
“I don’t need to see that”: Seeking, Avoiding, and Attempting to Control Video Content

Jennifer Lee

University of Colorado Boulder
Boulder, CO 80309, USA
jennifer.c.lee@colorado.edu

Alvin Jude

Meral Shirazipour
Julien Forgeat
Ericsson Research
Ericsson, Inc.
Santa Clara, CA 95054, USA
alvinjude@acm.org
meral.shirazipour@ericsson.com
julien.forgeat@ericsson.com

Abstract

Evolving technology and growing connectedness of devices allow more opportunities for video consumption, and greater integration in our everyday activities. This study conducts exploratory research on video interaction to better understand how people currently seek, avoid, and attempt to control video content. Data was collected by a semi-structured interview process with 10 participants. Three interesting trends emerged in people’s video watching behavior: (1) Social context and obligations change behavior, (2) a preference for more participatory parental monitoring techniques, and (3) the importance of storyline in video viewing behavior. These findings can help inspire future research, and help designers and technologists recognize the complexities and dynamic nature of how people watch and attempt to control their video content. Designing with this knowledge can improve users’ experience when they consume media content in the form of videos.

Author Keywords

Video interaction; video metadata; content filtering; parental control; interviews; video content.

ACM Classification Keywords

H.5.1 [Information interfaces and presentation]: Multimedia information systems: Video (e.g., tape, disk, DVI)

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Category	Definition
Seeking Behavior	Searching behavior for content within video and specific types of video.
Avoidance Behavior	Tactics and behavior to avoid content in video
Liked Content	specific content participant seeks out or enjoys (does not include behavior around content)
Disliked Content	specific content participant avoids or dislikes (does not include behavior around content)
Controlling Behavior	Tactics and behavior for monitoring video consumption for oneself or others
Technical Features	Technical Features, Software, Services, etc participants use and emotions around them
Internal Conflicting Behavior	Conflict between participant's preference and their action
Context Changes Behavior	Surroundings and/or people changes participant behavior

Figure 1: Interview data was coded using five preconceived categories stemming from our original research question. Two unexpected categories emerged: internal conflicting behavior and context changes behavior.

Introduction

According to cultivation theory, the more someone exposes themselves to television realities the more likely they are to believe that what they view is an accurate reflection of the real world [6]. Exposure to mature content in video, such as violence and X-rated, can affect the way we behave [5, 7, 8, 11]. Children and young adults can also be more susceptible to showing aggressive behavior and feelings of trauma after being exposed to violent video content [7, 15].

The fact that watching video and television media can influence our actions and perceptions so profoundly is a strong argument for users to be able to control, with greater precision, what they are exposed to via these outlets. This task becomes difficult considering the vast amounts of video sources and the technology that can access it. Moreover, with 360-degree video, augmented reality, and virtual reality becoming more common place, novel ways to interact with video are inevitable. Video may see more seamless integration into our physical environments and become more receptive to voice and gesture interaction, manipulation, and editing. The advancement of media consumption technologies creates opportunities to interact with video content in new and more personalized ways. With the opportunity to differentiate media delivery platforms with more personalized interactivity features, it is important to first understand how people prefer to control their video media.

Related Work

Video-sharing websites like YouTube and Vimeo rely heavily on users to upload videos that are appropriate to each websites' guidelines, and to report those that are not [18, 16]. YouTube uses video metadata, title, description, age-restrictions, and community reviews to determine if videos are potentially mature, and has a "restricted mode"

which blocks mature content and all video comments [17]. Human reviewers are still essential for both reviewing and removing content as well as training machine learning systems [13]. These methods cannot guarantee complete accuracy since this information relies on user-generated input, which can vary depending on age, culture, and personal interpretations of the user. This makes video filtering vulnerable to human error. Recently, thousands of videos on YouTube using popular children's cartoon characters in disturbing, inappropriate, or adult themed context were left unfiltered [10], while other videos promoting gay rights and similar issues were being blocked in the restricted mode [4].

Inconsistencies in categorizing and flagging inappropriate content can also make monitoring minors video consumption more difficult since many parents already may not be aware of or fully understand their children's video habits online [12]. Although diverse television mediation strategies by parents have been found such as restrictive, instructive, and co-viewing mediation [14], many parents tend to favor co-use and interactions over technical filters or software [1, 9]. These methods rely mainly on post-viewing actions and broad blocking of content. With new video technologies emerging and undefined content filtering mechanisms, this study seeks to better understand how people seek, avoid, and attempt to control exposure to video content. The answers to these inquiries can help provide direction and inspiration for future research and novel technology applications around video content control.

