Times Newer Roman: A Crowdsourced Font

The Effectiveness of Interactive Media at Disseminating Information

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By
Khoi Pham

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On my honor as a University student, I have neither given nor received unauthorized aid on this assignment as defined by the Honor Guidelines for Thesis-Related Assignments.

ADVISORS

Rider Foley, Department of Engineering and Society

Rosanne Vrugtman, Department of Computer Science

Why Internet Discussion Is Terrible and What Can Be Done

A popular internet adage is Godwin's Law, stating that as an online discussion goes longer, the probability of a comparison to Adolf Hitler being made grows (Miller, 2013). While some of the negative aspects of online discussion can be attributed to innate human nature, most of the responsibility falls on the internet as a medium (Lipinski-Harten & Tafarodi, 2013). The amount of negative language and insults thrown on online discussions have caused many users to leave social media websites, broken real-life relationships, and increased the amount of existing anger on the platform, leading to a negative feedback loop (Wang et. al, 2011). Negative online discourse is a problem and research has alluded that individual websites suffer at varying degrees, which can be seen in Figure 1, showing that certain design aspects of these platforms either exacerbate or reduce the problem (Baughan et al., 2021).

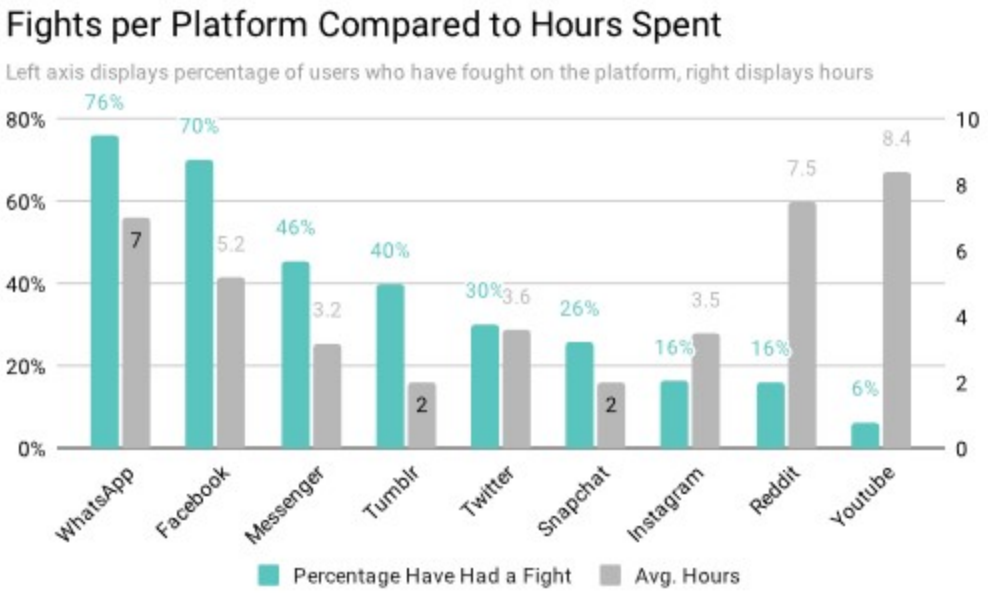


Figure 1. Graph showing the differences in the argument rate of platforms (Baughan et al., 2021)

Social media platforms are willing to put forward design decisions that encourage toxic behavior if it meant users would stay on their websites for longer. Around 2016, Facebook hired

a great number of sociologists and data scientists to figure out how they could design their website to increase the amount of time a user would spend on their website (Merrill & Oremus, 2021). Consequently, Facebook's feed algorithm began showing posts with the most angry face reactions more often since users interacted more with those posts. Internal documents within the company show that employees knew the moral qualms of the algorithm and when they brought those concerns to their superiors, their concerns were dismissed. Figure 2 shows Mark Zuckerberg, the CEO of Facebook, encouraging people to angry face react. It was only after the public took notice and pressured Facebook that the algorithm changed. A similar backlash occurred after the January 6th riots, causing Facebook to deweigh live videos, which were frequently used during the event, in their algorithm.

