occur	krdistan	occur	defence
9	occur	defence	turk	occur	marlene	defence	havoc	ruthless	heartbeat	oppression	trade	drawer	retreat
10	havoc	attacker	havoc	uma	occur	cuando	citizen	defence	uma	beside	publisher	cuando	motor
11	attacker	liga	swich	attacker	kholta	extinction	iin	isso	remote	immer	occur	motor	havoc
12	samus	occur	shirai	motor	uma	attacker	uma	phil	occur	havoc	defence	attacker	isso
13	floyd	uma	defence	hobby	wreak	che	oyunu	havoc	youreurbanlee	isso	rayman	inn	inn
14	drawer	publisher	isso	sheep	serpent	havoc	attacker	occur	welli	uma	pressure	uma	mutate
15	defence	intensas	motor	serpent	isso	occur	bendy	uma	transform	motor	transform	mutate	goon
16	dissappointed	desliga	rub	are	motor	wrist	collapse	motor	sayin	maggot	attacker	publisher	invitation
17	symbolize	isso	che	inn	elfs	frontier	publisher	sting	motor	mutate	marlene	terrigen	turk
18	mutate	accin	ele	che	mutate	serpent	isso	greedy	ele	inn	swamp	che	serpent
19	serpent	symbolize	scent	publisher	inn	publisher	velin	sob	havoc	publisher	isso	liga	anuncios
20	motor	motor	symbolize	mutate	vintage	rosalina	motor	serpent	defence	serpent	havoc	isso	ele

21	inn	mutate	fare	bendy	attacker	uma	mutate	inn	allanatra	defence	dairy	barricade	publisher
22	che	che	attacker	liga	atreas	mutate	che	oppression	inn	ruthless	clothing	are	che
23	turk	inn	inn	separate	che	isso	symbolize	opponent	attacker	marlene	che	desliga	liga
24	aran	opponent	publisher	fare	publisher	basicly	inn	mere	publisher	nation	sunny	picaxe	worsen
25	liga	benefit	yaptn	turk	basicly	monk	ederim	symbolize	turk	church	serpent	symbolize	fare
26	bendy	turk	udh	symbolize	turk	shaolin	greedy	clothing	gioco	cuando	ele	turk	sunny
27	undead	drawer	anuncios	desliga	spencer	goon	writer	attacker	false	che	turk	fare	agenda
28	wet	lenguaje	mutate	marlene	beside	liga	fare	plate	tiro	turk	are	expose	meteor
29	chis	eject	snowy	meteor	ele	fare	serpent	rosalina	serpent	ich	rave	anuncios	portray
30	eject	ele	serpent	ele	symbolize	sob	meee	ele	deem	puch	fare	eject	desliga
31	manny	fare	bendy	citizen	drawer	desliga	anuncios	turk	marlene	ele	anuncios	ele	are
32	fare	beside	liga	sur	fare	turk	clothing	voc	basado	symbolize	mutate	apropiate	beside
33	cassandra	marlene	eject	agenda	eject	ele	ele	che	puch	fare	liga	greedy	symbolize
34	desliga	anuncios	cheeted	nation	liga	gestas	tiene	citizen	liga	mech	hillbilly	marlene	eject
35	publisher	greedy	illa	ruthless	cuando	drawer	mere	marlene	are	bendy	convoy	goon	manila
36	anuncios	are	desliga	anuncios	greedy	sayin	cuando	pressure	gumball	pressure	manila	oppression	perfeito
37	rosalina	bendy	church	benefit	opponent	marlene	aimbot	spencer	enthusiastic	noch	desliga	elfs	sayin
38	citizen	ruthless	are	cuando	desliga	riolu	marlene	are	mostra	meteor	scale	ruthless	marlene
39	marlene	rosalina	thnh	randoms	awaz	enthusiastic	goon	qtes	desliga	anuncios	convenient	phil	ajudou
40	pacquiao	goon	kek	senior	inkling	fvcking	mech	conduct	symbolize	eject	perfeito	benefit	continuation
41	christian	citizen	greedy	oppression	rub	puch	are	bendy	aimbot	drawer	drawer	opponent	serve
42	therapy	commentate	marlene	sob	daniela	anuncios	therapy	eject	fazer	greedy	houser	puch	bendy
43	goon	oppression	drawer	transform	are	snowy	vas	drawer	reale	faith	ruthless	bendy	scale
44	beside	cuando	aimbot	eject	ajudou	beside	net	scale	eject	benefit	minha	pressure	oppression

