Perception of transparency and inclusivity in Google's AI by white and non- white users

Thematic analysis on users' perception of Google's AI

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ABSTRACT

Artificial Intelligence (AI) has recently emerged as the foundation of user engagement on digital platforms in the current technological era, and Google is setting the standard. This study examines how Google users perceive AI transparency and focuses on potential distinctions between non-white and white users. Even though AI technology is used more often, especially in everyday life, concerns regarding its transparency remain urgent. There is a lack of studies that compare users from different backgrounds, therefore this research makes a comparison between white and non-white Google AI users. To understand users' opinions on the inclusivity of the user experience and the transparency of Google's AI algorithms, twelve semi-structured interviews were conducted with diverse Google users in the Netherlands.

The interview results show differences in how people from various ethnic groups see inclusiveness and transparency. The users who identified as non-white conveyed more skepticism towards Google's AI and its transparency. Through evaluation of inclusivity, they pointed out biases. Interestingly, white users stated that they agreed that Google's AI was transparent and quite inclusive, and they did not have many remarks. Non-white users viewed transparency differently, because of how inclusive the content was, more specifically the lack of equality in inclusivity of users. These findings highlight users' challenges and thoughts when interacting with AI technology and further demonstrate the possibility that present AI systems may unintentionally reinforce racial prejudices, adversely affecting user engagement and trust. The comparison of the two groups allowed a clear distinction in the perception of transparency and how user experience varies across them.

This study emphasizes how crucial it is to include a variety of viewpoints while developing AI systems, including the early steps of data training. It is important to improve inclusion and transparency to ensure equal experiences for all users, no matter their cultural background. Due to the topic's recency, there are no studies which would compare users, or evaluate the differences between users based on their background. The study further implies that this issue is rooted within society and there is a lack of awareness of such disproportions. The research concludes with a call for attention towards the importance of AI transparency.

KEYWORDS: *AI, Google, transparency, inclusivity, bias*

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1. Introduction

In the evolving tech landscape with the rise of Artificial Intelligence (AI), a crucial question emerges about the impact of technological practices on humans. The definition of artificial intelligence (AI) refers to systems that can compute, learn, and adapt based on inputs and expected outcomes (Dwivedi et al., 2023, p. 3).

AI, shaped by its creators and their perceptions, incorporates elements like emotional understanding, sensitivity, and creativity into its functional design. Its development has dramatically altered social interactions and expectations, increasingly blurring the lines between human and machine interaction (Dwivedi et al., 2023, p. 4). The new system supports companies as well as users with their daily tasks, or by suggesting improvements for their living standards. Even though it does not benefit its users in a tangible way, it does make their jobs more efficient, allowing them to spend the time they save in other ways. Most importantly, AI makes access to information easier and despite users not understanding how that can be, they accept and benefit from the availability of the information (Dubin et al., 2023, p. 1197).

1.1. Google utilising AI

Companies from all over the world started to introduce and implement AI in their products and systems. Google is one example of a firm that utilises AI for its functionality and strengthens its leading position in the search engine market. With the expansion of AI systems, they began to implement and introduce features of products that implement the new technology to get ahead of their competitors (Dwivedi et al., 2023, p. 14). Recent technological progress has significantly improved business processes as well as the lives of individual users, which have developed from simple information systems to expanded networks that elevate the experience to a higher level. The introduction of AI by Google has a broad range of benefits that the platform provides. This includes meeting different customer needs, optimising the search algorithms to provide more accurate information, recognizing images, and immediate language translation to reduce the gap in available content (Burr, 2023).

The way Google has taken over the world with their products and the technology that they use is incredible; it is mostly based on machine learning (ML) practices that allow a program to learn from the input provided by the user without necessarily being programmed to do so (Dubin et al., 2023, p. 1996). This means that the AI Google employs continuously learns from consumer input and data to enhance user experience. Initially, these AI algorithms concentrated on structured data, but they have since evolved to handle unstructured data as well, employing advanced machine learning techniques such as deep learning and reinforcement learning. One of the techniques involves training artificial neural networks on a large amount of data to recognize patterns and make decisions. Reinforcement learning is a kind of machine learning where an agent learns to make decisions by taking actions in an environment and getting feedback through rewards or penalties (Dwivedi et al., 2023, p. 3).

Additionally, Google uses natural language processing (NLP) allows algorithm to understand

human language. To comprehend what users are saying and respond in a human-like manner (Burr, 2023; Choi & Drumwright, 2021, p. 2). Such advancements improve customer experience and aim to make the product as efficient as possible. Google's AI shares practices with other companies such as Amazon or OpenAI. However, they manage to operate and incorporate AI in all their different platforms and due to their reach, they are potentially the biggest influencers on society.

