Thesis Project Portfolio

A New Set of Hands-on Courses in Computer Science

(Technical Report)

The Connection Between Twitch.tv Interactive Features and the Development of Parasocial Relationships

(STS Research Paper)

An Undergraduate Thesis

Presented to the Faculty of the School of Engineering and Applied Science

University of Virginia • Charlottesville, Virginia

In Fulfillment of the Requirements for the Degree

Bachelor of Science, School of Engineering

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Spring, 2023

Department of Computer Science

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Executive Summary

The internet has drastically altered the way that people communicate with each other and share ideas. No longer are people constrained to talking with each other face-to-face or over the phone. The internet has added much more dimensionality to communication, allowing spontaneous communication between people across the globe, through many different mediums such as online forums, virtual reality, and of course social media. However, with expanded communication lines, it becomes crucial to consider the nuances of online communication and the new ways in which interactions can go sour. Specifically, the anonymity aspect of the internet is one notable cause of antisocial behavior such as online harassment or other forms of negative interaction, as people feel that there is lower threat of repercussion for their actions. These negative interactions online can be harmful to mental health. Therefore, it becomes important that we scrutinize the way interaction occurs online and facilitate positive interactions over negative ones. To accomplish this task, we need to study current internet platforms such as social media and examine their effects on the way interaction is done in a virtual space so that we may better understand how to design these platforms. In particular, one type of interaction that could be investigated further is "parasocial" interaction i.e. one-sided interaction.

It is important to teach new students entering the workforce so that they can design these platforms to better encourage prosocial behavior. Currently at UVA, there seems to be less of a focus on teaching practical coding skills, such as working with certain languages, tools, and frameworks. To fill in this gap of knowledge, the technical report proposes a new type of course offering in the computer science department at UVA. The objective of such a course is to prepare students about to enter the industry by introducing them to the tools and programming languages

that they might encounter in their job. This report provides a course syllabus detailing the objectives, course assignments and their grading breakdown, and logistics. The course is designed to accommodate independent learning through asynchronous, project-based learning. By taking this course, students can become acquainted with new tools and come out with a project to show for it. I think that adding a course like this would be helpful to UVA students wanting to pursue new skills and provide more variety to course offerings in the Computer Science department.

The STS research paper investigates the phenomena of one-sided relationships known as parasocial relationships on the popular livestreaming platform Twitch.tv. Parasocial relationships between a streamer and viewers are common and can be healthy if kept at normal levels. Otherwise, they can become an obsession that detracts from real-life relationships, and worsen quality of life. Not many studies have looked at how technical aspects of the platform such as the user interface play a role. Therefore, this paper seeks to answer the question: How do the interactive software tools and features on Twitch affect the development of parasocial relationships between streamers and viewers? This research looks into how features such as the chat box, subscription/donation system, and clipping/VOD features affect parasocial development through documentary analysis and empirical analysis of one of the top streams on Twitch (xQc). From this analysis, all the features help develop parasocial relationships further by driving emotional engagement with streamer as well as other viewers. The chat box provides an avenue for viewers to directly interact with a streamer through text-based messages, but this kind of interaction is impersonal, and these interactions are still parasocial. Subscriptions and donations made to a streamer allow viewers to feel closer to the streamer and when the streamer thanks these monetary gifts it can induce parasocial attachment. The clipping and VOD features

allow viewers to learn more about a streamer outside of their live broadcasting hours and drives further parasocial attachment. Altogether, these features help to foster a sense of community which according to research helps cause parasocial relationships to develop.

Overall, I think I accomplished my main goal of analyzing the main interaction features on Twitch and their effects on parasocial development. It was insightful to find standing research from the field which helped explain and support prior assumptions on this issue that I have formed from my experience using Twitch. One thing that I would do differently with this research is to do more empirical analysis and spend more time observing streams, which I think could reveal new findings. Future research could focus on this and do more qualitative methods such as surveying or interviewing viewers and streamers. Future research should also analyze features that haven't been covered here as well as newer features that have been released recently such as the "Guest Star" tool which allows a streamer to have viewers appear on stream with voice and video. I hope that this paper serves to better educate readers on parasocial relationships in livestreaming on Twitch.tv.