Redesigning Social Media

Limiting Self-Radicalisation caused by YouTube's Recommendation Algorithm

T̃UDelft

Preface

And suddenly I am writing the last part of my thesis on Prevention of Self-Radicalisation through YouTube's Recommendation Algorithm, hoping it will support positive changes to Social Media Platforms to create a safer online presence for everyone.

Starting on my master thesis was always something that I dreaded, but thankfully I found a subject that I felt so strongly about. It made the 5 months it took me to write this thesis interesting, exciting, and even fun. It got me through the long hours and sometimes sleepless nights this thesis has cost me. And even though writing this thesis has had its up and down, I am very proud of what I created, and I am happy to finally share it with everyone.

I want to use this space to thank my graduation committee and especially Lavinia. Lavinia, you have been a great support in the last months. Your ideas, input and feedback brought this thesis to the next level and made writing this thesis more enjoyable for me. I want to thank you for your enthusiasm, your time and your efforts. To Roel and Mark, I want to thank you for your feedback at the crucial moments and the effort you both put in to help me create a better thesis.

I want to thank the amazing people around me that supported me through these seven years. The friends from back home, the friends made in Delft, my family and my partner. The past 7 years would have been dull without you.

Lastly and most importantly: thank you mom and dad, for always believing.

And now it is time for my next challenge.

Larissa van de Vorstenbosch
June 18th, 2023

Executive Summary

Through Self-Radicalisation, individuals are quicker to commit terroristic acts, without having to be linked to any radical or extremist organisation. Self-Radicalisation has been a recurring theme on Social Media platforms. On Social Media platforms, such as YouTube the focus on engagement and revenue led to the implementation of Recommendation Systems. The YouTube Recommendation System has reportedly pushed radical videos to innocent users. Besides that, the Recommendation System tends to recommend similar content, which leads to Users diving into a rabbit hole. Within these rabbit holes, often the same opinion is shared, leaving the Users in an Echo Chamber. These dynamics can radicalise a User, which could have a big societal impact. Therefore, we see a need to interfere in these radicalisation processes on YouTube.

There is a need to investigate interference in the radicalisation processes. However, current literature on the prevention of Self-Radicalisation only focuses on removing videos from YouTube or deradicalizing Users, which are not linked to the radicalisation process, leaving a gap where possible solutions could be formulated. To interfere with these radicalisation processes, Design Alterations would be a sustainable and effective solution.

The Research Objective of this Thesis is to formulate Design Alterations for YouTube that would interfere with Self-Radicalisation. A Policy Analysis of Multi-Actor Systems in combination with a Value-Sensitive Design approach was used to answer the Research Question, which was formulated to achieve the Research Objective, namely:

> *What Design Alterations can be made to prevent Self-Radicalisation through YouTube's Recommendation Algorithm?*

First, a literature review was conducted to establish the knowledge base for this thesis. This was followed by simultaneously conducting the Actor Analysis and the System Analysis. In the Actor Analysis, criteria for the Design Alterations were formulated. While the System Analysis tested known Self-Radicalisation Pipelines. The Design Alterations were formulated and then tested using the criteria from the Actor Analysis and were tested on their influence on the Self-Radicalisation Pipelines.

Three Design Alterations were proposed in this Thesis:
- Block Button: Functionality that would help you block out similar content on your recommendations.
- Profiles: Possibility to host multiple profiles under the same User
- Scale: This creates insight into the political bias of a video and indicates what this political bias entails.

While all alterations influence Self-Radicalisation pipelines on YouTube this thesis does not advise implementing all alterations. The Block Button and the Profiles are advised to be implemented, with some slight alterations. However, the Scale functionality needs to be further addressed before implementation is possible, as it clashes with some of the criteria formulated in the Actor Analysis.

The results of this Thesis contribute to the knowledge base on Self-Radicalisation intervention on YouTube and offers a new type of solution, namely Design Alterations, not earlier investigated in the literature. These Design Alterations also follow the theory of the Self-Radicalisation Shortcut, where this is not used in other research. The research also tested the reported Radicalisation Pipelines through a Systematic view, rather than observational. While contributing to the knowledge base, this research also found other research possibilities, such as the hierarchy of User Values, as well as conducting a complete System Safety Analysis.

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1. Introduction

In 2014, 21-year-old college dropout Caleb Cain was going through a difficult time in his life. He felt like he was wasting his potential, he was severely depressed and fairly isolated from the outside world (De weerbare democratie, N.D.). It was then that Cain first encountered a self-help video by Stefan Molyneux on YouTube. Cain recognised his struggles in the struggles the creator was describing and recognised himself in the creator (Roose, 2020). However, Molyneux also had a political agenda and would push an Alt-Right agenda in some of his other videos. After watching this content, Cain was recommended more Alt-Right content, which eventually led to him radicalising and identifying as a White Nationalist (De weerbare democratie, N.D.).

1.1 Self-Radicalisation

The case of Cain is an example of Self-Radicalisation. Radicalisation refers to the process in which an individual aligns their views and motivations with those of an extremist organisation (Moghaddam, 2005). On the other hand, Self-Radicalisation refers to the phenomenon where individuals radicalise without being linked to an extremist organisation. This means that no extremist organisations actively push for radicalisation, nor are they actively recruiting. Self-radicalisation manifests faster than traditional radicalisation (Riyanta, 2022). Riyanta describes a quicker transition towards violent or terroristic acts for self-radicalised individuals than was registered in traditional radicalisation steps.

Self-radicalisation is an issue that needs attention, as it is emerging on social media (Riyanta, 2022). Social media play a big role in Self-Radicalisation as Extremist Organisations use the platforms to communicate, but also to share information and even recruit (Hollewell & Longpré, 2022). YouTube is one of the platforms that is used for this purpose.

1.2 YouTube's Recommendation System

To improve user experience, YouTube uses a Recommendation System. This system is aimed at recommending videos that would be of interest to the user. When users are shown interesting videos, they tend to spend more time on the platform. With YouTube being a primarily free service, the revenue they gain is created through advertisement income gained by playing advertisements at either the beginning or during the videos (Artero, 2010). If users watch more videos for a longer time, they see more advertisements, and this means the revenue for YouTube increases. The recommendation system supports user engagement (Hao, 2020). In turn, growth in user engagements leads to growth in revenue.

The Recommendation System creates a dynamic in which Self-Radicalisation thrives. The recommendations that are used to improve user engagement are not always straightforward. When information challenges our beliefs, or what we find acceptable, we are more likely to engage (Weill, 2022). Translating this to YouTube's recommendation system leads to an increase in recommendations that contain misinformation, are violent, or contain problematic opinions, as YouTube recognises these videos as videos with high engagement (Yesilada & Lewandowsky, 2022). Kirdemir et al. found that the YouTube Recommendation Algorithm does show a bias toward this niche of videos (2021). Papadamou et al. add that there is a realistic probability of encountering this type of content within 5 hops and that once a disturbing video was shown and watched, the algorithm recommended increasingly more similar content (2021). Alfano et al. (2020) had similar findings. Ribeiro et al. (2020) looked more at the radicalisation of singular users and described the movement from commenting on milder content to commenting on more extreme videos. They witnessed the radicalisation pipeline by seeing that the algorithm does recommend Alt-Lite and Intellectual Dark Web videos. Alt-Lite videos are videos that contain Alt-Right ideologies, but they are presented in a more socially acceptable manner. The Intellectual Dark Web videos focus on opposing political correctness. Creators often see themselves as people that voice the opinion that everyone holds, but does not dare to share. From the recommended Alt-Lite and Intellectual Dark Web videos, users would receive channel recommendations for Alt-Right content and from there they would radicalise.

YouTube wants to prevent self-radicalisation and wants to make sure that in all the uploaded videos, there is no problematic content (Google Transparency Report, N.D.). The platform tries to enforce this through its Terms and Conditions that you need to agree to when signing up to YouTube. The Terms and Conditions emphasized fulfilling community guidelines when you upload content to the platform. In short: you are not allowed to upload illegal content and YouTube is allowed to scan uploaded content using automated systems (Service Voorwaarden, N.D.).

However, the automatic detection of content that goes against community guidelines has its limitations. YouTube has become a familiar platform in society's daily life. The platform connects content creators and viewers on topics that are of interest to both groups, creating a gap for content and fulfilling this gap at the same time. In recent years we have seen that younger generations tend to prefer online audio-visual systems, such as YouTube, over television, leading to an increase in the size of the platform (Budzinski et al. 2021). And in 2020 over 500 hours of video were uploaded to YouTube every minute (Statista, 2022). One could imagine that scanning 500 hours of video can cause YouTube to potentially oversee videos with inappropriate content (Sureka et al., 2010).

1.3 Rules and Regulations

There are Rules and Regulations set in place regarding Artificial Intelligence which the Recommendation System YouTube uses falls under. There are also regulations on hosting illegal content on service platforms like YouTube. However, concerning the Self-Radicalisation problem on YouTube, these Rules and Regulations fall short.

The European Commission is working on the implementation of the AI Act (AI Act, 2021). In this AI act, the European Commission shares guidelines to classify AI Technologies and sets guidelines and obligations per category:
-   Unacceptable Risks, such as technologies that use social scoring, are prohibited.
-   High Risks are allowed if it conforms to the safety regulations and requirements. This category consists mostly of technologies that work with medical or personally identifiable information.
-   Low Risks are allowed if transparency obligations are fulfilled. In this category, you will find person impersonation techniques, such as bots and deep fakes.
-   Minimal Risks are allowed without restrictions.

However, within this AI act, YouTube would fall under minimal risk. The YouTube Algorithm does not process personally identifiable information and would therefore not fall under the High Risk Category. The Algorithm also does not impersonate a person, which would make them Low Risk. This leaves YouTube in the Minimal Risk category. This would mean YouTube would not suffer from any restrictions based on this AI Act.

On the other hand, the European Commission is working on the Digital Services Act (Digital Services Act, 2022). While this act does influence YouTube, this influence is minimal and the influence on illegal content on YouTube is minimal:
-   Within the Act, YouTube is not liable for any illegal content they are not aware of. They, however, need to delete the content when they become aware that it's residing on the platform. This regulation is in line with YouTube's current Terms and Conditions. This regulation does not impose any changes to YouTube's current way of working.
-   Following the Act, YouTube also needs to provide the possibility to report content, which is already part of the YouTube interface and therefore does not influence YouTube.
-   YouTube will have to contact authorities in case they become aware of any illegal actions undertaken or planned. This regulation in itself would help with the prevention of illegal actions; however, it is still dependent on the videos being detected and analysed to establish whether this video includes illegal actions or the planning of these illegal actions.
-   The act introduces professional flaggers. These flaggers work outside of YouTube and are tasked with searching for illegal activities on the platform. If they find any illegal content, they make it known to YouTube, who then

must respond adequately. However, as stated before, there are 500 hours of videos uploaded every minute. This amount imposes on the efficiency of the regulation.

- The parameters used in the recommendation algorithm need to be included in the Terms and Conditions. While this supports transparency, the influence on end-users is not guaranteed, as only a very small number of users read the term and conditions (Sandle, 2020).
- Besides the above-mentioned regulations that are aimed at hosting services like YouTube, there are special conditions for big platforms. This includes the possibility to leave your user profile out when creating recommendations. However, as researched before by Kirdemir et al. (2021) and Papadamou et al. (2021), users without any previous activity receive radicalising content within just a few videos.
- For big platforms there are also requirements to conduct a risk analysis every year and to perform actions to mitigate the risks as found in the risk analysis. This risk mitigation can consist of either Recommendation System Adaptation or Design Alterations.

Recommendation System Adaption, changing the factors that determine what is recommended or changing the links between these factors, is something YouTube is already practising (Alfano et al., 2020). The algorithm is regularly tweaked to improve the algorithm. However, when looking at design alterations, YouTube is not as forthcoming.

1.4 Knowledge Gap

When looking at the existing literature, we see that there is a shortage of literature on Self-Radicalisation solutions on YouTube that are focused on Radicalisation Pipelines or that look into User Motivation.

When looking at research focused on the prevention of Self-Sadicalisation on YouTube, there is some research on possible solutions for Self-Radicalisation on YouTube. The research on the prevention of Self-Radicalisation through YouTube is however very limited due to the novelty of it. Current research on interventions focuses on:

- Prevention through better filtering of the videos (Sureka et al., 2010) (Hammer et al.,2019), and
- Deradicalization through the platform by so-called LeftTube creators and E-Education (Kareem, 2020)(Maddox & Creech, 2020).

However, when looking at the Self-Radicalisation shortcut Riyanta (2022), as well as the paper from (Alfano et al. 2020), these solutions might not be as effective as hoped.

1.4.1 Self-Radicalisation Shortcut

Moghaddam defined 6 steps of radicalisation (2005). Each step brings someone closer to being fully radicalised and committing a violent act. Riyanta found through Empirical Research that in the case of internet radicalisation, Self-Radicalisation, a shortcut to these steps is found (2022). This means that some of the steps that are normally a part of the radicalisation staircase are passed or moved through quicker. This means that individuals move towards committing violent acts quicker in comparison to regular radicalisation. We see that the steps that include the engagement with an extremist organisation are moved past (Second floor, Third floor and Fourth floor).

Within Moghaddam's Radicalisation Staircase, the biggest part of our population resides on the Ground Floor, *Psychological Interpretation of Material Conditions* (2005). Within this floor, the perception of fairness and just treatment is the focus (Moghaddam, 2005). People that experience the feeling of being treated unfairly can move up to the next level. The Ground Floor is also part of the Self Radicalisation Shortcut (Riyanta, 2022).

Moving on to the First Floor, *Perceived Options to Fight Unfair Treatment,* consists of individuals that perceive their situation as unjust. On this level, the population will try to improve their situation. Whether they perceive their situation as solvable within their power determines if they move on to the next level (Moghaddam, 2005). If they perceive their situation as not solvable, and they feel a lack of justice they will go up to the next level. The First Floor can also be found in the Self Radicalisation Shortcut from Riyanta (2022).

The population on the Second Floor, *Displacement of Aggression,* tends to, directly and indirectly, support organisations that nurture alternative and extremist attitudes and behaviour (Moghaddam, 2005). They align their views with those of these organisations. Individuals that are willing to turn this displaced aggression into physically displaced aggression, move on to the next floor. Within Self-Radicalisation, we see that the Second Floor can be surpassed (Riyanta, 2022).

On the Third Floor, *Moral Engagement*, individuals move away from morality as they are taught by governmental authorities and start following the morality of the organisation that they are engaging with. In this step, individuals also get isolated from the outside world, as secrecy is an important aspect of these organisations (Moghaddam, 2005). Whether or not an individual moves forward to the next level depends on the interference of the outside world. In this case, interactions with relatives or friends might limit someone from moving up. The individual is likely to move up when there is only a limited connection to people outside of the organisation. Within Self-Radicalisation, the Third Floor is surpassed (Riyanta, 2022).

Once an individual reaches the Fourth Floor, *Solidification of Categorical Thinking and the Perceived Legitimacy of the Terrorist Organisation*, there is very little opportunity to move away from the radicalisation staircase. Most people that reach this stage move forward to the last level. Within this level, individuals are let into the inner circle of a terrorist organisation. There is a lot of focus on conformity at this level, which makes leaving a lot more difficult for individuals (Moghaddam, 2005). People at this level get recruited to perform violent acts, moving them to the final level. Within Self-Radicalisation, the Fourth Floor is surpassed (Riyanta, 2022).

The Terrorist Act and Sidestepping Inhibitory Mechanisms are the last steps within Radicalisation. In preparation for committing a terrorist act, recruited individuals are taught that everyone outside of their organisation is wrong or evil. This makes radicalised individuals distance themselves from their victims. The organisation focuses on ensuring the acts are carried out and recruited individuals do not back out. Individuals that arise to this level are fully radicalised and often do not survive the act. This level is also seen in Self-Radicalisation (Riyanta, 2022). See Figure 1 for the complete overview of the Radicalisation Staircase and the Self-Radicalisation Shortcut.
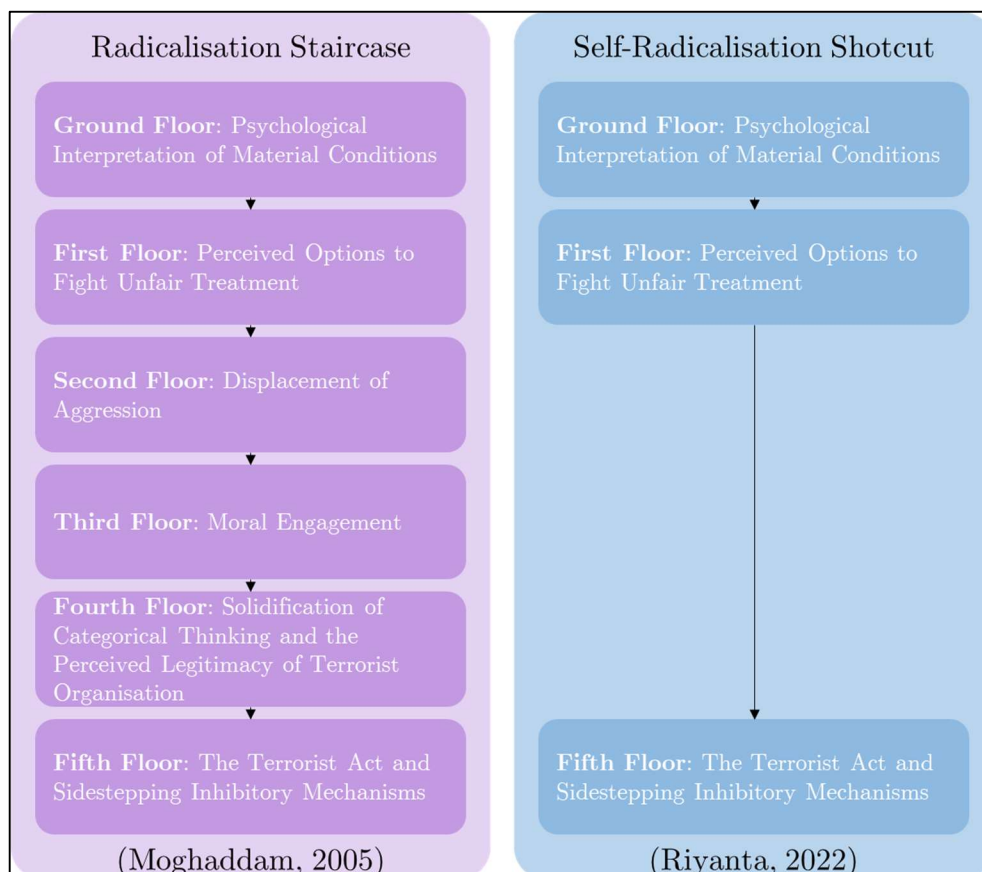
Figure 1: Radicalisation Staircase and Self-Radicalisation Shortcut

Looking at the Framework from Riyanta (2022), individuals are more likely to commit acts of violence after feeling like they are treated unfairly. Once they reach the Fifth Floor, a terrorist act is inevitable. Interfering at this stage is too late, the Deradicalisation Efforts through LeftTube and E-Education as proposed in current literature would therefore not solve the issue. An effective solution should focus on keeping individuals on the first floor of the radicalisation staircase and not have them move on to the Fifth Floor.

1.4.2 Self-Radicalisation Shortcut

On the other hand, the better filtering of content as proposed by current literature does not interfere with the radicalisation pipelines but rather tries to prevent the videos from being hosted by YouTube. However, as Alfano et al. stated, YouTube is an ever-developing platform (2020). When YouTube makes changes to either its filters or its recommendation system, radicalising content creators move along with these changes to still be able to push their content. The suggestion for better filtering, therefore, seems to be a short-lived solution. When formulating a solution there should be a focus on durability.

1.4.3 Self-Radicalisation Intervention in Other Recommender Systems

In other Recommender Systems, there is research on Radicalisation Intervention. This is mainly focused on News Recommender Systems. Most research is about heterogeneous Recommendation Systems. Ludwig et al. (2023) found that heterogeneous recommendations could potentially lead to deradicalisation of the user. While Interian et al.(2023) doubt the effectiveness of Diversity Aware Recommender Systems.

There is some research on making a design change by including a Bias Tool in News Recommender Systems (Patankar et al., 2019). This tool would show the political bias of news articles. The user can be recommended less polarising news based on the output of this score. Viewing the score can help put the article in perspective, helping the user to diversify their news intake. A Design Alteration, such as the Bias Tool, could interfere with the Radicalisation Pipeline on YouTube. However, there is currently no research on implementing a similar tool on YouTube, nor is there research on other Design Alterations.

1.4.4 Opportunities

To respect the Shortcut of Riyanta and the nature of YouTube, Design Alterations are a promising solution to Self-Radicalisation on YouTube. The Design Alterations would not be influenced by changes to the Recommendation System or changes made by Content Creators and would therefore be more durable than the filtering solutions. On the other hand, the Design Alterations should focus on preventing individuals from moving on to the Fifth Floor through the radicalisation pipeline as Ribeiro et al. (2020) described.

Besides that, there is some added value to looking at User Motivation. The available literature focuses on the dynamics around the users and the behaviour of the users, without looking into their motivation. Users are at risk of radicalisation. When trying to prevent them from taking part in the Self-Radicalisation Shortcut, they should be included in the creation of a solution. Solutions that do not match their motivations will not be used and therefore will not have the desired effect.

1.5 Research Objective

This research aims to deliver a solution to the radicalisation issues on YouTube. For this thesis specifically, the goal is to find a solution that interferes with the Radicalisation Pipeline rather than focus on a solution that tries to limit the number of radicalising videos or that tries to deradicalize. For the solution, this thesis looks at Design Alterations to the YouTube interface to prevent Self-Radicalisation.

This thesis will therefore dive into the emergence of Self-Radicalisation on YouTube through the Radicalisation Pipeline. The thesis will discuss the current situation of the systems involved to further understand the dynamics that form the foundation of Self-Radicalisation on the platform. Through interviews, this thesis will explore and map User Motivation and User Values. These Values will be used to form Design Alterations for YouTube's interface that could interfere with the Radicalisation Pipeline. Because the Design Alterations focus on the YouTube interface, this means that YouTube will look different and work slightly differently for Users, sometimes adding functionalities. Therefore, the Design Alterations need to be evaluated, using the formulated systems. The Design Alterations to the YouTube interface will be evaluated to ensure the Design Alterations are effective and desirable. Thus, answering the main Research Question of this master thesis:

> *What Design Alterations can be made to prevent Self-Radicalisation through YouTube's Recommendation Algorithm?*

This research will contribute towards a better understanding of Self-Radicalisation emergence on Social-Media and understanding Social-Media users' motivation regarding the YouTube platform. It offers possible interface alterations that could be implemented by YouTube. Lastly, it will contribute to future research concerning Self-Radicalisation Prevention on social media through Design Alterations.

1.6 Link with EPA Programme

This thesis is written as part of the completion of the Engineering and Policy Analysis Master at the Technical University in Delft. Within this programme, the focus lies on International Grand Challenges. Radicalisation and by extension, Self-Radicalisation are prime examples of these Grand Challenges. Using a systemic view while studying Self-Radicalisation in combination with an analysis of User

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Motivation fits well with the Engineering and Policy Analysis aim to support policymaking. The thesis could support policy creation for other social media as well as support the creation of public policy.

1.7 Thesis Outline

Further elaboration on how to achieve the research objective is necessary and will be discussed in Chapter 2; Methodology. Chapter 3; Actor Analysis, will focus on the Motivation and Values of YouTube Users, which will set the base for Chapter 4; System Analysis, in which the systems around YouTube will be established. In Chapter 5: Design Alterations, possible Radicalisation Pipeline interventions will be proposed, based on the Actor and System Analysis. Then in Chapter 6: Design Evaluation, these interventions will be evaluated. All insights gathered from the earlier chapters will be collected in Chapter 7: Findings. The thesis closes with Chapter 8: Conclusion and Discussion, which includes a reflection on this thesis as well as any recommendations for further research.

2. Methodology

2.1 Research Strategy

To answer the main research question, the framework for Policy Analysis of Multi-Actor Systems of Enserink et al. (2022) is used. The Framework aims to provide a method in which policy can be formed and tested in systems with multiple actors. Even though the aim of this research is not to formulate policy adaptions, but rather to formulate Design Alterations, this Framework is still used. This is chosen because this thesis aims to respect the different values of all the different involved Stakeholders. The Enserink et al. Framework gives space to look at issues that involve a lot of Stakeholders. Besides that, Enserink et al. respect the complexity of Socio-Technical Systems, systems that have both technical aspects as well as social aspects. YouTube falls under this category as YouTube takes social interaction to its online platform. For both the Multi-Actor perspective and the Socio-Technical System complexity, the Enserink et al. Framework was chosen for this thesis.

The Framework consists of three main analyses: the Actor Analysis, the System Analysis, and the Future Exploration. Within the Actor Analysis, the framework suggests different approaches. For this thesis, the Actor Analysis is enriched with Value Sensitive Design methods as formulated by Friedman et al. (2017). Regarding the System Analysis, this thesis will stay true to the methods as suggested by Enserink et al. (2022), however to this System Analysis the thesis adds the analysis of the Safety Control Structure from Leveson (2011). For the chapter on Future Exploration, the framework aims to evaluate policies based on possible future scenarios. This thesis aims at the evaluation of the solution as is, rather than how it holds up under different scenarios and therefore will focus on Design Evaluation. The Design Evaluation chapter asks for formulated designs, therefore there will be a chapter added to this framework in which the formulated Design Alterations will be described.

2.1.1   Value-Sensitive Design

Value Sensitive Design accounts for human Values in the design of technology (Friedman, 2017). Considering that Self-Radicalisation on YouTube is also an ethical issue, rather than a strictly technical issue, Value Sensitive Design is a fitting method. Value Sensitive Design has proven results in similar technological and ethical situations (Friedman, 2017) and has therefore been chosen to enrich the Enserink et al. Framework.

According to Friedman et al. Value Sensitive Design follows a tripartite methodology (2013). Value Sensitive Design has three parts that need to be addressed: Conceptual, Empirical and Technical Investigations.

Conceptual Investigation focuses on what Stakeholders are involved and what Values they hold but also looks at the link between Values. Values in this case are not related to economic worth but rather look at what principles or standards users of the technology hold (Simpson and Weiner, 1989).

Empirical Investigation is necessary to test if the Conceptual Investigation holds up regarding the earlier defined Values, as well as to further investigate Values in the context of the technology. Lastly, the Technical Investigation could be either focused on the existing technological properties and their influence on the established Values or on designing the system in a way to better support these Values.

Following this approach, the thesis first charts the Stakeholders in the Stakeholder Analysis. Based on the Stakeholder Analysis, the formal and informal connections between the Stakeholders will be described in a diagram of the Co-evolution of Technology and Social Structure, still fitting in the Conceptual Investigation.

For the Empirical Investigation, Value Oriented Semi-Structured Interviews will be conducted to confirm the Values of the Users. The outcome of these interviews will be analysed through Value-Oriented Coding (Friedman, 2017). The values that come forward from the coding will be charted in a network to find possible tensions between Values. These Value Conflicts will later be used as the focus of Value Improvements as part of the Technical Investigation. This will be part of the chapter on Design Alterations.

The choice of Value Sensitive Design for this thesis lies in the desire to create a Design Alteration that has the potential to be implemented. If the solution is not desired by the users of the platform, the chances of implementation shrink significantly. Therefore, the focus lies on improving the Values of the users of the platform.

2.1.2 System Analysis

The Design Alterations aim to interfere with the Radicalisation Pipelines. To test if the Design Alterations interfere, the Radicalisation Pipelines need to be known. There is some literature on these Pipelines, however, this literature is mainly based on use cases. Within this thesis, these Pipelines will be tested through System Analysis to either confirm or deny the known dynamics. The tested Radicalisation Pipelines will then be used to evaluate the Design Alterations.

2.1.2.1 Radicalisation Pipelines

Within the literature, three Radicalisation Pipelines are found. These Pipelines make that seemingly innocent users over time watch more and more radicalising content. This thesis aims at creating Design Alterations that interfere with these Pipelines.

Rabbit Holes

The Pipeline that is best known is the Rabbit Holes that are on YouTube. These rabbit holes are a result of the Recommendation Algorithm. Once you watch a specific video, you will get more recommendations that fall into similar categories. When it comes to relatively innocent videos, this is not a societal issue. However, these Rabbit Holes also happen with for example videos containing misinformation and political videos (Weill, 2022). This causes people to end up in Echo Chambers where they hear more of the same, sometimes incorrect, information (Cinelli et al., 2021). When it comes to political Rabbit Holes, users receive recommendations for increasingly radical content (Ribeiro et al., 2022).

Game Content

Another Pipeline that has been described is the Pipeline that people that watch gaming content go through. In this case, the users creating gaming content often discuss political topics in their videos, making the jump to more political content easier. An example of this is the Incel Ideology that is often discussed in these videos (Champion & Frank, 2021).

Besides that, we see that YouTube often recommends violent content to users that watch gaming content (Hern, 2023). Within this category of violent videos, there are often violent extremist videos. Therefore there seem to be two pipelines, stemming from a similar source; gaming content.

Self-Improvement

A case that speaks to the imagination is the case of Caleb Cain. Cain radicalised through YouTube around 2015. Roose describes Cain's radicalisation as one where it started with him watching a self-improvement video (2020). However, the creators of these types of videos sometimes have a political agenda. Cain watched other videos by the same creator where the creator addressed political topics (Roose, 2020). This in combination with the Rabbit Hole phenomenon on YouTube made the content Cain was fed increasingly more violent.

The Radicalisation Pipeline that we can formulate focuses on people that try to further educate or improve themselves but get reeled into political content by the creators that create those videos. Eventually, this makes that the individual receives more political recommendations, once in the Rabbit Hole, they will further radicalise.

2.1.2.2 System Analysis Approach

As mentioned in the Research Strategy, YouTube is a Socio-Technical System. The added value of conducting a System Analysis for this system lies within the formulation of Design Alterations, as well as the evaluation of these Design Alterations. The System Analysis offers context for the formulation of the Design Alterations and forces the Design Alteration to follow this context. Solutions outside of this context probably focus on other issues or aspects. This automatically also

allows evaluation of the Alteration to see in what way the Alterations fit within the System and what influence the solution has on the dynamics of the System.

A system exists of Internal Factors and connections between these factors (Enserink et al., 2022). A system also knows Objectives, Means and External Factors (Walker, 2000). A system is often seen as a model as it represents a reality, however only part of the reality (Miser & Quade, 1985). System Analysis aims to represent this reality as closely as possible within the set boundaries as we can not model the world.

Within the Policy Analysis of Multi-Actor Systems framework, the System Analysis consists of four steps (Enserink et al., 2022). First, the Means-End Diagram is conducted. This diagram is based on the Value Source Analysis from the Actor Analysis and adds instruments that are available to the stakeholders to fulfil their values. Step 2, the Objective Tree, makes the Values of the Stakeholders measurable. In Step 3, the Causal Diagram is constructed. This diagram gives insight into dynamics within the System and whether two factors in the System have a positive or a negative causal relation.

The measurements and instruments, in combination with the Causal Diagram, make Step 4, the System Diagram. The System Diagram also accounts for any External Factors and their influence on the system dynamics.

2.1.3 Safety Control Structure

The Safety Control Structure shows safety control within a system. The interactions between departments within a company, but also of the company with governmental organisations are charted to fully understand how the safety is managed in this system. The Safety Control Structure is different for different systems and could change with the implementation of a design change and is therefore necessary when evaluating the Design Alterations.

2.1.4 Design Alterations

The Value Dynamics as came forward from the Value Oriented Semi-Structured Interview, will show insight into possible Value Conflicts. Conflicts on each level of abstraction will be used to formulate possible Design Alterations that fit within the System formulated in the System Analysis, while also supporting User Values. During this part of the research, the Design Alterations will be further explored as to what they entail. The thesis will also look at similar solutions in different Recommender Systems to support the validity of the Alterations.

2.1.5 Design Evaluation

The evaluation of the Design Alterations will focus on 3 main aspects. Namely the System Interference, the Safety Control Structure and the User Acceptance. Within the System Interference, this thesis will look back to the System formulated in the System Analysis. The evaluation will focus on in what manner the Design Alteration

influences or alters the System and how these changes influence the outcomes of the System.

The Safety Control Structure part of the evaluation focuses more on the influence of the Design Alteration on the existing Safety Control Structure and if additional safety measures are necessary to support the Design Alterations. This part is of importance if the solution should be implemented.

Lastly, User Acceptance is evaluated. The data for this was gathered through another round of Value Oriented Semi-Structured Interviews. Within these interviews, the thesis looks at how Respondents would feel about using the Design Alterations. Besides that, the questions focus on how Users would feel about the implementation of the Alterations. Within the analysis of the interviews, there is again a focus on the Values of the Respondents to test if the solutions support the Values as intended. Lastly, during the analysis of the interviews, possible improvements as offered by the Respondents are gathered.

2.2 Sub-Questions

This thesis aims to find fitting and effective Design Alterations to the YouTube interface to prevent the Self-Radicalisation of its users.

> *RQ: What Design Alterations can be made to prevent Self-Radicalisation through YouTube's Recommendation Algorithm?*

To answer the Research Question, multiple Sub-Questions are formulated to assist with the process and make sure the analyses are contributing to the conclusion.

First, it is important to understand the mechanisms behind Self-Radicalisation on YouTube and what Self-Radicalisation emergence on YouTube entails. This will later support the creation of Design Alterations that interfere with the dynamics of this Self-Radicalisation emergence. The dynamics of Self-Radicalisation on YouTube need to be researched; this will be done in the System Analysis. Which will answer the following question:

> *SQ1: What are the main dynamics that cause Self-Radicalisation to emerge on YouTube?*

For the creation of Design Alterations, it is also important to gather User Acceptance of the solution, to make sure the solution does not interfere too much with YouTube's user base. As mentioned in the Value Sensitive Design section, the research aims to implement technical solutions such as those offered by the thesis, which is in line with societal and user goals. To achieve this, it is important to ensure that Users still want to use the platform after the implementation of the Design Alteration. The

Users still should want to make use of the service. User Acceptance is necessary, otherwise, YouTube will opt out of implementing the solution on its platform.

To achieve User Acceptance, the thesis investigates what people value about YouTube and the Values that they hold for themselves and society. This will create an understanding of what Design Alterations users find acceptable and which Design Alterations they do not find acceptable. Besides that, other Stakeholders hold an interest in the influence of these Design Alterations. Their Values also need to be safeguarded. The Values of the Stakeholders will be investigated in the Actor Analysis. As such, the following question will be answered:

SQ2: What criteria need to be fulfilled for the Stakeholders to accept the Design Alteration?

YouTube is a system, which has intricate dynamics. To formulate a Design Alteration that interferes with these dynamics, a clear insight into these dynamics is necessary. Both social and technical aspects need to be considered and it needs to be shown how these aspects influence each other. Once there is a sufficient understanding of the system, the influence of the system on the Solution Space will come forward.

As stated in the part about System Analysis above, the system represents part of our reality. Solutions should fall within this system, as solutions outside of this scope will probably address other issues. Solutions outside of the System cannot be evaluated on System Interference later. The formulated System, therefore, determines the Solution Space. The Solution Space needs to be established within the System Analysis to move forward with the creation of Design Alterations, therefore the following question will be addressed:

SQ3: What influence does the Socio-Technical System of YouTube have on the Solution Space?

After all the information is gathered, the Design Alterations can be formed. The answers to the former Sub-Questions need to be considered when formulating the Alterations, to make sure the Alterations have influence on the Self-Radicalisation on YouTube, while at the same time supporting User Values. The supporting Sub-Question is as follows:

SQ4: What Design Alterations have the potential to influence Self-Radicalisation on YouTube?

Finally, the formulated Design Alterations need to be evaluated to see if implementation on YouTube will be beneficial. This means that the solutions interfere with the radicalisation on YouTube but are also accepted by the Users of

the platform which will be tested in the Design Evaluation. Therefore, the final Sub-Question will be:

> *SQ5: What Design Alterations would be beneficial to implement on YouTube?*

Combined, these Sub-Questions will assist in answering the Research Question and thus completing the Research Objective of this thesis.

2.3 Research Phases and Methods

The research consists of 4 phases; Prepare, Analyse, Design, and Evaluate.

During the Prepare phase, Literature Research will be conducted to support the analysis in phase two. The Literature Research aims to establish the knowledge base to understand the dynamics that will be further explored in the System Analysis. It will also support the preparation for the Actor Analysis, as this is the moment to gather information on involved Stakeholders. It will also show gaps in any information that is necessary for the completion of this research. Gaps of information could be filled by the response to the Value Oriented Semi-Structured Interview.

In the Analyse phase, the Value Oriented Semi-Structured Interviews will be conducted. The empirical data gathered from these interviews will be used to support the Actor Analysis and the System Analysis. Important is to mention the fact that conducting an Actor Analysis and System Analysis is an iterative process. During this phase, the current status of the Systems will be charted, which can be used during the Design and Evaluate phase.

During the Design phase the Values as came forward in the Actor Analysis will be used to propose some possible Design Alterations, the Alterations will at this point also include a preliminary System Interference. This means the Alteration will address either a node or a link within the System Diagram.

Lastly, the Evaluation phase. During the Evaluation phase, the Design Alterations will be held up against the Values of the involved Stakeholders, as well as the System Diagram and possible future scenarios to see if the Design Alterations properly address all themes. This is also the moment to look back on all the previous chapters to answer the Research Question, as well as reflect on the research.

2.4 Research Flow Diagram

The above methodology can be summarized in a singular diagram, see Figure 2. The figure shows the four Design Phases. Within the Design Phases, the blocks represent

16

chapters that are included in this thesis. The figure also shows where in the thesis the Sub-Questions will be answered.
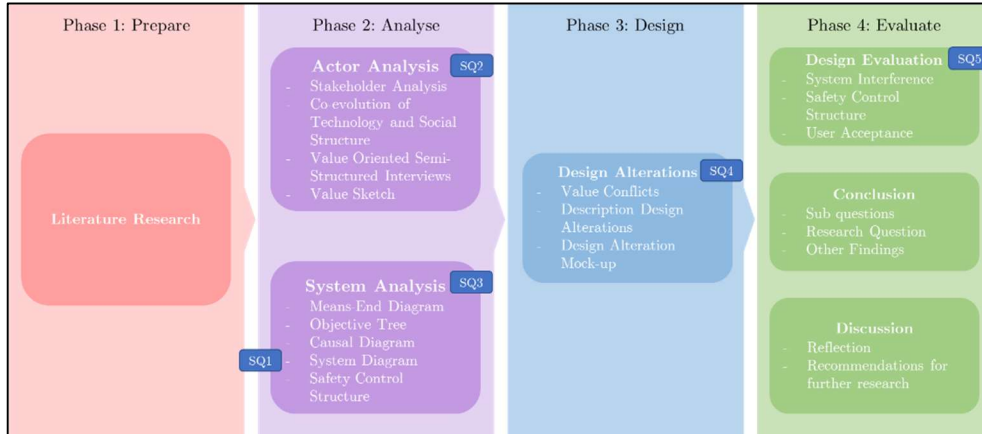

Figure 2: Research Flow Diagram

3. Actor Analysis

This chapter discusses the findings of the Actor Analysis part of this research. The purpose of the Actor Analysis is to chart which people, groups or organizations have influence in or are influenced by the problem at hand. First, a general overview of the involved Stakeholders is made, based on this overview the structure between these Stakeholders is charted to establish both legal and social structures. For YouTube Users, this thesis will dive deeper into their Values and wants through Value Oriented Semi-Structured Interviews as described by Friedman(2017). Eventually, based on the results from these interviews, the dynamics between the found Values will be charted to better understand the connections between these Values.

3.1 Stakeholder Analysis

For the Stakeholder Analysis, the methodology of Enserink et al. is used(2022). Within the Stakeholder Analysis, all direct and indirect Stakeholders are identified. During the Literature Review as used in Chapter 1: Introduction, a list of Stakeholders was kept. Actors were put on this Stakeholder list if they either are impacted by Self-Radicalisation on YouTube or have an influence on the Self-Radicalisation on YouTube. This is following the Power-Interest Grid method of classification of Actors from Enserink et al.(2022). Similar actors were sometimes clustered to prevent clutter. The Stakeholder Analysis focuses on the interests of the Stakeholders, as well as what they would like to achieve and why they might encounter difficulties achieving these goals.