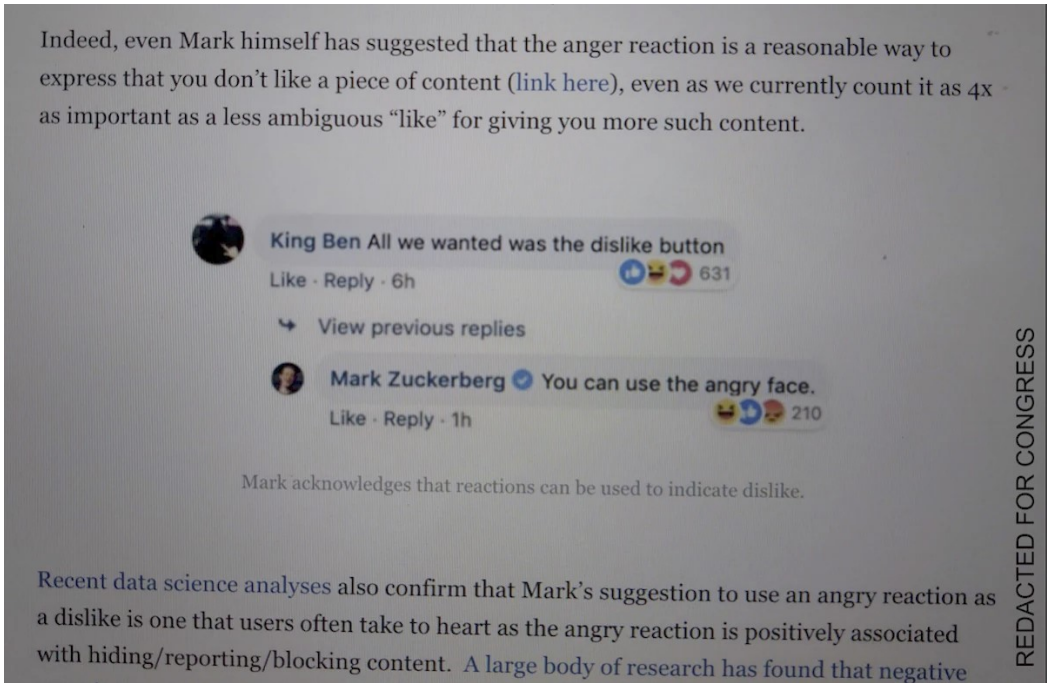


Figure 2: Zuckerberg telling a Facebook user to angry face react (Merrill & Oremus, 2021)

In addition to Facebook, YouTube's recommendation algorithm had intentionally been showing users incendiary and controversial content to gain more engagement (Munn, 2020). Again, executives ignored warnings and it was only after complaints of spreading vaccine

misinformation that YouTube began flagging videos as “borderline content”, videos that won’t be recommended to users (Bergen, 2019). Platforms such as Facebook and YouTube only change their design after public scrutiny. A solution to toxic discourse has to target the public, not the platform itself.

Times Newer Roman is a parody social media website created to tackle this problem. The platform attempts to educate people about the impact of feed algorithms, voting systems, and content moderation policies. By mimicing design aspects from websites such as Facebook, Twitter, and Instagram, Times Newer Roman showcases the problems of these websites in a fun, light-hearted manner that users can easily digest. Using the framework of Actor Network Theory, this paper will examine the ability of interactive media, such as Times Newer Roman, to spread a message.

The Components of a Crowdsourced Font

I made an online social media parody called Times Newer Roman that can be viewed at crowseeds.com/font. The goal of the platform is to create the best font imaginable through crowdsourcing. Though the project was originally built for entertainment, it has been repurposed for educational use. Users get assigned a letter to draw and submit to a database, see Figure 3. Users can also like and dislike other artists’ drawings, as shown in Figure 4, with the highest rated drawings becoming a part of the font.