Methodology

The study took place from late May to early August 2017. Data was collected by a semi-structured interview process. Interviewees were recruited internally within an international networking and telecommunications company, using a

**Margin 1: Social Context
Changes Behavior
Quotations**

"If my wife is in the room and she's already got the TV on something she likes, I'll watch her stuff. Sometimes I'm like 'are you really watching this?'. I will [sit down and watch it] because she's in the room and I'm just being social. I'm just there to be with my wife." - P7

"I wouldn't watch it on my own...I have other things I want to watch that to me seem way more important or interesting. The main reason would be to spend time with [my daughter]." - P9

screeener-survey. The screeener-survey was a pre-selection survey that allowed us to recruit and diversify participants selected for interviewing. The survey was emailed to around 400 employees through an internal communications newsletter. The survey asked: on average, how many hours of video did they watch daily; if they lived with kids; the age range they fell within (18–32, 33–52, or 53+); and gender. There were three categories of users: those who consumed less than 2 hours daily (low users), those who consumed 2-5 hours daily (medium users), and those who consumed more than 5 hours daily (high users).

We received a total of 41 responses. Our goal was to interview 9 participants, 3 from each category of low, medium, and high users and keep a diverse age range within those categories. Due to lack of diversity in responses and scheduling opportunities, we interviewed 10 participants total: 4 low users, 5 medium users, and 1 high user, 5 were female and 5 were male. 4 participants had kids living in their household, 5 did not, and 1 had kids in the household some of the time. 8 participants fell in the 33–52 age range, 1 was in the 18–32 range, and 1 was 53+. Each interview session was 60 minutes per participant. Since the interviews were semi-structured, the same base questions were asked such as "can you describe the last time you watched video media" and "are there videos you enjoy re-watching?". Depending on the interviewee certain topics, such as parenting, were explored with more depth. The interviews were recorded via audio recorder and later transcribed. This study included both short form (less than 10 minutes) and long form video (over 10 minutes) from any source (YouTube, Instagram, Netflix, Hulu, etc.).

Data Analysis

Interview data was coded using five preconceived categories stemming from our original research question:

When, why, and how do people seek, avoid, and attempt to control video content? Two unexpected categories emerged: internal conflicting behavior and context changes behavior. Using thematic analysis, these eight categories (as seen in figure 1) were analyzed for reoccurring topics and themes.

Results

We observed three interesting trends from the data: (1) social context and obligations change behavior, (2) a preference for more participatory parental monitoring techniques, and (3) the importance of storyline in video viewing behavior.

Social Context and Obligations Change Behavior

Certain social contexts would cause participants to watch a video even if they did not particularly enjoy the content, were not entertained, or found it distasteful. As seen in margin 1, Social Context Changes Behavior Quotations, two participants (P7 and P9) mentioned they would do this in order to spend time with another person. Seven participants mentioned that they felt an obligation to watch at least some of the video shared with them personally from family, friends, or colleagues.

"Yes [I always watch the video] if they've shared it with me, like via email or text message or something, so that it's personal to me then yes I always watch it. If it's a post to a lot of people, then I might not." - P6

P3 said if it was "a dumb video" they would still play it "since someone sent it". P7 said he would "check out" the anime (Japanese animation) his son recommends he watch, because he's a "good dad" and that he would "at least try" to watch the videos.

The majority of participants mentioned changing their video

Margin 2: Parental Monitoring Behavior Quotations

"Kids opening up and playing with Barbies, those are considered kids' movies. I'm not saying they are not for kids but I just don't think they are for my five-year-old right now." - P2

"Since it is YouTube Kids already, it is restricted to an extent so he [son] can go freely on that. Even on that there are some channels I don't prefer him watching. It's a personal thing, I don't like channels that try to promote too many toys." - P5

watching behavior when in a public space. The main reason was fear of judgment. The type of content that was avoided was romantic/sexual content, violent/gory content, and political content. These findings fit with existing theories such as social learning theory and identity control theory [2, 3] and can illustrate the influence external environments and social relationships can have on people's choice to expose themselves to certain video content.