Google's AI systems are not limited to the search engine, yet they are available through image recognition, Application Programming Interface (API), or navigation, as even Google Maps use AI in their performance (Jung et al., 2018, p. 626). Each platform uses the content differently; Google Photos uses image recognition to advance users' experiences, such as through location or what is on the image. Gmail, the Google email, uses AI for data sorting and, most importantly, a search engine that allows users to search in different languages and ask whatever they want to know (Burr, 2023). The more people use the application, it's supposed to provide more accurate results. Google processes huge amounts of data, with a variety of platforms and users. Such functionality allows the company to create personalised content, available worldwide with openness to adapt to the newest technology (Heimstädt & Dobusch, 2020, p. 2).

Current literature often treats user perceptions of AI transparency somewhat homogeneously. This research seeks to investigate whether there are significant differences in how white and non-white users perceive transparency in Google's AI algorithms. This is a topic that is less explored in existing studies. There is a lack of research on AI, and race, especially when trying to discuss racial bias within the existing technologies (Intahchomphoo & Gundersen, 2020, p. 81). Therefore, this research aims to highlight the relevance of AI and fill in the research gap excising in perceiving transparency by different users. Such gaps refer to understanding of the content, knowledge of the platform and experiencing inclusivity. Furthermore, the issue of racial discrimination is a much bigger topic that affects other spheres such as job application processes or mortgage acceptance. There is limited research on how socioeconomic status and other demographic factors influence perceptions of AI transparency and trust. For this reason, these dimensions are to be explored more comprehensively.

1.2. Background information

Many benefits of AI have been presented based on the user experience as well as company-related benefits. However, potential problems such as discrimination, generalisation, and misjudgement have surfaced, often stemming from the lack of emphasis on ethical considerations during AI creation (Cave & Dihal, 2020, p. 686). Such inclusion would include representative datasets, and a feedback option to analyse how users experience platform usage. The challenges can therefore further expand to incorrect information being shared, and they may continue to carry existing biases that make the system less ethical (Saka et al., 2023, p. 7). Acknowledging these challenges underscores the necessity for AI systems capable of recognizing bias and ensuring transparency. This is essential for improving platforms and motivating other companies to adopt comparable measures. One particular concern that

reappears in literature is socioeconomic bias, which refers to unfair opportunities and challenges that are affected by social or economic situations (Akter et al., 2021, p. 2). Existing literature acknowledges the presence of bias in current AI systems, with transparency being a frequently discussed but unresolved issue (Felzmann et al., 2020, p. 126). Intahchomphoo and Gundersen (2020) determine that AI causes unequal opportunities for their users; however, there is not enough research on the unfair treatment of different groups. Given the complexity of this matter, in-depth research is essential to comprehend transparency and determine ways to address it. Transparency is a way to approach the usage of AI; due to its subjectivity, it needs to be addressed on a small scale (Van Den Berg et al., 2022, p. 57).

This study aims to gain insights into how white and non-white users perceive transparency in their use of Google AI. The study seeks to uncover users' existing biases and investigate differences in the perceptions of transparency between users. AI's racial, demographic, and socioeconomic disparity affects users on many dimensions, but there is still limited data on the connection between race and AI (Intahchomphoo & Gundersen, 2020, p. 76).

Considering the extensive and diverse audience Google can impact globally, the central research question is: How do Google users, both white and non-white, perceive the transparency of Google's AI algorithms, specifically in terms of how inclusive their experiences are perceived to be? Transparency relates to Google's openness, and inclusivity requires transparency, as it allows the system to inspect biases (Floridi et al., 2021, p. 135). The study aims to explore how different users understand transparency and how it may impact their experience. White users are the ones who consider their race as Caucasian, as non-white users are everyone else therefore those who do not consider themselves as white. The reason for such a comparison is the racialization of AI models, and the divergence of experience of these two groups (Mickel, 2024, p. 2484). Additional attention is paid towards comparing white and non-white users which is defined by differentiated product experience. Trust builds the way users perceive AI, however, there are present gaps in how users are treated which will affect their attitude towards a platform such as Google (Ryan, 2020, p. 11). The research questions bring significance to both literature and society by evaluating the differences between users and highlighting the existing disparities. Current research lacks users' insight on companies actions and how they are being acknowledges as well as understood.

To further refine the study, three sub-questions are included to provide additional clarity and identify specific concerns. Such questions allow further development of concepts that create the research questions and provide a deeper understanding, of how the transparency and inclusivity are being studied.