3.1.1 Stakeholders

As mentioned in the Methodology chapter, the Actor Analysis and the System Analysis are conducted iteratively. Within the System Analysis, we found that this research cannot rely on a singular system. Therefore, an analysis of three different systems is necessary. When looking at YouTube, we see not only the system of YouTube but also the smaller systems within the platform. Every Creator creates their system on YouTube. For every Creator, an extra system is created. We also recognize that YouTube is part of a bigger system, namely society. More elaboration can be found in Chapter 4: System Analysis.

Within the Personal System, this thesis focuses on YouTube Creators (content creators) and YouTube Users (content consumers). Both are YouTube Clients but have vastly different uses for the platform and are therefore kept separate. YouTube Users are considered as they are the biggest client group of YouTube, any changes to the platform directly influence them. For the livelihood of YouTube, the Users need to accept any Alterations made. The same is true for the Creators. The Creators create opportunities for the Users to find a variety of content and create opportunities

for YouTube to receive advertisement revenue. If the Creators and Users move to a different platform, this could prove detrimental to the platform.

In the YouTube system, we look at YouTube as a company and departments in the company that have a hand in the radicalisation issues on YouTube. The YouTube Shareholders in this case look at the impact of illegal content on the image of YouTube and therefore worry about the sustainability of the company in case similar platforms offer solutions that are preferred by their clients. YouTube Management also looks at the sustainability of YouTube but added to that they look at the profit for YouTube. Accidentally hosting illegal content could lead to fines as they would not follow legislation from the European Commission. Lastly the Public Relations Department of YouTube worries about the recent research on radicalisation on social media. YouTube is now known as a radicalisation platform, threatening the positive image clients currently have of YouTube and with that jeopardises the platform.

Within our society, there are a lot of public organisations that are directly involved with this issue. The European Commission is heavily involved, as they create legislation regarding social media and extremism. But they also make sure that existing legislation is followed. On the other hand, there are Social Technical Justice Organisations. These organizations support a safe online presence for everyone and support initiatives that fill gaps left by legislation.
Other interesting Stakeholders are the YouTube Competitors that are looking to replace YouTube as a market leader and offer platforms similar to YouTube with some alterations to counter some of the negative effects within the YouTube platform.
Lastly, both Extremist Organisations and Counter Extremism Organisation have stakes in the problem, as they both use YouTube to convey their beliefs and to counter the beliefs of the other party.

Figure 3 shows the Stakeholders that are involved in the issue of Self-Radicalisation on YouTube. The Stakeholders have been categorized into the three identified systems: Personal, YouTube and Society.
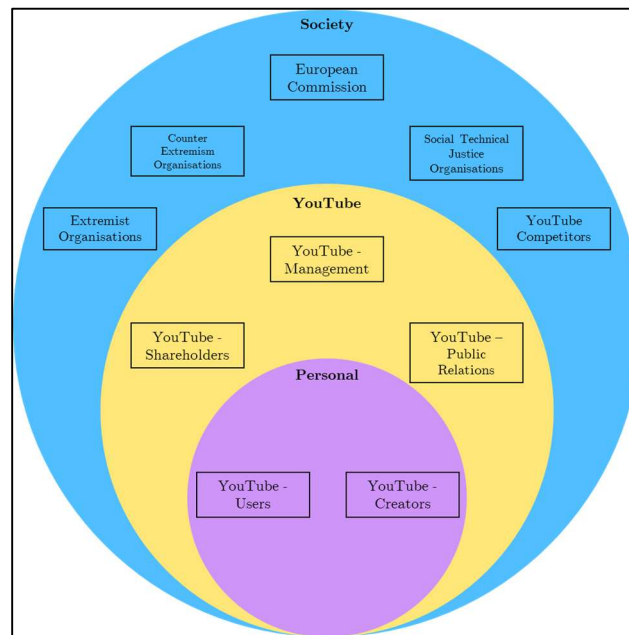
Figure 3: Stakeholders

3.1.2 Stakeholder Overview

When looking at the Stakeholders defined, it is important to establish their stance on Self-Radicalisation on YouTube and what they perceive as the issue and possible solutions. In Figure 4 an overview of the Stakeholders in the Self-Radicalisation on YouTube issue is given. This information is gathered through Literature Research in the first stage of the research. This was used to formulate the Anticipated Values and the Objectives of the Stakeholders, what they find important and what they aim to achieve. If information was missing, an additional literature search was conducted. The value for the Public Relations Department of YouTube was assumed as no fitting literature was available.

The Existing or Expected Situation and Gap focus on why stakeholders currently cannot achieve their objectives, while Causes look at what the cause of this gap is. Solution looks at ways to solve the causes. The information for the Gap, Causes and Possible Solutions are assumptions based on the literature. The assumptions are made with the identified Values and Objectives in mind, to make sure that they are consistent. For example, the possible solutions are based on the already offered solutions in literature, which is further discussed in the Introduction. The possible solution offered per Stakeholder is based on their Values/Objectives.

Stakeholder	Anticipated Values Based on Literature	Desired Situation/ Objectives	Existing or Expected Situation and Gap	Causes	Possible Solutions
YouTube – Shareholders	Sustainable YouTube (Artero, 2010)	Profitable organisation with future perspective	YouTube is currently market leader; other similar platforms are popping up with the chance of taking over	Other organisations find flaws in YouTube, and offer a similar platform with adjustments	Improvements to match new platforms, research on user based and improvements that could improve user experience
YouTube – Management	YouTube profit (Artero, 2010)	Increase revenue while cutting down on expenses	Recommendation of extreme videos increase user involvement. However, fines regarding this content could hurt profit	Content filter is not perfect. Not properly responding to the existence of illegal content on the platform leads to fines	Stricter filtering
YouTube – Public Relations	YouTube image	Increase popularity and image of the platform	Opinions on YouTube as a platform are dwindling	YouTube is known as a platform used by extremist organisation to recruit and communicate.	Rebranding, start counter radicalising campaigns, adjust filter
YouTube – Creators	Popularity of their brand (Praswary & Darma, 2021)	Increase of profit and increase of engagement to content	Content is not watched enough	Other types of content create more engagement and more views	Adjust content
YouTube – Users	Entertainment value YouTube (Hao, 2020).	Increase of entertaining content	Recommender system sometimes recommends irrelevant content that does not align with the user's worldview.	Recommender system recognises some videos as videos with high involvement and will recommend these to the general audience in the hope to increase user involvement and experience	Adjusting recommender system, find alternative
European Commission	Safe living in the European Union (*About the European Commission*, N.D.)	No radicalisation	Self-radicalisation spiked on social media, including YouTube in the past few years.	Recommender system recognises extreme videos as videos with high involvement and causes a rabbit hole where similar content is recommended to the user	Adjusting recommender system
Counter Extremism Organisations	Deradicalisation of radicalised individuals (Kareem, 2020)	Less radicalisation	YouTube causes self-radicalisation	YouTube has multiple radicalisation pipelines which causes individuals to radicalise faster	Create counter terrorism videos, spread information about radicalisation risks
Extremist Organisations	Spreading their beliefs (Hollewell & Longpré, 2022).	A world in line with their values	Their beliefs are not known by the public	Governmental organisations do not support their beliefs and therefore their beliefs are not open to the public	Create content to inform individuals about their beliefs and try to convince them to act accordingly
YouTube Competitors	Offer an alternative to YouTube (PeerTube, N.D.)	YouTube Users moving to different platforms	YouTube is currently market leader	YouTube is a familiar platform, with variety of content	Offer more variety to users, offer better recommender systems
Social Technical Justice Organisations	Safety Online (Silva, 2020)	Safe online environment for everyone	Self-radicalisation spiked on social media, including YouTube in the past few years.	Recommender system recognises extreme videos as videos with high involvement and causes a rabbit hole where similar content is recommended to the user	Support alternatives, pressure on YouTube to adjust their platform

Figure 4: Stakeholder Overview

3.2 Co-evolution of Technology and Social Structure

The formulated Stakeholders each have different kinds of interactions with each other. These interactions can be based on legislation but can also be social interactions. For the development of design alterations, it is important to fully understand the relationship between the stakeholders, to understand developments, but also to make sure that the design alterations are following the forged relationships.

As the European Commission creates legislation for the European Union, YouTube needs to accommodate the regulations. Examples are the AI Act and the Digital Services Act, which direct YouTube to act in compliance with the standards set in the European Union (AI Act, 2021)(Digital Services Act, 2022). Even though Extremist Organisations are often far removed from other organisations, the European Commission does have regulations that influence them, such as the Counter Terrorism Agenda for the EU(Counter-Terrorism Agenda, 2020). Besides the regulations set by the European Commission, it is common practice to try to lobby for better legislation, therefore many relations with the European Commission are based on lobbying (Lobby Groups and Transparency, N.D.).

YouTube also has some regulations for their clients, that need to be followed to have access to the platform(Service Voorwaarden, N.D.). As for the relations between YouTube and other Stakeholders, this is mostly focused on YouTube Management. An example is the YouTube Shareholders who have a say in YouTube's daily business through votes on the board level. On the other hand, you see Counter Extremism Organisations trying to sue YouTube in an attempt to have YouTube change their way of working. Figure 5 shows the complete overview of these relationships between Stakeholders as described above.
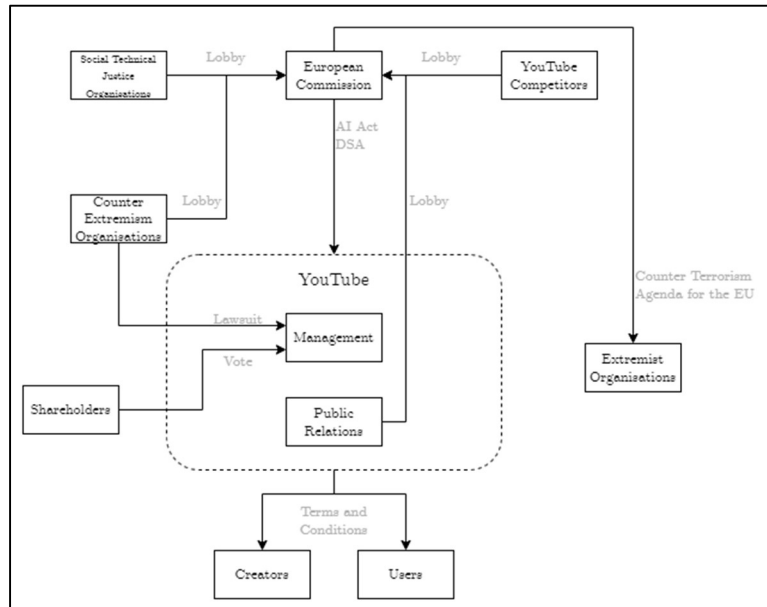
Figure 5: Co-evolution of Technology and Social Structure

3.3 Value-Oriented Semi-Structured Interviews

As discussed, YouTube stands with its Users and Creators. To make sure that these Stakeholder Groups accept the Design Alterations proposed, this thesis aims to design the Alterations with the Values of these Stakeholder Groups in mind. To better understand their Values, Value Oriented Semi-Structured Interviews (Friedman, 2017) were conducted.

3.3.1   Interview Questions

In preparation for the interviews, the interview questions were formulated. When creating the interview questions, inspiration was taken from Friedman et al.(1997). Friedman et al. emphasized the importance of asking Respondents why they feel a certain way. The first answer people give is often superficial, asking why after makes them explain their opinion. Often in this explanation, the Values surface. The Values are eventually needed to formulate Value Conflicts, which will be used in the formulation of Design Alterations.

As mentioned, we will look at three Systems. To make sure that all Systems are addressed the questions aim to include all these Systems. First, to look at the Personal System Level, there are questions about what people find important in life. The question of what people would do if YouTube would act in contrary to that is to gain more insight into the Value, as well as to see how much people are bounded to YouTube as a platform in case Values are compromised.

On the other hand, Respondents were asked to explain why they use YouTube and why they chose YouTube over other platforms, this helps bring Values concerning

YouTube forward. They were also asked about possible improvements. Respondents were also asked questions that relate to the Society System Level, these questions focused on how the Respondents feel about political content on YouTube. This supported formulating Values on the Society Level. For these questions, the method of Friedman was used. Friedman discusses the importance of "Would it be all right" and " How would you respond" questions(1997).

For all Systems, the same question was asked, namely: Where would you like to position yourself on a scale ranging from Safety to Freedom of Speech? This question was inspired by a recurring debate on Safety vs. Freedom of Speech(Price, 2016). This question was based on the fact that radicalising videos are often addressed from these two sides of the spectrum. On one side people want to delete them to ensure safety. On the other hand, people feel that everyone should be allowed their opinion. This dynamic is constantly at play in this problem and therefore needed to be explored in the questions.

Lastly, a question about controversial content was added, this was added to test the Radicalisation Pipelines found in the Literature Research, as well as the radicalising dynamics found in the System Analysis.

The order of the questions was deliberate. First, the respondents were asked about the scales. This was done to make sure that the rest of the interview did not influence their answer to this question. Also, within the Politics on YouTube part of the interview questions, the last question was one example question about encountering controversial content. This was done because asking this question at an earlier stage could make people respond differently, as it would set the context. After these questions, more general questions were asked. Lastly, questions about YouTube improvements were asked. This one was saved to the end, because the earlier questions would lead the respondent to offer improvements in a controversial content context, offering possible Design Alterations that could be used in a later stage.

A complete overview of the Interview Questions can be found in Attachment A1.

3.3.2   Respondents
The researcher looked at different categories of Respondents. On one side are the Users of the platform, and on the other side are the Creators of the platform. There are two Radicalisation Pipelines within the platform as described in the Literature Review. On one side, we see gamers whose content becomes gradually more violent and eventually extremist. Then there are also occurrences where users looked at self-education videos where content over time got more political. For the Respondents, the focus was therefore on both people that used YouTube to watch gaming-related videos and people that used YouTube to educate themselves.

The research aimed to find 3 Respondents of the three categories: Content Creators, Content Consumers Game Content and Content Consumers Educational Content. For the Content Creators, the aim was to find at least one Gaming Content Creator and one Educational Content Creator.

The Respondents were found through two public calls on different online platforms. First, there was a public call looking for Content Creators, which was followed by a public call for Content Consumers of Gaming Content and a public call for Content Consumers for Educational content.

From the Respondents to the Content Creators open call, the respondents for the interview were chosen by the researcher, to make sure that they fit the criteria. For the open calls for Content Consumers, the interviewees were chosen randomly. The public calls make that there is no further information on the background of the Respondents, other than what was asked in the interviews.

Table 1 shows the profiles of the Respondents, whether they were Content Creators, Content Consumers (Users) and if they use YouTube for either Gaming or Self-Education.

	Creator	User	Gaming	Self-education
Respondent 1	X	X	X	
Respondent 2	X	X	X	X
Respondent 3	X	X	X	X
Respondent 4		X	X	
Respondent 5		X	X	
Respondent 6		X	X	X
Respondent 7		X		X
Respondent 8		X	X	X
Respondent 9		X	X	

Table 1: Respondents

As discussed, the aim for the Respondents was to have an even distribution between gaming and self-education. However, many Respondents did not use YouTube for a singular type of content. There was a lot of overlap between the categories.

3.3.3   Interview Process
Once the Respondents were selected, they were contacted to participate in the research. The Respondents received some primary information on the aim of the interviews, without trying to set a context to colour their responses. The Respondents also received a consent form, to ensure that they agreed to the interview responses being used in the thesis. They also agreed to record the interview to support the transcription of the interviews. The recordings of these interviews will be deleted upon completion of the master thesis. Once the consent form was signed, a moment was planned to conduct the interview.

The interview took place on Microsoft Teams and was recorded through this platform. Microsoft Teams has a transcription functionality, which was also used for recording the interviews. After the interviews the transcripts were compared to the recordings and changes were made accordingly, to stay true to the original interview.

Before the start of the interview, Respondents were asked if they had any more questions about the consent form or the research. Once questions were answered, the interview would start. After the interview, Respondents would get some additional information about the research, and they were reminded that there will be a follow-up interview.

Seeing that we are looking at a Semi-Structured interview, this means that not every interview followed the same process. An example is the question on controversial content. First, Respondents are asked if they ever encountered any controversial content. If so, what did they see and do they know how they encountered it. In some cases, the first question also prompted Respondents to answer the follow-up question. In other cases, these questions needed to be asked.

Another example is the use of the why question. For some Respondents, this question was necessary for them to elaborate and to find their Values, while other Respondents already answered the why as they were answering the original question.

3.3.4   Coding Process

This thesis is mostly focused on the Values of this Stakeholder group. Besides these Values, some other relevant findings were reported. The Interview Transcripts can be found in Attachment B1. To find the Values and to further analyse these Values, the application ATLAS.ti was used to perform Open Coding, Axial Coding and eventually Selective Coding as described by Williams and Moser (2019).

Within ATLAS.ti, the Interview Transcripts were uploaded. All Interview Responses were analysed for Values. Findings were labelled separately without looking for connections between findings, as part of the Open Coding. This led eventually to 102 quotations. To better interpret the Values, these quotations were put in categories with quotations that had similar groundings. The quotations were then coded into these 14 categories, completing the Axial Coding. These categories in turn were eventually distributed along the three identified systems, which was part of the Selective Coding.

To give an example of this process, we will look at part of the interview with Respondent 2 and Respondent 3 in Figure 6 and Figure 7. Both respondents were asked to position YouTube on the scale from Safety to Security. Respondent 2 refers to the Safety of Minorities, while Respondent 3 refers to the Safety of Younger Children. Both were found during the Open Coding process. During the axial coding,

these quotations were coded under the umbrella term: Safety of Vulnerable Entities. Eventually, this value is categorized under a Societal Value. This is linked to the Systems as defined in the System Analysis. Even though Respondents were asked about YouTube, these quotations still fall under the Societal System, rather than the YouTube System. This choice was made because these values are not solely linked to YouTube, these are values that people hold for Society and are therefore linked to the Societal System.

Researcher

For YouTube as a platform. Where do you think they should position themselves?

Respondent 2

I think in the middle is still fine where it is right now.

Researcher

And can you elaborate on that why you think it should be in the middle?

Respondent 2

Um, I think that it's important to have freedom of speech, but also ==safety in terms of any minority populations or any marginalised communities that== would be affected by whatever's on YouTube. So, it's still important to have safety with freedom of speech in that way.

Figure 6: Interview Respondent 2

Researcher

When you think of the platform YouTube. Where do you think they should position themselves?

Respondent

I think they should stay probably as close to the middle as possible because YouTube is such an accessible site, especially for, like, ==younger kids and everything. A big portion of it needs to be under safety==. But they also don't want to infringe on freedom of speech. I feel like it's a very tight line that they have to run between the two, that they don't wanna be too much in one direction cause of potential issues of. All of a sudden, there's people, like, getting killed in videos on YouTube or something like there's inappropriate scenes or whatever on YouTube and then like ohh your 5-year-old who's staying there with this iPad is watching it. That affects them. So, like, I feel, like, there has to be a very fine line in terms of YouTube for the safety and then freedom of speech, but not to infringe on each other.

Figure 7: Interview Respondent 3

3.3.5 Interview Findings

Using the method described earlier, 14 Values were defined and categorised in the three abstraction levels following the System Levels. Table 2 shows the values found and their definitions based on the Interview Responses.

	Value	Definition
Perso	Freedom of Speech	Having the ability to share one's personal opinion with others and not fear repercussions for sharing your opinion
	Personal Safety	Living without fear of encountering harm
YouTube	Correct Information	Statements and arguments made on YouTube should not be misleading or false
	Creator Support	Users that post content on the YouTube platform should receive support from YouTube whether this is in the form of monetary support or support within the community
	Ease	Users of the platform should be able to reach the content they want to consume without too much hassle
	Entertainment	The content presented by YouTube should be enjoyable to watch for the users
	Familiarity	YouTube is an often-used platform, people know what to expect. Part of this is that there are many creators on the platform because they know YouTube is the market leader
	Freedom of Posting	Within limits, you are allowed to post any content that you want. Limits are set by YouTube and refer to illegal content.
	Privacy	Users can entrust their data to YouTube and know that their data will not be shared without their knowledge.
	Recommendations	YouTube users value suggestions from YouTube on what to watch. This is very tightly linked to the ease value.
	Storage Options	The possibility to access created videos at any given time
	Variety in Content	Many different types of content can be found on YouTube
Society	Debate	All sides of an argument should be portrayed and should be available to the public.
	Safety Vulnerable Entities	Groups that are seen as more vulnerable by the general population should not have to fear encountering harm. Examples of these groups are minorities, children or individuals with disabilities.

Table 2: Identified Values

When looking back at the anticipated Values of the Stakeholder Analysis, we only see the Entertainment Value reoccurring. The Semi-Structured Value Oriented Interviews (Friedman, 2017) have however uncovered many other Values that were not apparent from the literature. These Values will be used to formulate Value Conflicts, which will be the base of the proposed Design Alterations.

3.3.5.1 Co-occurrence Values

To support the understanding of the relationship between the different Values and to establish the Value Dynamics, we look at how often Values are mentioned simultaneously. If Values are mentioned together often, it is more likely that there is a relation between these Values. Figure 8 shows the Co-occurrence of the Factors. If Value X is often discussed together with Value Y, this means that the Co-occurrence value is higher. The table maps all found Values against each other. This causes the diagram to be mirrored from the diagonal.

		FoS (17)	PS (9)	Debate (27)	SVE (28)	CI (4)	CS (9)	Ease (9)	Ent (11)	Fam (2)	FoP (13)	Priv (2)	Rec (7)	SO (3)	ViC (4)
Personal Values: Freedom of Speech	17		7	4	6										
Personal Values: Personal Safety	9	7			1						1				
Societal Values: Debate	27	4			15	1					3				
Societal Values: Safety Vulnerable Entities	28	6	1	15							2				1
YouTube Values: Correct information	4			1				2			2				2
YouTube Values: Creator Support	9							3	2		1				
YouTube Values: Ease	9					2	3		3	1			2	1	2
YouTube Values: Entertainment	11						2	3			2		1		
YouTube Values: Familiarity	2							1						1	
YouTube Values: Freedom of posting	13		1	3	2	2	1		2				1	1	1
YouTube Values: Privacy	2														
YouTube Values: Recommendations	7						2	1			1				
YouTube Values: Storage options	3						1			1	1				1
YouTube Values: Variety in Content	4				1	2		2			1			1	

Figure 8: Value Co-Occurence

This analysis brings forward an interesting Value Interaction that is discussed many times in the interviews, namely the Societal Value Debate with the Societal Value Safety of Vulnerable Entities. The other Co-occurrences will be used to create a Value Sketch which shows the connection between the Values and the nature of the relationship between these Values.

3.3.5.2 Other Findings

As mentioned in Chapter 3.3.1, some questions were added to the interview to test findings from the literature. More specifically, the questions about encountering controversial content. Respondents recognize that sometimes this content is encountered through recommendations that seem unrelated to things they used to watch, confirming the results from the research from Kirdemir et al. (2021). Others confirmed known Self-Radicalisation mechanisms, such as the Rabbit Hole as described by Weill (2022). But also Hern's theory that gaming content creators often turn towards political content was confirmed (2023).

Other than that, some Respondents suggested changes to the design that would improve their experience. Some of these Design Ideas could be used at a later stage in the research to see if they have an influence on Self-Radicalisation on YouTube. Ideas ranged from functionalities to block content, creating your own algorithm or profiles and adding trigger warnings related to extreme political content.

An interesting pattern found was that most respondents valued both Safety of Vulnerable Entities and Debate. This was often explained in terms of valuing the possibility of discussion, as long as this does not interfere with someone's safety. However, even though both Values were held by the respondents, their response to how society should position itself on a scale ranging from Safety to Freedom of Speech differs a lot. This hints towards respondents assigning different levels of importance to the Values.

3.4 Value Dynamics

All Values found in the interviews are mapped to show the different relationships between the Values. Values can occasionally contradict each other, but Values can also be a part of another Value. Some Values can cause other Values to occur. The diagram shows these relations between the found Values in the interviews.

When the diagram states that Values conflict, this means that there are instances where supporting one Value limits another Value, causing an Inter-Value Conflict (Garst et al., 2022). An example of this is the Safety Vulnerable Entities Value and the Debate Value. As seen in the Value Co-Occurrence, Debate and Safety of Vulnerable Entities are often linked to one another within the conducted interviews. When analysing the interviews, you often see that the Respondents state something along the line of; political discussion is important if it does not endanger minorities. This means that Respondents experience a conflict between these values as they feel the need to specify that open discussion should not lead to a decrease in safety.

A similar dynamic was seen between the Freedom of Speech Value and the Personal Safety Value, which is another Inter-Value Conflict. Both these Inter-Value Conflicts manifest themselves on YouTube through the Freedom of Posting Value.

In Figure 9 the dynamics between the Values are portrayed. The relationships have been based on the Co-occurrence of the Values as discussed in Chapter 3.3.5.1 and on the found literature.
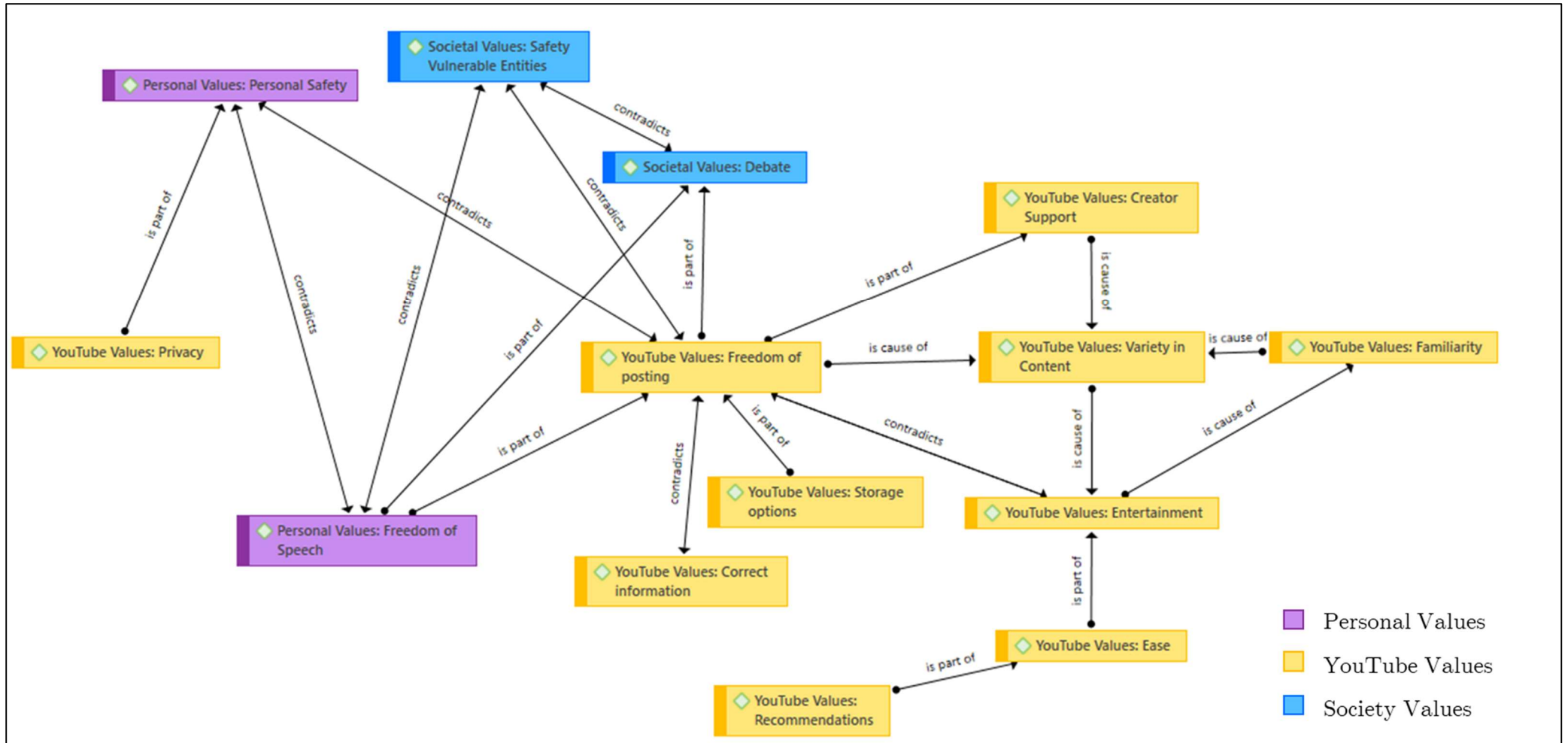
Figure 9: Value Dynamics

3.4.1   Value Conflicts for Design Alterations

The Value Dynamics diagram shows multiple Value Conflicts. As discussed in the Methodology, the Value Conflicts are used as the basis to formulate Design Alterations. As these Design Alterations aim at relieving this tension between the Values. The decision on what Value Conflicts to use determines the type of Design Alterations that will be formulated.

Considering that there are three Systems, this research looked for Value Conflicts for each of these Systems. The idea behind this is that there would be a possibility to implement all solutions without creating an overlap of solutions and with that limiting the effectiveness of the combined solutions. This overlap can be found within the System Diagrams as every value conflict will look for an effect within their Systems. This influence will be discussed in Chapter 6: Design Evaluation.

For this thesis, the decision was made to further investigate Value Conflicts that have at least one YouTube-related Value. This is because this research aims to find Design Alterations for YouTube specifically. Choosing a Value Conflict unrelated to a YouTube Value might lead to solutions that are undirected at YouTube and therefore not relevant or effective when discussing Alterations to the YouTube interface. Therefore, the Value Conflict between Personal Safety and Freedom of Posting, as well as the Value Conflict between the Safety of Vulnerable Entities and Freedom of Posting will be further investigated for the formulation of Design Alterations.

For the YouTube System Level, there are two Value Conflicts that can be considered for the formulation of Design Alterations, namely between Freedom of Posting and Correct Information, and Freedom of Posting and Entertainment. The decision was made to look into the Value Conflict between Freedom of Posting and Entertainment because YouTube has a policy on the spread of Misinformation (YouTube scam and impersonation policies - How YouTube Works, N.D.).

3.5 Conclusions Actor Analysis

This Chapter aimed to gather Values and find Value Conflicts to support the formulation of Design Alterations. Through the Stakeholder Analysis and the Value Oriented Semi-Structured Interviews, Value Conflicts were found. Based on relevancy, the decision was made to use the following Value Conflicts to formulate Design Alterations:
- Personal Safety – Freedom of Posting
- Safety of Vulnerable Entities – Freedom of Posting
- Entertainment – Freedom of Posting

The Value Conflicts will be used in Chapter 5: Design Alterations.

4. System Analysis

In the System Analysis, the environment of the Self-Radicalisation problem is formulated. The System Analysis is meant to better understand the dynamics between different factors that influence Self-Radicalisation. But also, to understand the influence of this Self-Radicalisation on the important Objectives of the different Stakeholders. First, the System Analysis looks at what influence certain Stakeholders have that supports them to achieve their goals; this is done through the Means-End Diagram. Once is known what these Stakeholders can do, this research establishes metrics to accommodate the interest of these Stakeholders, through the formulation of the Objective Tree. Both diagrams are used in the System Diagram, in combination with the Causal Diagram, which shows the relation between the factors relevant to this issue. Lastly, the System Analysis focuses on the Safety Control Structure, to understand current safety mechanisms.

4.1 Three Systems

When starting the analysis of the System of Self-Radicalisation on YouTube, it was difficult to include all relevant factors in a singular System Diagram. A System Diagram showing the total dynamics of Self-Radicalisation from the choices of the creator to the effects on society would create a very complex and difficult to analyse System with a lot of repetition. One of these repetitions we see when it comes to YouTube Creators. A Creator on YouTube has their own dynamics related to their videos. To properly portray this, repetition of these dynamics within the bigger system would be necessary, as there are many Creators on the platform. In this case, the decision was made to portray the system of a Creator separately from the rest of the System. This System will be referred to as the Personal System.

The other part of the System is again divided. This was a choice based on two arguments. First is that Systems are always modelled from the perspective of a chosen Problem Owner (Enserink, 2022). Two Stakeholders are in this case interesting to look at. Namely YouTube Management and the European Commission. YouTube Management is interesting as they are the party that can choose to implement the proposed Design Alterations. The European Commission on the other hand is the actor whose goal is to limit Self-Radicalisation effects. Therefore the choice was made to represent the rest of the System from two perspectives. YouTube for YouTube Management, Society for the European Commission.

The second argument is that splitting the System makes representing Self-Radicalisation dynamics less complex and gives better opportunities for analysing the Radicalisation Dynamics. Figure 10 depicts the Systems.
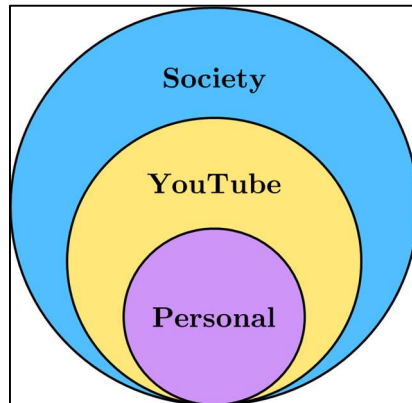
Figure 10: Systems

The three Systems are used in the next steps of the System Analysis. This means that for every one of the defined Systems, a Means-End Diagram, an Objective Tree, a Causal Diagram and a System Diagram are formulated.

Following Enserink et al. (2022), every System has a Problem Owner. The Systems are created from the perspective of this Problem Owner. This perspective defines what outcomes are considered for the System Analysis, namely the Objectives defined in the Objective Tree. The Problem Owner has the possibility to interfere with the System, their Means are described in the Means-End Diagram.

The perspective of the Creators is used within the Personal System, as they are the ones putting content on the platform and in that way decide what is accessible to YouTube Users. For the YouTube system, this thesis looks at the perspective of YouTube Management, as they have the most possibilities to adjust and change the system as the owner of YouTube. Lastly for the Society System, the focus will be on the European Commission, as they are responsible for legislation within the EU and can therefore set the context for this system and drastically influence the system.

4.2 Means-End Diagram

The Means-End Diagram is used to understand the Means of the Stakeholders. The Means-End Diagram is used to find the high-level goals and to further specify these goals to eventually formulate possible Means that support achieving these Stakeholder's goals. All Means-End Diagrams can be found in Attachment C1.

The creation of the Means-End Diagram starts with the Values as specified in the Stakeholder Analysis. To achieve this Value, general goals are added to the next level of the Means-End Diagram. The diagram is further specified till the Means are formulated as actions that can be taken by the Problem Owner. These actions are then used in the System Diagram as input variables.

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4.2.1 Creator

For the Personal System, we look from the perspective of Content Creators. Content Creators look mostly to improve their brand to ensure a durable and profitable career(Praswary & Darma, 2021). To achieve this, it is important to build engagement and ensure revenue to be able to afford to continue with this career. To increase engagement from Users, Creators aim to keep content accessible for everyone, as well as increase the quality of the videos they publish.

On the other hand, their career is also dependent on revenue to make it durable. To increase revenue, Creators focus on receiving endorsements, as well as creating opportunities for the placement of advertisements in their videos. How profitable these efforts are, depends on how many viewers the Creators have, and how they interact with the content. If they watch longer or interact with the video, this increases revenue for the Creator. Figure 11 shows the Creator Means-End Diagram.

4.2.2 YouTube Management

YouTube Management focuses on the endurance of the YouTube platform. They focus on both profit and image (Artero, 2010). Profit on one side to ensure livelihood and the ability to maintain the platform. On the other hand, we have the image of YouTube, as the continuation of YouTube depends on people using the platform. A bad image of the platform will lead to a decrease in users. This image is influenced by the content on the platform as well as the quality of the platform. Profit is influenced by advertisement income and by expenses, in which workforce expenses and settlement expenses play a big part(Federal Trade Commission, 2022). The YouTube Management Means-End Diagram is shown in Figure 12.

4.2.3 European Commission

The European Commission participates in a variety of activities to support EU strategy, in this thesis we will not fully explore all these efforts in the System Analysis as not all these efforts influence the problem of Self-Radicalisation. Therefore, the Means-End diagram will also not further explore branches that are too far removed from the issue.

One of the main activities of the European Commission is to improve the legislation within the European Union. Three main activities fall under this topic, namely improving the legislation, ensuring compliance with legislation and ensuring safety within the EU(About the European Commission, N.D.). Within these activities, a theme that tends to come back is radicalisation as this is addressed within the law proposals, but also in the efforts to ensure safety for EU citizens. The complete Means-End Diagram is shown in Figure 13.
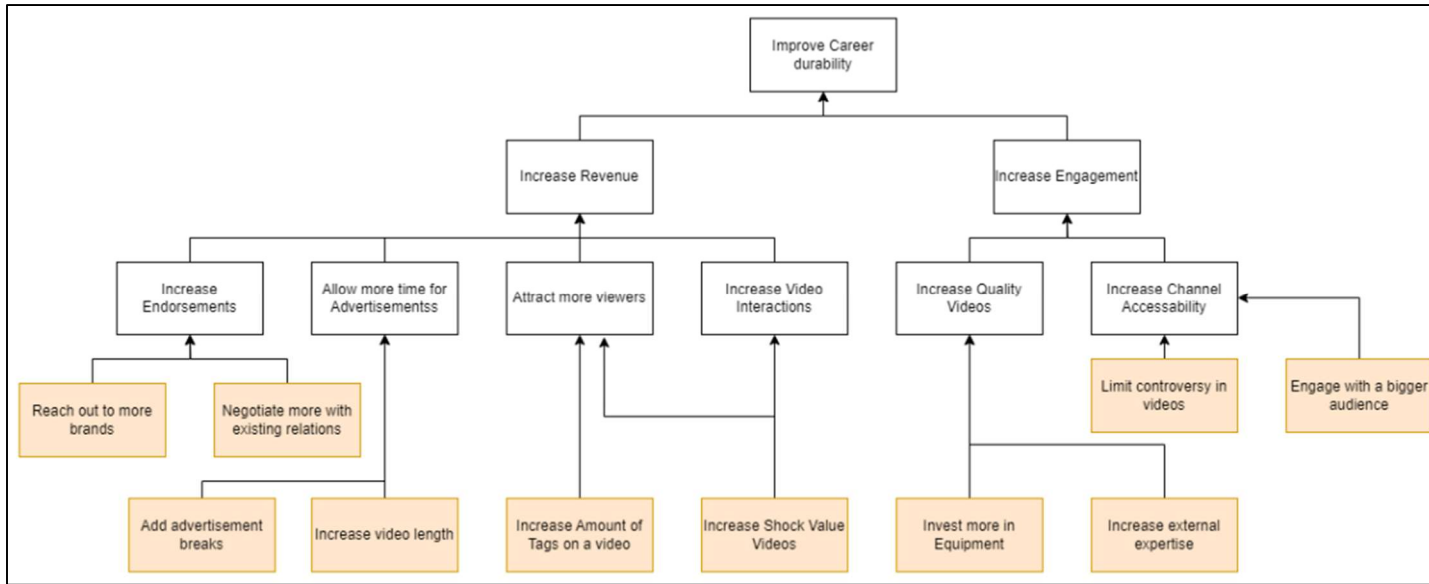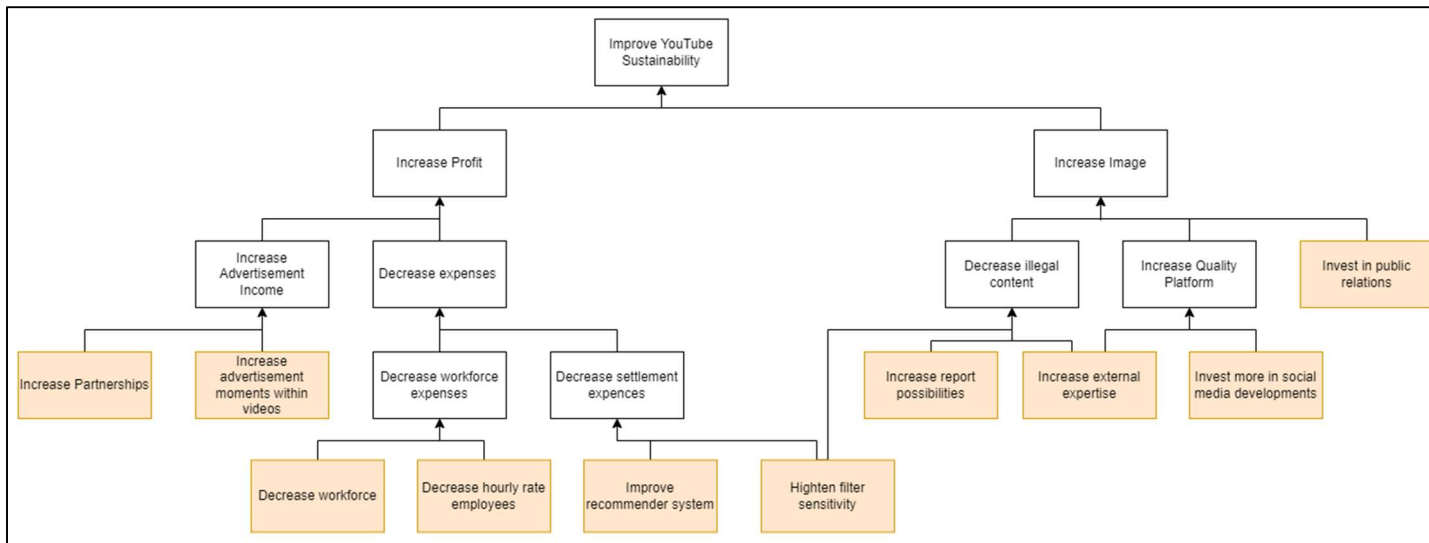
Figure 11: Means-End Diagram Creator

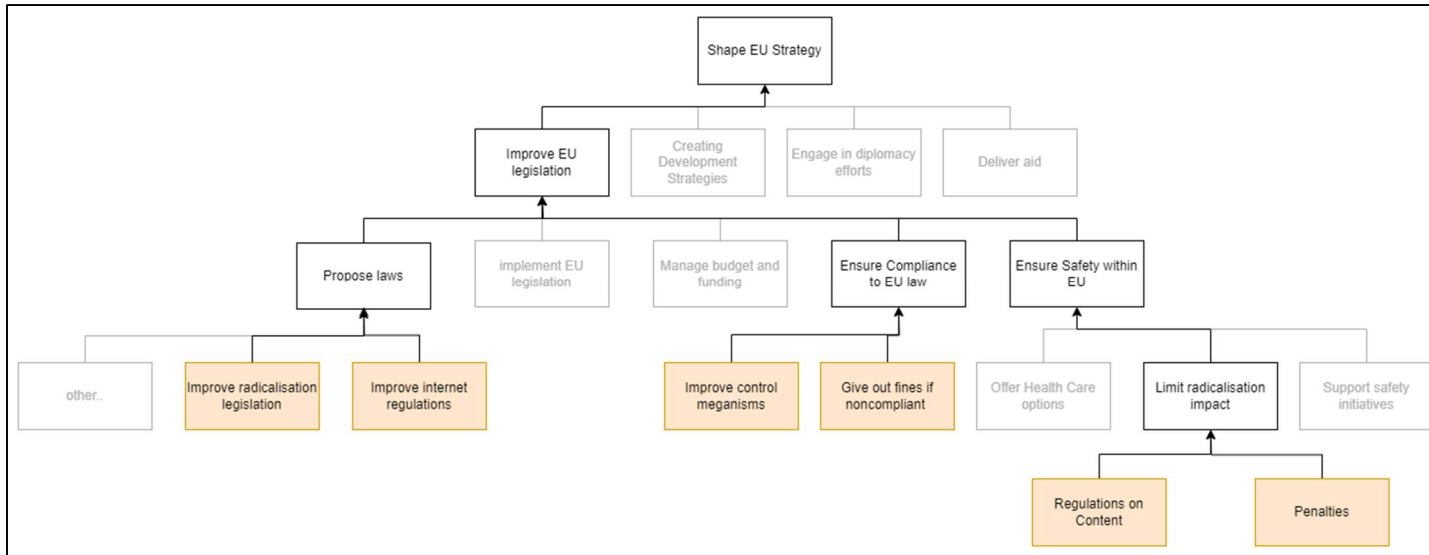Figure 12: Means-End Diagram YouTube Management

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Figure 13: Means-End Diagram European Commission

4.3 Objective Tree

The Objective Tree is focused on making wishes as formulated in the Means-End Tree measurable, the Objective Trees are therefore also based on the Means-End Diagrams. As the tree branches out, the Objectives become more specific and eventually, they become measurable. Again, since there are three Systems involved, there are three Objective Trees to be formulated. The results of the Objective Trees are used in the System Diagram as output variables. The Objective Trees can be found in Attachment C2.