Parental Monitoring Behavior

Parents took active roles when monitoring video content for their children. One role included discussing and asking children to avoid certain video content deemed inappropriate. One participant said it felt like a "rat race" to keep up to speed with video technologies and sources and "energy could be better spent" stating "you can just kind of train, coach them up, give them some good advice". Two parents said that they watched their minor's reaction to content to help them decide if it was appropriate. Retroactively deleting and blocking content was also a tactic parents used to control the video content their children were exposed to. P5 would see their child engaging too much in a certain type of video and block the channels producing those videos to reduce their child's access:

"Sometimes he [son] will go overboard on the super heroes and get into a violent mode, I want him to slow down, then for a few says I'll try to reduce those kind of channels. It's not that I don't want him to watch at all, but I want to keep it in moderation." - P5

As seen in margin 2, Parental Monitoring Behavior Quotations, P2 and P5 expressed that they still found certain content on YouTube Kids which they would have preferred to block or limit for their own children. No participants with kids said that they currently used any software to automatically block children's video requests but

did use child oriented outlets like YouTube Kids.

Storyline and Conflicting Behavior

Storyline influenced whether disliked content was avoided or tolerated, or even desired. We found that participants stated a change in behavior depending on how intrigued they were with the overall message and story that the content was within. Four participants spoke about the storyline drawing them in where they were willing to watch content they disliked or were uncomfortable with.

"I was uncomfortable watching [13 Reasons Why], at the end, when she actually commits suicide, I was uncomfortable, like 'oh I can't see that' because it grosses me out but I was okay watching it because it's part of the series, to get a full understanding of it." - P3

"I knew this guy was being fed to the dogs [in Game of Thrones] but the entertainment value of the show is really high so I tolerate the few things I don't appreciate and it's part of the storyline." - P7

Participants would watch things they specifically disliked such as themes of "suicide" or "unnecessary violence" because of the context in which it was being presented brought "entertainment value" or allowed the viewer to get a "full understanding" of the storyline (additional quotations in margin 3: Storyline and Conflicting Behavior Quotations).

Discussion

This data illustrates that there is a complex and dynamic interaction to how people seek, avoid, and attempt to control the video media they see. Factors such as the user's current physical space and location, social relationships and obligations, and context (such as storyline) in the video can affect whether the user wants to expose themselves to certain content at that time. This makes it difficult to

Margin 3: Storyline and Conflicting Behavior Quotations

"I'm not into the unnecessary amount of violence like Game of Thrones. I love it but it's so violent...but I'll stomach it for the sake of Game of Thrones. I want to turn away but I end up watching it. You can't turn away." - P10

"I do enjoy watching true stories, or documentaries, it's more common I would come across something sad. Mostly I continue [to watch] even though I find it sad, I find it interesting. It's a good story or a true story." - P6

automatically categorize video content for the end user.

Implications for design

For parental monitoring, there was a preference among our participants for engaging with their children rather than attempting to block and control all content automatically, as research cited earlier showed. Parents also expressed concern that certain kid platforms allowed content they personally wanted to be reduced or blocked. This study illustrates the importance of considering customization that can address different parenting styles, reduction of content (as opposed to blocking), and the parent-child relationship when designing technologies and applications for video parental controls.

The awareness of the complexities in people's preference for video content can help designers and technologists when designing interactions and new features for video control. This information shows a need for technologies that can give users a sense of autonomy, customization, and personalization that addresses the interactions between factors such as social obligations, physical location, and specific video content. It also illustrates that new technologies should consider that storyline and plot may affect the viewer's desire to expose themselves to certain video imagery and content.

Directions for future research

This study illuminates the complexities of influences in people's decisions to expose themselves to particular video content. Future work could further explore the varying degrees specific aspects, such as storyline or social obligations, play on people's willingness to watch undesirable and disliked video content. Further exploration of these concepts and their impact can allow for a more complete understanding for balancing these different influences to create more personalized profiles for end

users in content filtering applications.

Limitations

Our study was limited in several ways. Since the study interviewed a small sample size of internal employees, generalizability to other populations may be low. Future work might increase participant sample size, analyze gender, and/or age. The broad scope of the research question itself may have also limited us to a high level of analysis.