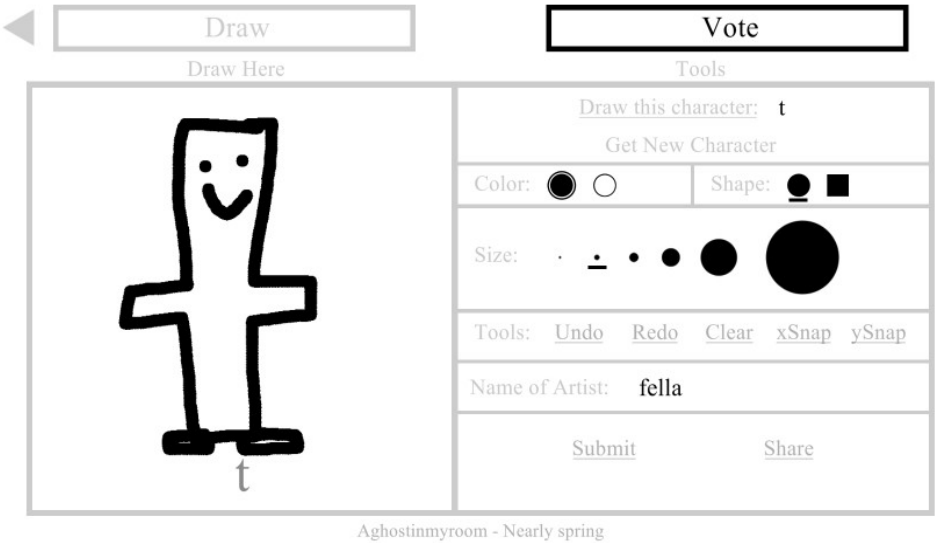


Figure 3: Drawing Screen of Times Newer Roman (Pham, 2022)

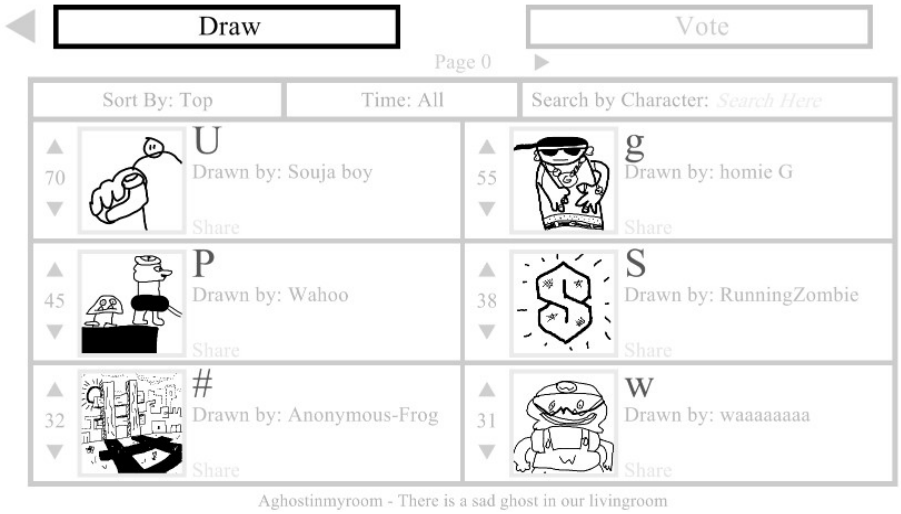


Figure 4: Voting Screen of Times Newer Roman (Pham, 2022)

The software was coded using the C# programming language and built using Unity, a game engine. The reasons for using Unity are that it is cross-platform, which allows the software to be run on phones and web browsers. It also handles many aspects such as audio and internet connections automatically, reducing the workload of the developer.

When the player first loads the website, they are greeted with a title screen that explains the concept of the game, as seen in Figure 5. Examples of drawings are shown with the letter and

artist name attached. Below are buttons that lead to the drawing and voting pages, seen in Figure 3 and Figure 4 respectively, in addition to buttons leading to a settings page and an explanation page.

