I. INTRODUCTION

YouTube is one of the most popular websites on the internet. It has grown steadily, yet rapidly, since its inception in 2005. In 2021, a survey by Pew Research Center showed that 81% of Americans use YouTube [1]. To deliver content to users that they want to watch, YouTube must maintain robust methods of sorting through content, displaying them, and giving tools to users to decide what to watch. A lot of attention has been, rightfully so, given to the algorithm that curates lists of videos based on a user’s activity and profile, both for the search feature and the recommendations. However, users still have the agency to choose which videos to watch from the algorithm’s output. To inform this decision, users rely on various affordances of the platform like the view count, the like count, the comment section, etc. The like-dislike ratio was a simple and concise indicator of social information that affected users’ perception of a video even before watching it. Given the rapidly changing landscape of political content sharing and the issues caused by the spread of misinformation, understanding how affordances shape people’s relationship with political content is extremely important. Through my thesis, I hope to study how YouTube’s decision to remove the public dislike count from all videos has changed users’ consumption and interaction habits with political content on the platform using a controlled experiment as well as data analysis.

II. BACKGROUND

On November 10th, 2021, YouTube announced that the dislike count will be made private across the platform, while the button would remain.¹ In addition to the dislike count, this change also removed the like-dislike ratio bar that was displayed below the count and informed users about the general consensus on the reliability of a video. Hereinafter, I refer to the dislike count and the like-dislike ratio bar together as the ‘like-dislike ratio.’ According to YouTube, the like-dislike ratio was removed in an attempt to ‘protect creators from harassment, and reduce dislike attacks — where people work to drive up the

¹ https://blog.youtube/news-and-events/update-to-youtube/
On January 25th, 2022, Susan Wojcicki – YouTube’s CEO – defended the decision to remove the dislike count from videos in a blog post.\(^2\) She wrote -

“So we **experimented** with removing the dislike count across millions of videos over many months. Every way we looked at it, we did not see a meaningful difference in viewership, regardless of whether or not there was a public dislike count. And importantly, it reduced dislike attacks. Creators will still be able to find their dislike counts in YouTube Studio if they find it a helpful metric, and viewers can still dislike videos to inform their recommendations.”

Many people have pointed out the obvious effect this change has on users’ ability to identify reliable educational and instructional videos. For example, a video solving a math problem incorrectly with 80% dislikes now requires a closer examination of the comment section to recognize the unhelpfulness of the video. Moreover, creators can choose to hide the comment section completely, effectively removing any social information apart from the absolute like count. It is likely that this change also affects users’ relationship with news and political content on the platform.

Being one of the largest video streaming and user-generated content sharing platforms, YouTube has become an important source of news and political opinions for the world. 26% of adults in the U.S. say that they get news on YouTube, out of which 72% say that it is an important way for them to get news. Mainstream and established news organizations and independent news creators thrive together and are popular on the platform, with 49% being established news organizations, 42% being independent channels, and 9% other types of organizations. \(^1\)

Unlike other platforms that solely rely on an algorithmically curated feed to deliver content to users, YouTube emphasizes its search feature and gives users agency in determining which video to watch. This means users are frequently offered a list of choices from which they pick the video they want to watch. On the home page as well as the recommendations panel on a video page, YouTube lists videos with their thumbnails, title, channel name, view count, and upload date. In addition to these indicators, a truncated description is shown for each video on the search results page.

A user uses these indicators to pick a video to watch, which leads them to the video page. On a video page, YouTube shows users the view count, upload date, like count, channel name, subscriber count, video description, comment section, and recommendation panel. Before a user commits to watching the video, they will often spend some time assessing the reliability of the video by interacting with the

affordances of the page. The view count, the like count, the comment section, and earlier, the dislike count, all influence the perceived credibility of the video. A user may decide to not watch a video in response to negative feedback from the dislike count or the comment section. In fact, YouTube recognizes this dynamic and only counts a view when a user has watched a video for at least 30 seconds.\(^3\)

![Like & dislike buttons with count and ratio bar](image1)

Figure 2. Like & dislike buttons with count and ratio bar

![Current like and dislike buttons, without dislike count and ratio bar](image2)

Figure 3. Current like and dislike buttons, without dislike count and ratio bar

### III. THESIS STATEMENT

According to the MAIN (Modality-Agency-Interactivity-Navigability) model [2], technological cues that surround the presentation of online media can affect how content is subsequently evaluated. The model theorizes that news endorsed by the majority will trigger the bandwagon heuristic or the mental shortcut that if others have praised this content, then it must be good. On YouTube, the like and dislike counts, and their ratio, are social cues that indicate whether a video has been endorsed by the majority or not. This triggers the following research question -

**RQ1: How does the like-dislike ratio change which political videos users choose to watch?**

In general on YouTube, users tend to like videos more than dislike them. 85-90\% is widely considered neutral\(^4\). While different users have different interpretations of the like-dislike ratio, I assume that, on average, a high like-dislike ratio means more than 90\% likes, and a low like-dislike ratio means less than 85\% likes. Assuming that most YouTube users understand this scale, I assume that a high like-dislike ratio offers positive social feedback, and a low like-dislike ratio offers negative social feedback (Table 1). It is intuitive to think that if a user receives negative feedback from the like-dislike ratio on a video, they are less likely to choose to watch that video.

---

\(^3\) [https://www.tubics.com/blog/what-counts-as-a-view-on-youtube](https://www.tubics.com/blog/what-counts-as-a-view-on-youtube)


Sources on the internet point to this average. I will adjust the figures upon analyzing YouTube data myself.
H1: Negative feedback from the like-dislike ratio decreases the likelihood that users would choose to watch a political video.