Conclusion

This study explores how people seek, avoid, and attempt to control video content. Findings suggest that there is a complex interplay of factors (such as social obligations, physical location, and storyline) in a given moment that influence choices made around watching video content. Since what the user desires and is willing to watch changes depending on a dynamic interplay of factors, defining metadata within video concretely and automatically to either disliked or liked content for the end user is difficult. This research also points towards parents preferring a more active parental monitoring style and desire for customization to reduce content instead of blocking. This can inform future parental control application designs. This study may also provide insights for developing and recognizing potential applications for advanced technologies related to the video media experience as well as inspire more in-depth research on the trends found.

REFERENCES

1. Monica Anderson, A Singh, and D Page. 2016. Parents, teens and digital monitoring. *Pew Research Center: Internet, Science & Tech* (2016).
2. Albert Bandura. 1969. Social-Learning Theory of Identificatory Processes. *Handbook of socialization*

- theory and research* 213 (1969), 262.
3. Peter J Burke. 2007. Identity Control Theory. *The Blackwell Encyclopedia of Sociology* (2007), 2202–7.
 4. Niraj Chokshi. 2017. YouTube Filtering Draws Ire of Gay and Transgender Creators. *The New York Times*. (March 2017). Retrieved January 14, 2018 from <https://www.nytimes.com/2017/03/20/technology/youtube-lgbt-videos.html>.
 5. Rebecca L Collins, Marc N Elliott, Sandra H Berry, David E Kanouse, Dale Kunkel, Sarah B Hunter, and Angela Miu. 2004. Watching Sex on Television Predicts Adolescent Initiation of Sexual Behavior. *Pediatrics* 114, 3 (2004), e280–e289.
 6. George Gerbner and Larry Gross. 1976. Living with Television: The Violence Profile. *Journal of communication* 26, 2 (1976), 172–194.
 7. Paul M Haridakis and Alan M Rubin. 2003. Motivation for Watching Television Violence and Viewer Aggression. *Mass Communication and Society* 6, 1 (2003), 29–56.
 8. Jeffrey G Johnson, Patricia Cohen, Elizabeth M Smailes, Stephanie Kasen, and Judith S Brook. 2002. Television Viewing and Aggressive Behavior During Adolescence and Adulthood. *Science* 295, 5564 (2002), 2468–2471.
 9. Sonia Livingstone and Ellen J Helsper. 2008. Parental Mediation of Children’s Internet Use. *Journal of Broadcasting & Electronic Media* 52, 4 (2008), 581–599.
 10. BBC News. 2017. YouTube to Restrict ‘disturbing’ Children’s Videos, if Flagged. (November 2017). Retrieved January 13, 2018 from <http://www.bbc.com/news/technology-41942306>.
 11. Haejung Paik and George Comstock. 1994. The Effects of Television Violence on Antisocial Behavior: A Meta-Analysis. *Communication Research* 21, 4 (1994), 516–546.
 12. Emma Sorbring and Linda Lundin. 2012. Mothers’ and fathers’ Insights into Teenagers’ Use of the Internet. *New Media & Society* 14, 7 (2012), 1181–1197.
 13. CEO of YouTube Susan Wojcicki. 2017. Expanding Our Work Against Abuse of Our Platform. Official YouTube Blog. (December 2017). Retrieved January 10, 2018 from <https://youtube.googleblog.com/2017/12/expanding-our-work-against-abuse-of-our.html>.
 14. Patti M Valkenburg, Marina Krcmar, Allerd L Peeters, and Nies M Marseille. 1999. Developing a Scale to Assess Three Styles of Television Mediation: “Instructive Mediation”, “Restrictive Mediation”, and “Social Coviewing”. *Journal of Broadcasting & Electronic Media* 43, 1 (1999), 52–66.
 15. Juliette H Walma van der Molen. 2004. Violence and Suffering in Television News: Toward a Broader Conception of Harmful Television Content for Children. *Pediatrics* 113, 6 (2004), 1771–1775.
 16. Vimeo. 2017. Help Center/Vimeo Guidelines. (2017). Retrieved August 1, 2017 from <https://www.vimeo.com/guidelines>.
 17. YouTube.com. 2017a. Disable or Enable Restricted Mode - YouTube Help. (2017). Retrieved September 5, 2017 from <http://support.google.com/youtube/answer/174084>.
 18. YouTube.com. 2017b. YouTube Policies and Safety. (2017). Retrieved August 1, 2017 from <https://www.youtube.com/yt/about/policies>.