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THE ALGORITHM PLAYGROUND: A CONTENT ANALYSIS OF USER-PRODUCED CHILDREN'S VIDEOS ON YOUTUBE

Kalia Vogelmann-Natan
Northwestern University

With online videos now dominating children's screen time, YouTube has emerged as a key source of content for children (Rideout & Robb, 2020). While the company explicitly states that its platform is not intended for children under the age of 13, content oriented toward children makes up a large share of YouTube's videos (Pew Research Center, 2018). In fact, of the top ten most viewed YouTube channels worldwide as of January 2021, six feature user-produced children's content (Statista, 2021). Unlike content developed for television, the user-produced children's videos proliferating YouTube are essentially unregulated, overtly commercially-driven creations. Public concern over child privacy violations and exposure to inappropriate – and at times, disturbing – content on YouTube due to the recommendation algorithm has led to international legal action against the company (Kelly, 2019). Despite these issues and ineffective efforts on YouTube's behalf to address them, the platform remains the dominant source of video content for children.

The escalation in children's consumption of YouTube videos and the precedented multi-million-dollar revenues of high-subscriber channels (including ad view earnings, sponsored content, merchandise sales, and more) have contributed to the establishment of children's video production into a popular, lucrative venture. As a result, there have been some recent industry shifts concerning children's media and YouTube. Primarily, there has been a change in the power relations towards bottom-up production. No longer viewed as a supplementary distribution outlet for TV-produced content, YouTube is increasingly recognized as a source for 'televisable' content. Many successful YouTube channels have been picked up by leading networks and streaming platforms, their videos featured alongside traditionally produced content. Additionally, there is a rise in media production and management companies that focus on YouTube content. These companies engage YouTube content in various ways, including purchasing and distributing channels to networks, YouTube channel management, assisting existing TV shows in developing content for YouTube, and grassroots attempts at low-tier incorporation, among others.

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However, not much academic research has focused on these videos beyond a handful of studies on specific channels or sub-genres (See Nicoll & Nansen, 2018; Jaakkola, 2019) and one attempted wider-scale assessment (Radesky et al., 2020). The alarming popularity and ever-expanding reach of YouTube-produced children's content makes it crucial for parents, educators, and policymakers to study this phenomenon and assess its impact on both families and the media industry. This study aims to address the knowledge gap that exists around user-produced children's videos on YouTube by providing a typological map of the landscape and initial exploration of the relations between content and features.

Method

The study corpus consists of 100 user-produced children's videos was collected in late February 2021. A sampling method inspired by previous studies (e.g. Shifman, 2012; Radesky et al., 2020) was developed and applied to ensure that the sample both reflected the current landscape and addressed algorithmic considerations. This included using the search term "children videos" and YouTube's 'view count' filters, sampling videos recommended by YouTube's algorithm, and addressing popular genres identified by mainstream media and past studies. The sampled videos were subjected to content analysis and analyzed in terms of YouTube characteristics (such as number of views, channel subscribers, length, etc.) and content-related features, including genre, format, materials, actors, setting, narration, production quality, use of visual effects, and overall quality and educational value.

Selected Findings

The analysis led to the identification and conceptualization of 13 distinct genres of user-produced children's videos: *unboxing*, *surprise eggs*, *finger family*, *play-doh*, *nursery rhymes*, *kids songs*, *learning*, *pretend play (enactment)*, *pretend play (toys)*, *storytelling*, *arts & crafts*, *entertainer in character*, and *process repetition*. Each video genre had a distinctive and often unequivocal video format associated with it (2D/3D animation, live action, or hands-only). The data also revealed that 23% of the sampled videos belong to licensed channels, reflecting the discussed industry trends. Overall, the videos were clearly targeted towards early childhood audiences (preschool and younger). In this abstract I would like to focus on a few select genres not commonly featured in the literature:

Learning series videos feature the most educational elements from the sample. Each video is dedicated to learning a preschool-level subject, such as counting numbers, colors, shapes, ABCs, etc. Most of these videos are 3D animated, featuring animated object rather than people (as opposed to nursery rhymes), the music (songs and/or melodies) is usually accompanied with disembodied narration and sound effects.

Nursery rhymes videos usually feature familiar nursery songs sung by a cast of 3D animated characters, mostly people but occasionally singing animals too. Most of the videos in this genre are memetic of each other using the same repeated structure of family and animal cast, vehicles, same list of songs, and so on.

Kids songs differ from the 'nursery rhymes' genre in that they feature original songs about various situations or holidays (mostly Halloween). These videos are animated 3D and 2D, the majority feature animated people, and are of medium-high production quality. Despite the potential educational value of some prosocial messaging, many of the lower quality videos feature scary and violent content.

Entertainer in character videos always feature an adult actor in costume, in a commercial or staged location, narrating their so-called adventure to the accompaniment of background melodies. The production of these videos is medium yet relatively simple (one camera or continuous shot) with rare visual effects despite the known expansive resources available to these successful influencers. This suggests an intentional strategy intended to attract children who are more easily immersed in the content when captured through a simple lens. The imaginative play modeling and simple narration of activities offer some educational value.

Pretend play (enactment) videos are usually family productions featuring the children and adults acting out scripted scenes, usually in their homes or yards, accompanied by sound effects and animated special effects. These videos lean heavily on consumerism and feature lots of expensive, large-item toys. These videos are generally captured by home recording devices or phones.

Pretend play (toys) videos differ from the enacted pretend play genre in that they featuring adult hands playing with the toys, set up in simple indoor staged locations. These too employ simplified production efforts and are often accompanied with sound effects and exclamations, though only half had scripted narration. Despite being heavy on consumerism, the simplified imaginative play offers some educational value in that it models playing for young children. These videos are closely related to other toy play genres, such as *unboxing*, *surprise eggs*, and *play-doh*.

Discussion

The selected findings indicate that there are unique interplays between genre, content, format, educational value, and more to be found in these videos. For example, there is a clear division between the format of genres licensed by networks (only animated and live action) and those not (hands-only particularly excluded). Yet this distinction is not reflected in the popularity and number of views of the non-licensed genres. This suggests that despite changes in content consumption and the departure from public broadcasting, there is still a distinction made between what is deemed TV-worthy content by corporations and what is not. The licensed genres and video formats are reminiscent of traditional children's television shows. However, this also does not necessarily reflect the quality or educational value of the content, both licensed and overlooked.

Ultimately, each of the genres identified in this study offer much to learn and unpack, the analysis of which can provide valuable insights into the materials that children are increasingly consuming. In addition to highlighting the importance of studying child-targeted YouTube content, this study can serve as a basis for future studies.

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