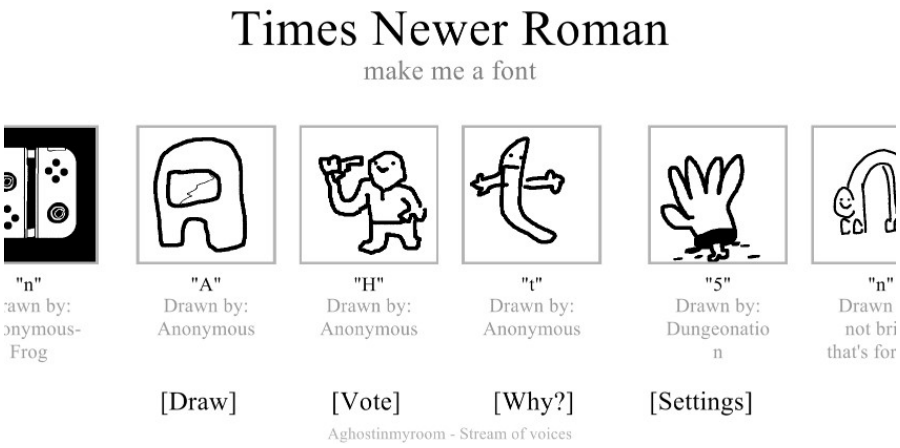
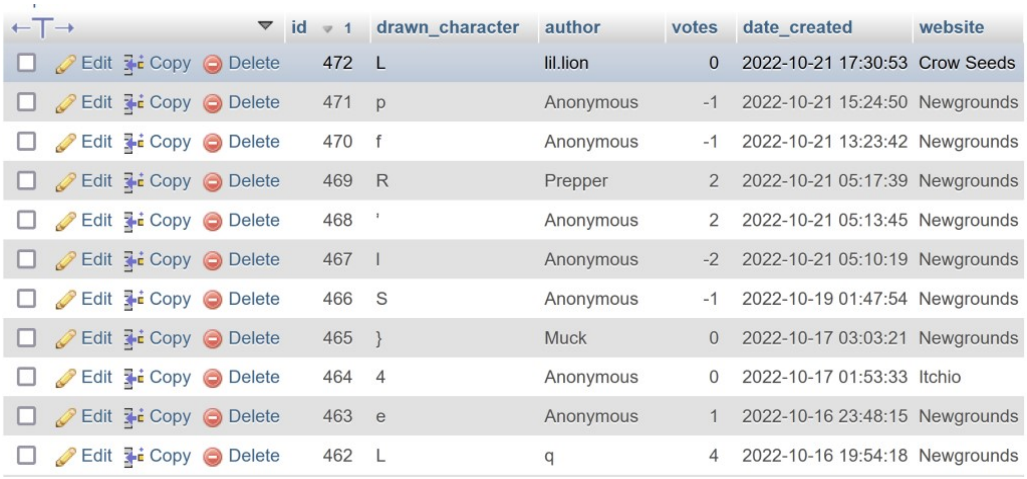


Figure 5: Title Screen of Times Newer Roman (Pham, 2022)

The website is running 24/7 through Amazon Web Services, or AWS, a cloud computing platform that hosts the server code on Amazon's hardware. Submitting a drawing calls code running on the AWS service to store the image data in a MySQL database, an open-source data management system. The database utilizes phpMyAdmin, a database administration tool, see Figure 6. The code used to run the database is built using PHP, a programming language that specializes in web server development. In addition to crowseeds.com/font, Times Newer Roman can be viewed on other websites that host browser games such as Newgrounds and itch.io, to increase game's visibility.



	id	drawn_character	author	votes	date_created	website
Edit Copy Delete	472	L	lil.lion	0	2022-10-21 17:30:53	Crow Seeds
Edit Copy Delete	471	p	Anonymous	-1	2022-10-21 15:24:50	Newgrounds
Edit Copy Delete	470	f	Anonymous	-1	2022-10-21 13:23:42	Newgrounds
Edit Copy Delete	469	R	Prepper	2	2022-10-21 05:17:39	Newgrounds
Edit Copy Delete	468	'	Anonymous	2	2022-10-21 05:13:45	Newgrounds
Edit Copy Delete	467	I	Anonymous	-2	2022-10-21 05:10:19	Newgrounds
Edit Copy Delete	466	S	Anonymous	-1	2022-10-19 01:47:54	Newgrounds
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Edit Copy Delete	463	e	Anonymous	1	2022-10-16 23:48:15	Newgrounds
Edit Copy Delete	462	L	q	4	2022-10-16 19:54:18	Newgrounds