45	are	pgsecuencias	nation	aimbot	turf	oppression	opponent	puch	drawer	liga	symbolize	gumball	ruthless
46	opponent	sunny	clothing	beside	benefit	citizen	eject	goon	benefit	sayin	bright	infection	haciendo
47	rub	clothing	goon	puch	citizen	are	lots	cuando	greedy	und	gumball	citizen	citizen
48	puch	basicly	cuando	fvcking	commentate	greedy	benefit	beside	corpo	gumball	citizen	ajudou	tiene
49	mech	puch	krds	drawer	pressure	phil	ruthless	murderer	voce	basicly	aimbot	mech	drawer

APPENDIX 4: REPRESENTATIVE DOCUMENTS FOR GAMEPLAY WALKTHROUGH

The Most Representative Document of The Topics (Gameplay Walkthrough)

Topic	The Most Representative Document
1	Microsoft did not fund Rise Of The Tomb Raider. It's not as if Rise Of The Tomb Raider would not have been made if it wasn't for Microsoft's Money. (Darrell Gallagher said so in an interview)Tomb Raider 2013 and Tomb Raider definitive edition sold over 8.5 million copies, at the time of the timed exclusive to the Xbox deal announcement between Microsoft and GREEDY publisher Square Enix Tomb Raider has sold 7 million copies, more than enough MONEY to make Rise Of The Tomb Raider. Microsoft secured the timed exclusive deal for only 10-20 million dollars went to the GREEDY publisher to make Rise Of The Tomb Raider for the Xbox first in the hope that Rise Of The Tomb Raider helps boost Xbox one sales, and reasons for the timed exclusive deal by Xbox boss Phil Spencer, CEO Square Enix Phil Rogers, Head of Xbox Games Marketing Aaron Greenberg is nothing more then PR corporate BULLSHIT. because of the exclusivity I am not buying this game They turned Lara Croft in-to a brutal viscus cold blooded mass murderer Microsoft paid Square Enix to exclude gamers , I am NOT GOING TO BE A PARTY TO MICROSOFT'S INTEREST,
3	This is how many people watched it in one go? 1387: 3 hours in 1 1388: Hi my friend this game is available for androide yes or no. 1389: I at my grandma house. 1390: you can't play 1391: I do not have bando or WiFi 1392: My name and number is on the phone and the number is the number I need to send it to the other email addresses and I. 1393: I think you are crazy 1394: Hiii
4	Like many people have said in this comment section, I have played this game on Wii as a kid. The hardest part for me was when you play as "remodeled" Bumblebee in the Hoover Dam and you are waiting for the Allspark to shrink and then Megatron's arm cannon becomes free and he starts shooting at you. Plus there are those drones shooting at you and they rarely release a health heart upon their deaths. I also never unlocked all of the collectibles or played and beat all of the side missions or completed all of the stunts. Today was my b-day and I've been trying to find this game again so I could play it to 100% completion but where I'm from it doesn't exist.
5	I love how shinnok looked like he was unbeatable at the start of the game up until he was beaten by johnny cage...Technically their fight was still going on but he did injure shinnok and when their fight was going to resume cage gave raiden shinnoks amulet....then he got trapped but shinnok was going to trap raiden and fujin in the amulet and beat everyones ass already...He didnt need to be empowered with the jinsei...he just did it to gain more power for the hell of it....Then cassie cage beats him in his strongest form....They could have atleast let shinnok had more screen time where the good guys actually got killed and let corrupted shinnok beat most people and finally get beat by all the guys put together not let one being beat shinnok thats crazy...I LOVE SHINNOK but i hate how theyve portrayed him...I wouldnt care if cassie cage descended from gods because shinnok is an elder god...She should have to be stronger than an empowered elder god to beat shinnok which she obviously was..... MAybe mk11 will explain shinnok having been weakened in some crazy way as for cassie beating shinnok cuz her having god like powers still wouldnt be enough to beat him in my book...i love this game because im glad shinnok came back but i wish the story was longer
6	it says playthrough, so it hasnt to be perfect- ease up on the man and thank him for a 10 hour long entertainment. for a real walkthrough you gotta go to Major SLACK. you can play this smartly and without taking tons of damage and with the apropiate weapons for the apropiate charakter. if there is any form of taking advantage on a game, MAJOR SLACK IS GONNA FIND IT. (stand in a pool and one-hit the zombis since they drown, stand on a car and be virtually unattackable and so on....)
7	just needa get my 2 cents out there, this game looks wonderful visually, especially the cutscenes. The plot wasn't super epic or anything, but it does fit very nicely in the niche of survival horror that's formed over the last few years. The gameplay was honestly really great as well, only this play through felt super repetitive over meticulous things and rushed to all hell so I wasn't able to really "get" into it. But the gameplay seemed fantastic nonetheless. Now, onto the part that ruined the game for me. The fucking script for the voice actors in this was terrrrrible. Holy Shit. Aside from the very beginning, not once did I feel immersed into the world of the game. Even through let's plays/walkthroughs, I can get immersed in a game. But this one's script writing was terrible. The characters didn't even feel like fully flushed out characters most of the time, especially the protagonist. The lack of any real emotional or physical response made this whole game fall flat to me. You go thru the whole third part of the game to catch Lucas. He's basically tortured you, forced you to fight monsters, kidnapped your wife and only hope to get out and all you respond with when he gets away after you