4.3.1   Creator

The Objective Tree for the Creators is similar to the Means-End diagram focused on increasing Revenue and Engagement and includes different measurements as to how these factors can be measured. Revenue could be measured by advertisement income and endorsements. Which can be measured through monetary values, along with some measures such as the duration of videos and how many advertisement breaks are included. These measures are of relevance to the Revenue side of the Objective Tree, as an increase in these factors would directly impact the number of advertisements shown to the Users and therewith increase the revenue for the user. On the other hand, we have the engagement side of the Objective Tree which focuses on the Views of and the interactions with the video. The interactions look at the number of likes, dislikes and comments, while views focus on both viewers and potential viewers. The Objective Tree for Creator can be found in Figure 14.

4.3.2   YouTube Management

The Objective Tree for YouTube Management is at the top very similar to the Objective Tree for Creators. However, due to the organisations being vastly different, the measurements fitting with these factors are different. Where Creators look at endorsements, YouTube looks at ways to minimize costs in both the workforce and any necessary settlements. On the other side of the Objective Tree YouTube Management focuses on their image which is measured through how much illegal content is on the platform as well as how many reports on content are filed. On the other hand, YouTube focuses on the quality of the platform which is measured through different measures such as external expertise and investments. Figure 15 depicts the Objective Tree for YouTube Management.

4.3.3   European Commission

Similar to the Means-End Diagram the Objective Tree is limited to measurements that are relevant to this topic. The European Commission has many responsibilities and tasks but not all these are relevant to the issue that is studied in this thesis. Therefore, they are not further explored in the Objective Trees. The Objective Tree shows interestingly that the same measurements are found on two sides of the Objective Tree, namely the radicalisation victims and material damage related to radicalisation. Both can be used as measures for safety and legislation and as both

link directly to the issue at hand, they are of interest to the System Diagram. The complete Objective Tree can be found in Figure 16.
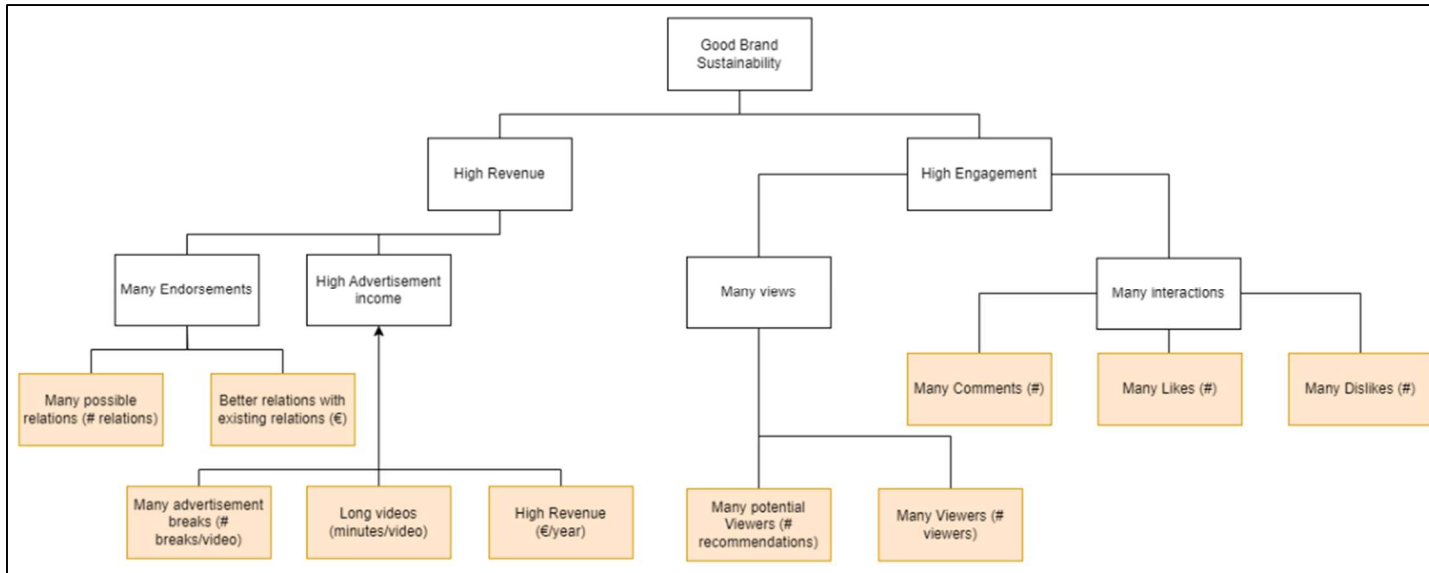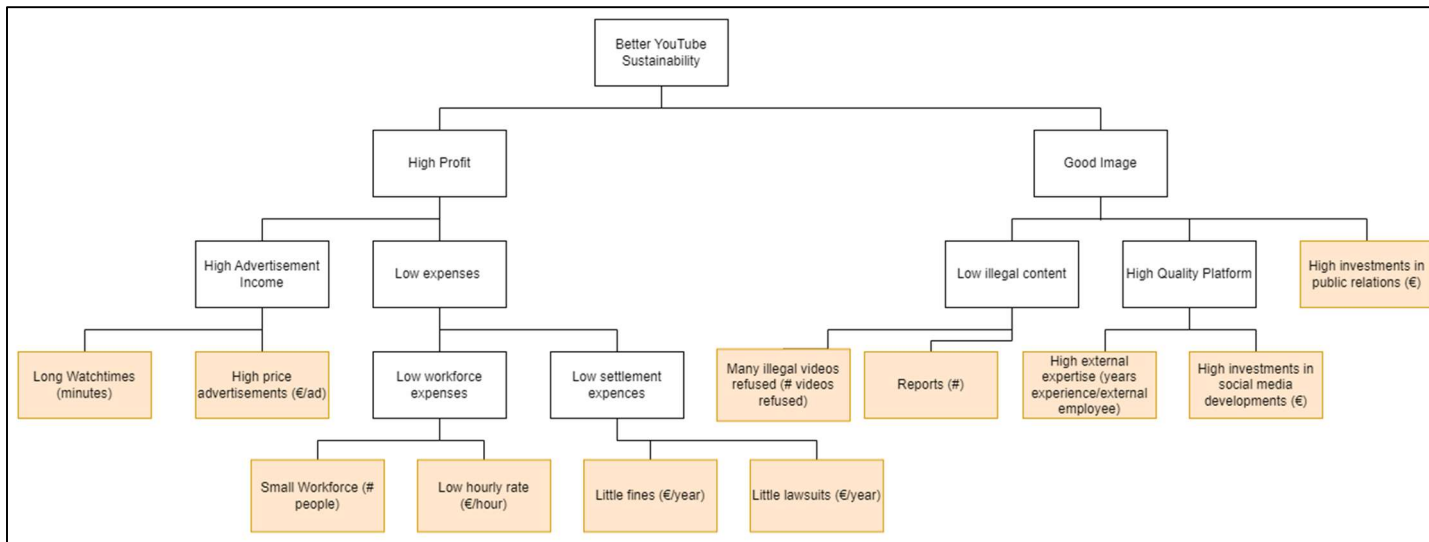
Figure 14: Objective Tree Creator

Figure 15: Objective Tree YouTube Management
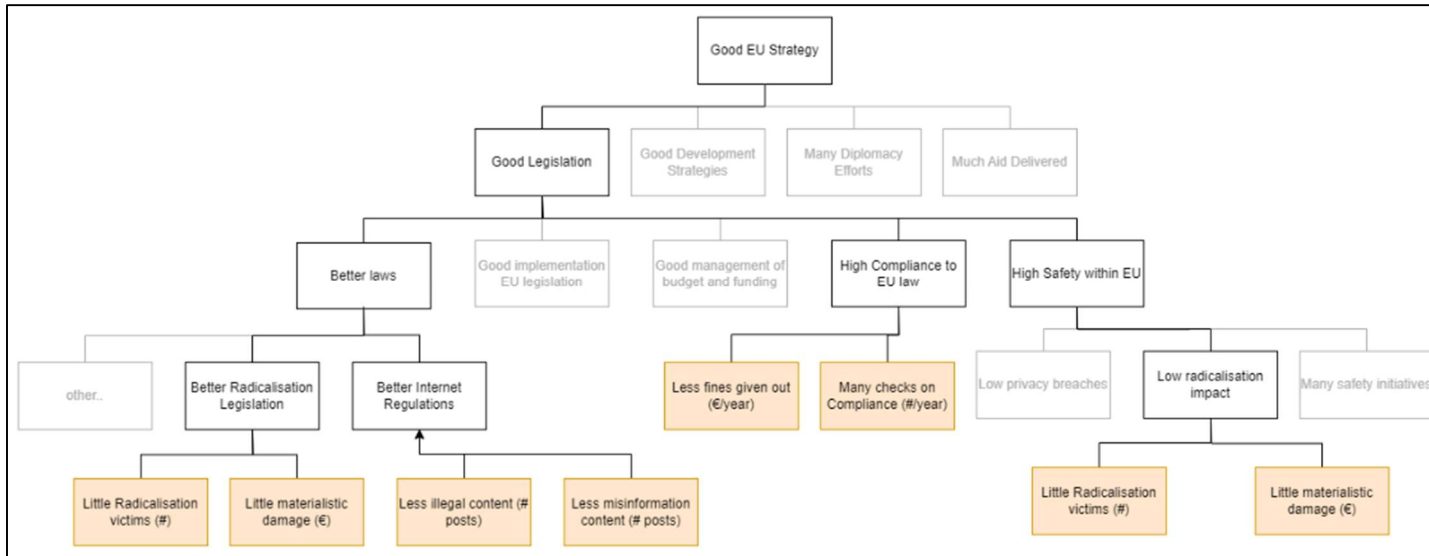
Figure 16: Objective Tree European Commission

4.4 Causal Diagram

The Causal Diagram depicts the relationship between different factors within the System. For all three Systems, a Causal Diagram is created to explore the Causal Relations between the factors. The Causal Diagram completes the System Diagram and shows the Dynamics of Internal Factors. The Causal Diagrams can be found in Attachment C3.

The Causal Diagrams started with documenting links that were found in the literature used in the Literature Review. When the factors were established, additional literature was found to support links between established factors that were not earlier mentioned in the literature.

4.4.1 Personal

Within the Personal System, this thesis focuses on the dynamics of YouTube from the perspective of a Creator. The system also looks closely at the dynamics on YouTube for a specific video uploaded by the Creator, namely Video A. As described in the literature, more interactions with a video, likes, comments and dislikes, lead to more recommendations for this video and this creator. This increases the number of people that watch the video, which in turn increases the number of interactions with a video. If more people watch the video, the total watch time of the video will increase. Both the recommendations towards this content creator and the watch time of the creator increase due to this dynamic. Figure 17 shows the Causal Relations between the factors in the Personal System.
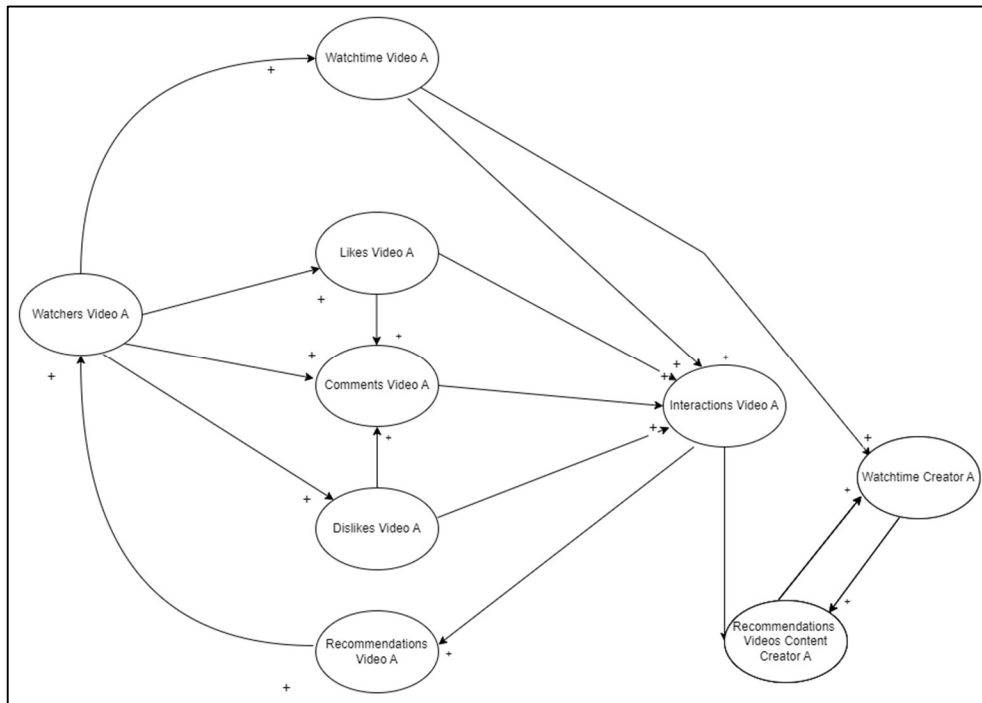
Figure 17: Causal Diagram Personal

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4.4.2 YouTube

The Causal Diagram shows the dynamic of how radical videos increase engagement on YouTube, as people tend to interact more with controversial content. They tend to leave more comments and more likes and dislikes. As we know, videos with higher engagement lead to longer watch times. Longer watch times mean more revenue for Content Creators who in turn create more videos. Figure 18 depicts the Causal Diagram for YouTube.
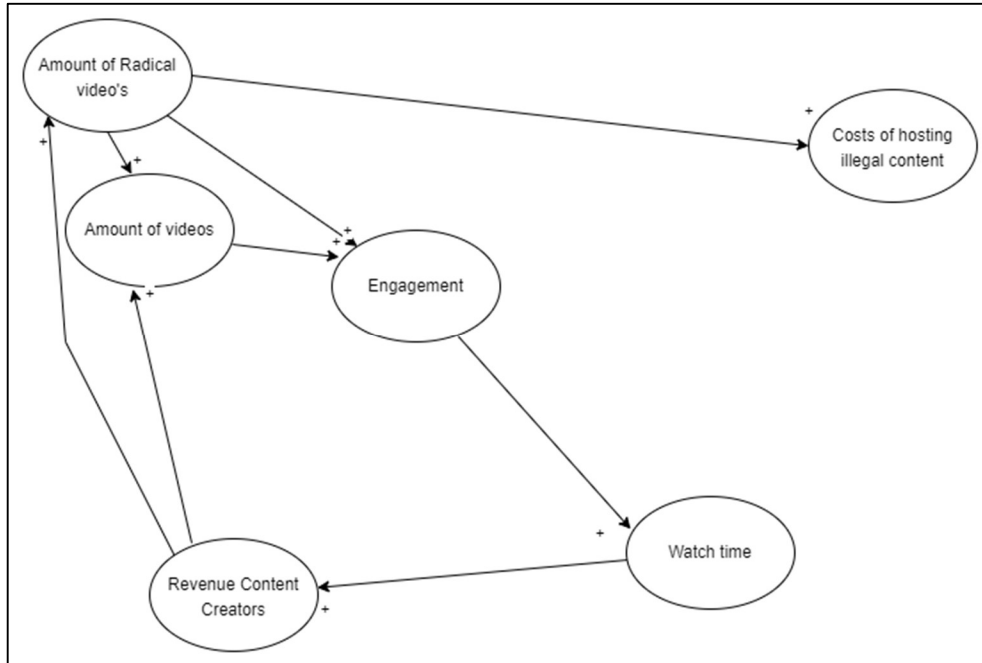
Figure 18: Causal Diagram YouTube

4.4.3 Society

The Causal Diagram for Society more focusses on the pathway from extremist content existing on YouTube towards increasing the number of radicalised individuals. The diagram also shows the effect of counter-radicalisation content recommendations on the amount of self-radicalised users. This diagram also shows the differentiation between two known radicalisation pathways. On one hand, we have political radicalisation, on the other hand, there is radicalisation caused by the spread of misinformation. The diagram includes the influence of videos with misinformation, as these videos often also work radicalising and encourage watchers to disrupt governments with sometimes radical actions. The Causal Diagram can be found in Figure 19.

Figure 19: System Diagram Society

4.5 System Diagram

The System Diagram takes the Causal Diagram and adds means from the Means-End Diagram as well as Objectives from the Objective Tree to combine this into the System Diagram. The System Diagram can then be used to understand the dynamics of the System and the influences of the Measures on the Objectives. All complete System Diagrams can be found in Attachment C4, this attachment also includes the data sources for the System Diagrams.

4.5.1   Personal

With the completion of the System Diagram, the emergence of Self-Radicalisation can be found in the dynamics of the System Diagram. As has been reported in the literature, the shock value of a video increases the watch time of a video as well as how much people interact with the video and how much a video is recommended. The increase in these three factors eventually leads to an increase in revenue and interactions. We see this effect also in the literature where content creators make increasingly more controversial and politically charged content, even if it is not relevant to their original content. This dynamic has also been documented during the Value Oriented Semi-Structured Interviews. This dynamic is shown separately from the System Diagram in Figure 20.

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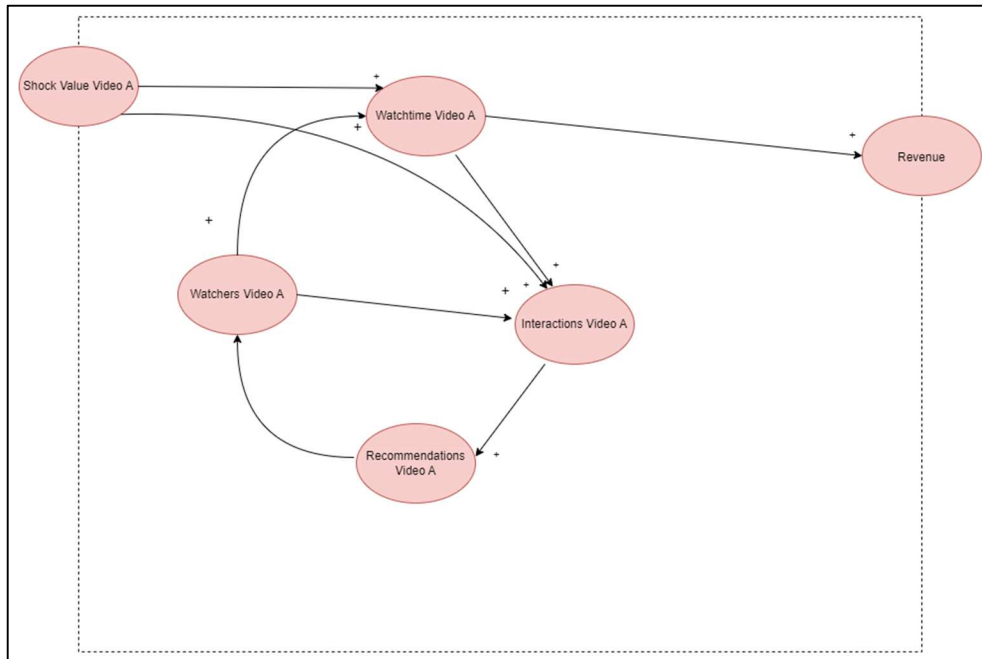
Figure 20: Dynamics of Radicalisation of Content - Personal

4.5.2 YouTube

The System Diagram shows another aspect of Self-Radicalisation on YouTube, as we again see that the shock value of YouTube videos increases engagement. Higher engagement leads to longer watch times, which increases the revenue for YouTube. The Recommendation System is focused on increasing engagement and watch times, recognising these videos with higher shock values as videos with higher engagement. This causes a recommendation bias toward more shocking videos. This dynamic is highlighted in Figure 21.

Figure 22 shows a different interesting dynamic within this System. Namely, filter sensitivity both has a negative as well as a positive influence on the revenue for YouTube. This is mostly because we know that radical videos are more engaging, leading to a revenue increase. However, with the new legislation as proposed by the European Commission, more radical videos would lead to YouTube having to pay fines for hosting illegal content, therefore hurting YouTube's revenue.
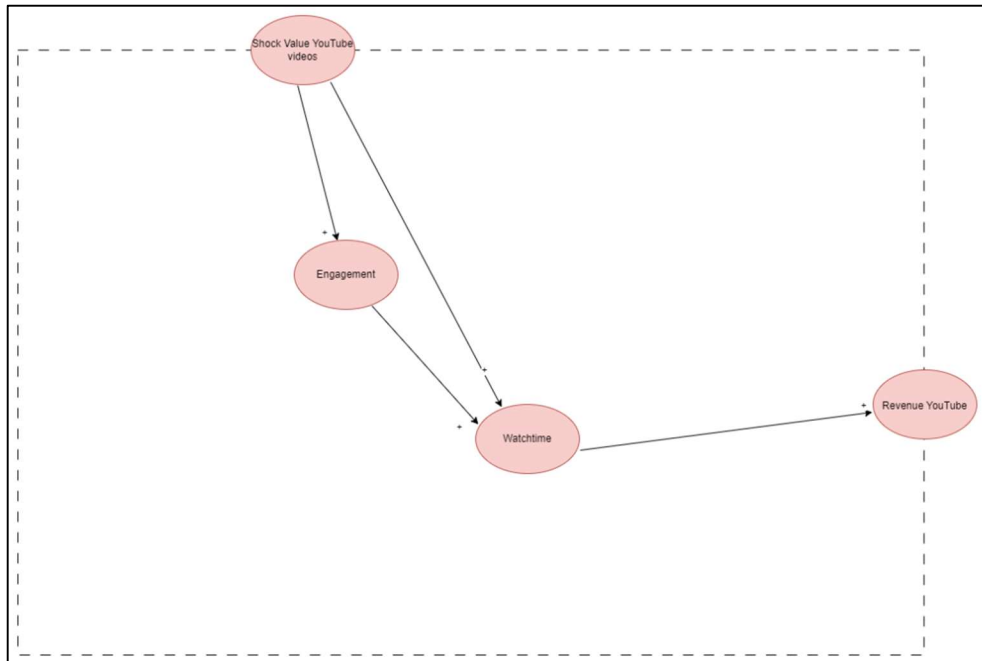
Figure 21: Dynamics of Radicalisation of Recommendations – YouTube
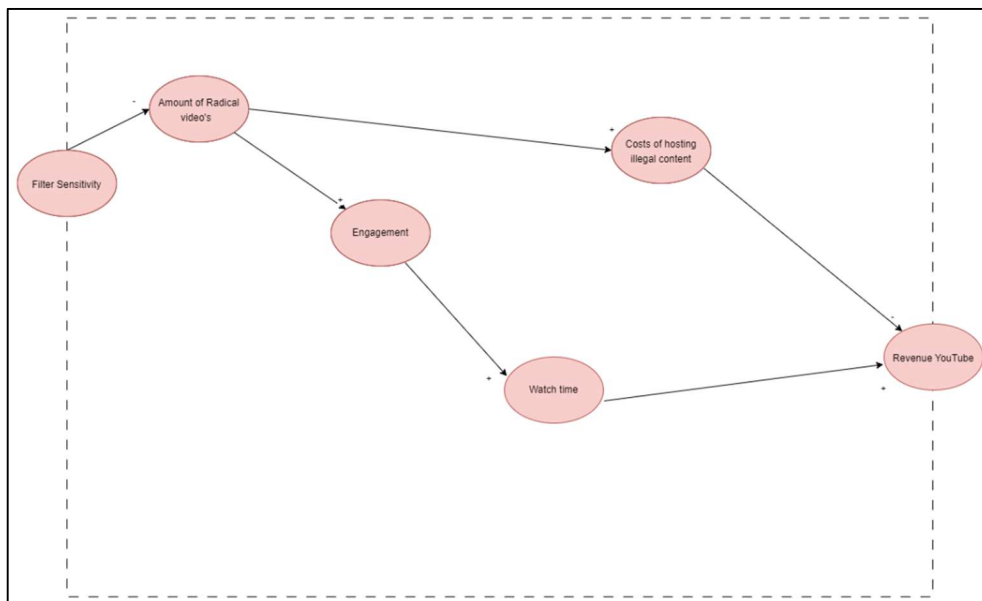
Figure 22: Effects of Filter Sensitivity – YouTube

4.5.3 Society

Adding the penalties for hosting illegal content and the regulations on content, both measures that are included in the legislation currently being discussed within the European Commission, limit the number of radicalised individuals. With the

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limitation of radicalisation, this also means that any damages caused by radicalisation will go down, which plays into the goals of the European Commission to improve both safety and legislation within the EU.

4.5.4 Self-Radicalisation Dynamics

As came forward in the System Diagrams, Self-Radicalisation on YouTube consist of a few different dynamics. To start the process of Self-Radicalisation, the radicalising content needs to be on the platform. In the Personal System Diagram, we see that Creators post content that becomes increasingly radical as it increases Revenue for a Content Creator.

A User will be recommended a slightly polarising video from these Content Creators, this is often unprovoked and is supported by the Dynamics within the YouTube System Diagram where you see that shocking videos get more recommendations as a way to increase revenue for YouTube. The YouTube User will get more recommendations of this nature as this is reported as engaging content. This will cause a User to find themselves in a Rabbit Hole, receiving more radicalising content over time. Eventually leading to the Self-Radicalisation of the User.

4.6 Interpretation Diagrams

Even though the Diagrams find their base in literature, literature is not always unambiguous. When creating the diagrams there were choices made concerning what findings to use. There were a few criteria to decide on what findings to use.

First and foremost, the findings that are most related to Self-Radicalisation and YouTube. Relations between factors that are outside this scope do not support the understanding of the Self-Radicalisation dynamics on YouTube and should therefore not be included to prevent clutter.

Secondly, if the findings were contradictory, the most recent source was used. This decision was made as we are looking at an evolving system that has changed a lot in recent years. More recent sources, therefore, are preferred. All sources for the diagrams can be found in Attachment C4.

4.7 Safety Control Structure

As stated in Chapter 2: Methodology, this Thesis aims to present Design Alterations that interfere with Self-Radicalisation on YouTube which could be implemented within YouTube. To ensure correct implementation, the Design Alterations need to adhere to the Safety Control Structure currently in place. It is possible that changes to this Safety Control Structure need to be made. In this chapter, the focus lies on establishing the current Safety Control Structure.

For the Safety Control Structure, this thesis focuses on the YouTube platform rather than the other systems. This is because any alterations might be influenced by this Safety Control Structure or even influences the existing Safety Control Structure. Notably, the AI Act and the Digital Services Act influence YouTube higher in the Safety Control Structure, but also apply changes lower in the chain, changing YouTube's daily business.

At the bottom of the Safety Control Structure, we see the safety feature most YouTube Content Creators and YouTube Users are familiar with. The possibility to report certain content when this opposes the Terms and Conditions YouTube expects its Creators to uphold. Based on reports, YouTube could start focused improvements to the platform through the System Development side of the System Control Structure. This part of the Safety Control Structure is shown in Figure 23. The complete Safety Control Structure can be found in Attachment C5.
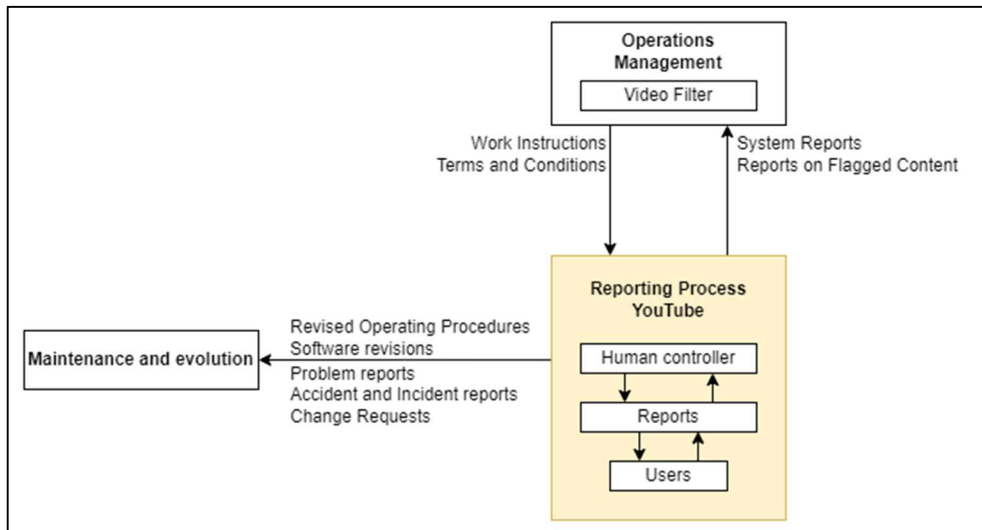
Figure 23: Safety Control and Improvements

4.8 Conclusions System Analysis
The goal for this Chapter was to test the reported Radicalisation Pipelines, as well as establish the Solutions Space, based on the System. Within this Chapter, three Systems were defined and analysed. The Analysis found affirmation of the Radicalisation Pipelines within the System Diagrams. The dynamics in the System Diagrams that lead to Self-Radicalisation need to be addressed by the Design Alterations. This is evaluated in Chapter 6: Design Evaluation.

5. Design Alterations

5.1 Value Conflicts

Within Chapter 3: Actor Analysis, the values of the YouTube Users and YouTube Creators were determined. Whether a User or Creator accepts the Design Alteration depends on to what extent these Alterations support the Values as described. However, as seen in the Value Dynamics diagram, Values can conflict. Therefore, the solutions formulated in this thesis will focus on limiting or even solving a Value Conflict. In this way, both Values will be supported, and it is more likely that Users and Creators will accept the suggested Design Alterations.

Later in this chapter, the Value Conflicts are further explained. Figure 24 shows the diagram with the Value Dynamics. Within the figure, the Value Conflicts that are further investigated in this chapter are highlighted. The thesis will focus on the Conflicts between Personal Safety and Freedom of Posting, Entertainment and Freedom of Posting and, Safety of Vulnerable Entities in combination with Freedom of Posting and Debate.
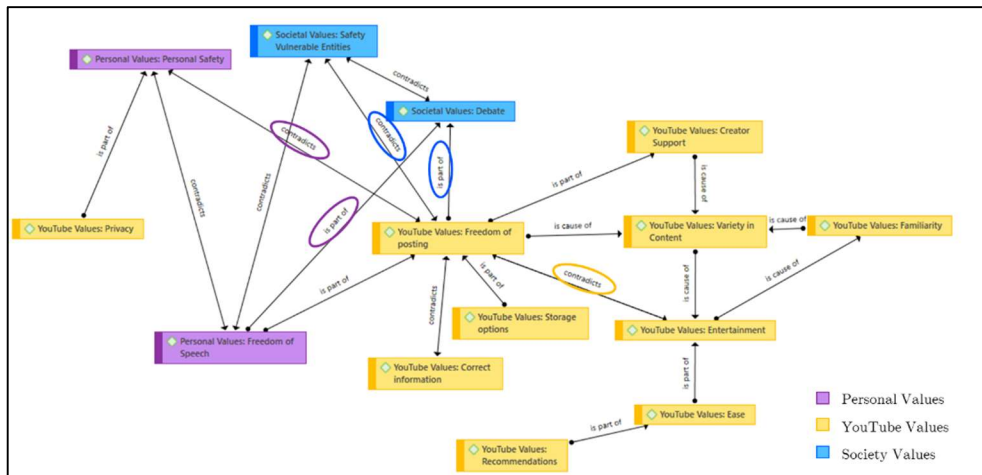
Figure 24: Value Conflicts further investigated

In the following subchapters, these Value Conflicts will be further explained in means of what the Value Conflict entails.

5.1.1   Personal

The Value Conflict within the Personal System is the conflict between Personal Safety and Freedom of Posting. This can be explained by the fact that some things that get posted can directly impact one's safety. This can be indirect, but also direct. Examples can be videos containing identifiable information, therefore being a threat to someone's safety. This falls under the Terms and Conditions of YouTube and

could therefore be reported. But there are also instances of videos that are less directed at an individual but do impact one's personal feeling of safety. These videos, even though they impact someone feeling of safety, are not automatically classified as illegal videos or as videos that handle in conflict with the Terms and Conditions of YouTube. Due to them not being illegal, they will remain on the platform. Solving this Value Conflict therefore should focus on the possibility to protect oneself against encountering these videos without immediately deleting these videos.

5.1.2   YouTube

Within the YouTube values, there are two Value Conflicts found. On one hand, there is the Value Conflict between Freedom of Posting and Entertainment, which originates from the fact that simply put, not every video that is posted on YouTube fits every YouTube User. On the other hand, there is a Value Conflict between Misinformation and Freedom of Posting. YouTube policy states that they respect Freedom of Speech and therefore keep videos with misinformation on the platform, as long as this misinformation is not seen as extremely harmful. YouTube uses its recommender system to steer YouTube Users away from this content.

Considering that YouTube already has a strict policy to relieve the Value Conflict between Misinformation and Freedom of Posting, this thesis chooses to continue the analysis of the Value Conflict between Freedom of Posting and Entertainment. Similar to the Personal Value Conflict, solving this Value Conflict should not focus on deleting videos. Instead, it should focus on increasing the Entertainment Value for individual Users.

5.1.3   Society

The Value Conflict on the Societal Level focuses on the Safety of Vulnerable Entities and Freedom of Posting. Similarly, to the Personal Value Conflict, some videos can potentially be harmful for some Users. However, in this case, we look at Vulnerable Entities, which include, but are not limited to children, minorities, and disabled people. However, as we saw in the Co-occurrence Diagram the Safety of Vulnerable Entities interacts often with the Societal Value Debate. As stated before this thesis focuses on Value Conflicts related to YouTube Values, therefore this thesis will not focus on the conflict between the Safety of Vulnerable Entities and Debate. We do see that Freedom of Posting is part of the Debate and therefore the Value Conflict between the Safety of Vulnerable Entities and Debate will still be respected by focussing on the Value Conflict between Freedom of Posting and the Safety of Vulnerable Entities.

5.2 Design Alterations

Based on the Value Conflicts, Design Alterations were formulated. These Design Alterations are described below. The different Design Alterations also include mock-

ups to visualise the interface change on YouTube. Figure 25 shows an overview of the Design Alterations.

Figure 25: Design Alterations

5.2.1   Personal

The focus on solving this Value Conflict was protecting Users against videos without deleting these videos. The Design Alteration that eventually was chosen was taken from the Value Oriented Semi-Structured Interviews. Two respondents separately mentioned introducing a "Block Content" Button. A similar Button is already being used by Facebook. On Facebook, after clicking the Button, people can give a reason as to why they don't want to see similar content. For YouTube a simpler implementation was considered. In a similar way that the algorithm works and recommends videos you would enjoy seeing, in this case, the algorithm would form an understanding of what exactly you don't like seeing and would leave this out of your recommendations. This Button would be included under the video next to the other action buttons. Figure 26 shows the change to the YouTube interface, while Figure 27 shows the functionality by itself.

Figure 26: Block Functionality on YouTube Interface
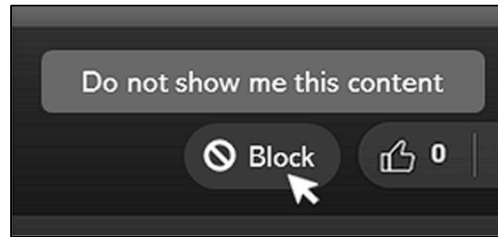
Figure 27: Block Function

5.2.2 YouTube

For the YouTube Design Alteration, the focus should be on increasing the Entertainment Value for Users, without deleting videos. Within the literature, we know of a YouTube alternative named 'Gobo' (MIT Media Lab, N.D.). This alternative differentiates itself from YouTube because you would be able to create your algorithm for recommendations. However, what YouTube has over Gobo, is Familiarity, which was also established as one of the Values the Users and Creators uphold. It would be interesting to see an implementation of this idea nurtured on Gobo implemented on YouTube, to see if this solution would work on this scale.

The idea was also offered by one of the Respondents, all be it in a slightly different fashion. The idea was to create Profiles within your account. You could switch between Profiles based on what you want to watch then. The Profiles each have their recommendations based on the Profile. You could set up your algorithm easily by creating a Profile and then finding 10 videos that fall in that category according to you. This is an extension of the idea of Gobo, as this would include multiple different recommendations, instead of trying to fit everything in one recommendation. This feature would be added at the top of the website, close to where your account is projected. Figure 28 shows how the interface would look when this is included. Figure 29 shows the feature by itself.