Figure 6: Screenshot of phpMyAdmin managing the Times Newer Roman database

Design aspects of the platform are made to enable toxicity. Artists can name themselves anything and keep themselves anonymous. The voting feed either displays the highest rated images of all time, limiting the visibility of newer posts, or shows the newest images created, depending on the website hosting the software. There is no moderation on the website.

The results and commentary of the experiment will be publicized at a later date to inform people of the effects these design decisions had on the content created. The accessibility and humorous concept of Times Newer Roman will hopefully educate people on the effect that social media design has on the behavior of its users.

Using Actor Network Theory To Analyze Intentional Social Media Design

Actor Network Theory, or ANT, will be used to analyze the relationships between the social media companies, the users, the algorithms and design choices on their sites, and interactive media to explain how they all relate to the problem of companies engineering their platforms to encourage toxic discourse. The framework breaks down the above problem into a series of actors, which can be human or non-human, and describes how they interact. Actors are

independent and are not “the subject of the other, more important actors’ whims” (Latour, 2005). This is important as it separates the non-human elements of the system, such as the feed sorting algorithms on social media or a game an activist creates, from their creators, making them contributors to the system with as much as a role their human counterparts.

Platforms have also delegated the responsibility of content moderation and prioritization to automated algorithms. Companies have inscribed the value of keeping users on their website as long as possible, which has been responsible for inadvertently popularizing controversial content due to their high user retention rates (Merrill & Oremus, 2021). Ultimately, the prescription, the behaviors reflected back onto human actors, of social media algorithms causes users of the site to engage in bad behaviors, with the feed algorithms of Facebook playing a part of the January 6th Capitol Riots and vaccine hesitancy during the COVID-19 pandemic. The behaviors prescribed as a result of the inscriptions on social media platforms are the crux of this problem and ANT allows us to break down the back and forth relationship between non-human and human actors.

Breaking the problem into actors and relationships represents the system in an easy-to-digest manner. Companies have to follow laws created by government institutions, for which there is a lack of restrictions (Patterson, 2020). Companies inscribe their code to encourage inflammatory behavior from their users. Companies won’t change because of the monetary incentive of keeping users on the site. Users can complain and cause the company to change its policies with enough noise (Merrill & Oremus, 2021). Users are also unaware that companies intentionally cause anger (Bergen, 2019). One could even argue that social media discriminates against users who do not partake in controversial posts, due to the lower prioritization of other posts.

Looking at the web of relationships, it can be seen that users are powerless unless they band together, which is rare (Merrill & Oremus, 2021). Users cannot control the algorithms that decide what posts are shown on their feeds. They cannot remove inflammatory or fake content. They lack the ability to inscribe their values onto social media technologies. In the other direction, the prescription of platforms have is overwhelming. Social media has an immense influence on a user's mood (Wang et al., 2011), political votes (Allcott & Gentzkow, 2017), and opinions (Bergen, 2019). ANT also presents alternative solutions to pressuring social media companies. Since government institutions are also an actor, they can change laws to force change on platforms, such as repealing Section 230 which would make social media companies liable for content hosted and the values inscribed onto their platform (Patterson, 2020). In the network, the government is at the whims of the people, and people can be influenced by media. Among those media are interactive entertainment like Times Newer Roman and *We Behold What We Become*.

Nickey Case's (2016) *We Behold What We Become* is a browser game that attempted to capture the polarization of United States politics caused by the news cycle, see Figure 7 (Boykin, 2016; Case, 2016). The game has garnered millions of plays and had multiple news outlets write about the project, with Josh Boykin of Intelligame stating that "We Become What We Behold sits with me in ways many others haven't." The accessibility and silliness of the game attracted the millions of players who wouldn't normally engage in the topic, popularizing the issues of the 24/7 news cycle.