blow up the wall is "Dick." The voice actors were definitely good, but the script for the game was whack as hell. Immersion is what makes a game for me. I've come to love some really faulty games purely because they're still immersive, and vice versa games that have so much going for it just lose me because of the lack of immersion. yes the horror was there, but the horror gets so damn boring when you realize you're shooting at the same crazy people with the same lines and same empty monsters/bioweapons. Then you know what to expect because you're no longer being psychologically thrown around by actual scary characters, actual terrifying human beings with fleshed out personalities that keep you on your toes instead of learning their patterns and knowing when to shoot, then run. shoot, then run. maybe hide, then repeat. So not only was the immersion just not really there, but any attempts fell super flat. A good 6.5/10 from what I've seen since immersion in any type of genre in any form of media is the most important thing to me, everything else about it was really cool though.

2	This video was too long. Halfway through it, I got hungry so I left it playing and went to the kitchen to fix myself a sandwich. But then I found out that I'm out of mayonnaise so I went to a store. There, I saw the most beautiful woman I have ever seen in my whole life. But I'm a really shy person so I took up a three-year personality development course so I could introduce myself. She was very friendly and all, but unfortunately, she had a boyfriend. So I said, all good, I'm a mature person. I wanted the best for her and I harbored no illusion that I am the best person for her and she seemed happy with her boyfriend, so I didn't bother her anymore. But we kept in touch and we became friends and I got over my crush on her. Then she broke up with her boyfriend, we drank some alcohol because of it. I told her she'll be fine and I wished her well. I still think she's the most beautiful woman in the world, but like I said, I am over my crush on her. It was like five years already since I first saw her. Besides, I am quite happy with the friendship I developed with her. It was more important than a crush. So we kept hanging out, drinking, having coffee, and all. I had a girlfriend, she started dating other guys. My girlfriend wanted to live some other life without me in it, so I said, "Okay, I want the best for you and I want you to pursue your happiness." My lady friend and I drank alcohol about it, and she gave me the same advice I gave her when she was in that position and I became okay with the breakup immediately. But we were really drunk, so she spent the night in my apartment. I only have one bed, so you know what that means: She took the bed and I slept on the couch. But on the couch, I really can't sleep. Something was bothering me. So I tossed and turned for about three hours, then I finally couldn"t take it anymore, I stood up and went straight to my room where she's sleeping. I approached the bed, gently sat on it and I reached for her shoulder to pull her closer to me. She stirred and woke up. She asked what's up. I told her, "you know, the first time I saw you, I was watching a video and left it playing to get myself a sandwich then went to the store to get some mayo then I got so distracted by life that I forgot to finish the video." She said, "You know what, I've been wondering about a weird noise in your night drawer." So we opened that drawer, and lo and behold, there's my phone and this video still has two minutes of play time on it.	Dropped off
8	The girl I first loved just so happened to be hated by my parents when I lived in my hometown Great Neck, NY. Some psychologists and false experts tried displacing my first love with a Chinese woman and they failed. Then 9-11 shook the world and bigots tried convincing me to hate dark skinned persons when it was you all along I hated most. I do not remember her name. I do not remember her voice. All I remember is a still image of her secure in my vault of mind. She is sacred. If I forget her face, then I could be as mad as a man with no coda. The people who hurled virginity jokes and incest jokes at me never perhaps knew the pain of my loss. I sometimes wonder when I became so silent and gloomy, then immediately I remember why America is hated internationally.	Dropped off
9	Finalmente, luego de tanta espera lleg este video	Dropped off
10	Oigan saben cmo tener el limbo? Se tiene q buscar en internet la aplicacin happy mod lo descargan y es como una play store solo q tiene todos los juegos hackeados buscan limbo lo descargan pero q el nombre de limbo est en chino todo eso nada ms	Dropped off