Figure 28: Profile Functionality on YouTube Interface
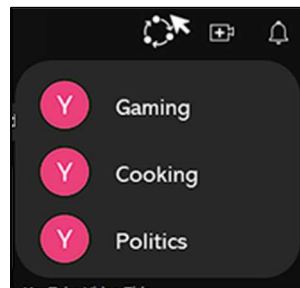
Figure 29: Profile Function

5.2.3 Society

The idea behind the Design Alteration comes from the literature on News Recommender Systems. The article discusses the implementation of a Bias Score on News Articles to support the understanding of the motivation behind the article. It would also support readers to try to look for articles from different political viewpoints. Within the implementation on YouTube, we aim to keep this feature accessible. However, to respect that politics are on a spectrum and not a line, it is important to find a middle ground. For this solution, therefore the solution is split into two factors; showing how politically charged a video is and showing where it is on the political spectrum.

The result is a Scale beneath the YouTube video informing the viewers in one view how politically charged a video is. Once you hover over this Scale a popup appears informing you about where on the political spectrum this video resides. From here there is the option to receive more information on what this political view entails. The value of the Scale and the spectrum would be decided through the automatic

screening for keywords in the videos. How this would look on the YouTube interface can be seen in Figure 30. Figure 31 in turn shows a clearer view of the alteration.

Figure 30: Scale Functionality on YouTube Interface
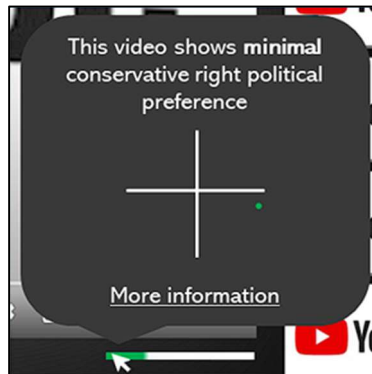
Figure 31: Scale Function

5.2.4 Other Alterations

Besides the Alterations discussed above, other Alterations were also considered. One of these Alterations for the Personal System Level was suggested by one of the Respondents. The idea behind the Alteration was to add a Trigger Warning for videos that could be possibly harmful. However, with this Alteration, the Trigger Warning is dependent on recognising videos as harmful. If there was a system on YouTube that recognises something as harmful, YouTube would already delete this content as it conflicts with the Terms and Conditions. This would make the Trigger Warning obsolete, therefore this solution was not further included in this research.

For the YouTube System Level, a change to the recommendation section was considered, using a like and dislike button next to a recommendation. This would improve recommendations to show better fitting content, increasing the Entertainment Value, while also giving everyone space to upload what they want. This idea was formulated by the researcher and did not have any base in either literature or the interviews. Therefore, this Alteration was not further investigated.

Lastly, there was another idea for a Design Alteration addressing the Debate-Freedom of Posting-Safety of Vulnerable Entities Value Conflict. The idea behind this was that when one was looking for a political topic, one should see a collection of videos on this topic of different sides of the political spectrum. However, this would not include all political videos on the platform, not helping to put the videos into perspective. Therefore, the Scale option was used in this thesis.

5.3 Conclusions Design Alterations

Within this chapter, different Design Alterations were formulated based on the Value Conflicts found in Chapter 3: Actor Analysis. The Value Conflict between Personal Safety and Freedom of Posting is addressed by the introduction of the Block Button which would let you block content from being recommended to you. The Profiles Design Alteration, where a User could have different profiles within their account, addressed the Value Conflict between Entertainment and Freedom of Posting. Lastly, the Value Conflict between Debate and Freedom of Posting is addressed by the Scale functionality, where Users would get more insight into the political bias of a video. The Design Alterations will be evaluated in Chapter 6: Design Evaluation.

6. Design Evaluation

The evaluation of the designs is based on three topics. First, the influence of the design within the system is evaluated to determine if the design affects the dynamics that were identified as causes of Self-Radicalisation on the YouTube platform. After this is established, the thesis will focus on the Safety Control Structure and will see how implementing the design alterations could alter the Safety Control Structure. Lastly, the Designs will be shown to the original Respondents from the Value Oriented Semi-Structured Interviews to see if the Design Alterations would be accepted by the Users and Creators.

6.1 System Interference

Within this thesis, a distinction is made between the three Systems. As explained in Chapter 5: Design Alterations, during the evaluation of System Interference the focus will be on the influence of the Design Alteration on the System in which the targeted Values were identified. This is done to prevent accidentally overestimating the effects of the Alteration, which would happen if influence were gauged for all Systems.

6.1.1   Block Button

The Block Button would introduce a new factor to the system, being the number of blocks for video A. The amount of blocks limits similar recommendations. Considering that Creators often stick with similar content, this will therefore also mean that a User is not recommended more content from the Creator. This in turn leads to less watch time and fewer interactions with the Creator. Less watch time leads to less revenue for the Creator. Reducing the revenue and the outreach of the video will force Creators to limit the number of blocks their content receives. The more shocking a video is, the more likely it is to be blocked. This would interfere with the phenomenon where Creators post increasingly shocking and radicalising content. Therefore, introducing the Block Button would be effective in the prevention of Self-Radicalisation. In Figure 32 the System Interference of the Block Button is depicted.

6.1.2   Profiles

To depict the influence of the profiles on the System, the step between the amount of radical videos and the image of YouTube is added. The image of YouTube is only influenced by the number of radical videos seen by the Users. Considering this is a direct connection between two factors and there is no connection to other factors, this was left out of the original System Diagram. It has been added to this diagram to show the influence of the Profiles. The Profiles would steer recommendations better, which would mean Users would be less likely to recommend unrelated radical videos. The connection between radical videos and radical videos seen is weakened. Figure 33 shows the System Interference of the Profiles functionality.
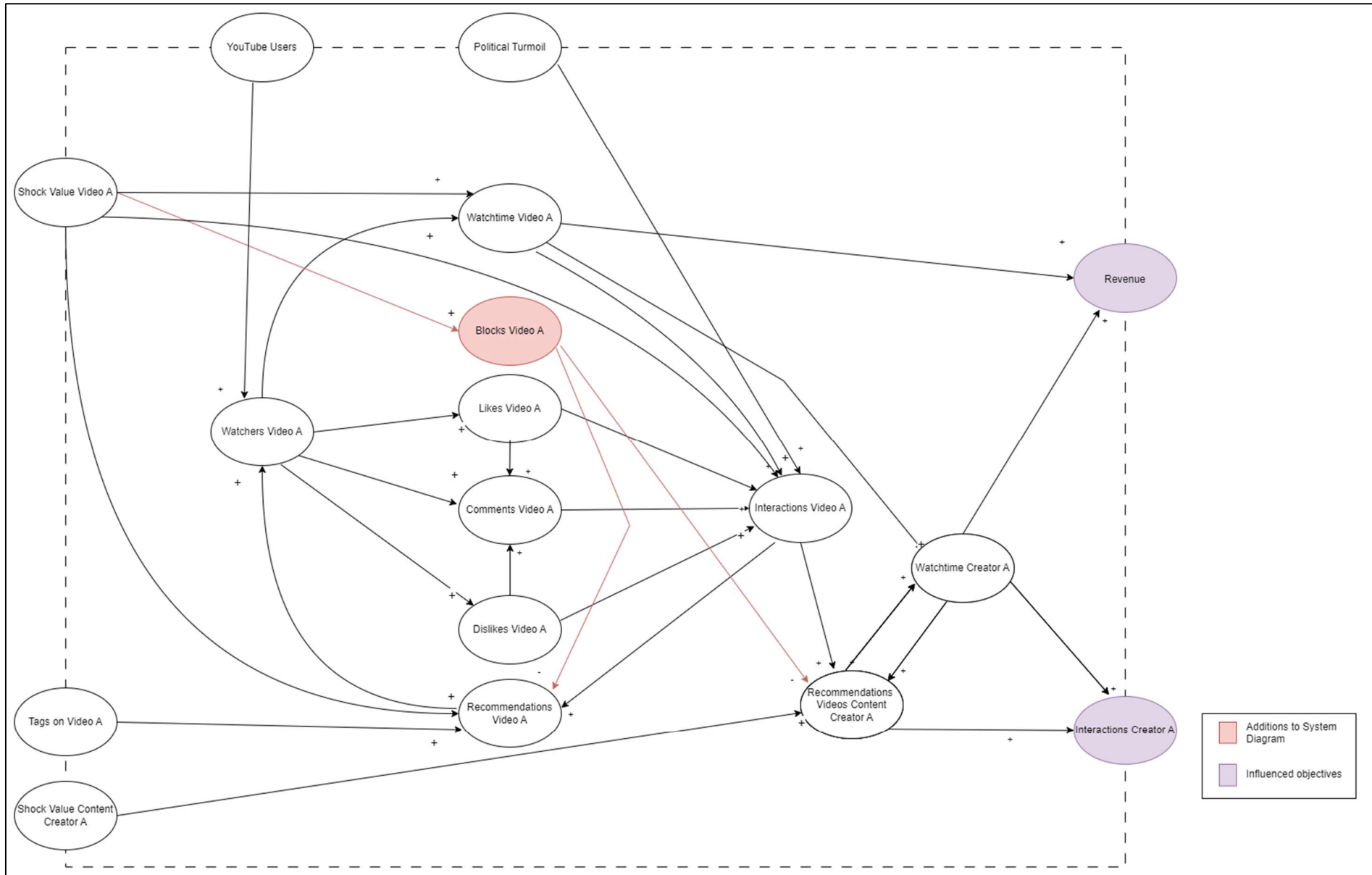
Figure 32: System Interference Button
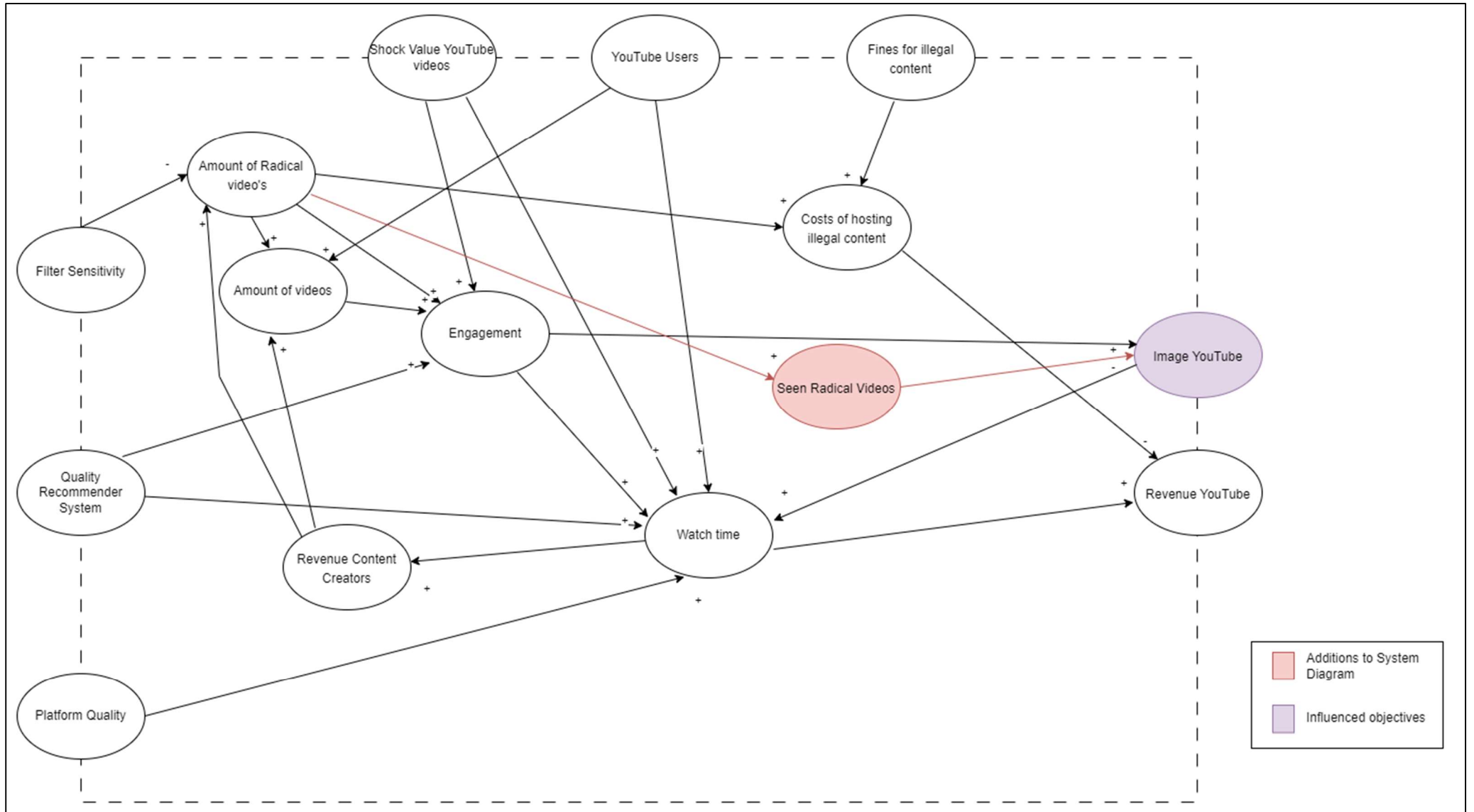
Figure 33: System Interference Profiles

6.1.3 Scale

For the Scale, the focus lies on the connection between Users viewing extremist content and self-radicalised users. The solution would allow Users to put consumed content into perspective. Political perspectives are often presented as truth, rather than a political view. This makes people start acting by the videos, believing that they depict the truth. With the introduction of the Scale, the content of the video can be put into perspective. This would weaken the link between extremist content and self-radicalised users. The link and the effect on the Objectives are shown in Figure 34.
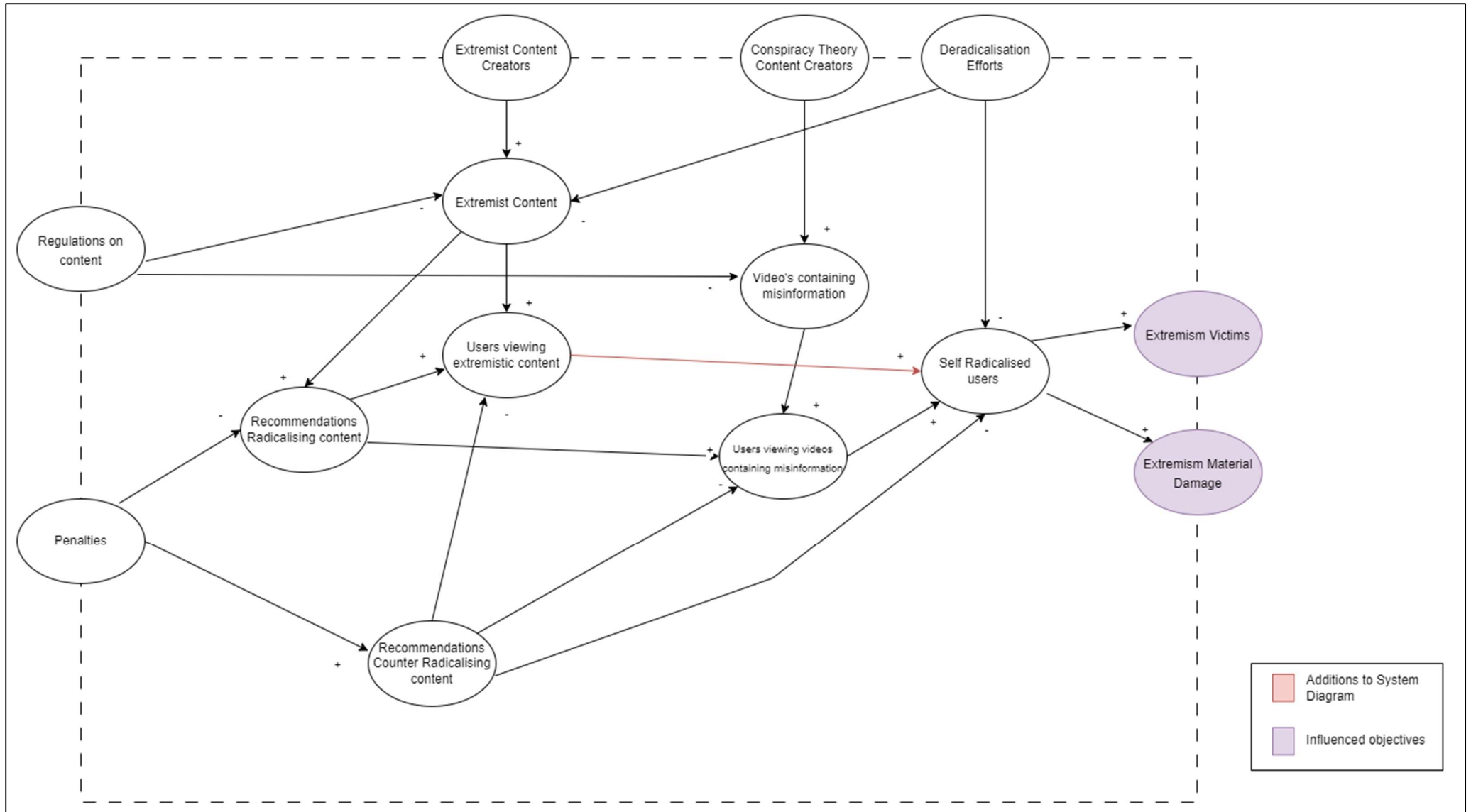
Figure 34: System Influence Scale

6.2 Safety Control Structure

Implementing changes to the YouTube interface, sometimes also means that some changes to the Safety Structure are necessary. Sometimes additional safety features need to be added to the platform to ensure safe usage of the platform. Below the changes to the Safety Control Structure are described and pictured.

6.2.1 Block Button

The addition of the Block Button in itself is an additional safety feature. Users may use the Button to prevent them from getting recommendations for illegal content. If certain content seems to get blocked more regularly, a human controller could potentially report on repetition and file for change requests. This could be used to improve User Experience and overall improve the platform. Figure 35 depicts the new Safety Control Structure.
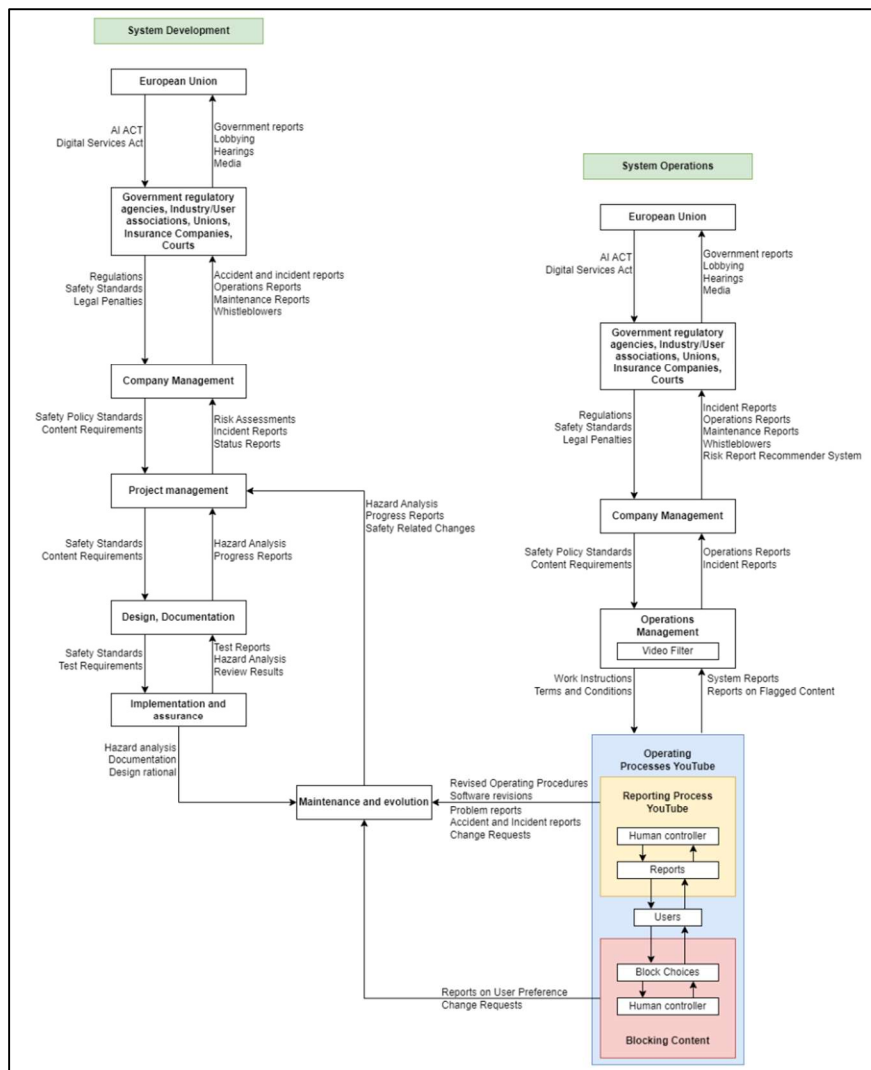
Figure 35: Safety Control Structure Button

6.2.2 Profiles

For the introduction of Profiles, there are no changes to the Safety Control Structure are necessary. This is because the Profiles are almost like accounts within an account. The introduction of the Profiles does not change any of the features of YouTube, it also does not change the inner workings of the YouTube platform. Therefore, there are no changes to the Safety Control Structure and therefore no new diagram is created.

6.2.3 Scale

For the introduction of the Scale, YouTube also needs to ensure that the political label that is given to a video is correct. Therefore, there needs to be an option to report mistakes in the scales. Reporting mistakes for the political Scale can be very similar to the already existing reporting feature. Within the Safety Control Structure, this report function could also support improvements for the keywords that are used to determine the political nature of the video. Figure 36 shows the new structure.
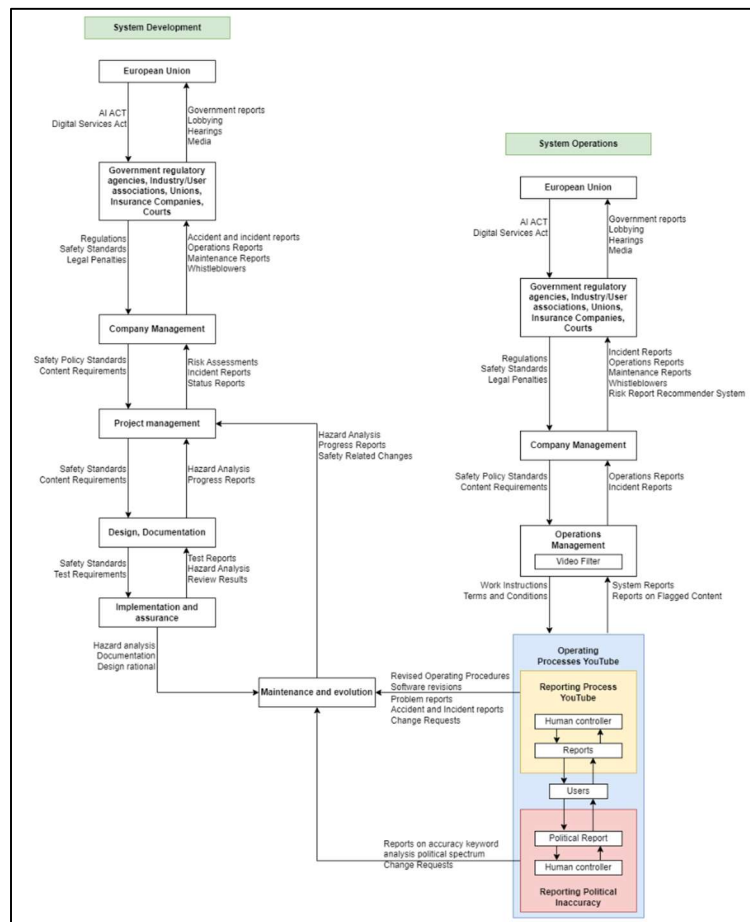
Figure 36: Safety Structure Scale

6.3 User Acceptance

To establish whether or not Users and Creators would accept the solution. This thesis differentiates between 3 acceptance metrics. Namely, what is their opinion on the implementation of the solution, would Users and Creators make use of the solution and how does the solution confirm to earlier established Values? Lastly, this thesis will look at possible improvements offered by Users and Creators.

The information used in this chapter comes from the original interview Respondents. In this thesis the choice was made to go back to the original Respondents, to test if the Alterations formulated matched with the values earlier offered by the respondents. This tests if the Values are correctly understood and documented. Going to different Respondents would take away the risk of bias, or in this case artificial confirmation of the correctness of the solutions, however, a new group could hold different Values than originally identified. This would make that the solutions might not fit with their Values and therefore lead to a mismatch.

6.3.1 Interview and Coding Process

The Respondents were asked back to discuss the Design Alterations as proposed based on the Values found in the original interview. The interview started with showing a YouTube mock-up that included the three Design Alterations. The Design Alterations were not highlighted. This was to gauge a first response and to see if the interface possibly changed too much.

This was followed by an explanation of the Button functionalities, followed by questions to gain insight into someone's feelings about the implementation of the alteration and if they would use the alteration. In the end, the respondents were asked if they thought others would use it. The question, of whether they think other people should use the Alteration, was added to try to bring forward the positive or negative feelings for the Alteration and how they would feel about the YouTube population using the alteration. These questions were then also asked for the Profiles and the Scale functionalities. All questions, similarly to the first interview, were followed by the question why, to make the Respondents express their values.

The interviews were again analysed by ATLAS.ti. The techniques used were similar to those of the analysis of the original interviews. Within ATLAS.ti the focus was on 4 aspects, Implementation, Improvements, Positive/Negative Value and Usage. Within the Value aspect, the result is limited to Values that were originally found in the first interview. No new Values were added.

6.3.2 Block Button

The Block Button was received overall positively, however, many Respondents had worries about the Implementation and offered Improvements to the solution that would take these worries away. Concerning the upholding of Values, the solution

seems to score both positively and negatively. In Figure 37, the codes used in the Design Evaluation are shown.
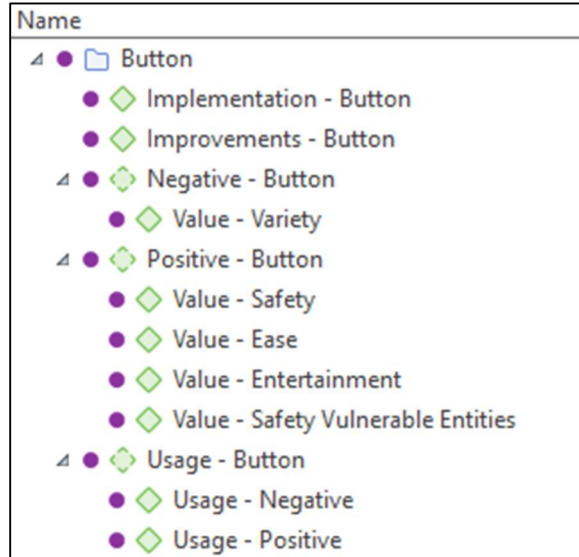
Figure 37: Design Evaluation Button

6.3.2.1 Implementation

While most Respondents liked the idea as it was, some Respondents were more cautious about using the functionality. This comes down to the fact that the proposed variation of the Block Button is too simplified. In the design, the Recommendation Algorithm would determine what blocking entails, this was done to keep the solution simple and accessible. However, the worry that Respondents voiced was that they don't exactly know what using this Block Button entails, see Figure 38. They are unsure what content they are blocking and are afraid that they will no longer see a category of content that they enjoy watching.

Respondent 6

I think it's fine. I think it wouldn't really work because it's going to require people to categorise their YouTube videos correctly. Already now, if you look at what category certain videos are under, they're normally listed under like, not just like one thing, they are listed under dozens or hundreds of different categories. So if you block something, you might end up blocking something else that you actually would be interested in, so I think that for this to work it would have to be super specific. And then people would just not use that category for their video, if they're worried that people have blocked it. So, I don't think it would really have any benefit in the long run whatsoever.

Figure 38: Implementation Button

6.3.2.2 Usage

Overall, most Respondents would use a functionality like this. Respondents who had worries about the Implementation mentioned that they would use the solution, with some alterations, see Figure 39.

Researcher

Next question is also would you use a button like this yourself?

Respondent 2

If I was able to see either visually or read what. If there was like a learn more portion right? Like if you were hovering it and there was like a learn more portion where like the do not show me this content is. I feel like having something that would allow us to learn more about what exactly it's blocking would make me use it but outright I don't know if I would because it might block something that I'd be interested in watching, not knowing the background of it.

Figure 39: Usage Button

6.3.2.3 Values

As mentioned in the Implementation findings, Users and Creators are afraid that they will be limited in their recommendations, this stems from the fear that the Variety Value, as established in earlier interviews, will not be respected.

Other than that, the Block Button would support other Values found in this thesis, that were not originally targeted in the process of designing the Design Alterations. Users and Creators mentioned that they like that they could easily change their recommendations to better fit what they enjoy watching. This plays in both the Ease and the Entertainment Value, both were not targeted originally by the solution. Lastly, Users and Creators saw benefits regarding the Safety of Vulnerable Entities Value, see Figure 40. As this could be used to steer for example kids away from certain parts of YouTube.

Respondent 5

I think it would be quite good. I don't know if I'd necessarily use it, but I think that's because I'm like quite specific. I know there's a lot of people that watch YouTube videos and they go down these rabbit holes and they watch tons and tons and tons at the time, and they'll go through all like the suggested videos and stuff like that. I think where I'm so specific with what I watch, I don't think I would ever use it, but I do think that it's useful. Especially I think if kids are watching YouTube and maybe their parents just like walk past and they see them watch it, it's something that's aimed at kids, but they don't find it appropriate. To for them to be able to use it, I think would be really useful.

Figure 40: Values Button

The solution was aimed at improving one's Safety and upholding that value. It was only mentioned once in the interviews. However, there were no negative notations for this value. We can therefore establish that the influence of the Block Button on one's Safety is not apparent to the Users or Creators.

6.3.2.4 Improvements

To take away the worries as presented by the Respondents, some Respondents mentioned that they would like a pop-up when they click the Block Button to better understand exactly what they are blocking, see Figure 38. This could also be used to possibly have Users formulate why they are blocking this content. This way the positives of the solution still uphold, but the impact on the Variety Value is taken away, which would make it a positive experience for all users.

6.3.2.5 Conclusion

Overall, the Design Alteration is a viable solution. It interferes with one of the Radicalisation Pipelines and users are positive about using the functionality. However, the solution could be improved by giving more insight as to what blocking a certain video entails.

6.3.3 Profiles

The Profiles functionality was received very positively. Respondents were excited about the solution. The worries regarding the Implementation were limited, however, the positive influence on the Values was noticeable. Respondents were positive about the Usage of the solution. Figure 41 shows the results of the second interview regarding the Profiles.
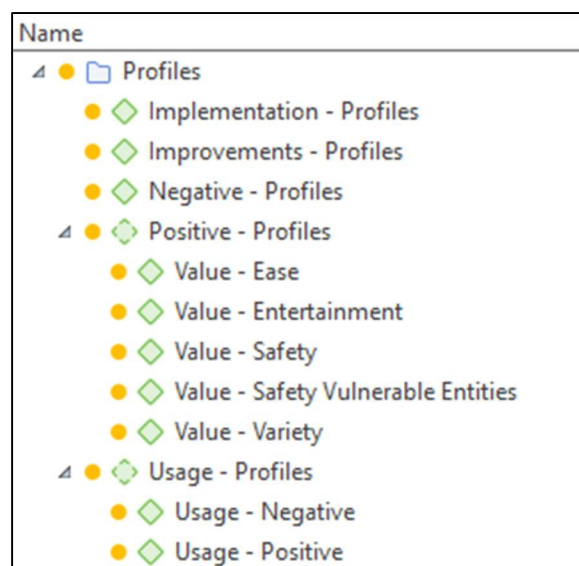
Figure 41: Design Evaluation Profiles

6.3.3.1 Implementation

The only worry about the Implementation of the Profile Functionality that came from the interviews is that Creators would try to surpass the Profiles by using tags that are not relevant to the video, see Figure 42. However, this would be underestimating the accuracy of the Recommendation Algorithm. The Algorithm can establish what kind of video it is without the use of the tags, but instead basing it on what people that watch that video have watched other than this video. Therefore, this worry would not become apparent when the functionality is implemented.

Respondent 6

Yeah, seems like a great idea. My only worry again would be that it's likely to be users categorising these videos or an AI system and you will likely have people who try to bypass that where you will be watching a gaming video or like you'll see a gaming video, but it'll actually be political or cooking content. But I like the premise. I think it's nice. Sometimes you just want to chill and watch some cooking videos. I think it's pretty neat that you can have that on separate profiles and that it doesn't mess up your recommendations based off of what you watch on a different profile instead of having multiple different YouTube accounts. I think this is a really good, smart idea.

Figure 42: Implementation Profiles

6.3.3.2 Usage

Respondents were very enthusiastic about the implementation of this feature, see Figure 43. A respondent mentioned that they are unsure if they use YouTube enough to benefit from this but were not negative about the use of the functionality.

Researcher

So, you would use it?

Respondent 1

Yeah, I would use the hell out of that.

Figure 43: Usage Profiles

6.3.3.3 Values

The Respondents were very positive about the solution, which seems to stem from the fact that there is no negative influence on any of the earlier established Values. However, this solution also supports Values found in the first interview that were not targeted by this Design Alteration. The solution focused on supporting the Entertainment Value, which, looking at the results of the second interview, is

properly supported. All Respondents in a way mentioned that this solution would support the Entertainment Value for them.

Other Values were also supported. Respondents saw possibilities to create profiles for kids, therefore supporting the Safety of Vulnerable Entities Value. While others recognised the possibility to filter out harmful videos, therefore increasing the Safety Value. The solution also supports the Variety Value for some users, as they like that they can still reach all videos if they want to.

Most notable is the positive influence on the Ease Value. Respondents were happy about how easy it would be for them to find content they want to see, without having to think about what they want to watch, see Figure 44. They were also positive about the focused recommendations and that they do not have to click through their recommendations to keep watching similar content. They like that the recommendations will not be divided between different topics they find interesting but instead focus on the topic they are currently watching.

> **Respondent 4**
> I think I would quite like it. I think it's a pretty easy way to filter out videos and your recommended portion that you're not really interested in watching at that given time.

Figure 44: Values Profiles

6.3.3.4 Improvements

The only Improvement that came forward was the possibility to have pre-set Profiles, in case you don't want to spend time setting up the Profiles, see Figure 45. This would support again the Ease Value. This Improvement could be added to the functionality, without changing the functionality and would improve User Experience and should therefore be considered.

Figure 45: Improvements Profiles

6.3.3.5 Conclusion

The Implementation of multiple User Profiles on YouTube would be a sustainable solution for Self-Radicalisation on YouTube as the functionality ensures that Users get less random radicalising content recommendations. The functionality is popular among the respondents. An Improvement added is the option to use pre-set Profiles to make them more accessible.

6.3.4   Scale

Respondents were divided on the Scale Functionality. They were either very positive or very negative about the solution. Partially due to worries about the Implementation, but also because of the negative influence on the predetermined Values. This influences the usage of the solution. Figure 46 gives an overview of the findings from the second interview concerning the Scale Functionality.
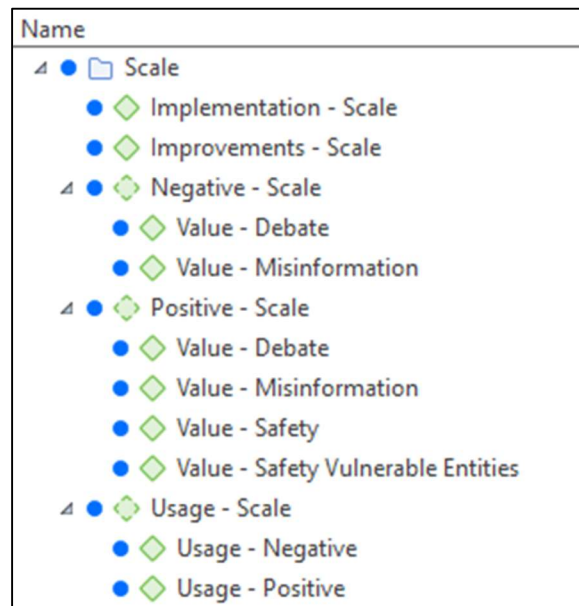
Figure 46: Design Evaluation Scale

6.3.4.1 Implementation

The biggest worry the Respondents had, was about the tool depicting the wrong information, see Figure 47. They were afraid that the tool that determines automatically what a video depicts politically would be inaccurate. They also fear that Content Creators could try to bypass the tool, misleading viewers into thinking that a video is in the middle of the spectrum, while it is in reality very politically polarising.

If choosing to implement a tool to this extent, these worries need to be addressed. Again, these worries seem to stem from underestimating the capabilities of Artificial Intelligence. To successfully implement the solution, the Users need a better understanding of what it is based on and need to be reassured that the solution works properly.

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Respondent 3

I don't know, it is just because, like, political stuff is hard because it's like it's very opinionated. It's like I feel like it would be hard for YouTube algorithm to accurately determine if it's right or like in the middle. I feel like it would be hard to like fully to determine where it is and then could lead to the bar being misleading. I feel like there would be ways that like content creators could express their views to sort of get around this.

But not every video is going to be like watched by like an individual and be judged. So it has to be an algorithm that automatically does it. So like that it looks like keywords and everything. I feel like I'm actually like there could be people like ohh we know what keywords is like the far right. So like. To sort of get people to come to like the far right, we'll be like, ohh, we'll just not say these keywords. So it gets like put more towards like the middle and like more neutral, and then still pushing that far right agenda. I'm not a big fan of that.

Figure 47: Implementation Scale

6.3.4.2 Usage

Whether Respondents would use the solution was very divided. On one hand, some people would use it to further educate themselves, others would just look at the bar to create perspective. And finally, some people would not use it at all, see Figure 48. The people who would not use it were more vocal about it than people that would use the functionality.

Researcher

So you were saying, not right now, not possible. But in a hypothetical future, if it was properly working, would you use it?

Respondent 1

No.

Researcher

Can you explain why.

Respondent 1

Because I don't need to avoid content that I disagree with or is from a different political perspective. The point of having your views is the best idea standing. So you need to be able to survive criticism and it is better to be able to do that than to have the unchallenged view. The unchallenged view is untested, so I don't need to avoid this and then plus it's not always just because something is from a different ideology or a different political perspective, doesn't necessarily mean that it isn't useful or interesting to me. I don't want to categorically deny myself access to all things of a political spectrum that I'm not, or a political the edge of a political spectrum, that I'm not on, just because it's from that.

People who are holding ideologies that I disagree with can still have ideas that I agree with or ideas that are good ideas or be bringing up questions or problems or comments about things that are relevant and important to me. So just I don't. I don't know what to do with this. Let's say that a YouTube video says it's 75%. I don't even know. Do you use parties by the country they're in? Do you use, like, what is what? What are the even the polls on this, is this a conservative liberal? It doesn't even matter what it is. Let's say it was one radiant on this. Am I going to ignore all information above a threshold of like 50% of this or 70% of this? Is that the intended feature for? I don't know how I would use this in a way that would be useful to my life.

Figure 48: Usage Scale

6.3.4.3 Values

On one hand, people see the benefits of this solution and see that this solution supports both Debate and the Safety of Vulnerable Entities as well as their Safety. However, others see the negative effect in the form of not respecting the Values Misinformation and Debate. Respondents are afraid that people will start sorting through content and will limit themselves to one side of the political spectrum, therefore limiting the intake of different political views, and hurting the Debate Value see Figure 48. Respondents that were positive on the Debate Value saw it from the perspective of getting recommended extreme content and being able to see that it is political and to have the ability to move away from that type of content.

Noticeably, Respondents that cared more about the Debate Value did not like the solution, while Respondents who care more about the Safety of Vulnerable Entities liked the solution. This points towards how our Value Hierarchy can influence our opinion on the solution.

6.3.4.4 Improvements

Different Respondents mentioned that the scale should have a threshold before it gets added to a video, as not every video is political in nature, see Figure 49. Videos that do not have political aspects therefore wouldn't need to have a scale.

Researcher
How would you feel about YouTube implementing this?