The first question aims to support the researcher in understanding the transparency of users. Therefore, the question is, how do White and non-White Google users perceive the transparency of Google's AI algorithms in their decision-making process while using Google's services? Google is a tool utilised by many people from all over the world due to its popularity and integration into their lives (Dubin et al., 2023, p. 1197). The specific AI processes may not always be easy to understand for a

common person. However, the way that the company chooses to share information and its practices may allow it to grasp the process better (Busuioc et al.,2022, p. 83). The study focuses on exploring users' beliefs of their autonomy and their opinion of Google's transparent actions. As the company reaches billions of people, the transparency of the firm is a critical aspect that needs to be studied and evaluated (Heimstädt & Dobusch, 2020, p. 3).

To explore the topic of perception effectively, it's crucial to understand who the product is intended for and how inclusive it is. Hence, the research question is: How do white and non-white Google users perceive inclusivity in their interactions with Google's AI algorithms? To understand the inclusivity of AI, the first question to answer needs to be on who this product is for. In the example of Google, it would be everyone. The content that the firm provides is for every person, no matter the age, gender, or race; however, this may not mean that all different people are going to share the same experience (Saka et al., 2023, p. 11). Therefore, assessing the interactions that white and non-white users have, may bring insights into the differences that exist. The current literature emphasizes the importance of users' inclusivity, although it remains a challenging factor to measure, particularly because Google's AI prioritizes short-term goals that offer immediate user benefits while potentially disregarding the long-term impact of the company's decisions (Akter et al., 2021, p. 17).

Lastly, the final sub-question is how users experience fairness and possible bias of Google AI systems. Studying inclusivity connects to the fairness that users encounter when using Google, and it is crucial to study algorithmic fairness (Katell et al., 2020, p. 46). Once one detects the aspects that are harmful within an AI system, there is space and opportunity for growth as well as positive change. One aspect is assessing the reliability of the data being shared, and another is understanding the way users perceive it (Ryan, 2020, p. 4). The study focuses on trust that Google users have the transparency of the company, rather than focus on the trust that there is between Google and its users. The aim is to understand the feelings and opinions that people have on the context of the information that they are personally exposed to. These questions develop the perspective that users have on the content they are consuming and the beliefs they hold about it. The study would expand consumers' perception of Google while focusing on benefits as well as drawbacks.

1.4. Research outline

The study is made of five different chapters, where each part aims to describe a different component of the research questions. The detailed evaluation and consideration of the research scope dive into Google's users' perceived transparency of AI concerning the inclusivity of their experience. The introduction of the research is followed by the theoretical framework, which is divided into distinct parts, each aiming to justify the scientific relevance and explain the applicability of the topic. Explaining the meaning of the research components such as transparency and inclusivity, with the use of existing literature and knowledge available, provides a scope of understanding of the topic. Furthermore, the methodology justifies the use of qualitative research, more specifically the conduction

of semi-structured interviews. Going into details about the participants' recruitment, data collection, and data analysis that have been completed for the research. The results section explains the findings of the study, focusing on themes that reappeared and support the research question. This section provides data that has been found through the conducted interviews, at the same time comparing two groups with each other. In the end, the conclusion answers the research question and provides implications, and recommendations for future research including the research overview.

1.5. Societal relevance

The study aims to highlight disparities in how white and non-white users perceive Google's AI transparency and inclusivity. By examining these perceptions, the research highlights how societal inequalities can be embedded in technological experiences. Especially the disparity between white and non-white users is developed, by how individuals perceive transparency and inclusivity of the platform. Evaluation of such factors would improve the understanding of the way that technology is being created and how it currently affects society. Once one social group has privilege over another, the disparity between them affects everyone around as well as generations to come (Cave & Dihal, 2020, p. 688). The affect is that there is higher social inequality and possible cultural bias. Therefore, it is crucial to point out the ways in which technological developments have the power to influence societal perceptions and behaviours. By highlighting these disparities, the study emphasizes the need for more inclusive AI systems that serve diverse populations in the same way. Such changes could foster a more just society by ensuring that advancements in technology do not preserve existing biases but instead contribute to reducing inequality and promoting fairness (Akter et al., 2021, p. 17). Addressing these issues not only improves user experience but also builds trust and promotes ethical standards in AI development, which is essential for the societal acceptance and successful integration of AI technologies (Heimstädt & Dobusch, 2020, p. 6). Lastly, the world should give more focus to the ways technologies are being developed and the role they play in user's life. Such factors affect the way people perceive the reality therefore, companies need to be held accountable for ensuring a safe space for their customers.