APPENDIX 5: OTHER REPRESENTATIVE DOCUMENTS

The Most Representative Document of The Topics (Compilation of Gameplay Walkthrough Samples and Gaming Videos with commentary Samples)

Topic	The Most Representative Document
1	Frost is still frozen. Like Kano in MK9. And WTF happen to Kotal Khan after Cassandra killed Shinnok? And why did the Nethearealm always capturing Johnny? Like Quan chi kidnapped him and so Shinnok do. And Quan chi is so very fvcking weak in this story. Im puzzled of how did Jax have a daughter if he is on Quan chis feet. Wtf happen to Dvorah,FerraTorr,Ermac,Erron,Hasashi, and the other like the undead warriors. I waited for this story and i am really fvcking dissapointed. For those developers of this game please on the next game can you add Samus aran, Manny pacquiao, FLOYD MAYWEATHER, Mario, Or even ash ketchum for fun.
2	Godzila: oh, so I see mech me is here. Mech godzila: better scramble like a egg before you get folded like a omelet. Godzila: gets mech Godzilla folded instead of godzila Me: wow that battle was legendary
3	there is a way to upgrade the zor but its a glich what do you need is find a gun that can you can pack o puch then you go up to the pack o puch then place the gun and swich the gun two the zor then its pack o puch but you need to hurry and swich the gun that can be pack o puch the your don with the glich.
5	I truly love everything about the opening to the game?? This beast of a man we?샐 e been through with so many adventures from the past six games. 1,2,3, chains of olypus, ghost of sparta, and ascension. Having seen and felt and experienced every ounce of torment possible killing so many people clawing his way out of hell countless times and being repeatedly used for a means to an end by many others and finally having his revenge and being freed from his bondage of the sins of his past.
6	no words. ....he could quickly collect all the necessary to make yourself the best weapon against infected, but he walks with a knife for cleaning potatoes resting his face in the palm of read the inscription Profesional and where? it has been dropped on the ground, all enemies three simple weapon, melee 1 bit 2 knuckles 3 axe or machete it is easy to cut off body parts at a distance a shotgun is better suited as an option for easy shooting or machine gun if you have the opportunity to set fire to enemy the Molotov cocktail is best that you can find if you have grenades or explosives that the preponderance of the number of enemies throwing one of those in the crowd to even the odds is not excessive blow to the chest, legs or knuckles in the face knockout provided well if you have the opportunity to briefly inspect the area immediately know that you're not drive the more if the running speed 220.
7	i think there should be a uncharted 5 , in which the new velen come and that velen kidnapped elen and Nate's daughter and force drake to find the last treasure of Sir frances drake story - drake found a clip in which the velin force drake to bring the treasure of Sir frances drake "treasure of death mircy' and for that Nate , sam and sully went to different places like Newyork, London , New Indiana as well as Cuba . he even found that lady gun who had a army in trouble by the velin and hence forced to work with that velin
8	42:00-43:00 is my favorite part of the game. While the world spins around you and you're faced with giant, loud buzz saws and electrical floors, the only things protecting you from imminent death are a wooden crate and two chains dangling mere inches away from the saws. As you drop from the chain onto the wooden crate, you have just mere moments to position yourself before it slides directly into the second saw. As you make one final leap of faith and grab onto the second chain, the crate is shredded to bits. The deafening sound of spinning blades is quickly replaced with calm, tranquil music, and you are finally safe (for now.)
10	interesting detail: new wolfenstein plays on adding all nations in the game: Germans, Polish, Jews, Americans, Irish, Scottish, African nations etc, except for soviets, although Soviet Union was the country that actually defeated Nazis IRL. How come, really strange!
11	I love how shinnok looked like he was unbeatable at the start of the game up until he was beaten by johnny cage...Technically their fight was still going on but he did injure shinnok and when their fight was going to resume cage gave raiden shinnoks amulet....then he got trapped but shinnok was going to trap raiden and fujin in the amulet and beat everyones ass already...He didnt need to be empowered with the jinsei...he just did it to gain more power for the hell of it....Then cassie cage beats him in his strongest form....They could have atleast let shinnok had more screen time where the good guys actually got killed and let corrupted shinnok beat most people and finally get beat by all the guys put together not let one being beat shinnok thats crazy...I LOVE SHINNOK but i hate how theyve portrayed him...I wouldnt care if cassie cage descended from gods because shinnok is an elder god...She should have to be stronger than an empowered elder god to beat shinnok which she obviously was.....MAybe mk11 will explain shinnok having been weakened in some