Respondent 9
I think on certain videos. As long as it's not on every video but on certain videos. Ones that would mainly have a political topic, absolutely, 100%. Otherwise, not really.
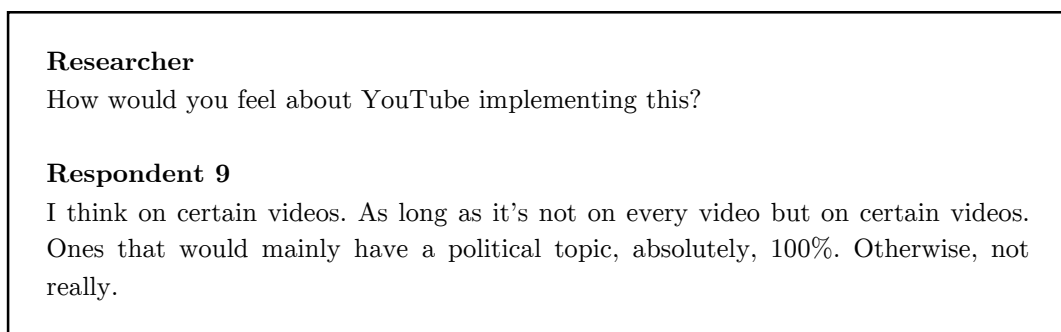
Figure 49: Improvements Scale

6.3.4.5 Conclusion

Even though the solution interferes with Self-Radicalisation on YouTube, implementing this solution would not be beneficial. There are Implementation and Value worries from the Respondents that need to be addressed before trying to implement this solution.

7. Findings

The goal of this thesis was to formulate Design Alterations for the YouTube interface that would interfere with Self-Radicalisation on YouTube. To achieve this, 5 questions were formulated that needed to be answered to be able to offer a solution. In this chapter, the sub-questions will be answered using the findings from this thesis. Once all these answers are known the main Research Question can be answered, accomplishing the goal of this research.

7.1 Self-Radicalisation Emergence – SQ 1

Within the System Analysis, two Self-Radicalisation dynamics were discussed. On one hand, the dynamic of Creators creates increasingly radicalising content which is not always relevant to their original content. This dynamic was found in the Personal System. This dynamic was also confirmed in the Semi-Structured Value Oriented Interviews. Respondents acknowledged that creators that they used to watch switched to heavy political content.

The System Analysis also shows the bias of the Recommendation System towards more radicalising content through Engagement and Watch Time. This is based on the phenomenon that more radical content seems to get more interactions from the Users, therefore seen as high-engagement videos and videos that therefore should be recommended. Respondents in the interviews also recognised this as they seem to get unfounded recommendations for highly political and radical content.

7.2 Values YouTube Users – SQ 2

Through Literature Research, the values of the stakeholders were predicted. These Values were further investigated through Value Oriented Semi-Structured Interviews. The Interviews found many more Values for both Users and Creators. These Values were categorized under the three systems that are formulated in the System Diagram.

7.3 System Interference – SQ 3

Within the System Analysis, three Systems were formulated, this was done to respect the complexity of all the Systems involved. For the solutions, this thesis aimed to find a solution that would fit with the Values of the Stakeholders. The categories of these Values correspond to the different System Levels. This thesis chose to therefore look at a Value for every System Level and evaluate the solutions based on the corresponding System Level, rather than have an unfocused evaluation and design process.

7.4 Design Alterations – SQ 4

Based on the Values found in the Actor Analysis, Value Conflicts were found. The Design Alterations focused on solving these Value conflicts:

- Personal Safety – Freedom of Posting
- Entertainment – Freedom of Posting
- Safety of Vulnerable Entities - Freedom of Posting - Debate

To solve these Value Conflicts, solutions offered in the Value Oriented Semi-Structured Interviews, literature on YouTube alternatives and literature on News Recommender Systems were considered. This offered three possible Design Alterations; a Block Button, the ability to use multiple Profiles and Scales on the political bias of videos.

7.5 Evaluation Designs – SQ 5

The Design Alterations were evaluated based on their influence on the System, the influence on the Safety Control Structure and the Acceptance from the Stakeholders.

7.5.1   Button

The Block Button showed the influence of the phenomenon of creators creating increasingly shocking content. By introducing the Button, Self-Radicalisation would be limited. The button does ask for an additional safety feature, which is aimed at YouTube to improve their recommendations based on the content that gets blocked.

Users are overall positive on the use of this functionality but did suggest some alterations, where they could better convey why they are blocking a video, so they do not accidentally block content they do want to see.

7.5.2   Profiles

The Profiles would help with the prevention of unfounded radical recommendations. This feature does not ask for any changes to the safety control structure.

Users are very enthusiastic about implementing this feature. The only addition would be to also offer pre-set Profiles.

7.5.3   Scale

Introducing the Scale would make users that view extremist content less likely to radicalise, now that they can put content in a video into perspective. Therefore helping with the prevention of Self-Radicalisation. However, to implement this Scale, there needs to be an extra safety feature to report mistakes in the political classification of the videos.

Users were divided over this solution. This solution for some Respondents seemed to hurt the Debate Value, while for others it did support the Debate Value. The divide

seems to be caused by a difference in Value Hierarchy between Respondents. Respondents who value the Safety of Vulnerable Entities more than Debate seem to like the functionality. While Respondents who value Debate more, seem to dislike the functionality.

7.6 Summary – RQ

The goal of this research was to establish Design Alterations for YouTube to prevent Self Radicalisation. While all solutions interfere with Self-Radicalisation, not all solutions would be supported by the Users. This would therefore not be beneficial to implement.

The Design Alteration with the most potential, by far, is the Profiles functionality. This alteration shows clear interference when it comes to Self-Radicalisation, but also seems to be easily accepted by the User base. The only alteration would be to add pre-set profiles to also have people that do not use YouTube as much have the benefits of the Profiles.

Other than that, the Block Button seems a good option. The Block Button shows System Interference, but to gain User Acceptance, the functionality needs to be further developed to include the possibility of seeing what the influence of the Block Button is on Recommendations.

The functionality that is left uncertain is the Scale. While it is promising when it comes to Self-Radicalisation interferences, there are serious worries about the acceptance by the Users. To implement this feature, these worries first need to be addressed, otherwise, this might turn away Users from YouTube.

8. Conclusion & Discussion

This chapter looks back at the added value of this research, as well as the limitations and further research based on this thesis.

8.1 Reflection on existing literature

Within the thesis, different sources of information were used. In this chapter, the focus will be to reflect on these information sources to see how this thesis supports the existing literature.

8.1.1 Self-Radicalisation Interference YouTube

Within the introduction, the literature on existing Self-Radicalisation Interferences was discussed. The current literature focuses on better filtering of videos and deradicalisation. This thesis offered a new method to interfere with Self-Radicalisation through Design Alterations. In comparison to the earlier research that was either focused on technical aspects (better filtering) or the social aspect (deradicalisation), this thesis combined both aspects through the use of the Enserink et al. (2022) framework and the Value Sensitive Design methodology. Therefore, this thesis enriched the existing literature.

8.1.2 Radicalisation Pipelines

This thesis tested reported radicalisation phenomena through System Analysis. The System Analysis confirmed the Radicalisation Pipelines of Self-Education and Gaming Content getting increasingly more radical, as well as the Rabbit Holes in which users tend to get pulled. The thesis methodologically tested the Radicalisation Pipelines, rather than reporting on observations or specific cases.

8.1.3 Self-Radicalisation Shortcut

This thesis based its Design Alterations on the Self-Radicalisation shortcut and emphasizes preventing people from radicalising rather than deradicalizing. The knowledge gathered through this thesis therefore will be complimentary to Riyanta's(2022) research.

8.2 Implementation Design Alterations on YouTube

The Design Alterations all interfere with Self-Radicalisation on YouTube; however, they are not all beneficial to implement. The Scale functionality at this time is not beneficial to implement. The implementation worries, as well as the worries about if this functionality would lead to the spread of misinformation, need to be addressed.

The Block Button and the Profiles both interfere with the Radicalisation Pipelines and could be implemented with small alterations. The implementation should be feasible as both use functionalities are already used on other platforms. For both

functionalities, YouTube however will take a bit of a loss on the engagement on videos, as users will only see content that they want to see, therefore they will interact less with a video in the form of dislikes and comments. However, YouTube would gain a better image as a consolidation of the limitations of engagement.

8.2.1 Implementation Other Platforms

The Design Alterations as proposed in this thesis are specifically tailored to YouTube. This applies to both the dynamics the Alterations interfere with as well as the Values that the Design Alterations are based on. Trying to implement these solutions on other platforms is therefore not advisable. However, if a similar analysis was conducted for a different platform, the formulated Design Alterations could be considered.

8.3 Limitations

The research knows some limitations that need to be accounted for when looking back at the progress and results of this thesis. This needs to be included to put results into perspective and to offer improvements.

8.3.1 Methodology

For this thesis, the Framework of Enserink et al. was used (2022) to support the Multi-Actor perspective and the System Perspective. While this methodology respects the complexity of multiple Stakeholders and the Socio-Technical System, this methodology is aimed at Policy Analysis, rather than Design Alterations. A methodology that would also fit the design of interface alterations would be Design Science Research. To still ensure the Multi-Actor perspective and the System complexity, an integration of both methodologies could be considered. The added value of using both methods needs to be further explored.

8.3.2 Interviews

When looking at the Respondents, there is a clear preference towards gaming content. The request for Respondents was an online open call. Within the open call, people could indicate what they use YouTube for. The thesis aimed at getting a diverse group of both Gaming and Study Respondents. However, people that categorised themselves under Study Respondents, often also used YouTube to watch Gaming related videos. In this case, it might have been better to issue a public call offline, rather than online, as it may have caused the respondents to lean more toward Gaming.

This also caused one of the limitations to be, that the research is relevant for Gaming Respondents, rather than a widespread of Users. Users that do not use the platform for gaming could bring forward different Values, which would lead to different Design Alterations and different results. Therefore, the conclusions of this research need to be seen in the context of Gaming Respondents.

8.3.3 Researcher Value Reflection

When trying to design based on Values one needs to acknowledge that the Researcher's Values are also of impact on the result of the study. This was made apparent in the result of the Scale Design Alteration. This Design was offered to Respondents with the belief that it would support all Values it was aiming to support. While Users that put more value towards the Debate Value do not experience this similarly. This can be explained by the fact that within the Value Hierarchy of the Researcher Safety of Vulnerable Entities is higher than Debate. Making the solution look like it is supporting both values, while this was not the case for some Respondents. Because the Researcher holds their own Value Hierarchy, a Design Alteration was offered that did not unambiguously solve the Value Conflict.

8.4 Recommendations for Further Research

This thesis left many possibilities for further research, both in regards to further research on the topic, as well as further research on the proposed Design Alterations.

8.4.1 Future Exploration

Within Enserink et al. Future Exploration is one of the steps to fully analyse the effects of Policies (2022). To better understand if the solutions are also relevant under different scenarios, a Future Exploration needs to be conducted. This would also support the implementation of the Design Alterations, as durable Alterations are more valuable to implement, while Alterations that would only work for a short time, might not be worth the effort.

8.4.2 Scale and Value Conflict

The Scale solution needs to be investigated more thoroughly before it could be implemented. One needs to look for a way to better formulated or alter the solution to increase acceptance by the Users.

In case the Scale is not possible to implement, more research is necessary for the Value Conflict, Safety of Vulnerable Entities – Freedom of Posting – Debate. This should be done to see if other Design Alterations would solve this Value Conflict.

8.4.3 Value Hierarchy

As mentioned, not only Values but also Value Hierarchy is of influence when it comes to the appreciation of Design Alterations. When looking at Value Sensitive Design, Value Hierarchy could potentially change how we design new solutions. The influence of Value Hierarchy on acceptance needs to be researched.

8.4.4 System Safety

Within the research, the Safety Control Structure was added to see the implications of the implementation of the offered Design Alterations. However, normally when formulating a new Safety Control Structure, a System Safety Analysis is conducted. In this research, this would have added value to see how harms emerge from the current controls in place. This would allow for changes in YouTube operations to ensure safety. However, this was out of scope for this research as this research aimed at formulating interface changes rather than changes to YouTube policy/operations. There is still research possible in this regard.

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Attachment A1

Semi Structured Value Oriented Interview - Questions

Scales

Showing a scale, ranging from Safety to Freedom of Speech.

1. Where would you like to position yourself? Why?

2. Where would you like to position YouTube? Why?

3. Where would you like to position Society? Why?

Politics on YouTube

1. Would it be alright for an individual to post political videos on YouTube? Why of why not?

2. Would it be alright for an individual to post their political opinion on YouTube? Why of why not?

3. How would you respond if you encountered a political video requesting the peaceful deportation of an ethnic group?

YouTube Content

1. What do you use YouTube for?

2. Why do you use YouTube over other platforms, such as Twitch of TikTok?

3. Have you ever encountered any controversial content?

    a. If so, what did you see?

    b. Can you describe how you encountered that content?

4. What do you find important in life?

    a. How would you respond if YouTube would act in contrary to what you find important?

YouTube Improvement

1. What would you like to see on YouTube to improve your experience?

2. What would need to happen for you to quit YouTube?

Attachment A2

General

Showing the new YouTube interface with all alterations.

1. If I show you this, how does this make you feel?

2. Is there anything that stand out to you?

    a. Why does it stand out to you?

Button

Showing the interface with the highlighted Button and explaining the functionality.

1. If I explain it to you like this, how would you feel about YouTube implementing this?

2. Would you use it?

3. Would other people use it?

4. Should other people use it?

Profiles

Showing the interface with the highlighted Profiles and explaining the functionality.

1. If I explain it to you like this, how would you feel about YouTube implementing this?

2. Would you use it?

3. Would other people use it?

4. Should other people use it?

Scales

Showing the interface with the highlighted Scale and explaining the functionality.

1. If I explain it to you like this, how would you feel about YouTube implementing this?

2. Would you use it?

3. Would other people use it?

4. Should other people use it?

Researcher

If you see the scale from safety to freedom of speech. Where do you like to position yourself?

Respondent

I think freedom of speech is extremely important, so for me, I'm willing to give up some safety for that. I guess I would move that somewhere between 2 and 3 notches on the to the right of that.
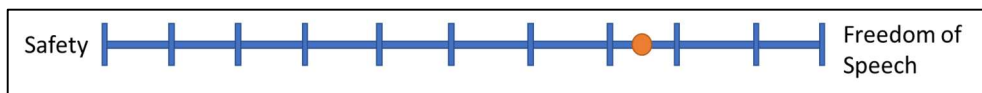
Researcher

If I'm going to ask you the same question about YouTube, where would you position YouTube? Where do you think they should be?

Respondent

OK, I again, I think freedom of speech is extremely important, so again, I would probably place that somewhere similar to where I place my own. I have a harder time conceptualising what safety looks like for a platform than it does for an individual. So if this is maybe safety of their brand or safety of their company. Perhaps I could see that, but it's harder for me to understand what the penalty of freedom of speech represents on this graph for YouTube.
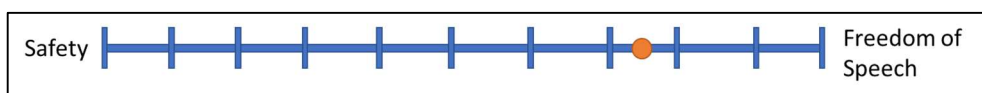
Researcher

And now that we're looking for the third one, we're looking at society as a whole. Where do you think it should be?

Respondent

I think it's further along for society towards the freedom of speech set. At least to the full rounded up to the full node, there, yeah.
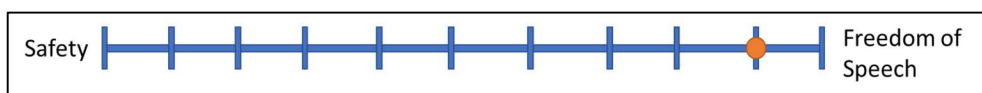
Researcher

I see you have a distinction between yourself, YouTube and society. Can you explain why?

Respondent

I'll start with society. That's the easiest one for me to conceptualise. I think it's essential to at least. Again, I'm from the US, I know you're running a study in different country, but for at least from my perspective this is an essential part of governance for us and an essential part of societally making decisions that we need to be able to discuss these in a manner that allows for different views and different opinions to be discussed in a relative. It's not just safety but it's in in the ability to do that not having that be restricted to do so. So I think that's extremely important socialty.

Company Wise, I think is a bit of a grey area there. Private companies can do whatever they want for their own business. This is how they get to run their businesses. So, they have a little bit less of an obligation for freedom of speech. However, I think if their platform is designed to be about communicating, then you still need to have that in there. I don't know what risk looks like for them outside of clicks. If it's just from a profit motive, I find to myself to be a little bit on the dismissive side of its best business for them to restrict free speech. While I'm not sure I want that in a platform, I prefer to see free speech more unrestricted than less unrestricted on a platform like that. But again, it's a private company, they get to do what they want, not like my society, which I am a contributing member of defining, and not like my personal where I'm also a contributing member of.

I define my personal interaction with that personally free speech is extremely important to me. I'm going to give up some safety for that. It's part of my worldview of how I wish to interact with my world. Part of how I design a fair world involves making decisions for myself as much as possible, and I'm willing to give up some safety for that. Obviously, I'd prefer a solution that increases my safety while increasing my freedom of speech, but if I had to choose between that, I would give up some willingness. Obviously, there's a bounded condition on that. If I get too low, you know, if I'm going to die for expressing my freedom of speech, that becomes a less interesting decision point or less likely to make a decision of free speech there clearly, but I would like to set up a society in a personal existence where I have that ability. If I possibly can.

Researcher

Do you think it is alright for an individual to post political videos on YouTube?

Respondent

I think legally that's a question based on the platform. What are the rules and

restrictions of that platform and rules and restrictions of whatever governing body above that platform like a country. Personally, my opinion on do I think individuals should be to post political information on a social media platform? Sure, absolutely.

Researcher

And posting their political opinion, that's also fine for you.

Respondent

I don't mind outspoken political opinion, disinformation is the more challenging question. I think with this for me, which is facts are fine, but opinion is not necessarily facts and the way something is presented is not necessarily it may be a persuasion attempt as opposed to an informative kind of thing. I think it's less clean there. But I think the idea of should people be allowed to express political information or political thoughts or political opinion on a public platform is a resounding yes for me. Of course, they ought to be able to do that.

Researcher

And in a hypothetical situation, if you were to encounter a political video on YouTube requesting the peaceful deportation of an ethnic group, how would you respond?

Respondent

Personally, that does not align with my view of the world of how I would want things done, so it would be a political opinion, contrary to my own held political opinions. Responding on a media platform is kind of irrelevant. I probably ignore it. It is again, in my opinion, just fine for people to present their opinions on platforms like this.

Respondent

It depends how it was done to some degree, right? If there was, if there was argument outside of this is the race or ethnicity. So, in other words, what is the argument they're presenting? Are they presenting, you know, some sort of economic argument, or is this just solely an argument based on the ethnicity of the person? And again, it doesn't really matter because they're allowed to have, what I would consider abhorrent views, and express those publicly, so almost doesn't matter what the context of that is, but it would define a little bit of how I reacted it. Would I just dismiss it? Would I dismiss it with some thought of this is some racist piece of shit. Or would I dismiss it with just kind of the thought of that's an out there political ideology, but I'm not really behind this. Hell maybe I suppose there's some universe in which I could even be persuaded by the message if the message was a well articulated well set up rational approach to persuading me, but it seems unlikely.

Researcher

Can you describe what you use YouTube for in a generalised way?

Respondent

Sure, it's a little bit more tricky with me. I'm a content creator as part of my profession, so I use it both professionally for generally gaming content. In other words, I produce videos on gaming for my audience. Personally, I use it to keep up with podcasts to keep up with creators that I'm interested in. I watch some YouTube with my wife for things like Van Lifers or other kind of lifestyle kind of blogging stuff. That's interesting for me. Yeah, I suppose I use it as a platform to engage with creative people across the world in the various things they're doing. I guess is how I'd use YouTube.

Researcher

And then my question is why YouTube over other platforms? Because you're describing your posting gaming videos, I'm assuming you also use Twitch. What is for you to benefit from YouTube over Twitch?

I use both. There are different types of tools. Essentially Twitch is a live streaming service primarily for me. Both of these things have both first mover advantage and additionally huge market shares comparatively. So why do I live stream on Twitch as opposed to YouTube? Because I have an exclusive contract with Twitch, what I consider moving platforms with better rates. Sure, I would consider that if there was a competitive platform to Twitch. I would of course consider the alternative, so it's not that necessarily I'm wedded to twitch or wedded to YouTube. It's just that both these companies have the position in the market to be useful to me for my personal career, essentially. So why do I watch stuff on YouTube as opposed to other platforms? I suppose I do use some other platforms, but YouTube is a pretty dominant platform for sharing media, so I use it because it's a market leader.

Researcher

We were talking about some, maybe more controversial content earlier. Have you've ever encountered controversial content yourself?

Respondent

Like there's all sorts of surprising content on YouTube. I learn stuff on YouTube all the time, so sometimes it's like, you know, I interact with something. And it's like, ohh, I hadn't. I never even thought about that or what an interesting perspective or what a cool thing someone has done here. And so that's controversial in some sense. But I suppose you probably meaning more in the offensive category here. Yeah, occasionally you encounter either views that you find offensive or sometimes it's depends. Yes. If I understand you. If I remember your

question I think I may have forgotten the question. You ask have I encountered that? Yes. OK. Was there a follow up to that in terms of of there going to be?

Researcher

Can you describe what it was?

Respondent

I wasn't thinking of a specific example when I did that, more of a general example. I suppose that occasionally I listen to some of the debate sphere stuff on YouTube, so occasionally I will hear a person presenting a side of an argument that I might find particularly either bad, either poorly put together argument or particularly offensive, or sometimes I think shocking kind of kind of argument there perhaps.

Researcher

What do you find important in life? What are your aspirations, your priorities? What do you think people should give more attention to. It can be very general.

Respondent

I think it's an impossibly large question to answer in short form. I suppose on some level I mean this is a little bit shaped by your previous question. So, on some level I believe in people being able to make decisions about their own lives and a societal setup that allows them to thrive with the decisions that are trying to make in those lives. So, I mean, I guess my general rule of thumb is something like I wish to have as much freedom as I can without infringing on other people's freedom, essentially. So, I wanna be in a society where I could be born in any position in that society and still have a chance to thrive in that society. And I try to make policy decisions and policy votes based on kind of building that structure as much as possible. So, I'm for personal freedom as much as I possibly can. Except where it infringes on other people's personal freedom, I guess. Is my philosophical take on what I want things to look like.

Researcher

How would you respond if YouTube were to act in contrary to what you find important?

Respondent

YouTube is a private platform. They are a business. It's unfortunate that they are in that scenario that you outline what they're doing, something that I don't like. It's unfortunate there's such a market leader because your normal response to a company doing something you don't like is to switch products essentially to switch companies, to go with somebody else doing something more in those terms, more in the terms of what you want. But again, I think part of the ability to have discussion and make informed decisions is being able to deal with opinions that are

contrary to your own. So, I don't have to like anyone's opinion. But I do need to be able to hear, listen and respond to those opinions. And so YouTube doing something or presenting something that I don't necessarily like isn't the end of the world, right. Just it depends on what options and recourse I have to deal with that. So do I wish to have some policy that I don't like enforced by YouTube? No, but it's a private company. They get to do that. And if I really find that abhorrent, then I get to do something through my legislature to try to change what their rules of that company existing are or to seek an alternative. If I can't do that, perhaps?

Researcher

What would you like to see on YouTube that would improve your experience?

Respondent

Maybe this is not exactly the answer you want with that, but I think the strategy of attempting to capture attention, regardless of how you do it is not a particularly good societal strategy. I think it ends, I think it results in outcomes that are not outcomes that we want. I don't want to be fed content based on the fact that I'll engage with it. I wish to be fed content based on the fact that I'll engage with it and it's type of content that I wish to engage with. So. Yeah, I think that basically answers that question.

Researcher

What would need to happen for you to quit YouTube altogether? Like, why? What would? Why would this influence your experience so much that you're done.

Respondent

I'll break that into two parts. I'll break that into professional and privately. Again. For me, I think it's a little different. Professionally you would need to no longer be a platform that I could use to support my business. Or perhaps I find a better alternative. I suppose that be another way that I might move from that platform professionally.

But I think you're really interested in the personal side of things, which is slightly different. What would I have to do for that? Well, I suppose I would need to see the entertainment value and engagement value that I find out of from YouTube be either decrease or be offset by the costs. And the costs here are something like the types of stuff that gets recommended and pushed on me from YouTube. The cost associated with using it, things like advertising, how much advertising do I have to watch? What types of things, what types of hoops do I have to jump through to get the content I'm interested in? What type of restrictions they do on the types of content out there. So, in other words, are they suppressing or removing the types of content I'm interested in? If they are only recommending me stuff that I really don't find interesting or find upsetting or. There's value in discussion, but there's

not necessarily. I'm not necessarily interested in seeking out repeatedly the other side of things just for the sense of having them out there kind of deal. So, I suppose it would depend on what they promote, how they promote it, what the cost of using their service are in terms of ads, in terms of my time in terms of, you know, just social media kind of stuff. And yeah, I think that would kind of be what would push me off the platform eventually.

Researcher

When you look at the scales you have one side, you have safety other side you have freedom of speech. If you would have to position yourself anywhere on the scale, where would you like to be?

Respondent

I would say one more to the right.
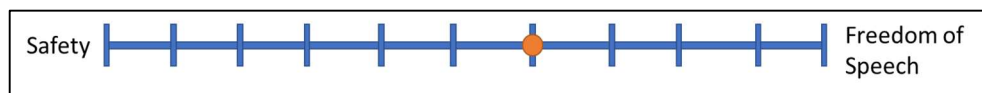
Researcher

For YouTube as a platform. Where do you think they should position themselves?

Respondent

I think in the middle is still fine where it is right now.
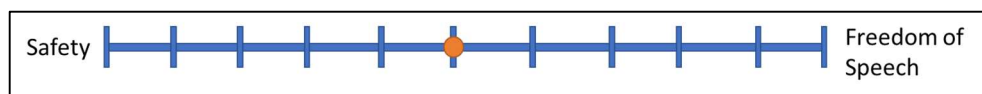
Researcher

And can you elaborate on that why you think it should be in the middle?

Respondent

Um, I think that it's important to have freedom of speech, but also safety in terms of any minority populations or any marginalised communities that would be affected by whatever's on YouTube. So, it's still important to have safety with freedom of speech in that way.

Researcher

And um, I forgot to ask, but for yourself, why did you position yourself there?

Respondent

I feel like it's important for me to share my opinions on how I feel about things, even if it takes away a little bit from the safety of some communities just because I know myself and I know that I wouldn't be that. Bad, I guess. Um. Or that insulting to communities or people that might be victimised usually. But yeah, I feel like knowing myself I could go a little bit more towards freedom of speech.

Researcher

And then the last one and society as a whole, where should we position ourselves?

Respondent

I would still say in the middle as well, just because in general I know that there are some people in society that would be able to control. How they were to elaborate if they had full freedom of speech. But I also think that is important for safety to be upheld no matter what.
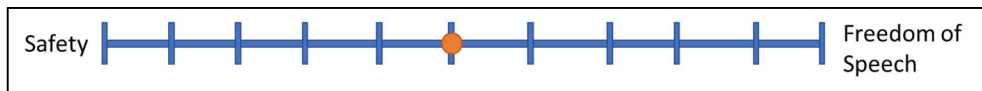
Researcher

Would it be all right for someone to post political videos on YouTube?

Respondent

I don't see why not. I think that it's important to be able to just political in general, are we just talking in general. So I think that in terms of that, I think that is important for the range to be represented well. I think that is important for people to be informed on both sides or multiple sides of the issue depending on where you're at, just taking things within Canada like I know that we have multiple different. Um political parties and political ideologies, whereas in the United States it is very much separated like Republican and Democratic. So I'm talking about the North American society in general. I think that knowing both sides like you might agree with some from one side, some from the other side and being able to take all that into account can make you a better well-rounded person. But I think that it's really important for it to be available to everybody and not have it. Um, like political ideologies should be available as long as they're not super discriminatory towards others.

Researcher

And if I'm asking you about a specific political opinion. Would it be alright for an individual to post their political opinion on YouTube?

Respondent

I think that that's fine as long as they're being respectful. I think that it plays into that piece. I think that my opinions around stuff like this is just respect. I think that you can show your opinion while still being respectful to every other community or every other person around you. I don't think that it should be disallowed. I think that they should be allowed to. Express how they feel while being respectful to what issues they're addressing.

Researcher

How would you respond if you would encounter a political video requesting the peaceful deportation of a specific ethnic group.

Respondent

I think that they're allowed their opinion, but that's then losing the respect piece for others. I think that everybody is allowed to be where they're at and I don't think that a full ethnic group is an appropriate deportation. So, I think that I'd respond negatively to seeing that video on YouTube.

Researcher

Would there be any action you would undertake seeing a video like that?

Respondent

Discussions within my own circles, but I wouldn't like, comment or try to attack that person, but I'd probably have a discussion with my friends or people around me. How do you guys feel about that? Like what? What is going on?

Researcher

Can you explain generally what you use YouTube?

Respondent

So at least with my job, we use it for a lot of Ted talks and a lot of short films to represent the content that we're teaching in class. That's mainly what I've used it for a lot this semester for social justice issues. Listening to Ted talks and being able to break them down. Personally, entertainment is usually what I use it for, so going to bed usually throw on just a show or something to watch. Um, other than that music videos. Of course, we use that a lot in in classrooms as well to show culture, and I use it at home to introduce myself to new artists before going off onto Spotify. But I use it more as entertainment slash education.

Researcher

Do you create videos on YouTube yourself?

Respondent

So, with my job we live stream on YouTube. Um, I help with a E-sports programme at one of the high schools that I teach at and we frequently have live streams of the gaming that we're doing. And then obviously they save as YouTube videos, so they become available as YouTube videos. I don't know if you really count that, but it is videos in a way.

Researcher

And so for that live streaming, why do you use YouTube over, for example, Twitch or other platforms?

Respondent

With YouTube, one of the things is privacy. You're able to turn off comments and stuff as well. So, on Twitch or otherwise streaming platforms that are very common, you don't have that option to fully turn off chat. It's a lot of times, followers only or subscribers only, whatever and obviously with kids that are underage, it's important to try to keep everything respectful and on par with school rules as much as possible. So that's mainly why we use YouTube, and also because YouTube is abetted app within our board because they take privacy more seriously than some of the other streaming platforms.

Researcher

Have you've ever encountered any controversial content on YouTube?

Respondent

A hundred procent, all the time. Like you said, there was a lot surrounding political ideologies or like social justice kind of issues on YouTube that are very controversial, and we've used some in my classes before. But there are a lot surrounding specifically what you said.

Researcher

And did you search for them or how did you encounter these videos?

Respondent

They've been showing up in my recommended, so I don't know if it's because you watch one side or just educational Ted talks that YouTube tries to present more information to you, but usually they show up either on the sidebar when you're watching a video or when you open YouTube when you're signed in. The videos that show up at the top, they're usually up there.

Researcher

I'm going to ask a very philosophical question, so if you need some time to think about that before you answer, that is fine. What do you find important in life?

Respondent

So first of all, I'm a big social justice advocate, so I feel like everybody should be treated with respect and dignity and be able to live without the fear of harm. So that's what I find important in life, like in my professional life. And I focus towards that in my personal life. I think that surrounding yourself with people that accept you for who you are and people that you can genuinely be yourself with is something that I find really important in my personal life.

Researcher

So you're talking about that everybody should be treated with respect and dignity. How would you respond if YouTube would act in contrary to that?

Respondent

I would probably just stop using the platform. Um, I'm not a big conflict person. I know some people who would probably post about it or tweet about it, but personally I just think I would kind of botcott the platform in general.

Researcher

What would you like to see on YouTube to improve your experience?

Respondent

I think right now from some stuff that I've noticed that YouTube is making important changes. Like I opened up a video that I had found last year literally 20 minutes ago, looking into planning ahead and there were trigger warnings that you had to click through. So, any sensitive content now YouTube seems to be starting to filter that and give you a warning. So, I think that that would be important on a broader scale. If there was something that was harmful to certain communities or certain types of people.

For example the one that I came across is. It's the first time I ever came across it. This video that we're talking about, we're going into a heterosexism unit and it's a video that includes self harm as a topic. And there's a big thing that you have to click through right at the start saying this video contains self harm. Do you agree? Yes. So I think that putting that out on a broader scale for more controversial or harmful topics would be something that I'd like to see. Yeah, I think that that's a big one. Other than that, I think that like I said at the start, seeing both sides of issues are important. So, the recommended videos, obviously I'd like them to be a bit maybe more tailored to what I've been watching, but I can't be that mad that they're trying to show things related to the content. But yeah, those trigger warnings would be really cool for things that are sensitive topics.

Researcher

What would need to happen for you to quit YouTube altogether?

Respondent

I think that if YouTube trended towards the way that Twitter is going under new ownership. Where hate speech is being more widely allowed without consequence. I think if you started taking that kind of route, that would make me stop using it. Other than that. Yeah, I think just if active hate was allowed on the platform like full on without a system to report it and action being taken on videos, that would probably one of the only things that would make me leave YouTube because of how broad the information and how much there is on YouTube that you could access for different reasons.

Researcher

I have three scales here. We're going to start with the first one. When you look at yourself and you think about safety and freedom of speech. Where would you like to see yourself on that scale?

Respondent

That is a very interesting question. Because at the same time, like, you want to protect yourself and, like, your data and, like, whatever you like. In terms of, like, online safety, like, you have to walk, like, sort of a thin line cause, like, you don't want to restrict everything. But you also can't just let everything be there. I'd probably lean a little bit more towards the freedom of speech, so probably, like, at least two notches over from the centre. That is where I'd lean for that question.
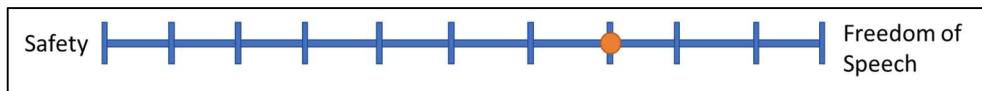
Researcher

Why are you leaning more towards freedom of speech?

Respondent

Because I think it's very important for everyone's views to be heard and this being able to hear and, like, listen of different opinions, different views and everything. And it helps educate people, but also at the same time. If you are all freedom of speech and there's no, like, restrictions, there's no nothing. They can sort of get jumbled up. You can get misinformation and then you can get a lot of people that are leaving this misinformation. So that's why it's like freedom speech is really good and it's really important. But I think there has to be some sort of either boundaries or precautions put in place. There's somethings that just shouldn't be said.

Researcher

When you think of the platform YouTube. Where do you think they should position themselves?

Respondent

I think they should stay probably as close to the middle as possible because YouTube is such an accessible site, especially for, like, younger kids and everything. A big portion of it needs to be under safety. But they also don't want to infringe on freedom of speech. I feel like it's a very tight line that they have to run between the two, that they don't wanna be too much in one direction cause of potential issues of. All of a sudden, there's people, like, getting killed in videos on YouTube or something like there's inappropriate scenes or whatever on YouTube and then like ohh your 5 year old who's staying there with this iPad is watching it. That affects them. So, like, I feel, like, there has to be a very fine line in terms of YouTube for the safety and then freedom of speech, but not to infringe on each other.

Researcher

And then I'm going to ask the same question one more time looking on this scale, where do you think society as a whole should position themselves?
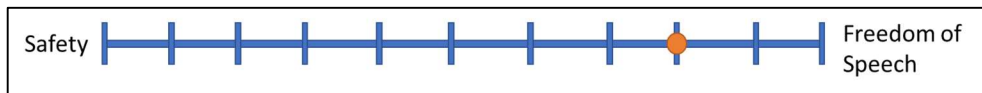
Respondent

I think society should be more on the freedom of speech side. Not being able to, like, express yourself, express your views, like, in, like, a non, like, harmful way is very important because it allows other people to learn. Sort of, like, connect with you more. Like, I feel like having a lot of freedom of speech and everything and a general world sense is very important as long as it's not being done in, like, a harmful way. Um, I'd probably do 3 notches. To begin, like, I feel like you don't ever wanna hit the extreme right, far right side of freedom of speech. But you also don't wanna hit the far left side of safety. There still has to be some sort of boundaries. You can't just be all of one thing and none of the other.

Researcher

Would it be alright according to you for an individual to post political videos on YouTube?

Respondent

That's an interesting question because political videos that are being posted. They're posting their political views of whatever situation is going on. It's like there's a situation going on, they're gonna be posting from their own views. Perfectly fine, but I feel there are some people who do post, like, political views and are very, like, sort of political on YouTube and on other sort of streaming platforms. You're always a little too hardcore on it. And like they get very

defensive or debitive. Debative, I don't think is a bad thing. Like, being able to properly debate with someone I think is actually really healthy. Like, it's a good thing to do, to debate back and forth, as long as you're debating and not just yelling. If you're just yelling at each other, that defeats the purpose. To answer your question, I'd say posting political videos on YouTube, I feel like isn't a big issue as long as it stays in that sort of almost like an educational viewpoint. And it's not overtly being like propaganda for that specific, like, view.

Researcher

Imagine you encounter a political video on YouTube, requesting the peaceful deportation of an ethnic group. How would you respond to that?

Respondent

That's just, that's just a harmful video. And just in general because, like, even if, like you have someone that isn't political or whatever and they see that video, they click that video, they watch that video. They may not think of it immediately, but, like, it can get put into, like, the back of their head and they can start seeing that ethnic group as, like, ohh they're trying to deport them from this country. Should we try and deport them from our country? They might not think that way right off the start. But the problem is that it's like a seed, like, it just plant seeds in people's minds. That shouldn't be allowed. We are at the civilization. We've been down that road before and it's not good. So, like, we like, it's just not acceptable especially, like, it's never acceptable. It just boggles me that a video like that one could be around.

Researcher

Can you describe the actions you would do once that video shows?

Respondent

I would report the video. It would be my first thing to do. Um. Other than that, I'm actually not sure what else I could do other than reporting the video because, like, I don't work for YouTube or not really. I don't know anyone that sort of has more power. So, like, I feel like, the most I could do outside of that would be asking, like, my friends who I hang out with and talk to saying like, hey, do you mind going to this video and reporting it? This is, like, very inappropriate and this shouldn't be allowed on a platform. I feel like that's all I would be able to do.

Researcher

Can you describe to me what you use YouTube for?

Respondent

I go through phases of watching of, like, actually watching content from other people. But I primarily use it just to upload clips of playing when I'm playing

games with friends or whatever, I'll upload, like, clips to YouTube just so it's a place where I store all of my game play from games with friends. Like, if we have like a funny moment or whatever and we get a clip of it. I'll just usually upload it to YouTube. It's easy to share with my friends and it's always nice coming back. I was just talking with a friend earlier this week and we're going back and forth, between videos I posted like 7 years ago when we were in, like, high school and, lik,e we were all, like, laughing and I completely forgot about that. And that's what I like about YouTube is that you get to keep those videos and down the line you look back and you remember that day and, like, that was a good day. So that's what I like to use it for.

Researcher

Why do you use YouTube over other platforms such as Twitch or TikTok or Google Drive?

Respondent

It's the most accessible. Like, I've used, like, streaming on Twitch before. Like, the thing is, like, my goal isn't to have, like, a lot of people to watch my content. Like I'm not trying to become a content creator. So, like, Twitch isn't really there cause the vods don't stay there forever. Where with YouTube, like, your video, stays there at least for 10 years, cause that's how long my videos have been there for so. And it's convenient and easy to use. I do use Google Drive, but that's just usually for storing photos because you have a certain size allocated to you for it. I think it's like, I don't know, 100 gigs or something like that. And like, if I was to use my, like, game clips and everything for that, it would fill up rather quickly. That's why I like using YouTube. It just takes space from doing it locally on my computer and clears it up and then puts it up on YouTube. I've always used YouTube, its familiar.

Researcher

Have you ever encountered any controversial content?

Respondent

On YouTube, no. On other websites, yes. Um. But I like I said, like, I don't watch too much YouTube. I've gone on and off it. There are specific things that I go on to YouTube to watch rather than just browsing.

Researcher

What do you find important in life?

Respondent

That is a big question. Important I find connections with other people and just with the things that are around you and like surround you in life. Which primarily

are people. Other people, pets, animals, like, I find being connected with that is very important in building strong connections. So, like, I looked at my life. I have these connections that I've built out and like I care about that, and like, that's what sort of matters most to me in this world, I guess. This building Connections with people and just being human, I guess. I don't know, I'm very, connection oriented and like to be around people that I care about.

Researcher

How would you respond if YouTube would limit you in building these connections. What would you do?