2. Theoretical framework

Google currently employs a variety of AI practices, each used for different services or products. These technologies include machine learning, neural networks, natural language processing, and many more (Burr, 2023). On this topic, people have become accustomed to using platforms such as Google in their daily lives to such an extent that they often do not think twice about the outcome; they accept it as it is. Google analyses data provided by consumers to enhance the reliability of their current products (Choi & Drumwright, 2021, p. 2). People have a lot of autonomy concerning their use of AI-driven technology; however, in many cases, they are unaware that certain information may be biased or that it may limit their search opportunities. Therefore, by understanding the user's perception of the transparency of AI, one can begin to understand the necessity of a clear outlook on the systems. Due to the topic's recency, research on specific AI systems is limited, especially when studying the differences between users. Currently, discussions primarily revolve around data discrimination and its constraints, often neglecting the individual experiences of users on platforms (Intahchomphoo & Gundersen, 2020, p. 76). Therefore, the study aims to dive deeper into individual perceptions of Google's practices regarding its actions and how inclusive their algorithms are.

By establishing a transparent structure, people can potentially anticipate whether AI systems will be inclusive or exclusionary (Heimstädt & Dobusch, 2020 p. 5). A company which communicates its actions openly, takes accountability and provides access to information to all its stakeholders may be considered as having a transparent structure. Transparency in how AI systems are designed, developed, and implemented could help foresee their impact on different groups of people, particularly regarding whether they will promote equality or perpetuate biases. To delve into the topic, all people using Google in any shape or form can be considered its users, their knowledge of the platform will vary depending on the intensity of the platform usage. A further step would be research on the inclusivity of AI platforms is crucial for establishing how companies define and implement inclusivity in their systems. Ensuring that AI development incorporates representative data and inclusive practices is essential not only within algorithms but also in society (Katell et al., 2020, p. 45). AI systems can be programmed in ways that may favour certain groups, highlighting the need for conscious efforts to prevent bias. These algorithmic systems process numerous inputs to produce final outcomes. AI can mimic human behaviour only if programmed effectively; otherwise, it operates like a machine, following similar cognitive processes (Ryan, 2020, p. 12).

2.1. Transparency:

2.1.1. Components of transparency in AI

The transparency of AI, in simple terms, is the understanding of the system and how accessible it is to the stakeholders. As defined in past research, it varies from person to person. For this paper, transparency of AI refers to how explainable and understandable the system is, it is also important to consider who should have access to this information and how it should be defined (Felzmann et al.,

2020, p. 3334, Toy, 2023, p. 3). Therefore, when creating an AI system, it is almost impossible to create it in a way that each individual will be able to share the same understanding of it. This does not mean that the information should not be available to the users, as the more information the company is willing to bring forward, it will provide reassurance that the data can be trusted and then used (Ryan, 2020, p. 8).

Transparency as a concept is complex, however, scholars agree on several components that an AI system should include to be perceived as transparent. These items are accountability, privacy, understanding and accessibility. Starting with accountability means that once a user understands the system, then the platform can be held accountable for anything that happens within it (Felzmann et al., 2020, p. 3338). According to Heimstädt and Dobusch (2020, p. 3), transparency may create accountability, by providing information about the company, and the users have more data to evaluate its practices. As people know more about the companies' AI practices and the information they disclose, such transparency can positively affect their market positioning.

However, transparency does not necessarily guarantee accountability, as its effects can vary by company and depend on the evaluative perspective applied to it (Heimstädt & Dobusch, 2020 p. 5). Actions such as selective transparency may occur, where the company chooses which information to disclose and which to withhold (Busuioc et al.,2022, p. 94). Another instance would be superficial transparency, where actions are being taken for the sole purpose of claiming that they have done something (Balasubramaniam et al., 2023, p. 13). Misunderstandings surrounding these actions could influence how users perceive the transparency and inclusivity of Google's AI products.

Privacy is a critical factor in shaping transparency, as customers demand the protection of their data (Floridi et al., 2021, p. 139). Simultaneously, firms are obliged to disclose detailed information about their practices, which can serve both as an advantage and a potential downfall.
This is because once companies share all their information, they may lose their competitive advantage. Another case would be that their competitors may use that knowledge for their gain, this is exceptionally difficult as companies are required to share certain data, but it may not always benefit them in the end (Saka et al., 2023, p. 14). The complex components of transparency make it more difficult to determine how to handle it, and it overshadows the most essential aspect, which is the reception of the information. People who are exposed to the provided information need to understand, acknowledge, and process it, due to individual differences, each person may do so differently, therefore exposing the company to miscommunication or misunderstanding of the context (Felzmann et al., 2020, p. 3339).