	crazy way as for cassie beating shinnok cuz her having god like powers still wouldnt be enough to beat him in my book...i love this game because im glad shinnok came back but i wish the story was longer.	
12	In the office in the desk drawer there is a TV remote, you take that and then go outside with Doug. Try the remote on the TVS and Lee will ask Doug if he can do anything with the remote, Doug programmes the remote to work with the TVS and hey presto you turn them on. Then you use the axe to break the lock, grab the brick, and toss it at the window where the TVS are.	
13	This is what i want my team for SW/SH to be: Cinderace - physical attacker - pyro ball, sunny day, flame charge, headbutt Sirfetch - physical attacker - brick break, meteor assault, first impression, sleep talk/steel wing/revenge/poison jab Sandaconda - physical attacker - sand tomb, earthquake, fire fang, rest	
4	Ulle dulle doff, kinke lade koff, koffe lade, kinke lade, ulle dulle doff!	Dropped off
9	adesso finalmente chiaro cos' sto gioco, cosa rappresenta, gli zombie sono inferiori grado nella vita reale, abbattibili senza ripercussione sul giocatore e comunque pericolosi in quanto manovrati mentalmente in quella che poi la vita reale. ma in italia non si fotte, non c'il modo di fare ancora all'americana, a fare il tiro all'anatra su gente indifesa zombizzata, e se anche si volesse fare per lo show stato resettato il medium che lo mostra. per ora solo in us va di moda fare il tiro all'anatra su gente a caso	Dropped off