<table>
<thead>
<tr>
<th>Percentage of likes</th>
<th>Kind of feedback</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 85% likes</td>
<td>Negative feedback</td>
</tr>
<tr>
<td>85-90% likes</td>
<td>Neutral feedback</td>
</tr>
<tr>
<td>&gt; 90% likes</td>
<td>Positive feedback</td>
</tr>
</tbody>
</table>

Table 1: Like-dislike ratios and the kind of feedback they represent

The MAIN model notes that “another judgmental rule relevant to credibility evaluations is the expertise heuristic (“experts’ statements can be trusted”) which is often invoked simply by using an expert source in the presentation of the message.”. Research has shown that expertise cues have a significant influence on the perceived quality of online news content. [4] In the absence of the like-dislike ratio and bandwagon cues, users will need to rely more on other cues. On YouTube, the channel name is a cue that serves to trigger the expertise heuristic in viewers’ minds.

The names of news agencies are closely related to the heuristic of news content quality; therefore, the names of news agencies have been widely used to manipulate the level of source expertise [4]. People are more likely to recognize names of popular news organizations than independent channels. Thus, I assume that people associate more expertise with YouTube channels of established media organizations than independent journalistic YouTube channels. This leads me to my second hypothesis -

H2: The absence of the like-dislike ratio will increase the likelihood of a user choosing to watch a video from an established media organization.

The like-dislike ratio was a good indicator to spot videos with misinformation. While the algorithm is unlikely to share videos with an overwhelmingly low like-dislike ratio, these videos can still be shared by users. Without the public dislike count, users can only be informed of misinformation through the comment section, which might be disabled or users might not read. This leads me to my next hypothesis -

H3: The absence of the like-dislike ratio increases the likelihood of a user choosing to watch a video with misinformation.

It would also be interesting to study how the removal of the like-dislike ratio has changed users’ habits of liking and disliking. This leads me to my second research question.

RQ2: How has the removal of the dislike count and ratio bar changed users’ interaction with the like and dislike button on political content?
It is likely that the removal of the public dislike count has decreased the motivation for users to click the dislike button. YouTube has claimed that the change has reduced the occurrence of dislike attacks and harassment. There is no obvious reason why the absence of the dislike count would reduce or increase the likelihood of a user clicking the like button. Based on these intuitions, I hypothesize -

**H4: The removal of the public dislike count has reduced the number of dislikes on political videos on YouTube.**

### IV. APPROACH AND METHODS

**IVb. Research Question 1**

I hope to conduct a randomized controlled experimental study with a 3x2x2 design. The factors that I want to manipulate are (1) Like-dislike ratio (low, neutral, high); (2) Channel type (Established media organization, independent channel); and (3) Misinformation (contains, doesn’t contain).

Participants will be randomly assigned to one of two sets of the same videos - one without the like-dislike ratio, and one with. The videos will be listed in a format similar to the YouTube search results page, where they will be able to see the title, channel name, and thumbnail of each video. The participants will be allowed to click and open each video, which would display the like-dislike ratio or just the like count depending on the set, in addition to all of the previous attributes. This design is intentional as YouTube users only see the like count upon opening a video on the platform. The participant is tasked with selecting their top three choices of videos they would watch. A visualization is shown in Figure 4. In addition to this activity, I will also collect information about the users’ age, gender and education level, as well as their activity level on YouTube, their political leaning, their prior knowledge of the topic of the videos, and their prior knowledge of scientific methods. A list of variables is provided in Table 2.

I am still considering how to recruit participants. Two options that I may pursue are (1) recruiting university students; and (2) recruiting workers through MTurk.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>First choice to watch (DV)</td>
<td>The index of participant’s first choice of video to watch</td>
</tr>
<tr>
<td>Second choice to watch (DV)</td>
<td>The index of participant’s second choice of video to watch</td>
</tr>
<tr>
<td>Third choice to watch (DV)</td>
<td>The index of participants' third choice of video to watch.</td>
</tr>
<tr>
<td>Like-dislike ratio (IV)</td>
<td>A categorical variable (75-85% likes, 85-90% likes, 90%+ likes), denoting negative feedback, neutral feedback, and positive feedback</td>
</tr>
<tr>
<td>Research Variables</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Channel type (IV)</td>
<td>A binary variable (established media organization, independent journalistic channels), denoting two major kinds of political content on YouTube.</td>
</tr>
<tr>
<td>Contains misinformation (IV)</td>
<td>A binary variable (contains misinformation, doesn’t contain misinformation)</td>
</tr>
<tr>
<td>Youtube activity (BV)</td>
<td>To account for participants’ level of experience with YouTube, questions about their level of activity on the platform.</td>
</tr>
<tr>
<td>Political leaning (BV)</td>
<td>To account for participants’ political leaning</td>
</tr>
<tr>
<td>Prior knowledge of topic (BV)</td>
<td>To account for participants’ prior knowledge of the subject content, question about their familiarity with the topic.</td>
</tr>
<tr>
<td>Prior knowledge of scientific methods (BV)</td>
<td>To account for participants’ prior knowledge of scientific methods, question about their familiarity with scientific methods.</td>
</tr>
</tbody>
</table>

Table 2: Research variables  
DV: Dependant variable, IV: Independent variable, BV: Background variable
IVb. Research Question 2

To study trends of likes and dislikes on videos of political YouTube channels, I hope to gather data about videos published by various established news organizations and independent channels using YouTube’s API. I will then analyze this data to see if interactions with the like and dislike buttons have changed over time.
REFERENCES


BIBLIOGRAPHY


[7] Pew Research Center YouTube Study Methodology