Respondent

I would just probably find a different platform that would allow me to do it. If YouTube was to say you can only upload like 5 or 10 videos and that's all they would store. Or you can only view these certain things. Then I'd be like, OK, well, that kinda sucks. Like, you've been using it for so long. But I'm not gonna stick around for that. There's bound to be something that is out there that I can substitute for YouTube. Like, I'll find a way or otherwise, like, I'll use a different platform or different programme that will allow me to continue making these and strengthening these connections.

Researcher

What would you like to see on YouTube to improve your experience?

Respondent

Yeah, that is a little bit harder for me to answer just because I don't use YouTube as my, like, daily video intake. I don't know if I would change anything at the moment, because most of, like, the things that are on it, I actually very enjoy using. Or, like, being on there. Like, I don't use their YouTube shorts thing or whatever, but, like, I know that was put in probably in direct competition with like TikTok and like Instagram reels so that YouTube content creators can sort of fit in that sort of niche, and I think that was a very cool thing for them to do. They are obviously, like, looking to keep up with the times and not just stagnate. It's not too overwhelming, I guess, for YouTube, like, it's very simple, like, especially for, like, uploading videos. Just, like, a couple of button clicks and upload your video to it. I'm not too sure if I would change anything. Just because I don't use it on the day-to-day basis all the time.

Researcher

What would need to happen for you to fully quit YouTube?

Respondent

If YouTube was to restrict, like, content creators. I don't watch a lot of content

creators on YouTube, but, like, I know a lot of people do watch content creators on YouTube. And that's their livelihoods and if YouTube was to restrict and, like, sort of cracked down. On not even just the controversial videos, but, just like a basic swear word in it. It is completely cut off from, like, a whole audience. You're no longer going to get paid for that. I've seen some content creators have issues with the YouTube's monetization. And one not even like a like taboo word, but like just like a regular swear word or whatever. Then all of a sudden their videos is demonetised. That whole video that they spent, like, that week on. They can't make anything of it. I feel like if that started happening more and more. Or like small things like that. That would persuade me to sort of stop using their platform because they clearly aren't in wanting to help out and support their own content creators. So if YouTube stopped working with their content creators is probably when I would stop using it.

Researcher

If I am correct, you see a PowerPoint presentation with some scales on it.
These scales show on one side safety, on the other side, freedom of speech. This can be sometimes a little bit of a trade off. Because sometimes freedom of speech can impose on your safety. Or trying to make yourself in a more safe and secure spot, you may have to give up some freedom of speech. It can be a little bit of a trade off sometimes. Where would you like to position yourself on this scale?

Respondent

Um, probably, go two to the right.
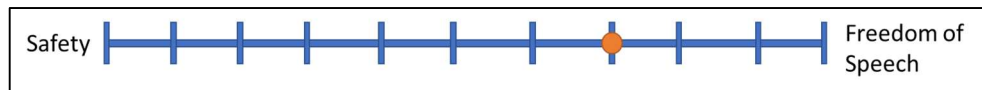
Researcher

Why there?

Respondent

Because. I believe that it's probably more important to me to be able to say how I feel. And obviously, you would want some modicum of safety still about your person. You don't want to be, like, actually persecuted for the things that you say, but I do believe that it's important to actually say what you think rather than be worried about being safe all the time.

Researcher

Where do you think YouTube should position themselves?

Respondent

Probably one to the left near the safety side.
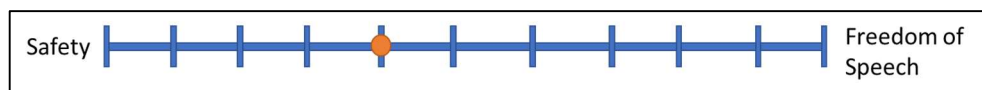
Researcher

Why there?

Respondent

Because I think it's different for, like, social media and just the Internet as a whole.

I don't think people necessarily need a platform that isn't, you know, afraid of saying exactly what you think because I think it emboldens a lot of people to say things that are quite harmful. So, I don't think people need any encouragement to do that. If I think these platforms should market themselves and should kind of put things in place that make them safer rather than kind of a free for all.

Researcher

I want you to think of society as a whole. Where should we position ourselves?

Respondent

Probably bang in the middle, just where it is. Just a balance between the two.
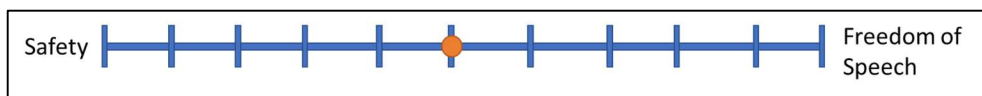
Researcher

Why in the middle?

Respondent

Not everybody has strong opinions. Not everyone will ever feel safe to say what they actually feel and what they think, and therefore I don't really think we should have a society where one outcome is more rewarded than the other. I think it should be fair and balanced so that everybody can find a niche for themselves, find somewhere to fit in. They don't feel too pressured to go one way or the other.

Researcher

Would it be alright for an individual to post political videos on YouTube?

Respondent

Yes, in general, yeah.

Researcher

Can you explain?

Respondent

I don't think it's necessarily a bad thing to share your political views on a platform. No matter what political view you hold. Because like free speech, I think it's important to not demonise people for doing so. But I think, I think people need to realise that there are consequences to that, not everyone's going to agree with them. And you can't just outright say harmful things without there being any retribution for it.

Researcher

Would it be alright for an individual to post political videos on YouTube, such as debates or more information that is already out there.

Respondent

Yeah. Yeah, I don't see anything wrong with that.

Researcher

This is a hypothetical situation, that I'm going to sketch for you. So, you're on YouTube and you encounter a political video that requests the peaceful deportation of an ethnic group. How would you respond to that?

Respondent

I wouldn't be very happy about it, but that's simply because it's not my political viewpoint. I don't believe that. Countries are filled with people that shouldn't really have borders as such. But I still respect their ability to post it. Again, as I said, as long as it's not directly harmful or inciting violence or anything like that. I wouldn't agree with it, but I also wouldn't be calling for it to be taken down.

Researcher

Okay, are there any actions you would undertake yourself?

Respondent

If I looked through, like, the comments on a video. And there were people in the comments spouting hateful stuff which often happens on these types of videos. I would maybe, you know, try and change people's mind on there. Like quote on Twitter and say like. That kind of view is harmful etcetera, but yeah probably that's about it.

Researcher

What do you use YouTube for?

Respondent

Mainly for like gaming videos or, like, I quite like, educational videos and house renovation videos. I love them.

Researcher

And why do you use YouTube for this, over other platforms, such as Twitch or TikTok?

Respondent

I do use those platforms as well. However, I think it's easier to find content on

YouTube. Obviously, you get recommendations and things like that. Generally, they do align with the things that you are watching already, so it's easier to jump from creator to creator without really needing to commit it and watch their channel solely. You can kind of float about on it. It's a bit easier.

Researcher

Have you ever encountered any controversial content?

Respondent

Yes.

Researcher

What did you see?

Respondent

A lot of like clips from maybe like kind of right wing podcasts. There's a lot of debate videos I've seen, like the cut videos and things that really get people with different political viewpoints and to debate a topic. Things like that. Nothing, probably, too controversial, like nothing really harmful, but I suppose that's down to the algorithm, cause that's not what I watch anyway.

Researcher

OK, so if I ask you the question; can you describe how you encounter the content? Your answer would be?

Respondent

Sometimes it's through recommendations. Or it comes up on like auto play if I've been watching something from the same channel and it will jump onto maybe a more hard hitting video from the same channel, but a totally different subject matter.

Researcher

Completely different question and this is a very philosophical question, so take some time, if needed, to think about it. What do you find important in life?

Respondent

Just doing the things that make me happy. And making sure that people that I love that are around me are happy as well. That's the bottom line.

Researcher

And how would you respond if YouTube would act in contrary to what you find important?

Respondent

It would probably put me off using the platform, you know, say I was just going on to like, relax, maybe like, eat my dinner, just have something in the background. And I was constantly finding that I was getting videos that were making me, like, upset or angry. I would probably just feel confused and distance myself from it.

Researcher

What would you like to see on YouTube to improve your experience?

Respondent

Probably a block content feature. They probably do have things like that. I know that you can block like channels directly, but maybe something that's more apparent? Where you can maybe have like profiles where you can filter what you're feeling that day, whether you're feeling like, you know, like hearted or you want like interviews, things like that. Maybe adjust the algorithm to not show you things that are going to upset you or kind of make you angry if you're not in the mindset where you want to deal with it?

Researcher

What would need to happen for you to quit YouTube?

Respondent

I've not experienced it as much. But I think if the algorithm and the recommendations are going the way that I've seen in other places in social media. I would probably quit because I feel like there has been quite a high uptick in YouTube recommending videos that are completely out of left field, so to speak. They will recommend things. It's usually right-wing things or conservative things, that's not my political view that I hold. And they'll recommend those videos to people that have never watched anything like that a day in their life. And so that is quite concerning and it definitely makes me think twice about using it. And like the data that they hold and the kind of picture that they want to give you as a platform.

Attachment B1

Researcher

These bars represent scales, on one side, safety and the other side, freedom of speech. Sometimes there can be a little bit of a trade off between those two. And if you think about you as a person, where would you like to position yourself on this scale?

Respondent

I'd say probably in the middle. Hmm. Probably closer to safety.

Researcher

So one towards safety?

Respondent

One more.

Safety |———————•———————| Freedom of Speech
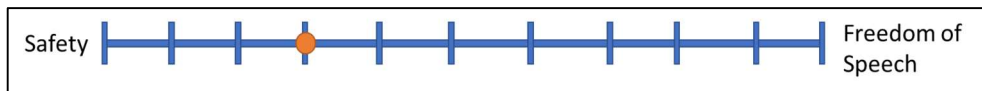
Researcher

Okay, why would you position yourself there?

Respondent

Because I don't think that freedom of speech is as important as safety. I think that especially, like, Americans are always banging on about freedom of speech, and I think that a lot of the time that is used in more of a way of projecting like racism and stuff like that. Rather than actually being, like, able to just speak your mind and do whatever I think people use it as an excuse, so I'd much rather feel like I'm safer than feeling like I have the ability to like, speak freely.

Researcher

And now we're going to look at YouTube as a platform. Where should they position themselves?

Respondent

I would say near enough the same space.

Safety |———————•———————| Freedom of Speech
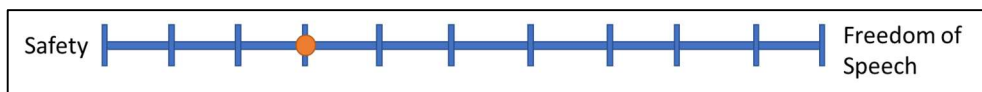
Researcher

And why should they position themselves there?

Respondent

Because I think if they didn't, then you would end up with a lot of bad content and people using the excuse of freedom of speech to say things that aren't necessarily right.

Researcher

And then for the last bar, society as a whole. Where should we position ourselves?

Respondent

Ohh it's a hard one. Again, I'd say probably. Like 1 bar closer to safety.
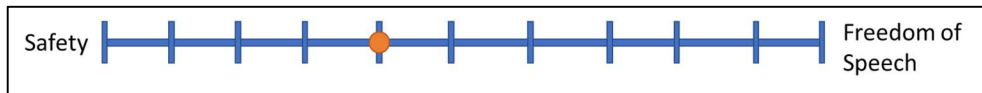
Researcher

And why there?

Respondent

Again, I think just society as a whole, I think needs to feel safer. Because I think a lot of the time, freedom of speech is used as an aggressor.

Researcher

Would it be alright for an individual to post political videos on YouTube?

Respondent

In a way, yes, because people are entitled to opinions and beliefs and things like that, but I think that there are a lot of people where they're slightly too far one way and that can be detrimental to people in like a different mindset or a different sort of lifestyle. There's a lot of people that I find that if they are very, very politically minded. They don't really consider other people. And the way that other people live. So, I obviously only know UK politics. And if you've got people that are really far right, they don't really understand. Because a lot of times they haven't been in that situation, they don't really understand what it's like to be of a poorer socio economic status. And I think that if you've got a lot of the people that have heavy political views that don't actually really consider the other side, that much. It can be good in some ways because you've got a lot of like-minded people coming together. But then sometimes if that goes a little bit too far, I think that that can be a really bad thing as well. So, I think that, yeah, in a way, yes, it's good because it can be used for good. But at the same time, I also don't think that people should be able to because it can also be a bad thing.

Researcher

You are on YouTube and you encounter a political video requesting the peaceful deportation of an ethnic group. How would you respond to that?

Respondent

I don't think it would be peaceful. Is that not just a huge video about being racist and like segregation in a way.

Researcher

It is more about you see this, what action would you undertake yourself? Would you do anything, or would you just click away, how would you respond to it?

Respondent

I mean, if I saw it. I wouldn't think it was necessarily about the video itself, but potentially the comments itself, depending on how almost like aggressive or violent or anything like that they are. Then I'd report it. If it's a bit more of like a video that no one's really seeing. It's not had much traction. And I don't think that it has potential to do harm. Then I'll just click away from it.

Researcher

What do you personally use YouTube for?

Respondent

I use it to watch a lot of streamers. And like gaming videos. So, I watch like Valorant clips on there. And then there's like streamers that solely stream on YouTube. So, I watch them as well.

Researcher

And why do you use YouTube over other platforms like Twitch or TikTok?

Respondent

Because on YouTube people make compilations of stuff. So, the Valorant clips I watch, this person makes like montages of all of the top watched clips of that day from Twitch, and then puts it on YouTube. And then, like I said, there's some people that will only stream on YouTube. So, then I'll watch them on there because I can't physically watch them on Twitch or anything else.

Researcher

Have you ever encountered any controversial content yourself?

Respondent

So I've watched videos about controversial content, but I've not actually found it myself. I think because I stick to like one side of YouTube, I rarely sort of venture

out of like the gaming side. And a lot of the time, that's not really that controversial because it's just like actual gameplay. Rather than anything else, although I suppose some of the gameplay videos I watched, they'll use words that I personally don't agree with, like they'll use the R word. And like, they'll just leave that in the video, and I'll be a little bit like "ohh, I don't really like agree with that" and that could potentially be controversial because I mean, even me, I don't agree with the use of that term. But there are some people that don't really care, and they obviously don't mind because they keep it in. And stuff like that. So that would be like the most controversial, but not like I don't think it's that deep if you know what I mean.

Researcher

What do you find important in life?

Respondent

Being happy.

Researcher

How would you respond if YouTube would act in a way that contradicts your happiness?

Respondent

I probably wouldn't use it. If you're not making me happy, you're gone.

Researcher

What would you like to see YouTube do to improve your experience on the platform?

Respondent

Well, one thing that I actually noticed that annoyed me the other day, was when I went on to the YouTube app on my phone and I didn't find it that easy to use. There weren't any videos coming up of channels I'm subscribed to, but that's the only thing. I mean I like the content that kind of comes up. It's just I didn't know any of them.

Researcher

What would need to happen for you to quit YouTube altogether?

Respondent

Probably if the people that I watch stopped making content.

Researcher

Because then it has no added value for you?

Respondent

Yeah, pretty much. I mean, there's nothing that YouTube's really going to do that's going to stop me from using it. It's just if people stopped posting.

Researcher

We're going to start with the first scale. The scales are ranging from safety on one side, freedom of speech on the other side. Sometimes it can be a little bit of a trade off. So, looking at the first bar. Where would you like to position yourself on this scale.

Respondent

And safety in what regard? Like safety of my wellbeing? Or what do you mean by that?

Researcher

Whatever you think it means.

Respondent

Yeah, I mean, I would probably put it 1 notch to the left, the safety over freedom of speech.
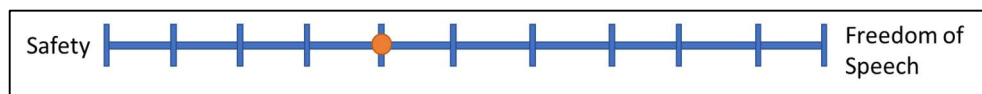
Researcher

Why there?

Respondent

I think free speech is very valuable. It's good that you can have, that everyone can have an opinion and state what they think and mean. But I think that your safety goes above what you personally think, so I think it's better that you are in a safe environment. I would say the value of being safe is higher than the value of me saying what my opinion is. But I do think that people should have the ability to give their own opinion and have freedom of speech which is why I didn't go any further to the left.

Researcher

If you think of YouTube as a platform, where do you think they should position themselves?

Respondent

I think in the middle is perfectly fine. I think if you go anywhere to one side it's going to put it to the point where they are biased. So, if you go to the left, they're going to be biased towards one group or another. If they go to the right, then the

same. So, I think they have to be in the middle. They have to allow people to have freedom of speech, but they also have to have the safety net.
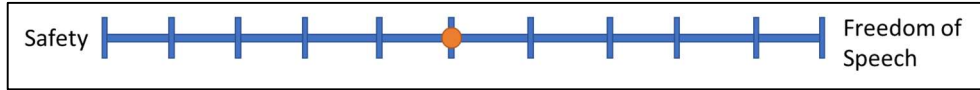
Researcher

Society as a whole, where should we position ourselves?

Respondent

In an ideal world. I think it should be in the middle again because you should be able to say what you want while feeling safe. So, maybe further to the right. I think in an ideal world you would have the ability to have freedom of speech without being worried about being censored or being worried about your wellbeing. Everyone should have their opinion and be able to state their opinion. So, I would set it 2 notches to the right.
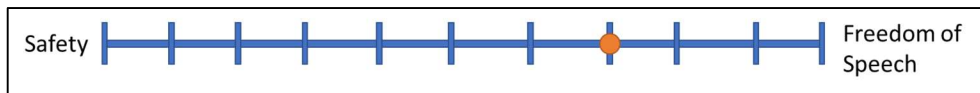
Researcher

Would it be alright for an individual to post political videos on YouTube?

Respondent

Yeah, I think so. I think everyone is allowed to have their opinion. I think so long as what they are putting on YouTube is correct information, then I think it's fine. So, I don't think you should be able to slander political opponents, but I think you're allowed to put up political videos, whatever videos you want, so long as it's legal. But yeah, bides by the law and is factual. I think if you put up video that is not factual then it should be taken down. But I think anyone should be able to post any video they want. Without any issue really.

Researcher

Would it then be all right for an individual to post their political opinion on YouTube?

Respondent

Yeah, I think so. I think you should be able to post your political opinion and state what your opinion is. I think that's part of freedom of speech that you have the ability to say what your opinion is and other people may not agree with you. But I think that's part of the world that we live in. Not everyone is in agreement about everything. And I think it's only fair and valid to be able to state exactly why you feel the way you do.

Researcher

How would you respond if you encountered a political video requesting the peaceful deportation of an ethnic group?

Respondent

I mean, I wouldn't agree with it. I don't think leaving comments on YouTube videos has any impact whatsoever. I guess it depends on the outreach. If it's, you know if it's been viewed in the millions, I would maybe see it as a cause of concern. Maybe ask other people how they feel about it. If there's anything, maybe look up if there's anything actually occurring. But if it, let's say, it's a political video that popped up and I has like 10 views, I wouldn't even bat an eye. I would just go right past it and not care. I think it's part of freedom of speech. While I don't agree with deporting citizens or noncitizens out of a country because of one view or another, I think they're allowed to have that view. I think it's one thing having the view and another thing actually for it to actually happen though.

Researcher

What do you use YouTube for?

Respondent

Mainly I watch gaming related videos. The occasional like tips and tricks or food stuff, but mainly to for my entertainment. Pure entertainment.

Researcher

What is the benefit for you? To use YouTube over other platforms such as Twitch or TikTok.

Respondent

So the reason I use YouTube and not TikTok is because there are all these stories about TikTok stealing your data and selling your data. So, I don't use TikTok. I do use Twitch. I mainly use YouTube because the content that you see on YouTube has been edited down into smaller bits so you can easily watch a 30-minute video or 45-minute video, whereas with Twitch you're committing to adds, life interferences. There are so many things. With YouTube I can open up a video and if my mail shows up, I can pause my video and come back to it. And I haven't missed anything, and you can't do that with Twitch. So, I think YouTube is great for entertainment. It's just kind of like watching a movie on a streaming platform, but it's just a different type of entertainment.

Researcher

Have you ever encountered any controversial content on YouTube?

Respondent

Back when I was in high school. We were talking about Flat Earthers, and I've

looked up flat Earthers like videos and like seen the whole premise of what their ideas is. That's about the most controversial thing that I would say I've seen. I don't really go out of my way to watch controversial videos on YouTube so, and it's not anything that's generally recommended to me. So other than stuff that I have sought out myself, I have not seen anything, no.

Researcher

What do you find important in life?

Respondent

I think the most important thing in life is your own happiness. And whatever you require to get that I think is the most important thing, whether it's the people you surround yourself with, or the material that you surround yourself with, I think one's own happiness is the most valuable thing.

Researcher

And how would you respond if YouTube would act in contrary to what you find important?

Respondent

I mean, I'm not necessarily sure how YouTube would. I mean, it would be if YouTube were to say: we no longer allow gaming videos on our platform. It would be annoying, frustrating I suppose. Cause it's something that I do enjoy, and I spend my time on. I do think that if that were to occur, it would not be the end of the world, as I imagine something else would take its place. YouTube is the biggest platform, but you know if it crashes, there will be dozens, if not more that come up. I think that any negative impact that YouTube will have will just be replaced by another alternative.

Researcher

What would you like to see on YouTube to improve your experience?

Respondent

It would be nice if you could turn off recommendations for videos that are outside of your scope. So, for example, you watch a video on how to assemble an IKEA table and then for the next three weeks you get videos on how to assemble IKEA or reviews of IKEA tables. You should be able to specifically say one time use. Like you should be able to like have a thing like don't recommend me this anymore. So, you watch a video, and you say I don't need recommendations based off of this. So that you don't get these silly inconvenient recommendations that you just have to ignore until they go away, would probably be the one thing that I would add to YouTube. Otherwise, I think that it is perfectly adequate to what I require.

Researcher

What would need to happen for you to quit YouTube altogether?

Respondent

I think it would need to be the point where it's unusable from my side, so in that sense it would be that the things that I watch or the people that I watch, no longer use YouTube because they switched to a different platform. There would have to be a better alternative, I suppose so. I don't see that happening anytime soon, but yeah. Let's say for fun that one of the content creators that I watch switches to a different platform. That would be the only reason I would really switch. I don't think there's anything that YouTube could do, other than literally saying we no longer allow this person or these videos. Otherwise, yeah, I think I will stick by it.

Researcher

So currently you should see a PowerPoint presentation with three scales on it. On one side we have safety. On the other side we have freedom of speech. Sometimes that can be a bit of a trade off. Where would you position yourself on this scale?

Respondent

Just in general you mean? Uh, I think like more to the side of freedom of speech. Two notches to freedom of speech.
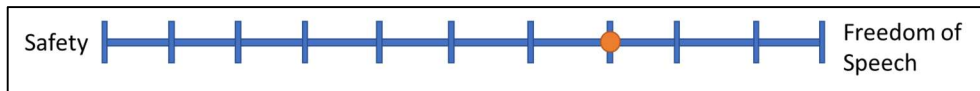
Researcher

Why there?

Respondent

Um, because I feel like everyone should be able to say whatever they want, but I also understand that somethings you can't say because it will make the world less safe, but I still feel like it's more important to say what you want or what you think. Or what you believe in.

Researcher

Okay and looking at the second scale. YouTube as a platform. Where would you position YouTube on this scale?

Respondent

I think one bar to safety. More to safety.
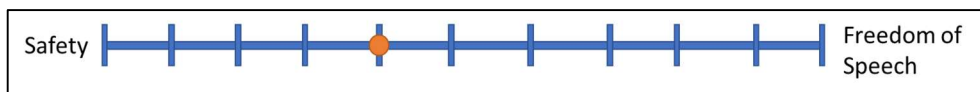
Researcher

Why there?

Respondent

Because anyone can access it and you don't always have full control over what you can see because you have like the video suggestions and everything, and sometimes that can already be harmful. So, when you put something on there, you have no idea what it's gonna do to someone. So, I think you should have a little bit more limitations on that.

Researcher

Society as a whole. Where should we position ourselves?

Respondent

I think right in the middle is pretty, pretty alright.
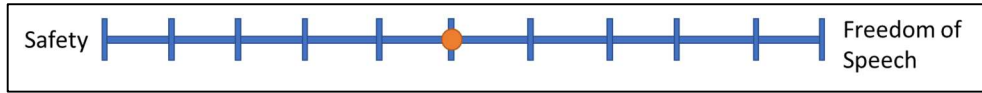
Researcher

Why there?

Respondent

Because society is always very broad. And again, you don't know what certain things will do to people, so if you're telling someone something. I think you have more control over it. Over the situation. But like a society as a whole, you don't really. I think you should always balance safety and freedom of speech. And I think we're in the middle. Should be.

Researcher

Would it be all right for an individual to post political videos on YouTube.

Respondent

As long as they don't force certain things on people, I think it should be allowed. I think it's alright as long as you don't try to activate people to harm others or if you just want to share your beliefs, or why you think certain way, I think, I think that's alright.

Researcher

So posting your political opinion on YouTube is fine?

Respondent

As long as you don't activate people to hurt. Others yes.

Researcher

How would you respond if you encounter a political video. Requesting the peaceful deportation of an ethnic group.

Respondent

I mean, I wouldn't watch it because I don't believe in that sort of thing. And I do feel like everyone should be allowed to believe what they want, but I just really disagree with that. So, I wouldn't wanna put any time in that sort of thing.

Researcher

Are there any particular actions you would undertake?

Respondent

Maybe dislike it or anything, but I wouldn't wanna pay too much attention to it because I think the more attention you give that kind of believe, the bigger it blows up and I don't feel like it should.

Researcher

What do you use YouTube for?

Respondent

Mostly music and study videos, mostly. Other than that music. For study mostly explanation videos.

Researcher

You use it for music and your study. Why do you use YouTube over other platforms? So, Twitch or TikTok or Sound Cloud.

Respondent

For the music, I mostly use Spotify, but if there's something's not on Spotify. I use YouTube for that, but for my study it's just there's a lot of good explanations on there. And ninety percent of the time I will find what I'm looking for. I think it's just the best way to look for something.

Researcher

Have you ever encountered any controversial contents? On YouTube.

Respondent

Not really, I think. No.

Researcher

A more philosophical question. What do you find important in life?

Respondent

Um, that you chase that what makes you happy. And what gives you energy.

Researcher

And how would you respond if YouTube would act in contrary to what you find important?

Respondent

I would want to understand why um. And if I disagreed with the reasoning behind it, I would probably try to use another surface that offers something similar.

Researcher

What would you like to see on YouTube to improve your experience?

Respondent

Probably a little bit less random videos because sometimes you get videos in your recommended that are just not even close to what you're looking for. Or what you've ever seen before, and I think that's kind of weird.

Researcher

What would need to happen for you to quit YouTube altogether?

Respondent

Um. I think if I would go in my recommendations or something and if I would get many, many videos that are not in line with what I believe in or what I find off-putting and then I would probably stop using it.

Researcher

If I'm correct, you see a PowerPoint slide with three scales on them. The scale is from safety all the way on the left side to freedom of speech, all the way on the right side, and that's because sometimes safety and freedom of speech can be a little bit of trade off. For yourself, where on this scale would you place yourself?

Respondent

Five.
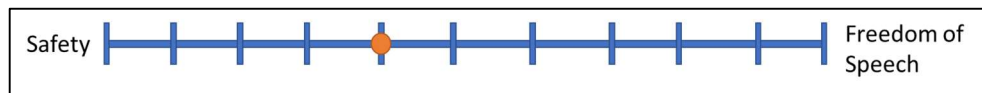
Researcher

Why there?

Respondent

Um, I don't know. I just feel like. I don't just think I lean more towards safety, to be honest. Safety is more important to me.

Researcher

Then we go to the next bar. This is YouTube. Where should YouTube position themselves?

Respondent

I think they should probably go more towards freedom of speech. I would say like one more towards it. Like fairly safe, but I would like that they kind of lean further towards freedom of speech, cause it's a place where you're to share information and get information and stuff. You can't really get a lot of that if you don't have freedom of speech, you know.
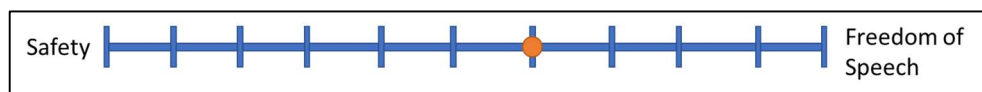
Researcher

And then. The last one. Being society as a whole. Where should we as a society position ourselves?

Respondent

I feel like it's very unrealistic, but I would see it right in the middle. To be honest, I feel like this is kind of how you would want it. I think. It's kind of the same thing

for YouTube. You want to feel safe but how safe is it to not have freedom of speech, you know? Like it would it be quite rubbish if you feel like if you are currently safe, but, like, you didn't have any freedom to do or say whatever you wanted, you know. Of course, it's always consequences to that as well.
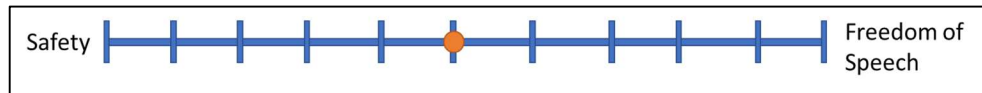
Researcher

Would it be alright for an individual to post political videos on YouTube?

Respondent

I would say so, yeah.

Researcher

Why?

Respondent

I think just for like the educational side of it, I think there's like an extent to it though because if it's, like, really radical stuff, I think that's maybe a little bit less great. On either side, you know. But it's good to have both sides of the political arguments shown on YouTube. I think YouTube is really good for like educational purposes, you know. So, I think it's important to have both sides shown, especially cause if you're raised in like a really for example left-leaning household or something, it's good to have, like, access to more right sides arguments and stuff. And like, you know, adopt your own opinions about things like that and stuff you know from YouTube videos.

Researcher

So it would be alright for an individual to post their political opinion on YouTube.

Respondent

Yes, I think so.

Researcher

And I'm gonna throw a hypothetical scenario at you. How would your respond if, while you were scrolling through YouTube, you encountered a political video requesting the peaceful deportation of an ethnic group. How would you respond to that?

Respondent

A video requesting the deportation? I would probably watch it, to be honest. I would want to know what they were talking about and why they were talking

about it, like their views on it. It would be given a thumbs down to be honest. But yeah, I would probably watch it.

Researcher

So you would give it a thumbs down. Are there any other actions you might undertake.

Respondent

I think it depending on how extreme the video was, you could obviously report it, because like I said before, I feel like that's a very radical opinion and a very radical view to have. I think, discussing things like deportation and stuff is important. But I think asking people to actually do it. Especially just for your own personal opinion. I think it's just really, I don't know, it's not good.

Researcher

So, what do you use YouTube for?

Respondent

Um, I use it for both educational purposes and just watching, like, gaming videos and stuff.

Researcher

And why do you use YouTube for this instead of other platforms like Twitch or TikTok?

Respondent

I mean, I do use both of those as well, but I use TikTok and, like, Twitch for fun things, you know? Where as I use YouTube if I want to have background noise or something while I'm doing, like, some work or if I have, like, a topic that I'm kind of struggling with at university. I'll just type it into YouTube and it's, like, loads of bits that come up. So, I think there's, like, so many videos on it and there's so much lay back and watch me videos. I like YouTube for that.

Researcher

Then the next question, have you ever encountered any controversial content on YouTube?

Respondent

Oh loads. Loads. All the time.

Researcher

What did you see?

Respondent

It's actually a lot of politics, politics, you know, videos that I see as very

controversial. I think there is kind of everything on there, you know, anything controversial you can imagine, it's probably on YouTube. Usually, if I find one video, I'll go into a bit of a rabbit hole of that. You know, the controversial stuff. It's kind of how YouTube works. A lot of horrible political stuff that I do think some of it shouldn't be on there cause, like I said, I think radical things shouldn't be on there. But you know, there are.

Researcher

And do you have an idea as to why you encountered those videos.

Respondent

I assume it's like part of the algorithm. It's just, uh, you know what's just kind of fed to you. And also if anything is on the news that is like, you know, political or anything that. I usually watch that on YouTube as well. So that will kind of tell the algorithm that I like political stuff and it'll show me all this extra stuff that I don't really want to see. But yeah.

Researcher

What do you find important in life?

Respondent

It is really probably quite cringey to say, but love. I think of all things you know, it's probably the most important thing. Just yeah, anything love base. You know I love love.

Researcher

But how would your respond if YouTube would acts in contrary to what you find important.

Respondent

I mean, I probably just stop using it to be honest. If it was just all about hate. Hate, hate, hate. I would just stop using it. I would use other platforms. To be honest. I would boycott it.

Researcher

What would you like to see on YouTube to improve your experience?

Respondent

My experience. Probably like. A bit of a rework of the entire platform to be honest. Um. For like content creators and also just viewers themselves. The layout and stuff. How they actually care about people that are on YouTube, whether they're, like I said, the creators of the viewers, because I've kind of noticed from using YouTube the past few years that they just kind of don't care about anyone, you

know, outside of the company. So probably, yeah, just like reworking the entire thing, to be honest.

Researcher

Can you give a specific example.

Respondent

For one, I mean, you know what I said earlier, but like, radical opinions and stuff, I don't think should be on there. That's a huge one. I think we should start, like, kinda, hammering down on that. Paying their content creators more money as well, cause I feel like they're really awful, but that sort of thing.

Researcher

What would need to happen for you to quit YouTube altogether?

Respondent

Probably even like, if they fed a lot of, like, political things on to my homepage, I probably still use it just to, like, look up videos and stuff. So, I feel like they would have to like really bombard their website with a lot of things I don't want to see. Or they like do something horrible as a company to, you know, to content creators, viewers or something. They do something horrible to be like, OK. Done with that then.

Researcher

I have 3 scales and they all represent the same. You have safety on one side. You have freedom of speech on the other side. Can you tell me where you would like to position yourself?

Respondent

Probably 4th from the left.
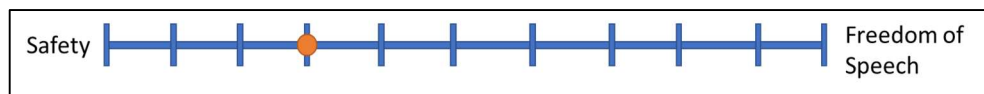
Researcher

Why would you position yourself there?

Respondent

Sometimes safety is better than saying stupid things.

Researcher

Can you elaborate on stupid things?

Respondent

Things that some people would find offensive, I guess.

Researcher

We're going to the next scale again, safety, freedom of speech. Where do you think YouTube should position themselves on this scale?

Respondent

Probably right in the middle to be fair.
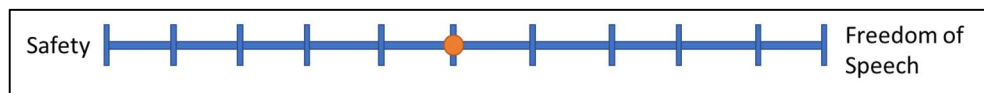
Researcher

Why right in the middle?

Respondent

It's that even mix of people can say some things and people can't say some things.

Researcher

And what are things that they can't say, for example?

Respondent

Again, offensive things, things that people wouldn't agree with.

Researcher

OK. And for the last bar society as a whole, where would we position ourselves on this scale?

Respondent

I'd say the middle again, yeah.
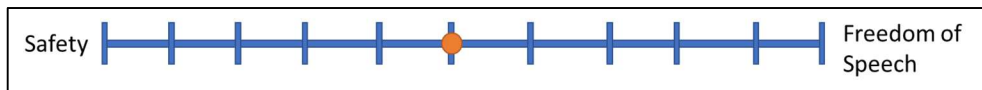
Researcher

Why are we in the middle again?

Respondent

Half and half of safety and freedom of speech.

Researcher

Would it be alright for an individual to post political videos on YouTube?

Respondent

To an extent.

Researcher

What is that extent?

Respondent

Not quite trying to force the political views on people, but to stand by their own.

Researcher

So more inform people about.

Respondent

Yes, yes.

Researcher

Would it be alright for an in an individual to post their political opinion on YouTube?

Respondent

Yes.

Researcher

Why?

Respondent

As it says only their opinion, it's not like you can change many things.

Researcher

You're on YouTube and you encounter a political video that requests the peaceful deportation of an ethnic group. How would you respond to that?

Respondent

If it's not anything to do with my ethnicity group. I wouldn't interact with it.

Researcher

So you would leave it as it is, move on to the next video, so to say?

Respondent

Yeah.

Researcher

What do you use YouTube for?

Respondent

Amusement, passing the time.

Researcher

Okay, what sort of amusement? Like what do you watch?

Respondent

A lot of horror things. A bunch of music.

Researcher

And why do you use YouTube over other platforms such as Twitch TikTok? Other streaming platforms, so to say.

Respondent

I'm personally not that much of a fan of Twitch because the I like to be really deep in the video. Without the streamer, I guess. And breaking the emersion. That would be it, I like to be emersed, emersed in the videos and TikTok videos just aren't as long.

Researcher

And on YouTube, have you ever encountered any controversial content?

Respondent

Yes.

Researcher

What did you see?

Respondent

A lot of offensive things. Not things that should be shared to the public.

Researcher

Do you have an idea how you encountered that content.

Respondent

People that I used to watch.

Researcher

As in they link you to it?

Respondent

They would post it.

Researcher

And the people that you used to watch, what sort of videos were that? Were that political videos, for example?

Respondent

It was like gaming, gaming videos.

Researcher

So you used to watch gaming videos and the creator posted or referred to videos that had controversial content?

Respondent

Yes.

Researcher

What do you find important in life?

Respondent

I believe things that you find important in life have to be discovered yourself.

Researcher

Can your elaborate?

Respondent

Ohh for me personally. More bikes than cars? Music.

Researcher

How would you respond if YouTube would support videos that try to ban all sort of bike videos or car videos?

Respondent

I certainly wouldn't be happy about it.

Researcher

Is there any action you would do?

Respondent

If it's from YouTube, there is not really much I can do, but. I guess I would swap to a different platform maybe.

Researcher

What would you like to see on YouTube to improve your experience?

Respondent

I'm not quite sure. I'm quite like how YouTube is laid out, you know. Yeah, I think if was fine for me, I think.

Researcher

What would need to happen for you to fully quit YouTube?

Respondent

If they take like some of my favourite YouTubers away. They wouldn't support them anymore I guess. Then I would just be done with YouTube.

Researcher

So if they stop supporting the content creators that you enjoy watching?

Respondent

Yes.

Researcher

So this is the primary view. When I show you this, do you have any particular feelings by what you're seeing now?

Respondent

Any particular feelings? What I'm having now, we're just looking at the interface of this. Is it supposed to be the home? Is that what this is?

Researcher

This is just after you clicked on a video.

Respondent

OK, let me see the differences. Can you highlight the differences between that and the existing interface?

Researcher

We will come to that later. I just want to see if you notice anything first.

Respondent

Ohh, I just pulled open YouTube to start looking at this so I can pay attention to this. I can stop doing that if you prefer just to do it from memory but.

Researcher

Yeah, just tell me what first captures your attention from this screenshot.

Respondent

I suppose this is the logo as opposed to. I mean I don't know if this is just your mock up though, right? Is this supposed to be instead of? I understand that you don't want to show a bunch of videos on the right. You don't buy us what's in them. But is this the fact that it is the YouTube as opposed to the content, is the immediately noticeable thing from this. I don't see description particularly visible there. I don't see an URL up there. Not a lot honestly.

Researcher

Is there anything that stands out really?

Respondent

No, not really.

Researcher

OK, that's fine. I did make some changes, one of them being this button over here. The idea behind this button is that once you are watching a video and you look at the video and you're like, OK, I do not want to see this type of content, you can click on this button and this type of content will no longer be recommended to you. And my question is how would you feel about it if YouTube were to implement this?

Respondent

So, this is intended to stop them from suggesting it in your in the algorithm that suggests you videos. How does it characterise when I click block here, what categories of things am I blocking? How does it decide that this is when you say this is not the type of thing I wanna see? What is the thing that you're deciding on?

Researcher

YouTube videos often get categorised within the algorithm. That's also how the algorithm knows that videos are similar and that they can recommend it to you. So instead of normally if you would watch a video, you would complete watching a video. It will recommend you similar to that. In this case it will take those similarities away.

Respondent

To give me an example then. So let's say, you know, let's say it say it's a animal compilation video with the voice over alright and I click block, what are my blocking? Am I blocking that content creator? Am I blocking the category of animal videos? Am I blocking specifically animals with commentary? What one of my blocking here?