APPENDIX 6: VIDEO GAME & GAME GENRE LIST FOR GAMEPLAY WALKTHROUGH WITHOUT COMMENTARY

Video Title	Account	Game Title	Game Genre	Link
GOD OF WAR 4 – Full Gameplay Walkthrough / No Commentary 【FULL GAME】	Gamers Little Playground	God of War 4	Action - Adventure	https://www.youtube.com/watch?v=hRMX9Rzq1AA
The Last of Us (PS4) - Full Game - No Commentary	SourceSpy 91	The Last of Us	Action - Adventure	https://www.youtube.com/watch?v=aLg98S4sxsE
Minecraft Relaxing Longplay - Building a Peaceful Ocean Home (No Commentary) [1.17]	InfiniteDrift	Minecraft	Sandbox	https://www.youtube.com/watch?v=BvPwKtAAJ_M
Minecraft Relaxing Longplay - Cozy Rainfall, Building a Spruce Cabin (No Commentary) [1.17]	InfiniteDrift	Minecraft	Sandbox	https://www.youtube.com/watch?v=kIyFw44cgn4
The Walking Dead Game - episode 1 walkthrough no commentary Full Episode HD Gameplay	HassanAIHajry	The Walking Dead	Graphic Adventure	https://www.youtube.com/watch?v=JuxotWssdPY
Dead Island : Definitive Edition	Full Playthrough	Gameplay Walkthrough No Commentary [PS4 Pro	P.B. Horror Gaming	Dead Island	Action Role Playing Survival Horror	https://www.youtube.com/watch?v=K-au0kjiiWA
GOD OF WAR RAGNAROK Gameplay Walkthrough FULL GAME PS5 4K 60FPS No Commentary	GameClips	God of War Ragnarok	Action - Adventure	https://www.youtube.com/watch?v=ixllGOX0Evw
Uncharted 4 Remastered Full Game Walkthrough - No Commentary (PS4 PRO 4K 60FPS)	NRMwalkthroughHD	Uncharted 4	Action - Adventure Third Person Shooter (TPS)	https://www.youtube.com/watch?v=3spSshYUvOU
Rise of the Tomb Raider Full Game Walkthrough No Commentary	RabidRetrospectGames	Rise of the Tome Raider	Action - Adventure	https://www.youtube.com/watch?v=x_Ow26-mBGo
Super Mario Odyssey - 100% Longplay Full Game Walkthrough No Commentary Gameplay Playthrough	Ninbanyan	Super Mario Odyssey	Action - Adventure	https://www.youtube.com/watch?v=vDwQpTFW2us
Bully PS4 Full Game Walkthrough - No Commentary (#Bully Full Game Longplay) 2016	RabidRetrospectGames	Bully	Action - Adventure	https://www.youtube.com/watch?v=e2U3agKHYQs
Mortal Kombat 10 FULL GAME Gameplay Walkthrough (No Commentary)	lzuniy	Mortal Kombat 10	Fighting	https://www.youtube.com/watch?v=rIfwUyuSphU
SPIDER-MAN PS4 – Full Gameplay Walkthrough / No Commentary 【1080p HD / Full Game】	Gamers Little Playground	Spider Man (2018)	Action - Adventure	https://www.youtube.com/watch?v=oYTR2reAaNg
Uncharted 2 Among Thieves Full Gameplay Walkthrough [Longplay] No Commentary	RabidRetrospectGames	Uncharted 2: Among Thieves	Action - Adventure Third Person Shooter (TPS)	https://www.youtube.com/watch?v=0EhpxpPeTKE

GODZILLA PS5 Gameplay Walkthrough FULL GAME (4K 60FPS) No Commentary	Shirrako	Godzilla	Action - Adventure Fighting	https://www.youtube.com/watch?v=e_Hrpw0whVs
AVATAR Gameplay Walkthrough Part 1 FULL GAME [1080p HD] - No Commentary	MKIceAndFire	Avatar: The Game	Action - Adventure Third Person Shooter (TPS)	https://www.youtube.com/watch?v=RTLYtoWCdTM
SPIDER MAN PS4 Gameplay Walkthrough Part 1 FULL GAME [1080p HD PS4 PRO] No Commentary SPIDERMAN PS4	MKIceAndFire	Spider Man (2018)	Action - Adventure	https://www.youtube.com/watch?v=jXs7kyAcfzE
Uncharted 3: Drakes Deception Full Gameplay Walkthrough [Longplay] No Commentary	RabidRetrospectGames	Uncharted 3: Drakes Deception	Action - Adventure Third Person Shooter (TPS)	https://www.youtube.com/watch?v=_2D30tzDoQM
The Walking Dead Game - episode 2 walkthrough no commentary Full Episode HD Gameplay	HassanAIHajry	The Walking Dead	Graphic Adventure	https://www.youtube.com/watch?v=dmCobUDErNA
Among us - Full Impostor gameplay - No commentary	Hornster	Among Us	Strategy (Social Deception)	https://www.youtube.com/watch?v=p0aHDT8wwrw
WOLFENSTEIN 2: THE NEW COLOSSUS – Full Gameplay Walkthrough (No Commentary) 1080p HD	Gamers Little Playground	Wolfenstein 2: The New Colossus	Action - Adventure First Person Shooter (FPS)	https://www.youtube.com/watch?v=SvbU423NR5k
LIMBO - Full Game Walkthrough【NO Deaths】	Bolloxed	Limbo	Puzzle	https://www.youtube.com/watch?v=1ie19_GXAAw
TRANSFORMERS Gameplay Walkthrough Part 1 FULL GAME [1080p HD] - No Commentary	MKIceAndFire	Transformers: The Game	Action - Adventure	https://www.youtube.com/watch?v=PExPzKw-0Pk
Resident Evil 7 Gameplay Walkthrough Part 1 FULL GAME Madhouse - No Commentary	RabidRetrospectGames	Resident Evil 7: Biohazard	Survival Horror	https://www.youtube.com/watch?v=mRbeU3cFyUY
Modern Warfare - Full Game (No Commentary)	TmarTn2	Call of Duty: Modern Warfare	First Person Shooter (FPS)	https://www.youtube.com/watch?v=fQvsouKAqaI
Total Number of Video Samples	25			
Total Number of Games	23			