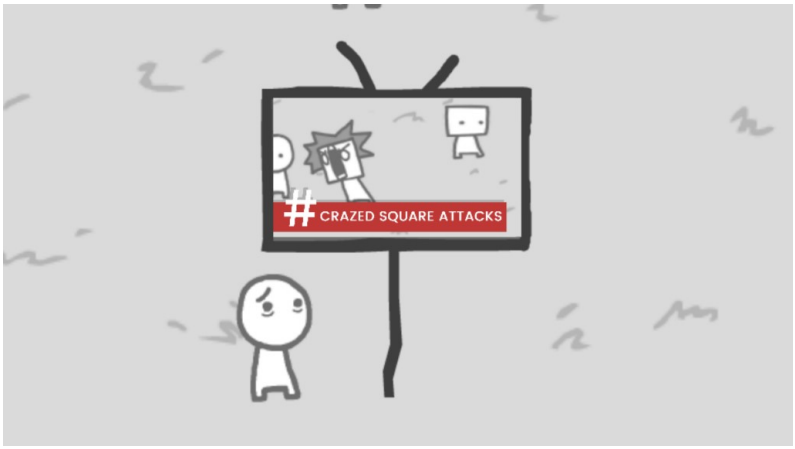

Figure 7: Gameplay of We Become What We Behold (Case, 2016)

Media can get people to act in the system, influencing the design decisions of social media platforms using the relationships they have with the companies and government. The creation of projects such as Times Newer Roman and *We Behold What We Become* for social commentary brings up an important question. Though interactive media is effective at teaching ideas (Singhal et al., 2013), is it effective enough to instill change?

How Can We Measure The Dissemination Ability of Interactive Media?

According to Cisco's 2020 Annual Internet Report, the amount of information on the internet has reached over 64 zettabytes, around 10^{25} bits of information (CISCO, 2020). Cognitive psychologist Herbert Simon warned of an "increasing poverty of information", where the fast-paced and information-dense nature of the internet will cause the human attention span to shorten, and attaining attention for any objective would be difficult (Simon, 1971) (Flemming, 1996). This statement has been confirmed to be true (Webster, 2010). Humans also have a working memory of 5-7 chunks of information and constantly have their attention refreshed (Nelson, 1994). These traits of the internet and human memory make it important to create media that both grab a user's attention and make them retain it. Digital interactive entertainment has

been considered by many sociologists as the medium that attains both (Singhal et al., 2013). How effective is interactive entertainment at disseminating a message online?

Sending a Google Forms online survey through social media can measure dissemination ability. The form will ask the following questions

- Do you remember any messages from any online games you've played?
- How effective was the message conveyed?
- How often do you think about the message?
- If the message was conveyed through another medium such as an article or video, would you be more or less likely to remember the message?
- Would you have viewed the game if it was a different medium?
- Did the message make you want to do something?

However, platforms such as Facebook, Twitter, and Instagram require an established following to get posts on users' feeds, and while posting on a Reddit subreddit or a 4chan board can disseminate posts to an entire community, a specific community is not representative of the average internet user (Waters & Lester, 2010). In addition to posting a form via Twitter, Instagram, Facebook, and Reddit posts on my accounts, Times Newer Roman will ask its users to also fill out the Google Forms survey. Since Times Newer Roman already has an established userbase in the hundreds and they have just played a game with a message, getting survey responses should not be an issue. The survey responses then can be classified as either viewing games as more effective or less effective at sending a message than other mediums. Conclusions will be based on the type of response that has the majority.

Using Interactive Media to Change Social Media

The research will be used to confirm whether or not interactive media is a viable medium to spread information on the internet. Hopefully, the research from the survey and the results of Times Newer Roman will influence activists to use games as a means to spread their message. In particular, Times Newer Roman can prove that interactive media has helped educate people on the detrimental effects of social media design. From there, the expectation is that more people will talk about platform design on the internet, helping pressure either social media companies or government institutions to alter social media to cause less anger and toxicity. These results will hopefully address the problem of social media companies being unwilling to change their design to limit toxicity on their platform.

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