Researcher

You are blocking in that case, not the creator itself, but like the type of video as determined by the algorithm.

Respondent

Yeah, I guess I, I guess the point I'm trying to make is that I struggle with seeing how you're going to draw the categories effectively and how you would prevent the accidental blocking of content you might be interested in or the algorithm generalising that in a way that you didn't intend when you clicked block.

Researcher

And in case you would have the option if you click this button to comment why you blocked certain this video specifically, how would you feel about that?

Respondent

As someone who interfaces with YouTube. Contacting people through YouTube for YouTube. I'd be shocked if that was handled by people and I would be shocked if there's any bandwidth for actually going through individual stuff like that. My content gets taken down occasionally by automated requests and it's automated procedures that review it and it's a pain in the ass to find people. So I would I would, I guess the idea of block sounds nice. I think the devil is in the details here and I suspect that I am dubious of the ability to implement that well. The idea of not seeing more content at this type that I don't want to see is an interesting idea, I guess. As a function, as a functional thing. That would be kind of cool, although you want to talk about the considerations of whether or not you should do that. Maybe a different thing, but certainly certainly an interesting idea, sure.

Researcher

So if implemented correctly, you would use it?

Respondent

It could be a feature type that I might find useful. Occasionally, yes.

Researcher

Do you think other people would use it?

Respondent

Ohh yes.

Researcher

Do you think other people should use it?

Respondent

I'm dubious of using it at all. Again, I don't know how it's going to categorise stuff, so you're going to run into these weird issues where maybe you block this, maybe you block this. This, I don't know. You block a video because you don't like the content, but it decides that you're actually blocking is the type of content being created there. So. Tough to do it without specific examples on this. To clarify that.

We try that again, so I'd be worried that you were choosing one category of intending to block and you would instead block maybe multiple categories or things that related to this that you didn't mean to do that and you're just going to further funnel kind of down what you see to another limited set. I don't know. I don't think I would suggest people doing this too much now. YouTube is already supposed to be policing their site to a degree. There's already stuff that is deemed does not acceptable for that. I don't know what I'd be using block with. Stuff I don't like? I don't need to block things I don't like. I can just not watch things I don't like, you know? So I don't know.

Researcher

We're moving on to the next one, which was up here. The idea behind this is that within your account you would be able to make different profiles.

Respondent

This is a really good idea.

Researcher

Each profile you could be like, OK, today I want to watch gaming videos. Ohh, I currently want to watch cooking videos and you could just go to your profile and you would get recommendations based on that profile. How would you feel about YouTube implementing me this?

Respondent

This is really good news. I would be strongly behind that. I think that's good for people who share a household. So that I don't necessarily wish to be recommended the videos my wife is watching. But nevertheless, those sometimes show up, especially on like a on a non computer interface like a television where we both share that interface or also just for the types of things I'm into. Sometimes I'm looking for music to work by. Sometimes I'm looking for gaming content, sometimes I'm looking for influencer content, that kind of thing. So yeah, I think this would be a fantastic idea.

Researcher

So you would use it.

Respondent

Yeah, I would use the hell out of that.

Researcher

Do you think other people would use it?

Respondent

I do.

Researcher

Why do you think they would use it?

Respondent

Because I think it has very nice functionality, which is you're not always looking for the same things at the same time for the same reasons and be able to continue to get recommendations from the algorithm that are tailored to what you're looking for in that moment is a useful feature.

Researcher

Do you think people should be using it?

Respondent

Yes, why wouldn't you? This is this is the the upside of customization without the downside, which is you're not blocking something because of some arbitrary distinction. You're instead opting into a category that you're interested in in the moment. I think that's a good way to do it.

Researcher

Then lastly, we have this bar over here. The idea behind this bar is that the more it's filled, the more politically charged this video is. So more green means more political content, less green means less political content. Then when you hover over it, you would see where on the political spectrum it is, and by clicking more information you would get more information about what that political view entails. How do you feel about that?

Respondent

I hate this idea.

Researcher

You hate it. Can you explain it to me?

Respondent

The idea or why I hate it?

Researcher

Why you hate it.

Respondent

I hate it because I don't think you can do this well, and I think you're going to. So there's already a system somewhat like this. It doesn't show visually, but there's already a monetization and acceptable ads on certain types of content produced on YouTube. And this is already a kind of arbitrary system. There's some guidelines they have for this, but whether or not you're stuff gets that gets enforced, or whether you're stuff is decided to be in there is already not exact enough to do the service well. So, this is going to add further complication to that you're going to, I don't know how you're going to attempt to do this. You're going to attempt to somehow, automatically, presumably because you can't do this with the number of YouTube videos that are coming out daily. You can't do this with people you're going to have to automate this. You're going to have to somehow summarise and interpret the information in that video, and then you're going to have to decide to attach a tag to it, and this tag is already an arbitrary tag. How right or left is this? You're going to give it what a percentage? You know it's, I don't know how you're

going to categorise this in a way that it is reliable enough that it doesn't result in so many violations of what you're intending to do that it's not going to be prohibitive. You're going to end up having people muting this video or banning this video or not advertising on this video or staying away from this thing. That's totally a different category than its intended. You know, just because it has, I don't even know because these things are just not accurate enough to do this. So maybe, maybe we get the next AI generation that can take care of this for us and you can do this realistically, if you could, I guess maybe I'll refer to that way. I don't think you can do this right now. Well, but let's say you could, let's say you had the technology to do this perfectly. Do I think it's a good idea? Then I'm still not that sure of that. I don't really know that. I think I don't really know that. I think people should be discounting information because of the ideology it comes from, I would love this for like facts, but I think that's hard enough. You know if, like, if this was like, this video is pushing for you kind of tried to do that on Twitter it a little bit on YouTube if this video is presenting information about a topic that is factually wrong, that would be useful to me. It's less useful to hear politically which direction is one or the other. So, I don't like this idea very much.

Researcher

So you were saying in like not right now, not possible, but in a hypothetical future, if it was properly working, would you use it?

Respondent

No.

Researcher

Can you explain why.

Respondent

Because I don't need to avoid content that I disagree with or is from a different political perspective. The point of having your views is the best idea standing. So you need to be able to survive criticism and it is better to be able to do that than to have the unchallenged view. The unchallenged view is untested, so I don't need to avoid this and then plus it's not always just because something is from a different ideology or a different political perspective, doesn't necessarily mean that it isn't useful or interesting to me. I don't want to categorically deny myself access to all things of a political spectrum that I'm not, or a political the edge of a political spectrum, that I'm not on, just because it's from that.

People who are holding ideologies that I disagree with can still have ideas that I agree with or ideas that are good ideas or be bringing up questions or problems or comments about things that are relevant and important to me. So just I don't. I don't know what to do with this. Let's say that a YouTube video says it's 75%. I

don't even know. Do you use parties by the country they're in? Do you use, like, what is what? What are the even the polls on this, is this a conservative liberal? It doesn't even matter what it is. Let's say it was one radiant on this. Am I going to ignore all information above a threshold of like 50% of this or 70% of this? Is that the intended feature for? I don't know how I would use this in a way that would be useful to my life.

Researcher

Do you think other people would use it?

Respondent

I guess I fear other people would use it, but I I don't know, maybe.

Researcher

So let's immediately go the next question, do you think other people should use it?

Respondent

No, I think it's a generally bad idea to silo your information in this way, I think. I think you needs to be a little bit more robust, a little bit more aware what's happening around you, I think than just limiting it to on to one side like this will do.

Attachment B2

Researcher

You should see a YouTube page. Do you have any feelings about this screen that I'm currently showing you?

Respondent

I feel like it's just what YouTube is right now, minus the ad that's usually at the top right above the recommended videos.

Researcher

Is there anything that stands out to you?

Respondent

Um, I'm wondering what the green bar is at the bottom, I guess.

Researcher

There anything else?

Respondent

There's a green bar filled out. The titles are a lot smaller than usual. But other than that, not really.

Researcher

You mentioned the green bar. Without any context, how does seeing it makes you feel?

Respondent

I feel like it looks like a goal bar, so like it's it's filled out probably 20% of a goal that it's trying to reach just by looking at it.

Researcher

I will take you to the bar in a second. There are a few other changes there as well. There are three design alterations that I made and there are all seen here, but the first one is the block content button. The entire idea behind this is that if you see a video that you do not find interesting or you just do not agree with and you do not want to see content similar to this, you can press this button.

Respondent

Okay, I didn't even notice that. But yeah, I see it now.

Researcher

How would you feel about YouTube implementing this?

Respondent

I feel like I would want to read to see what kind of algorithm is using to see what content it would block. Just because of the fact that like, yeah, you could say don't show me this content, but how far is it going to go related to it? Is it just going to go with the exact same topic? Does the user have to submit what topic it's talking about like the main topic. So I feel like. I don't know if I would fully use it just because of the fact that I don't know the background information on what's happening.

Researcher

Next question is also would you use a button like this yourself?

Respondent

If I was able to see either visually or read what. If there was like a learn more portion right? Like if you were hovering it and there was like a learn more portion where like the do not show me this content is. I feel like having something that would allow us to learn more about what exactly it's blocking would make me use it but outright I don't know if I would because it might block something that I'd be interested in watching, not knowing the background of it.

Researcher

Do you think others would use this button?

Respondent

Not without background information. I feel like even those that would use the button with background information, OK, but there will be a lot of people that probably wouldn't use it at all. They would just close the tab.

Researcher

And if there would be more information behind it so you know what you would be blocking. Do you think people should be using it?

Respondent

I think that people should be using it if they're the types of people to comment rudely on videos or personally attack some topics that are seen within the videos. I think that if people just want to be more informed, they shouldn't use it, but I think it adds that layer that if you're going to go super negative into it, two negatives don't make a positive kind of, so. But then at the same time, I feel like the people that would comment negative things on videos wouldn't use it. So I feel like it's very 50/50.

I feel like it might be redundant cause if people that should use it, would not. And the people that would wanna know the information behind it so. But then the people that would use it, are they the really types of people that would benefit from blocking the content? That's more questions than answers, but that's where my brain is.

Researcher

Then I'm going to a different one that is all the way on the top. The idea behind this is that you can switch between user profiles. Sometimes you're just feeling something you want to watch a certain topic. Sometimes you want to educate yourself a little bit on whatever you feel like. How would you feel about YouTube implementing it?

Respondent

I feel like I would use it. I feel like it would also stop you from going down rabbit holes and finding hurtful content without realising it, especially if you want something specifically on gaming. I'm sure we've all gone down that rabbit hole from gaming to some really obscure politics situation and that has an impact on how you're feeling, so I feel like I would use it and I feel like it would be useful to have.

Researcher

You said you would use it, why would you use it?

Respondent

Because I'm one of the types people who go down that rabbit hole. So, I feel like if I wanted to watch something specific. I feel like it would also narrow down your recommended videos. Right? So, like, I would use it in a job context. Like, if I'm looking for something specific related to curriculum, I would be able to filter the videos based on what I'm looking for specifically. Instead of searching and then having so many things come in.

Researcher

Do you think others would use it?

Respondent

I feel like I'd be again 50/50. I think that the people that are going on YouTube for specific content would use it. You always hear comments, about people saying like why did my one video that I watch change my whole recommended for you page, on the front-page YouTube. So, I feel like people would use it if they were those types of people because then they'd be able to keep their stuff separate if they wanted to watch video based on one thing, they won't have to worry about it affecting their recommended video somewhere else because the whole point of like.

Almost everybody that I talked to has at least like learned of new creators or stuff through the recommended videos. So, I feel like being able to have content creators that are within your niche specifically per category would be good. And I think that a lot of people use it because of that. But then at the same time you have those people that like going down the rabbit hole and finding new things. So, I still feel like it be 50/50.

Researcher

Do you think other people should be using it?

Respondent

I think it goes back to the previous comment. I think that people that should be using it, are the people that would leave those negative comments or personally attack or attack people creating the videos. But I feel like once again it might be a little bit redundant for those that should be using it, but I feel like that's a vast minority of users.

Researcher

We're going to the last one, which was the one that you pointed out. Which is a bar that represents how politically charged a video is. So, the more filled with green it is, the more political it is. Then when people hover over it, they can see on a spectrum how progressive or conservative, or how left or right political charged the video is. Then if they want more information, there's a button for more information about what's this political view actually entails. When I tell you about this, how do you feel about it?

Respondent

I think that it might be a little bit too far. I like the information that it talks about. And it gives more information about political views. I think that's really important as a lot of people are misinformed. But I'm not sure if trying to brand every video based on their political content is useful. I think that the bar is useful in order to see if it is a political charged video or not, but I don't think it's useful to show what side of the spectrum it is, cause some of the views do intersect. So where do you go with that? I think that that's a little bit too far, but I don't think it's a bad idea. I'm talking showing how political it is.

Researcher

Would you use it?

Respondent

I don't feel like I would hover because I wouldn't care that much. Because political preference changes and views overlap. But I feel like it I would at least take a look at the green bar for my own curiosity.

Researcher

Do you think others would use it?

Respondent

I think that it's the same thing. I don't think a lot of people are going hover over it or click the more information or try to see what political view it is. But I think people would glance over at it because it's there.

Researcher

Should they be using it?

Respondent

The bar maybe. Like I said, I think that the more information piece is important to learn about different political views, but I don't think pinpointing it on a graph like that is it. It's very subjective. Like it's up to the person that posts it or the algorithm to decide how far right or how far left it is. So, I think that like everybody's views of politics are different. So, I'm not sure if that should be used, but I don't think it's a bad idea. Once again showing how political the video is because. If a video is political or not is not a subjective opinion, whereas where it lands on the graph is.

Attachment B2

Researcher

You see a YouTube screenshot. When I show you this, how does this make you feel?

Respondent

Um, I really like that. It's dark mode rather than light mode, so it's a little bit easier on the eyes. That's the first thing that that sort of hits me. That's all. That's a little bit nicer to like look at. I don't know. I don't think there's actually too much different other than that.

Researcher

Is there anything that stands out?

Respondent

Below the bottom right corner of the video, you have a little like green with white bar. Don't know what, don't know what that is. The sidebar where you have like other YouTube videos on the side is still there like you have who the YouTube user is and the title. At the top right you have three dots and then arrows sort of going around them. Unsure what that is either.

Researcher

Do you have any primary thoughts? What do you think about those?

Respondent

I'm just assuming that they're like new tools, like a new shortcut to something. I'm sure that they provide different information, it's just problem like looking at it, I don't know what that information is.

Researcher

I'm going to start with the first design alteration. This is a block button under the video and the idea behind this button is that you're watching a video and you see the content and you're like, OK, I do not want to see this type of content again. You can click on this button and YouTube will no longer recommend you this these types of videos. If I explain it to you like this, how would you feel about YouTube implementing this?

Respondent

I think you would be good. I don't scroll through YouTube a lot, but, like, when I do there is just a lot of stuff everywhere. It's like if I'm able to like even just like

filter like one stuff I'm interested in. Like it would be useful if I see any content that I really don't want to see. Then I can just block it and get that off of my feed.

Researcher

Would you use the button?

Respondent

Ohh yeah, I would use it.

Researcher

Why?

Respondent

Being able to, like, filter the content that I am consuming and like sort of making it my own content I'm interested in. It's like definitely nice. Then when I do go to YouTube, I know what content I'm going to see.

Researcher

Do you think other people would use it?

Respondent

I think a lot of people would use it and there be people that don't use it like some people are just like, ohh, I don't care. Like I'll just like keep scrolling through stuff. I think you'll always have people that want you to and then some people that will not use it. I think for the most part people would use it though. Some people like that control of being able to see what they're engaging in. So, I think it would definitely be a very used option.

Researcher

So you think that others would use it, but should they use this button?

Respondent

I don't think there should be anything against you having the option to not see it.

Researcher

Then we're going to go to the next one. That's one that you also recognised, it is the one with the dots and the arrows. The idea behind this is that within your own account, you could make multiple profiles and you could say on this profile; I would like to watch gaming videos on this profile, I would like to watch a home renovation videos and on this profile would like study and then when you go to YouTube, you could choose what profile you're going to use and only get recommendations that fit that profile. When I explained to you like this, how would you feel about YouTube implementing this?

Respondent

I like that as an idea. I don't think it would be a bad idea at all. I think people would use it. I know myself. I just wouldn't feel like setting that up. If you have the gaming, cooking, politics, like they're like, almost like presets that you didn't have to create. Like you didn't have to, like, curate, which it was. Like if they are all set up there like you create your YouTube account and it's already like set up like there's gaming and there's cooking, there's a politics, there's like house renovation like all those different categories then yeah, that would be interesting. It would definitely be useful. But if you had to set up those categories yourself, I wouldn't care too much. Like I know some people would use it cause they like that but, you know, just I just see it as too much work for something that I'm not overly interested in.

Researcher

Do you think other people would use it?

Respondent

Yeah, I think some people would definitely use it.

Researcher

Should people use this option?

Respondent

It's just like further curating like your own intake of content. Some people want to curate what they are taking in more than others. And even then, like you could always have a section under there for like a kid's section or something for like kids, appropriate videos. Like I definitely see it as useful.

Researcher

And then we're going to the next one that was also something that you saw on the first screenshot. It is a scale that shows you how politically charged a video is. And being less full, meaning less politically charged, more full means more politically charged. Once you hover over this bar. You will get insight in what this means, in what part of the political spectrum it is. And if you want more information about what that political position means, you can click on more information. How would you feel about YouTube implementing this?

Respondent

I don't like that. I don't know.

Researcher

Can you explain>

Respondent

I don't know, it is just because, like, political stuff is hard because it's like it's very opinionated. It's like I feel like it would be hard for YouTube algorithm to accurately determine if it's right or like in the middle. I feel like it would be hard to like fully to determine where it is and then could lead to the bar being misleading. I feel like there would be ways that like content creators could express their views to sort of get around this.

But not every video is going to be like watched by like an individual and be judged. So it has to be an algorithm that automatically does it. So like that it looks like keywords and everything. I feel like I'm actually like there could be people like ohh we know what keywords is like the far right. So like. To sort of get people to come to like the far right, we'll be like, ohh, we'll just not say these keywords. So it gets like put more towards like the middle and like more neutral, and then still pushing that far right agenda. I'm not a big fan of that.

Researcher

Do you think other people would use it?

Respondent

I think maybe. There will always be like some people that will use features regardless of what the feature is. But I think for the most part, people would not use that feature.

Researcher

Can you explain why you don't think they would use it?

Respondent

A lot of people don't really want to be involved in political stuff. So, I feel like for the majority of people, they see that just like they're just going to ignore it, just because it's easier to ignore it rather than to interact with it.

Researcher

Do you think people should be using this feature?

Respondent

I don't like the features; it's going to be a bias for me but like I don't think people should use the feature but I feel like that's a biased just because I don't like the feature.

Attachment B2

Researcher

So if I am correct, you can now see a PowerPoint with a screenshot. When I show you this, how does this make you feel?

Respondent

I don't know. Normal. I feel like that's just the way that YouTube looks, especially these days.

Researcher

Is there anything that stands out to you?

Respondent

Not really, no. Maybe there at the right-hand side, it says recently uploaded and watched. Different tabs of things that you've seen or stuff that's kind of newfrom the channel that you're on.

Researcher

Why does that stand out to you?

Respondent

I think that's probably a pretty good feature. You can easily see things that are like new videos that are up, and once you've watched already, you may want to rewatch things like that.

Researcher

I will show you the design alterations. It starts with this button at the bottom which is a block function and the idea behind this function is that if you come across a video that you don't want to get recommendations for. You can block it. If I explain it to you like this, how would you feel about YouTube implementing it?

Respondent

Think I would quite like it. It seems like a pretty easy way to get rid of something from your algorithm.

Researcher

And would you use it yourself?

Respondent

Yes.

Researcher

Why?

Respondent

Especially with YouTube, somethings do pop up that you have no idea, how they got there and you're not really interested in. So I think that's a pretty easy and quick way to just put a stop to it.

Researcher

Do you think other people would use it?

Respondent

Yeah.

Researcher

Why?

Respondent

Similar reasons, I think sometimes the algorithm, especially for YouTube, doesn't always get it exactly right, or if it's just a topic that you are wholly uninterested in and you don't want it to be recommended anymore. I think a lot of people would find it quite useful just to be able to put a stop to it.

Researcher

Do you think other people should use it?

Respondent

Probably, yeah.

Researcher

Can you elaborate?

Respondent

Certain people that would use YouTube that can find themselves kind of going down a rabbit hole. Kind of like a pipeline to more radical views and videos that probably aren't very good for them. And that should stop it before it becomes an issue. But whether people that would be susceptible to that would use or not. I'm not sure of.

Researcher

I'm going to move on to the next one. It's in the top right. So, the idea behind this is that within your own account, you can make multiple profiles, depending on the things you like to watch, so you could make a profile for gaming or for DIY videos, whatever you find interesting. And then when you go on YouTube, you could pick one of these profiles depending on what you're feeling in that moment. When I explained to you like this, how would you feel about YouTube implementing it?

Respondent

I think I would quite like it. I think it's a pretty easy way to filter out videos and your recommended portion that you're not really interested in watching at that given time.

Researcher

Would you use it?

Respondent

Yeah.

Researcher

Because you like the fact that you can control your recommendations?

Respondent

Exactly, like if I wanted to get like recipe inspiration, I could like switch to like a cooking profile and kind of watch the recommended videos that come up. Same with documentaries. True crime. Just going to depend on what you are trying to watch at that point. So, kind of filter your recommendations a little bit.

Researcher

Do you think others would use it?

Respondent

Yeah, I think so.

Researcher

Can you elaborate?

Respondent

Um, probably similar ideas. Say you use YouTube to have more educational content or kind of wanting to brush up on different topics, I suppose, it's easier if you're in that profile to be recommended purely other educational videos. Or to be able to like save stuff, favourite stuff and switch between it easily without needing to filter through like you're full account, especially if you are quite an avid watcher. It is almost like having a Spotify playlist or something. It's instead of having all of your likes in one giant list and then kind of getting bored and exiting out because you don't know what you want to do. It's easier to kind of filter it and go by the mood that you're feeling at that point.

Researcher

Should people use it?

Respondent

I suppose only if they want to, it's not the end of the world to have like a varied

recommendation page. But if people feel that it streamlines their usage better then absolutely. Yeah. They should use it.

Researcher

Then I'm going to the last one. Which is a scale, and this scale indicates how politically charged the video is. So, if the more it's filled, the more politically charged it is. Then when you hover over it, you can see where on the political spectrum it is. And then you could click on more information and it will give you more information on what that political view entails. If I explain it to you like this, how would you feel about YouTube implementing this?

Respondent

I think that would be really quite helpful. I think sometimes, maybe especially younger people or people that aren't that entrenched in politics could potentially watch a video and not know that it's an extreme view. Or whether it's left or right and they may think that it's normal to think like that and not just a small percentage of opinion and that it is kind of a political spectrum.

Researcher

Would you use it yourself?

Respondent

Probably, yeah. I'm quite interested in politics, so I suppose I feel like I've got a good gauge on where things lie anyway, but I would probably use it especially for the more information part. And to just kind of gather insight. If it's like a really niche section of that political side. It might be interesting to kind of learn more about it, what they think as a whole.

Researcher

Do you think other people would use it?

Respondent

I think people would, I think if they're interested in politics. Or if they are kind of dipping their toes in a little bit, I think they would use it.

Researcher

Should people use it?

Respondent

Yes, definitely, and especially people who, as I said, maybe aren't into politics too much. I think it gives perspective on these types of videos, whether it's extreme content, neutral content. But particularly content that maybe seem really neutral but actually has an agenda. Like Fox News, for example, in America, is historically quite right wing. However, they present the news as fact and you wouldn't know,

unless you knew historically what their opinions were. You wouldn't know that that wasn't the way things actually are. So, it would be helpful to have kind of a better perspective and to know they do have an agenda here.

Attachment B2

Researcher

If I am correct, you now see a YouTube screenshot. When I show you this, how does this make you feel?

Respondent

It just looks like I'm looking at YouTube.

Researcher

Is there anything that stands out to you?

Respondent

Ohh you can block it.

Researcher

Is there anything else that stands out?

Respondent

Not really, it just looks. I don't know, just looks like a normal YouTube page.

Researcher

Then I'm going to show you the alteration that I made. The first one is indeed the block button. The idea behind this button is that you get to a YouTube video, you see the video and you're like: I don't really enjoy this type of content. You can click the block button and it will not come up in your recommended anymore. If I explain it to you like this, how would you feel about YouTube implementing this?

Respondent

I think it would be quite good. I don't know if I'd necessarily use it, but I think that's because I'm like quite specific. I know there's a lot of people that watch YouTube videos and they go down these rabbit holes and they watch tons and tons and tons at the time, and they'll go through all like the suggested videos and stuff like that. I think where I'm so specific with what I watch, I don't think I would ever use it, but I do think that it's useful. Especially I think if kids are watching YouTube and maybe their parents just like walk past and they see them watch it, it's something that's aimed at kids, but they don't find it appropriate. To for them to be able to use it, I think would be really useful.

Researcher

So you said you would not use it yourself. Do you think other people would use it?

Respondent

Yes. Yeah.

Researcher

And why would they use it?

Respondent

Like I said, I mean, if they're going through a bunch of videos, especially like the suggested videos that are coming up or, I don't know. Maybe someone said: watch this video and they watch it and they're like, yeah, no, this isn't for me. To be able to like block that whole section of content that they don't want to see. That would make them angry or unhappy or anything like that I think is really good. So I think that's why lots of other people would use it as well.

Researcher

I'm going to the next one. The next one is here at the top. The idea behind this is that within your account you can make multiple profiles based on things you enjoy watching, so you could go to a certain profile and then you would only get recommendations that match that profile. If YouTube were to implement this, how would you feel about it?

Respondent

That is so cool. I mean, I think I would definitely use it. I know that my husband definitely would, because he watches a lot of, like, different things on YouTube and then it ends up like almost messing up what is suggested for him because it's almost like too many different types of videos in one place. So being able to just, like, go onto one and now that's all you're gonna see I think that would be so good and again for things like, I don't know, the children, and stuff like that. If you had children, I know that my nieces and nephew, they go on YouTube a lot as well. So being able to. Almost like. Like click on like children or something like that and then that's all that's coming up for them. I think would be really good and a lot safer for them as well, especially sort of as they get a little bit older. If I don't know if like some sort of like videos that we wouldn't want them to watch, might worm their way in. But at least then you could know that they are hopefully only watching videos for them to watch. It isn't something that's completely going to skew their way of thinking and stuff like that.

Researcher

So you think you would use it? You think other people would use it as well?

Respondent

Yeah, yeah, definitely.

Researcher

Do you think people should use it?

Respondent

I think it's just personal preference I suppose. I think saying if someone should use it is like. I don't know. It's that's very like, I don't know, forceful way of saying. Something. But I mean, obviously some people don't really mind and just like skip a video or whatever. Where I'm very much like if I'm watching like a gaming video, I want the next one to be something similar. I don't want just like another random video to come up after it and then I have to go and change it. But a lot of people out there probably don't mind that.

Researcher

Then we're going to the last one. That was the bar underneath the video. The idea behind this bar is that the more full it is, the more politically charged a video is. And then when you hover over this bar, you would see where on the political spectrum this video is. And then if you click on more information, they will show you what this political view entails. When I explained to you like this, how would you feel about YouTube implementing it?

Respondent

I think it would be really good, like going back to sort of like teenagers and things like that. I feel like they're quite easily moulded. They might watch a very short video and can sometimes come up with a very extremist sort of way of thinking from that. They will be like, yeah, that kind of resonates with me. I'm going to agree with that, and I'll think that way moving forward. But having something that I think almost could warn them that this is really far right, if you look at the bigger picture, this is what it stands for. Then I think that would be really good for sort of. I don't know. The future of the world. I suppose it maybe it depends on where you live as well. I think being in America and being really far right and being in the UK and being really far right. Different things happen because of it.

But. I think being able to not necessarily have like a warning on it, because everyone's entitled to their opinions and their beliefs and things like that. But I think especially with younger generations that are just learning about things like politics, I think it's really important for them to be completely informed, so that maybe. I don't know, like, especially in places like America with gun laws and abortion laws being overturned, I think it's important for them to maybe learn that these are the types of people that are getting like the abortion law overturned, so then they can think. Ohh OK, maybe my views don't align so much with that, but it could be a completely different video. It could be explaining in the more information section what has happened because of views like this and then they

could be like: ohh okay, actually, yeah, maybe not. Maybe I won't vote for them at the next election or like the first election that I can vote for to make the world a bit of a safer place.

Researcher

Would you use it yourself?

Respondent

I think if I came across videos like that, but I don't think I ever really. I suppose there could be like some videos that. Potentially. Could have like underlying political agendas. But it's so underlying, you don't even realise. So it would be quite interesting to see. Like what would come up almost. To see if I am being influenced without even realising it. And I think that probably happens to quite a few people as well. They're probably just watching a video for entertainment, and they don't even realise that there is actually some political influence. So actually, mayb,e I probably would use it. Yeah, just I think more out of curiosity. But I tend to try and steer away from videos like that, I wouldn't go out and like search for it.

Researcher

Do you think other people would use it?

Respondent

I would hope so. Again, even if it's just out of curiosity. I think people being able to access information that can teach them different things is always like a positive. Again, with like teenagers and things, I think you know if we have things like this that can teach them. Then I think they should use it definitely.

Researcher

When I show you this screenshot. How does this make you feel?

Respondent

I'm assuming that the pictures on the right that say YouTube, those are just place holders for actual videos. I mean it seems fine. There's some green bar underneath that seems weird, but. Ohh there's a block button now. I mean it seems fine doesn't seem that different than it is right now. I mean, you also have a download button. I don't believe that's there. But yeah, I know I mean it looks fine, but nothing has drastically changed. I feel it's still fairly similar to what I normally see on YouTube.

Researcher

You said the block button, the download button and the bar, they stand out to you? Are there other things that stand out to you?

Respondent

No, I don't think so. I think that's everything else looks exactly like it is already, maybe it's not, but that's how it seems to me. There's something up in the top right with like the three dots, but that could be on YouTube, I don't know.

Researcher

I'm going to show you the first mock-up. And it is the block button that you also discovered. The idea behind this button is that if some content pops up that you do not like to see, you can click this button and YouTube will not recommend you these types of videos. When I explained it to you like this. How would you feel about YouTube implementing this?

Respondent

I think it's fine. I think it wouldn't really work because it's going to require people to categorise their YouTube videos correctly. Already now, if you look at what category certain videos are under, they're normally listed under like, not just like one thing, they are listed under dozens or hundreds of different categories. So if you block something, you might end up blocking something else that you actually would be interested in, so I think that for this to work it would have to be super specific. And then people would just not use that category for their video, if they're worried that people have blocked it. So, I don't think it would really have any benefit in the long run whatsoever.

Researcher

So would you use it yourself?

Respondent

I think I would be worried that it would hinder some videos that I watch. That that I might not be interested in something, but maybe one of the categories that it is listed under, is something that I would be interested in. So, I would very hesitantly use it only if I knew exactly what it would be blocking category wise.

Researcher

Do you think other people would use it?

Respondent

I think other people would use it, but I think eventually people would come to the same realisation that I have, which is that if it blocks categories and people list videos under certain categories, hoping that you'll actually block them without realising it. That it'll end up not being used, because I think it will be abused both in the sense that people blocking videos that they didn't mean to block because the categories that are on them and on top of that I think people will abuse that they will try to get people to block this type of video and they will have certain categories listed under them to, you know, actually be a bother.

Researcher

Do you think people should be using this feature?

Respondent

I mean, in a perfect world, if it works like it should, it can't be abused from either side. Then yeah, I think it's perfectly adequate. But I think it would need to actually work properly and you'd need to be able to know exactly what is being blocked when you block this video. Or this content, not this video.

Researcher

Looking back at our interview from some time ago. When I asked you what you would like to see on YouTube to improve your experience, you were talking about IKEA and how to assemble things from IKEA and that you should be able to say one time use or to have a thing like: don't recommend me this anymore. So I am curious as to why this button does not fulfil your expectations in that manner. If you can, maybe elaborate on that a little bit.

Respondent

So my worry is that if you go underneath the YouTube video, you'll see categories that you can list it under. For example, if it's a video game, you can list that specific video game. But for example, with using the IKEA example. It would be nice to be able to say: ohh I don't want this content unless I look it up myself. The

thing is if I were to watch a video on how to assemble an IKEA thing. Perhaps one of the categories might be like DIY or repairs or something that I do watch in my free time but is not necessarily IKEA related. So that's what I'm saying, like, when it says do not show me this content I want it to be specific. I need to know what content am I blocking. Is it the categories that it's linked to? Is it linked to the title. For me to use this button I would need to know the absolute specifics of what it is that I am blocking so that I don't penalise myself for trying to not watch stuff. I don't want to watch.

Researcher

I'm going to go to the next one. Which is the dots and the arrows between them. The idea behind this is that within your own account, you can make multiple profiles depending on what you want to watch at different moments. Sometimes you can be in a mood for gaming videos, sometimes you can be in the mood for DIY. So you can choose categories yourself and categorise videos in that way as well. How would you feel about YouTube implementing this?

Respondent

Yeah, seems like a great idea. My only worry again would be that it's likely to be users categorising these videos or an AI system and you will likely have people who try to bypass that where you will be watching a gaming video or like you'll see a gaming video, but it'll actually be political or cooking content. But I like the premise. I think it's nice. Sometimes you just want to chill and watch some cooking videos. I think it's pretty neat that you can have that on separate profiles and that it doesn't mess up your recommendations based off of what you watch on a different profile instead of having multiple different YouTube accounts. I think this is a really good, smart idea.

Researcher

Would you use it yourself?

Respondent

Yeah, I would use it. And I also think other people would use this.

Researcher

Can you explain what the benefits are for you? Why would you use it?

Respondent

Ohh, well I like I said before that you won't have recommendations on your other account so that you can have them split up. Sometimes you just want to watch one thing once and then you don't want to get recommendations about it constantly and instead of blocking that content, it's nice that you can just switch profiles when you want to watch it. That way it doesn't mess up what you normally watch,

and it's also not content that you want to necessarily block. But it's just not something you want to have visible on your own main profile constantly. So, I think it's pretty nice to be able to do that.

Researcher

I am going to move on to the next one because you answered the other questions that I had about this feature. The last one is the bar that you also noticed. So, the more filled it is, the more politically charged the video is. Then if you hover over it, you can get more insight in where on the political spectrum it is. Then you can get more information about what that political view entails by clicking the more information button. When I explain it to you like this, how would you feel about YouTube implementing this?

Respondent

I don't really, necessarily. I understand the premise behind it, and I see what benefit it could have. But the thing is there are I assume millions, if not billions, of videos on YouTube. Who is going to go through and do this, if it's user based. Again, you're going to have people who are spite voting, like saying: ohh this is actually this type of political preference or ohh there's no political preference. And I don't think it's going to be valid, no matter what you end up doing. So, I like the premise of it. I don't think the functionality will be there. You could have an AI doing it, but even that's not going to be, I don't imagine it'll ever be 100% accurate. And then you're going to have people who are trying to watch a non political video? Who actually end up watching a political video, so I think. I don't know if I would go to the extent, maybe I would say maybe I would have something that says contains political content instead of it's saying it contains minimal or significant radical conservative you know anything like that.

And you know, politics are different all over the world. So, what I might consider minimal might not be minimal to someone else or what I might consider to be absolutely radical, might not be radical to someone else. And then I think it's going to cause issues of people being like, ohh well, why? Why am I being targeted? Why is this saying it's radical when this is something I agree with when other people would be like ohh no, this is radical. So I don't like how it's built up. I see why it could be there and I could see that some people might like it, but it would not be something for me.

Researcher

Do you think other people would use it?

Respondent

I do think some people would use it maybe just to philtre out like certain viewpoints or political points. But yeah, I would not and I think there would be a

lot of people that would not like it both in the sense of feeling targeted, but also that just don't care enough to use it.

Researcher

Do you think it should be used by people?

Respondent

In a perfect world where it was accurate 100% of the time, I guess, if you want to know what something's political meaning is sure. But I feel like most people will know when something's political. For most, I guess. Most adults will know when something is political. In what way that it's targeted. So, I guess for the younger audience it might be beneficial to see. But unless it's like 100% accurate, 100% of the time, I don't think people should use it, no.

Attachment B2

Researcher

If I'm correct, you now see a PowerPoint presentation that has a YouTube screenshot. When I show you this, how does this make you feel?

Respondent

Like the page isn't fully loaded?

Researcher

Is there anything that stands out to you other than the fact that it is not fully loaded yet?

Respondent

I have to read the titles of the videos instead of going off of the pictures, which I don't know, I guess does annoys me a little bit cause it takes a lot more effort to think about what I want to click on.

Researcher

Is there anything other than that that stands out to you?

Respondent

No, not really.

Researcher

So within the screenshot, there are three changes to the YouTube interface. I'm going to take you through them. I'm going to explain them to you, and then I'm going to ask you some questions based on that. So, I am first starting with this one. It's a button that you can click if you do not wish to see content that is similar to the video that you're currently watching. How would you feel about YouTube implementing this?

Respondent

Uh, pretty good, because sometimes you just get kind of sucked down a rabbit hole. I guess that you don't want to go in and then you see things that can be disturbing. So, adding this button would allow me to let you know that I don't want to see those kind of videos.

Researcher

Would you use the button

Respondent

Ohh, I think so yeah.

Researcher

Why would you use it?

Respondent

Maybe also if I dislike a certain thing. But mostly, if I, uh, see things that I rather not see again.

Researcher

Do you think others would use it?

Respondent

Ohh yeah, I think so. Yeah, for sure.

Researcher

Do you think others should use it?

Respondent

I don't know. I think everyone should decide for themselves, to be honest. If they want to use it or not.

Researcher

We're going on to the next one. Which is up here and the idea behind this one is, is that you would be able to create profiles on YouTube depending on what you would want to watch. So, you can make a profile for gaming. You can make a profile for studying, you can make a profile for cooking videos. It depends solely on you, what you want to watch and then you can click on your profile and you will get recommendations based on that profile that you created. How would you feel about YouTube implementing this?

Respondent

Um. I think. Some people, for some people, would be it would be really nice, but um. Yeah, actually I think it would be nice if you also get like the right logarithm with it, because then you could just watch gaming videos. Or if you want to listen to music, you won't randomly get another video, um, while listening to music. So yeah, I think that would be pretty nice.

Researcher

Would you use it?

Respondent

Ohh I'm not sure, I think I don't use YouTube enough to need separate accounts.

Researcher

Okay. Do you think others would use it?

Respondent

Actually, I think I might actually for the separation between music and, like, for study or something. So, maybe, yeah.

Researcher

And other people?

Respondent

Ohh yeah, I'm pretty sure especially people that use it for gaming and also just to watch random videos because sometimes you just want to have like a video on your second screen. Um, and you don't want to really think about what you're going to click and then you can use the gaming accounts. So yeah, I think people would use it.

Researcher

Okay, should they use it?

Respondent

Ohh again, I don't really think they, uh, I can't say anything about that. I think they should decide for themselves.

Researcher

Then the last one. It is a scale that shows how politically charged a video is. And the more filled it is, the more politically charged it is. Then once you hover over it, you can get more information, namely. Where on the political spectrum this video is aiming towards. And if you want more information about what that preference means, you can click on more information below. How would you feel about YouTube implementing this?

Respondent

Um, I think if it works properly, it would be a good addition to YouTube. But. I'm not sure if you. If it's that easy to implement it because for instance, how are you going to do that to music videos like for certain videos? Yeah, it would be a good addition. But who decides where it is on the scale as well, and I'm not sure.

Researcher

OK. And you said you'd think it would be a good addition if it works. Can you explain why you think it's a good addition?

Respondent

Hmm so. People actually realise what kind of videos they're watching and, um,

maybe also think about if they should believe the video, or if it's in line with what they believe in.

Researcher

Would you use it yourself?

Respondent

I mean, I would probably check it out if it was there, but I wouldn't. I think it wouldn't really add that much to the videos, I watch on YouTube.

Researcher

Do you think others would use it?

Respondent

Yeah, I think so. If it works properly, people. I think they would look at it for sure.

Researcher

Do you have an idea why they would use it?

Respondent

Maybe to get an idea of what kind of videos they're watching or um? Maybe also to see if. I don't know. Yeah, I think, yeah. I think mostly just to see what kind of uh videos they're watching.

Researcher

And the last one, do you think other people should use this alteration?