APPENDIX 7: VIDEO GAME & GAME GENRE LIST FOR GAMING VIDEOS WITH COMMENTARY

Video Title	Account	Game Title	Game Genre	Link
Deadpool Gameplay - Part 1 - Walkthrough Playthrough Let's Play | PewDiePie	PewDiePie	Deadpool	Action - Adventure	https://www.youtube.com/watch?v=SULJh7cU8pg
The Last Of Us Gameplay Walkthrough Playthrough Let's Play (Full Game) - Part 1	PewDiePie	The Last of Us	Action - Adventure	https://www.youtube.com/watch?v=0wLljngvrpw
Mario + Rabbids Kingdom Battle - Gameplay Walkthrough Part 1 - World 1 Ancient Gardens! 2 Hours!	ZackScottGames	Mario + Rabbids Kingdom Battle	Action - Adventure Turn-based Strategy	https://www.youtube.com/watch?v=mIzUhUptHCU
Spider Man: Miles Morales PS5 Gameplay Walkthrough, Part 1!	Typical Gamer	Spider Man: Miles Morales	Action - Adventure	https://www.youtube.com/watch?v=F3dNRDH2S9U
Call of Duty Ghosts Gameplay Walkthrough Part 1 - Campaign Mission 1 (COD Ghosts)	theRadBrad	Call of Duty Ghosts	First Person Shooter (FPS)	https://www.youtube.com/watch?v=PCGydpJXIOg
SCARIEST PART! - Outlast Gameplay Walkthrough Playthrough - Part 5	PewDiePie	Outlast	Survival Horror	https://www.youtube.com/watch?v=wOMUIFl8sHQ
Pokemon Sword and Shield - Gameplay Walkthrough Part 1 - Galar Region Intro! (Nintendo Switch	ZackScottGames	Pokemon Sword and Shield	Role Playing	https://www.youtube.com/watch?v=bntB4KY0V6E
Bowser's Fury - Gameplay Walkthrough Part 1 - Scamper Shores and Fort Flaptrap! (Nintendo Switch)	ZackScottGames	Bowser's Fury	Action - Adventure	https://www.youtube.com/watch?v=k3ZmfSML29s
Quantum Break FULL Gameplay - Walkthrough Part 1 // THIS GAME LOOKS REAL	PewDiePie	Quantum Break	Action - Adventure Third Person Shooter (TPS)	https://www.youtube.com/watch?v=bymDk2mYAHI
INSIDE Gameplay Walkthrough (XboxOne) - (FULL GAME) | CenterStrain01	Centerstrain01	Inside	Puzzle	https://www.youtube.com/watch?v=vPcolQbesz4
Super Mario Odyssey - Gameplay Walkthrough Part 11 - Bowser Wedding Boss Ending! (Nintendo Switch)	ZackScottGames	Super Mario Odyssey	Action - Adventure	https://www.youtube.com/watch?v=wfNl38NhDbk
LEGO Marvel Superheroes - Part 1 - Welcome True Believers (HD Gameplay Walkthrough)	Blitzwinger	LEGO Marvel Superheroes	Action - Adventure	https://www.youtube.com/watch?v=LB-7Qj6he2U
ELDEN RING PS5 Walkthrough Gameplay Part 1 - INTRO (FULL GAME)	theRadBrad	Elden Ring	Action Role Playing	https://www.youtube.com/watch?v=TouU2G9p7vU

DYING LIGHT 2 FULL GAMEPLAY PREMIERE (Walkthrough Gameplay)	theRadBrad	Dying Light 2	Action Role Playing Survival Horror	https://www.youtube.com/watch?v=_ZybPBQV980
MORTAL KOMBAT 11 STORY MODE Walkthrough Gameplay Part 1 - INTRO (MK11)	theRadBrad	Mortal Kombat 11	Fighting	https://www.youtube.com/watch?v=R3qFcLSW94Q
Black Ops 3 Zombies - "Shadows of Evil" Full Gameplay Walkthrough (Call of Duty Black Ops 3 Zombies)	NoahJ456	Call of Duty Black Ops 3	First Person Shooter (FPS)	https://www.youtube.com/watch?v=XmGDAi1vj5c
Siren: Blood Curse - Part 1 - Lets Play Siren Gameplay [Walkthrough Playthrough]	PewDiePie	Siren: Blood Curse	Survival Horror	https://www.youtube.com/watch?v=FpUKQ9m7Cqc
Splatoon 2 - Gameplay Walkthrough Part 28 - Callie! DJ Octavio Boss Fight! (Nintendo Switch)	ZackScottGames	Splatoon 2	Third Person Shooter (TPS)	https://www.youtube.com/watch?v=1tTvouSxRgk
Grand Theft Auto 5 Gameplay Walkthrough Part 10 - The Long Stretch (GTA 5)	theRadBrad	Grand Theft Auto 5	Action - Adventure	https://www.youtube.com/watch?v=M5Mpsi_3P6Q
ENDING! - Amnesia: A Machine for Pigs Gameplay Walkthrough Playthrough - Part 5	PewDiePie	Amnesia: A Machine for Pigs	Survival Horror	https://www.youtube.com/watch?v=NRrxVxilkXE
SPIDER-MAN PS4 GAMEPLAY WALKTHROUGH REACTION (E3 2017)	theRadBrad	Spider Man (2018)	Action - Adventure	https://www.youtube.com/watch?v=X-dftZaH1h4
GOD OF WAR RAGNAROK PS5 Walkthrough Gameplay Part 1 - INTRO (FULL GAME)	theRadBrad	God of War Ragnarok	Action - Adventure	https://www.youtube.com/watch?v=0xy4NNqX_ZU
Far Cry 3 Ending - Final Mission - Join Citra - Gameplay Walkthrough Part 63	theRadBrad	Far Cry 3	First Person Shooter (FPS)	https://www.youtube.com/watch?v=XS26eNTSCFg
MARVEL'S AVENGERS GAMEPLAY "PROLOGUE" REACTION (Walkthrough Gameplay Part 1)	theRadBrad	Marvel's Avengers	Action - Adventure	https://www.youtube.com/watch?v=Nw3v92juBSU
Bowser's Fury - Gameplay Walkthrough Part 4 - ENDING! Bowser Boss Fight! 50/100 Shines!	ZackScottGames	Bowser's Fury	Action - Adventure	https://youtu.be/PdLeskf3s2I
HORIZON ZERO DAWN Walkthrough Gameplay Part 2 - Machines (PS4 Pro)	theRadBrad	Horizon Zero Dawn	Action Role Playing	https://www.youtube.com/watch?v=guYEZ-OL1MM
Watch Dogs Ending / Final MIssion - Gameplay Walkthrough Part 49 (PS4)	theRadBrad	Watch Dogs	Action - Adventure	https://www.youtube.com/watch?v=vQoR9TLgP14
Mario + Rabbids Kingdom Battle - Gameplay Walkthrough Part 21 - Bowser Final Boss Fight!	ZackScottGames	Mario + Rabbids Kingdom Battle	Action - Adventure Turn-based Strategy	https://www.youtube.com/watch?v=Qq9z9T9sKck
DEAD RISING 4 "FRANK RISING DLC" Walkthrough Gameplay Part 1 (XBOX ONE S)	theRadBrad	Dead Rising 4	Action - Adventure	https://www.youtube.com/watch?v=Nu8rc9ARcl8
Mario + Rabbids Kingdom Battle - Gameplay Walkthrough Part 14 - Phantom Boss Fight!	ZackScottGames	Mario + Rabbids	Action - Adventure	https://www.youtube.com/watch?v=5-WMbKvBl6I

	Kingdom Battle	Turn-based Strategy	
Number of Videos	30		
Number of Games	27		

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