Respondent

Yeah, I think so for sure. Especially if it's more towards the radical side of YouTube. They, they, they, it should have a little bit more of a. It should be a little bit more apparent in my opinion. Uh, maybe also like with the link or something. So it's like, hey if you think too much this way, maybe you should check this out.

Researcher

If I'm correct, you see a PowerPoint presentation on which you see a screenshot of the YouTube interface. When I show you this, how does this make you feel?

Respondent

I'm fine. I guess it's just like the usual YouTube interface. It's a lot. A lot of videos.

Researcher

Is there anything that stands out to you?

Respondent

Probably the amount of videos on the side like. All down the right side.

Researcher

Why does that stand out to you?

Respondent

Because there's a lot of them. Sort of squished together.

Researcher

So in this screenshot, there are already the design alterations that I made and I'm going to take you through them one by one. And I'm just going to ask you what you think about them. So, the first one that I have is over here, it's under the video, it's a block button, which would pretty much mean that when you click this button you will not see any content similar to the content that you are currently watching.

Respondent

Cool. I like that.

Researcher

How would you feel about YouTube implementing this?

Respondent

I would. I would like that, that would be really useful.

Researcher

Can you explain why it is useful?

Respondent

Um. I like uh. Being able to like have my own choice and, like, what I actually
watch and what I'm, like, given the option to look at? Yeah. Like, I like being able
to. If I don't like a video. Cause, like, the thumbs down thing doesn't work
anymore now, like you can, like, dislike a video and it looks like it won't make a
difference in it so. Um, you having a block button would be good for my
experience, I guess, on YouTube.

Researcher

OK. So, you would use it yourself.

Respondent

Yes.

Researcher

Do you think other people would use it?

Respondent

Ohh yeah definitely.

Researcher

Why do you think they would use it?

Respondent

Probably similar kind of reasons to me.

Researcher

Do you think people should be using this function?

Respondent

Ohh yeah, I think they should be allowed to choose what they do and don't see on
platforms they use.

Researcher

I'm going to the next one. Which is all the way here up top and the idea behind
this is that within your own account you would be able to create different profiles
and you could switch between these profiles whenever you want. But these profiles
will be focused on a topic that you define yourself and you create sort of your own
recommendations for that as well. So, if you would go, for example, to gaming, you
would only see gaming videos if you go to cooking, you would only see cooking
videos and so on and so forth. Just what you're feeling in that moment. If I
explained to you like this, how would you feel about YouTube implementing this?

Respondent

I would also really, actually, enjoy that because. I'm, like, whenever I'm on

YouTube, I'm usually looking for, like, a certain thing and I can never seem to find it, like. I want to like in the mood to, like, watch a gaming video or in the mood to watch like an educational video and I'll look in my, like, homepage and there's never anything I actually want to watch. So, I just end up, like, clicking off of it and going to TikTok or something.

Researcher

So you would use it the function.

Respondent

100% yeah.

Researcher

Do you think other people would use it?

Respondent

Yeah. Ohh yeah, definitely.

Researcher

Why do you think they would use it?

Respondent

Probably similar reasons, just you know it can. It makes it easier to find what you're wanting to watch.

Researcher

Do you think other people should be using it?

Respondent

Ohh yeah.

Researcher

Can you elaborate.

Respondent

Um, I think. Like I said about the block point, people should be able to pick and choose what they do and don't see on platforms and being able to choose. You know, if you want to see gaming videos or cooking videos, many people would be more likely to actually use the platform as well.

Researcher

Then I'm going to the last one. Which is a scale, and the scale is meant to show how politically charged a video is. So, the more it's filled, the more politically charged it is. The less it filled, the less it is. Then, when you hover over this bar you can see where on the political spectrum it is. And then once you see that, you

can click on more information and that will lead you to a different page where you can see more about what this political view entails and what it means to further educate yourself. When I explained it to you like this, how would you feel about YouTube implementing this?

Respondent

I think that would be a really good addition, I think. It would be really useful for educational purposes, specifically, as well. Um, obviously it would be. It would be harmless on like a gaming video, like, you know, you wouldn't really care for it, but if you click on like a political video, you can definitely learn more about it with that there.

Researcher

Would you use it?

Respondent

Probably, yeah.

Researcher

And in what manner would you use it?

Respondent

I suppose just to educate myself as well, because I'm not the most educated on politics on, like, you know, left side, right side and, and, what not. So, I think it will be, yeah I would use it to for educational purposes.

Researcher

Do you think other people would use it?

Respondent

Um, yeah, probably as well. Maybe not everyone, but definitely if they're interested in politics. I think they would use it.

Researcher

Should people be using this feature?

Respondent

I would say so. Yeah, I think it's very useful.

Researcher

In what way is it useful for other people?

Respondent

Um, just for like educating them. Um, I think a big issue within, like, politics is, like, people not being educated enough in certain topics.

Researcher

You see a YouTube screen shot. If I show you this, how does this make you feel?

Respondent

Another day on YouTube I'm really used to it.

Researcher

Is there anything that stands out to you?

Respondent

The low green bar at the bottom.

Researcher

Why does it stand out to you?

Respondent

I don't recognise it.

Researcher

Is there anything else that sends out?

Respondent

There's a block button.

Researcher

I'm going to start with the block button and the idea behind the block button. Once you click it, you can choose no longer to see this type of content and the content that is similar to the video that you're watching. If I explain it to you like this how would you feel if YouTube were to implement this.

Respondent

I think that, I honestly think that is absolutely genius, they have to do that.

Researcher

There can you elaborate?

Respondent

I should be able to just say that I don't want to watch this video, get rid of it completely, and then things like that, although it would be nice to see. Like potential of. Somewhat of a comment thing. So that you can pinpoint what it is, in case it's just one part of the video instead of the whole thing.

Researcher

Would you use the button?

Respondent

Absolutely

Researcher

Why?

Respondent

Videos I don't want to see.

Researcher

Do you think others would use it?

Respondent

So yeah, I think you would, yeah. I think to have a block button is, I think, it would be a big step in the right direction for YouTube.

Researcher

Why do you think it's a big step in the right direction?

Respondent

Type of videos that people are no longer interested in. Political, politically, political videos people don't want to see. That they have a lasting effect on I don't wanna see any type of video like this again. Then yeah, I think it's a fantastic idea.

Researcher

Okay. Do you think other people should use it?

Respondent

Oh god yeah. Sometimes YouTube is an absolute mess of stupidity.

Researcher

I want to move on to the next one, that is one that you did not notice. It's all the way on the top and the idea behind it is that you can create profiles for yourself, so you have your account and within your account you make profiles and each profile can be linked to some topic that you like watching. You can think of gaming, but you can also think of cooking videos, but maybe sometimes you want to look at home improvements videos, so you can make your own profiles and then you can just click on those profiles to see content and recommendations that fit those profiles. If I explain it to you like this, how would you feel about YouTube implementing this?

Respondent

That is another thing that I thoroughly enjoy. Being able to decide what you want to watch that easily depending on the mood. No, I think that's good.

Researcher

So would you use it?

Respondent

Yes.

Researcher

And do you think others would use it.

Respondent

Yeah, but yeah.

Researcher

Why do you think they would use it?

Respondent

If they are like me, then you know, sometimes I just want to watch movie clips, you know. Or videos on cars, bikes, gaming videos. You have to have them, like, not mix them between each other. Easier to differentiate the odd ones I guess.

Researcher

And do you think other people should use this feature?

Respondent

Yep.

Researcher

Why?

Respondent

Avoiding, maybe easier to avoid the weird stuff or the bad things of YouTube.

Researcher

And then the one you were very curious about, which was the green bar. The idea behind the green bar is that the more it's filled, the more politically charged a video is and people can see the bar and if they want more information, they can hover over the bar to see in what direction this political video leans. So they can see if it's progressive, conservative, left, right and where on that spectrum it about is. And then if they want to know more about what that entails, they can press on the button for more information below. If I explain it to you like this. How would you feel about YouTube implementing this?

Respondent

I think on certain videos. As long as it's not on every video but on certain videos. Ones that would mainly have a political topic, absolutely, 100%. Otherwise, not really.

Researcher

Um, would you use it or in this case, would you actually look at what this bar says?

Respondent

But yeah, would absolutely look at what it says, yeah.

Researcher

Why?

Respondent

Dependent on political outlook, I guess. Um, I would like to see. What the? The how? The aggressive, I guess if that's the right word to use with it, would be on it.

Researcher

Do you think other people would use it?

Respondent

Yes.

Researcher

Why?

Respondent

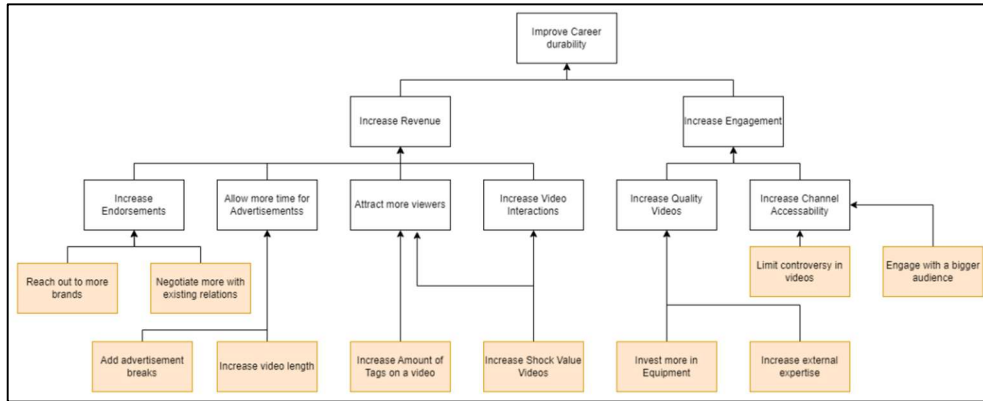To avoid the political, the deepness of the political situation.

Researcher

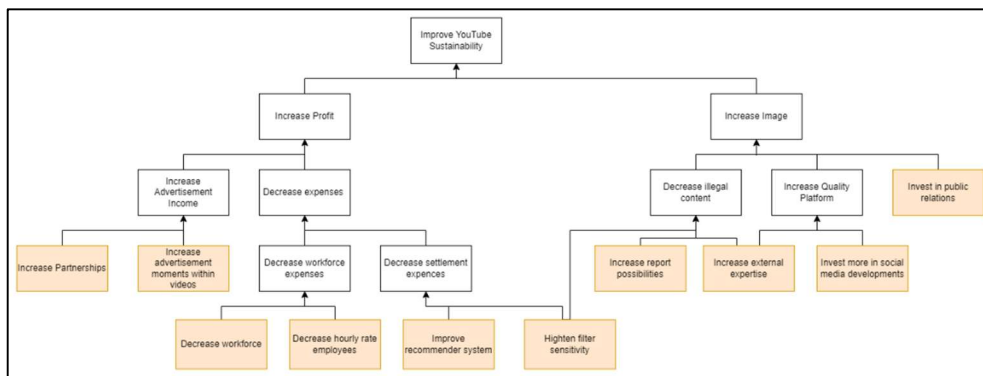Do you think people should use this bar?

Respondent

I do. That would that have to go with it that it would have to be situational for mainly political videos.
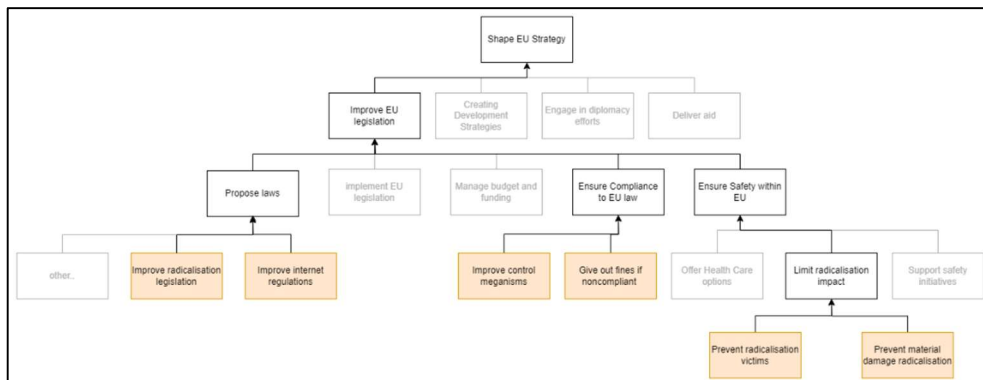
Attachment C1
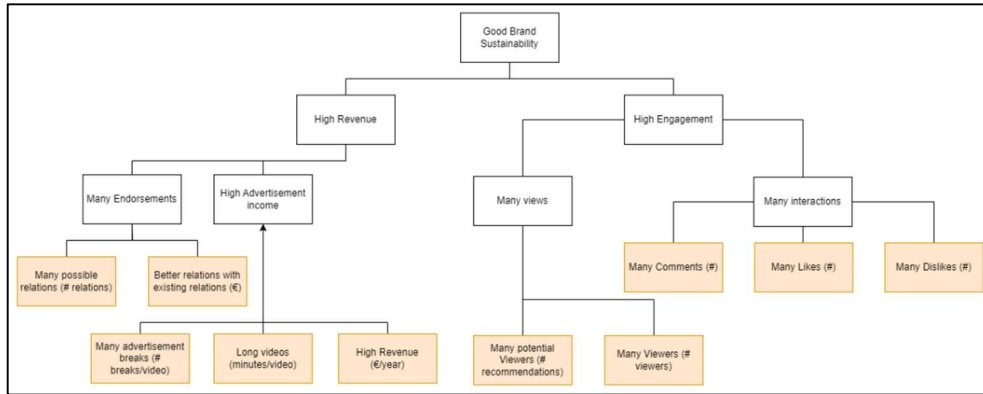## Means End Diagrams

C1.1: Means-End Diagram Creator

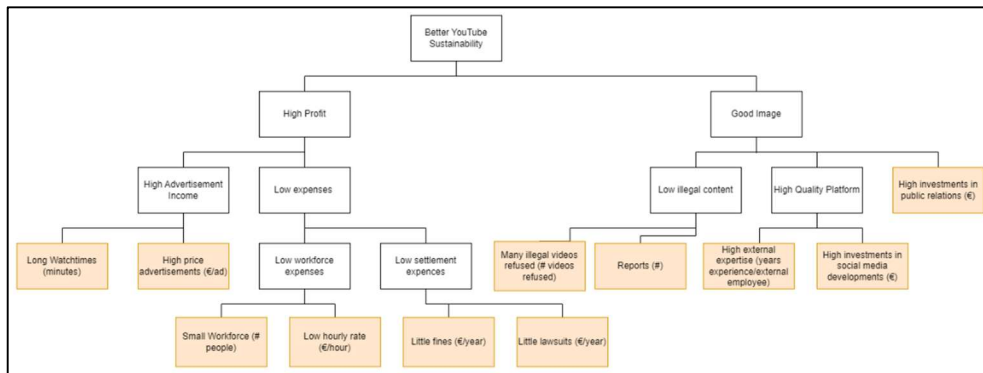*C1.2: Means-End Diagram YouTube Management*

C1.3: Means-End Diagram European Commission
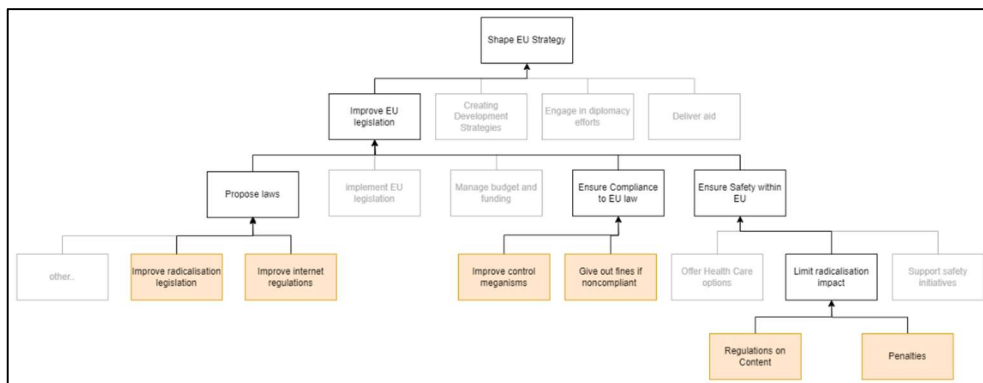
Attachment C2

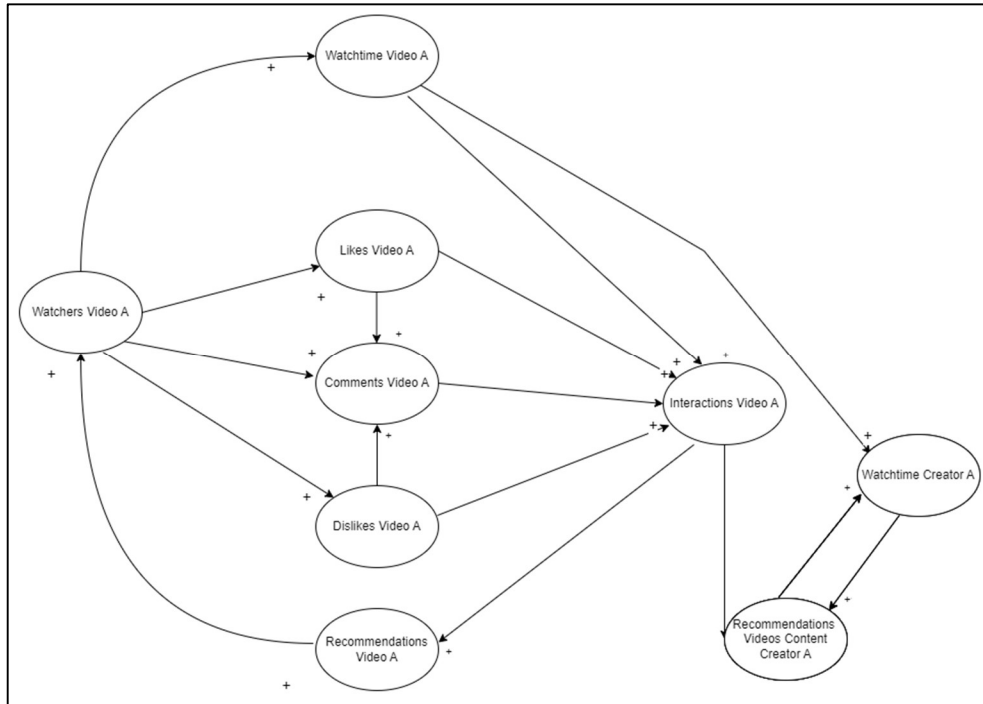## Objective Trees

C2.1: Objective Tree Creator

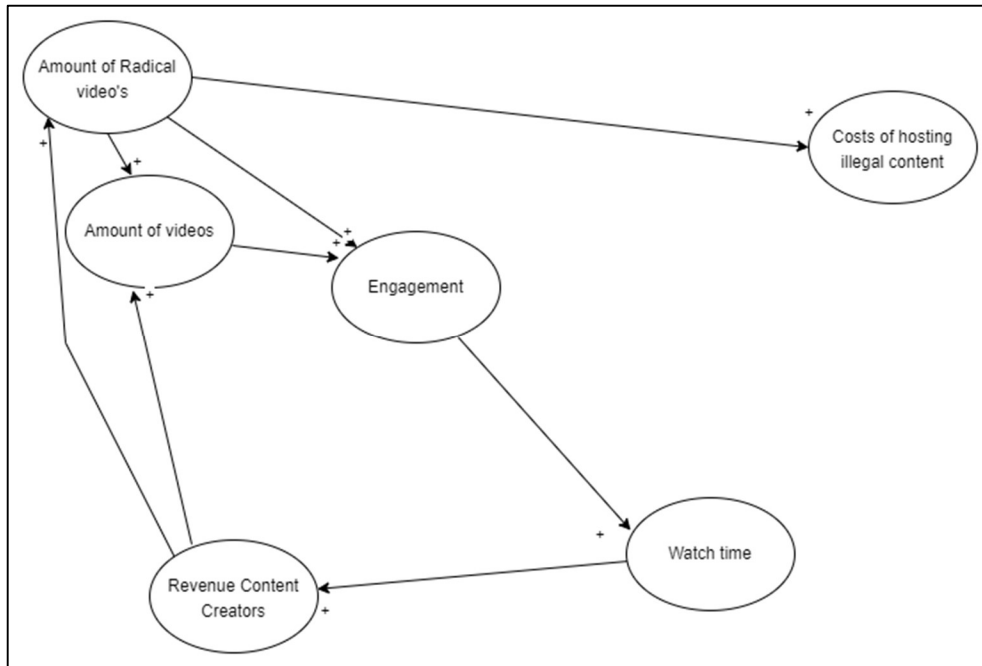*C2.2: Objective Tree YouTube Management*

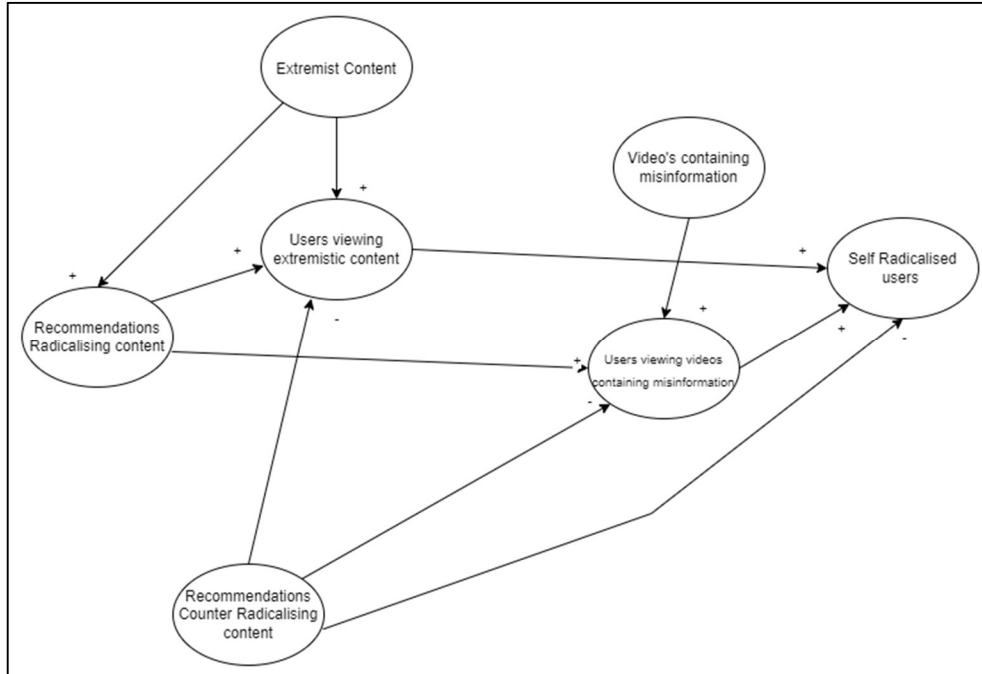*C2.3: Objective Tree European Commission*

Attachment C3
Causal Diagrams

*C3.1: Causal Diagram Personal*

C3.2: Causal Diagram YouTube

C3.3: Causal Diagram Society

C4.1: System Diagram Personal

Start	End	Relation	Explanation	Source
Shock Value Video A	Watchtime Video A	+	If we are confronted with information we do not agree with, we are more likely to stay engaged in this content	(Weill, 2022)
Shock Value Video A	Interactions Video A	+	If we are confronted with information we do not agree with, we are more likely to interact with this content	(Weill, 2022)
Shock Value Video A	Recommendations Video A	+	YouTube Recommender System shows a bias towards more shocking/radical content	(Kirdemir et al., 2021)
Tags on Video A	Recommendations Video A	+	When more tags are placed on a video, it is more likely to be linked to more other videos. Increasing recommendations for these videos.	(YouTube Help, N.D.)
Shock Value Content Creator A	Recommendations Videos Content Creator A	+	YouTube Recommender System shows a bias towards more shocking/radical content	Similar link as Shock Value Video A – Recommendations Video A
YouTube Users	Watchers Video A	+	If there are more people on YouTube, there is a bigger pool of people that would potentially watch a video, therefore that increases the amount of people that end up watching the video.	Logical Conclusion
Political Turmoil	Interactions Video A	+	If there are developments on the political landscape, such as elections of political discussions, people are more likely to interact with political content to show their support. They will also try to convince others of certain political views. Therefore, increasing interactions with the videos.	Assumption
Watchers Video A	Watchtime Video A	+	If more people watch Video A, the total watch time of Video A will increase.	Logical Conclusion
Watchers Video A	Likes Video A	+	If more people watch a video, there will be more people with an opinion of a video.	Logical Conclusion
Watchers Video A	Comments Video A	+	If more people watch a video, there will be more people with an opinion of a video.	Logical Conclusion
Watchers Video A	Dislikes Video A	+	If more people watch a video, there will be more people with an opinion of a video.	Logical Conclusion

Recommendations Video A	Watchers Video A	+	Users enjoy the recommendations and will follow along with recommendations. If a video is recommended more, this eventually leads to more watchers.	Interviews
Likes Video A	Comments Video A	+	Similar to the Dislike – Comment link, the assumption is made that users are more likely to commend if they enjoy a video.	Interviews – Dislike - Comment
Likes Video A	Interactions Video A	+	Likes, Dislikes and Comments combined are the interactions to a video	Definition
Comments Video A	Interactions Video A	+	Likes, Dislikes and Comments combined are the interactions to a video	Definition
Dislikes Video A	Comments Video A	+	Interviewees mentioned commenting if they saw something they did not agree with	Interviews
Dislikes Video A	Interactions Video A	+	Likes, Dislikes and Comments combined are the interactions to a video	Definition
Interactions Video A	Recommendations Video A	+	Videos with more interaction get recommended more often	(Yesilada & Lewandowsky, 2022)
Interactions Video A	Recommendations Videos Content Creator A	+	Trying to increase engagement, users will be recommended videos, this also includes videos of the same creator.	(Yesilada & Lewandowsky, 2022)
Watchtime Video A	Interactions Video A	+	Watching a video longer, makes users more likely to interact with a video	(Weill, 2022)
Watchtime Video A	Watchtime Creator A	+	Watchtime Video A is a part of the total Watch time for Creator A. An increase in watchtime for Video A, therefore immediately increases the creators watchtime.	Definition
Watchtime Video A	Revenue	+	If videos are watched longer, there is more room for advertisements, therefore increasing revenue.	(Artero, 2010)
Recommendations Videos Content Creator A	Watchtime Creator A	+	More recommendations, leads to more viewers and longer watchtime.	Based on Recommendations Video A – Watchers Video A – Watchtime Video A links
Recommendations Videos Content Creator A	Interactions Creator	+	More Recommendations leads to more Watchers which increases interactions.	Based on Recommendations Video A – Watchers Video

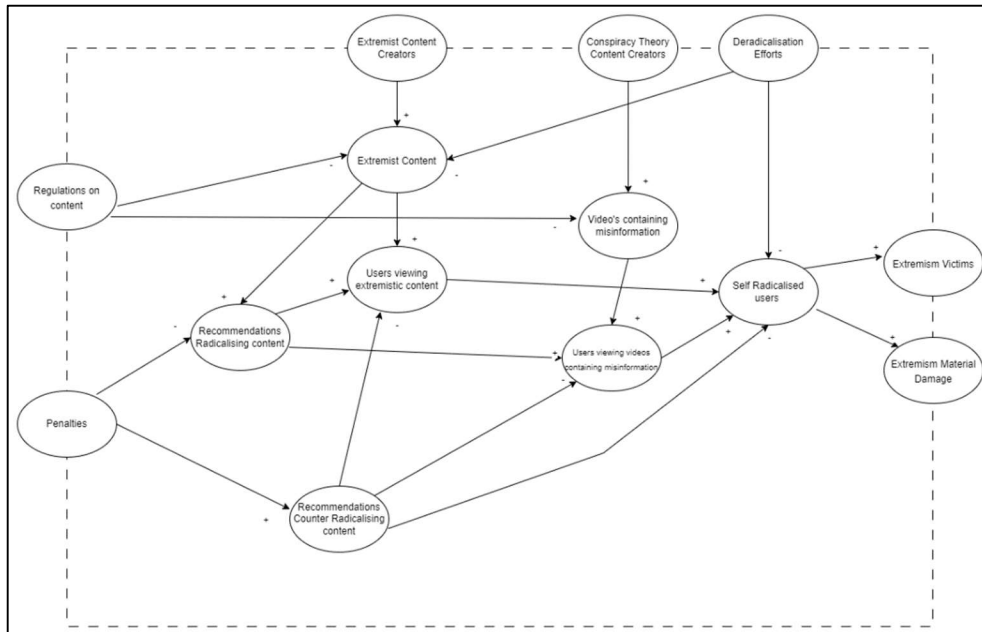|				
				A – Likes/Dislikes/Comments links
Watchtime Creator A	Recommendations Videos Content Creator A	+	Longer Watchtime leads to more interactions, which makes that the recommendation algorithm is more likely to recommend this creator.	Based on Watchtime Video A – Interactions Video A – Recommendations Video A
Watchtime Creator A	Revenue	+	If creators are watched longer, there is more room for advertisements, therefore increasing revenue.	(Artero, 2010)
Watchtime Creator A	Interations Creator	+	Watching a creator longer, makes users more likely to interact with a creator	Based on Watchtime Video A – Interactions Video A link

C4.2: Justification System Diagram Personal
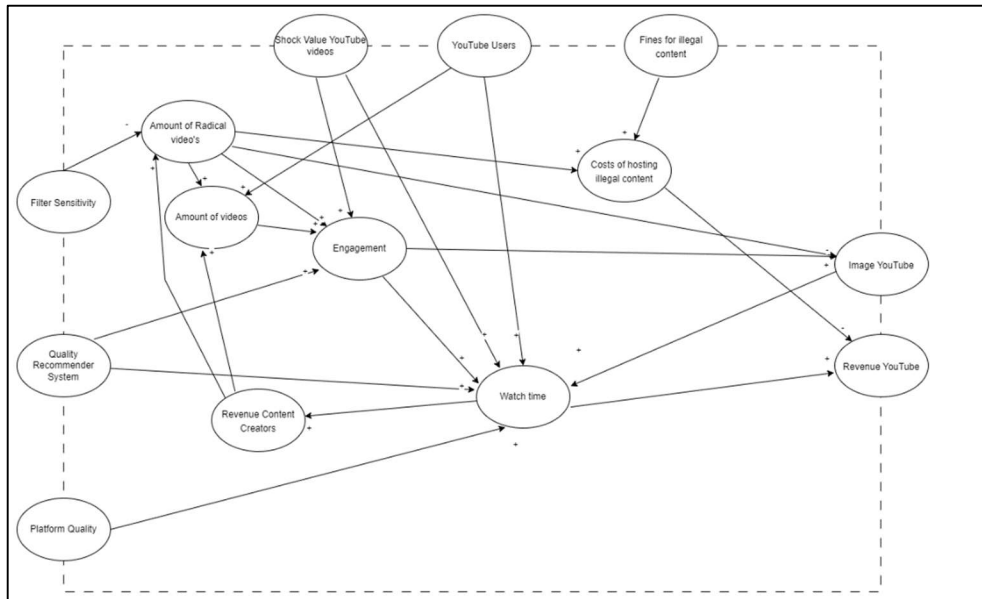
C4.3: System Diagram YouTube

Start	End	Relation	Explanation	Source
Filter Sensitivity	Amount of Radical videos	-	Higher sensitivity of the filter would mean less radical videos	(Sureka et al., 2010)
Quality Recommender System	Engagement	+	Recommendations that fit well will lead to more Engagement	Based on Personal System – Recommendation Video A – Watchers Video A – Interactions Video A
Quality Recommender System	Watch Time	+	Better recommendations lead to higher interest, which makes more watchers, watch longer.	Based on Personal System – Recommendation Video A – Watchers Video A – Watchtime Video A
Platform Quality	Watch Time	+	Accessibility plays a big part as to why users use YouTube, therefore increasing Watchtime	Interviews
Shock Value YouTube videos	Engagement	+	If we are confronted with information we do not agree with, we are more likely to interact with this content	(Weill, 2022)
Shock Value YouTube videos	Watch Time	+	If we are confronted with information we do not agree with, we are more likely to stay engaged in this content	(Weill, 2022)
YouTube Users	Amount of videos	+	More Users would lead to more possible Content Creators, which would lead to more videos	Logical Conclusion
YouTube Users	Watch Time	+	More Users would lead to more videos watch, increasing the watchtime.	Logical Conclusion
Fines for illegal content	Costs of hosting illegal content	+	When fines for hosting illegal content go up, this will increase the costs for YouTube if they are hosting this content	(Digital Services Act, 2022)
Amount of Radical videos	Costs of hosting illegal content	+	When fines for hosting illegal content go up, this will increase the costs for YouTube if they are hosting this content	(Digital Services Act, 2022)
Amount of Radical videos	Image YouTube	-	Encountering radical videos on the platform make for a worse reputation for YouTube	Interviews
Amount of Radical videos	Engagement	+	Radical videos are videos that are known for high engagement	(Yesilada & Lewandowsky, 2022)

Amount of Radical videos	Amount of Videos	+	More videos of a certain category increases the total amount of videos	Definition
Amount of Videos	Engagement	+	If there is more content to engage with, there will be more interactions	Logical Conclusion
Revenue of Content Creators	Amount of Radical videos	+	Content creators see higher revenue in radical videos and will therefore create more radical videos.	Personal System Diagram
Revenue of Content Creators	Amount of Videos	+	If Content Creators are given monetary means, they will invest that in creating more content	Interviews
Engagement	Image YouTube	+	If the content fits better and engagement with content is positive, this leads to a better view of users	Assumption
Engagement	Watch Time	+	If the content fits better and engagement with content is positive, this leads to longer watchtimes	Assumption
Costs of hosting illegal content	Revenue YouTube	-	More costs will put pressure on YouTube income	Logical Conclusion
Watch time	Revenue YouTube	+	Higher watchtimes leaves more room for advertisements, leading to an increase in revenue	(Artero, 2010)

C4.4: Justification System Diagram YouTube
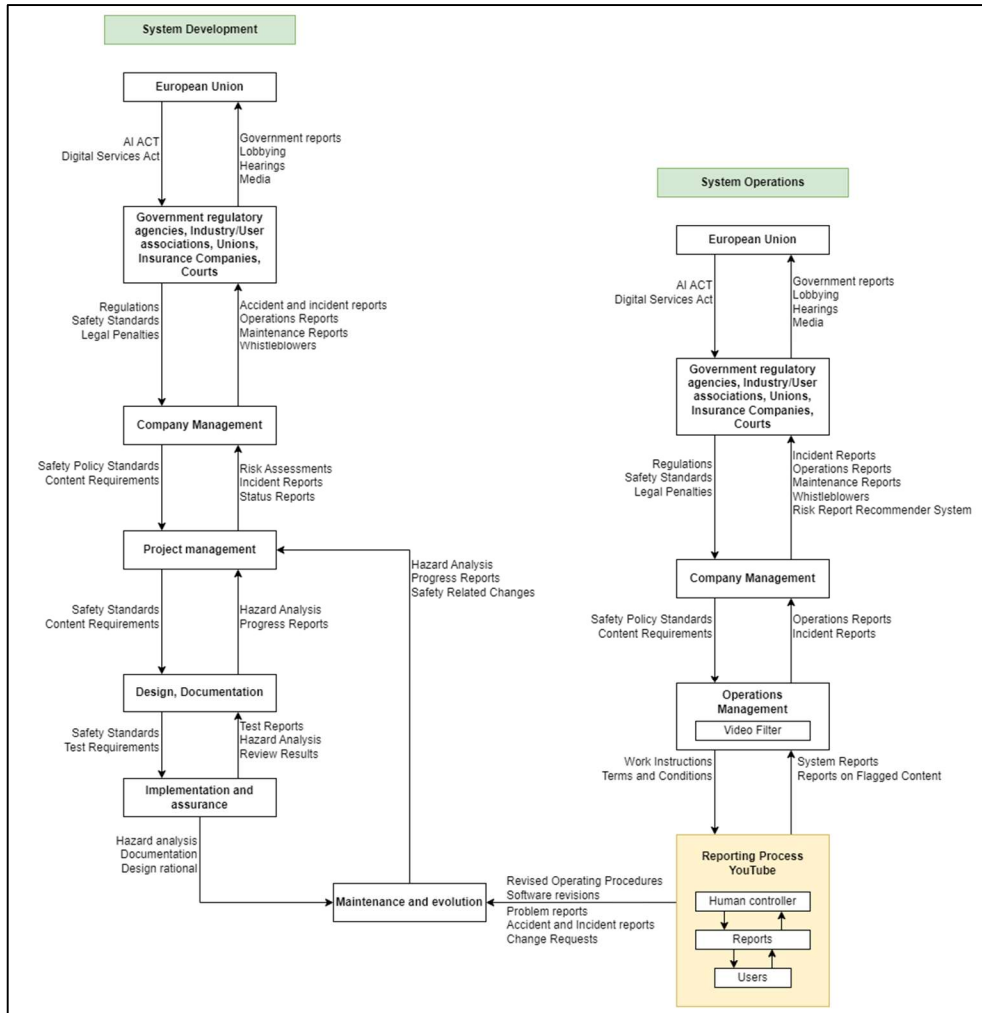
C4.5: System Diagram Society

Start	End	Relation	Explanation	Source
Regulations on content	Extremist Content	-	Regulations on Content will inform YouTube that Extremist Content falls under illegal content, forcing them to delete the content	(Digital Services Act, 2022)
Regulations on content	Videos containing misinformation	-	Regulations on Content will inform YouTube that Misinforming Content falls under illegal content, forcing them to delete the content	(Digital Services Act, 2022)
Penalties	Recommendations Radicalising content	-	Fines will force YouTube to improve recommendations to limit radicalising content and to increase recommendations for Counter Radicalising Content	YouTube System Diagram
Penalties	Recommendations Counter Radicalising content	+	Fines will force YouTube to improve recommendations to limit radicalising content and to increase recommendations for Counter Radicalising Content	YouTube System Diagram
Extremist Content Creators	Extremist Content	+	More Content Creator of a certain type of video, will lead to more of these videos	Logical Conclusion
Conspiracy Theory Content Creators	Videos containing misinformation	+	More Content Creator of a certain type of video, will lead to more of these videos	Logical Conclusion
Deradicalisation Efforts	Extremist Content	-	Users that are deradicalized will no longer create Extremist Content	Logical Conclusion
Deradicalisation Efforts	Self Radicalised users	-	Deradicalisation Efforts focus on deradicalizing self-radicalised users	Definition
Extremist Content	Recommendations Radicalising content	+	More content of a kind makes that they get recommended more	Logical Conclusion
Extremist Content	Users viewing extremist content	+	More content of a kind makes that there will be more users that will view this content	Logical Conclusion
Recommendations Radicalising content	Users viewing extremist content	+	Users follow recommendations, more recommendations for extremist content will lead to more Users watching this content	Interviews
Recommendations Radicalising content	Users viewing videos containing misinformation	+	Users follow recommendations, more recommendations for extremist content will lead to more Users watching this content	Interviews

Recommendations Counter Radicalising Content	Users Viewing Extremist Content	-	Heterogeneous recommendations lead to less viewers watching Extremist videos	(Kareem, 2020)
Recommendations Counter Radicalising Content	Users viewing videos containing misinformation	-	Heterogeneous recommendations lead to less viewers watching Extremist videos	(Maddox & Creech, 2020)
Recommendations Counter Radicalising Content	Self Radicalised Users	-	Heterogeneous recommendations lead to less self-radicalised users	(Kareem, 2020)
Users Viewing Extremist Content	Self Radicalised Users	+	More users viewing Extremist Content makes the pool of possible Self-Radicalised individuals	Logical Conclusion
Videos containing misinformation	Users viewing videos containing misinformation	+	More videos make that more people have the opportunity to run into this content	Assumption
Users viewing videos containing misinformation	Self Radicalised Users	+	More users viewing Content with Misinformation makes the pool of possible Self-Radicalised individuals	Logical Conclusion
Self Radicalised Users	Extremism Victims	+	Once Self Radicalisation is achieved, Radical Acts are a certainty	(Moghaddam, 2005)
Self Radicalised Users	Extremism Material Damage	+	Once Self Radicalisation is achieved, Radical Acts are a certainty	(Moghaddam, 2005)

C4.6: Justification System Diagram Society

Attachment C5
Safety Control Structure

C5.1: Safety Control Structure