The transparency model proposed by Felzmann et al. (2020, p. 3345) illustrates the interconnected aspects of transparency, describing them as forming a circular relationship. The model comprises three key components: the design of the AI system, information on data processing and analysis, and accountability. Each component has distinct characteristics aimed at ensuring the system meets general design requirements.

The first component involves creating a user-focused system that integrates input from all stakeholders. The second component emphasizes the disclosure of data processing methods and decision-making processes during development. The final component addresses the accountability of the AI system, which includes evaluating the platform's responsiveness and detailing the information reported by the company. All these forms a circular model that represents the connectedness of transparency that needs to be kept in mind whenever making any changes within the AI.

2.1.2. User experience

In the realm of user experience, the importance of transparency within a company varies depending on its actions, objectives, and, most crucially, its target audience. In today's landscape, companies are expected to be inclusive, acknowledging that stakeholders beyond their primary audience may seek insight into their operations. However, a significant challenge arises from the difference like human awareness contrasted with the expectation for transparency in complex algorithms (Toy, 2023, p. 2). To offer an alternative perspective, it needs to be clarified the difference between user autonomy and passivity. Focusing on the degree of influence users should have over company actions.

Floridi et al. (2021, p.138) consider transparency as essential to AI's goal of promoting autonomy, where perceivably unimportant actions contribute to outcomes supporting user autonomy. This requires a deeper comprehension of the overarching processes involved. Users express a desire for autonomy, indicating a willingness to give up on certain conveniences in favour of potential advantages facilitated by AI, although in different ways (Trawnih et al., 2022, p. 1473). On the other hand, passivity has appeared as a common trait, particularly concerning the distribution of information and data usage (Busuioc et al., 2022, p. 86). Despite a desire for comprehensive access, individuals may lack the desire or capacity to evaluate the information presented to them. Furthermore, identifying the target audience and determining the scope of information sharing poses a challenge due to the complexity of AI, which is often beyond the average individual's understanding. This has led to EU legislative initiatives aimed at increasing public involvement in AI development, although these efforts have yet to reach a definitive conclusion (Floridi et al., 2021, p. 42).

Beyond mere access to information lies the critical point to comprehend its contents. Cave and Dihal (2020, p. 689) suggest that users' perspectives on system transparency may be influenced by their racial backgrounds, with white users likely perceiving alignment with their worldview while non-white users may perceive bias. The current lack of transparency within AI systems disrupts efforts to identify and reduce biases, complicating efforts to address disparities (Ferrer et al., 2021, p. 74). The insufficient research on racial comparisons further intensifies these disparities (Intahchomphoo & Gundersen, 2020, p.78).

In the sphere of user engagement, AI's purpose is to boost or integrate human tasks, forcing consideration for the diverse needs of its intended users. A socially responsible AI must prioritize data inclusivity and ethical conditioning of information (Floridi et al., 2021, p. 133). Ensuring inclusivity

demands transparency to evaluate the system's fairness and thereby enhance user engagement. Felzmann et al. (2020, p. 3354) advocate for inclusive design processes involving diverse stakeholders to leverage existing data and knowledge, fostering better comprehension and usability across various cultural and social contexts. However, the predominant involvement of white individuals in AI development preserves biases, ending with hindering inclusivity across racial, age, gender, and socioeconomic lines (Cave & Dihal, 2020, p. 668; Akter et al., 2021, p. 2). While anonymizing data presents a potential solution, concerns regarding safety and unintended consequences arise (Bag et al., 2021, p. 2084). Biases inherent in AI systems disproportionately disadvantage women and non-white users, underscoring the need to address biases and enhance inclusivity (Dwivedi et al., 2023, p. 49).

Therefore, the point is that transparency is an individual factor that will depend on a person and their personal experience with the company, and not having a shared framework between white and non-white users. As the first sub-question highlights to the extent which users believe in Google's transparency, it can be concluded that users will have different perceptions of transparency. This results from the content that is being consumed and the ability to evaluate the transparency of an AI system. The current research is only able to highlight which race groups have been discriminated against the AI systems or includes diversity to users being studied but it does not define their perceptions (Shin, 2020, p. 562).

2.1.3. White vs Non-white users

The sole focus of this study is to compare two groups of individuals, one group being those who are white and another non-white group. The study by Shin (2020, p. 550) consisted of 68% white and 32% non-white AI users, yet there were no insights related to the differences between them. Other research discussed the importance of race, and the way that it affects the perceived transparency of AI, however, those points were usually mentioned in limitations and suggestions for further research. Moreover, the study by Akter et al. (2021, p. 15) discussed how race and skin colour have an impact on how a person is being processed by an algorithm and the bias embedded in them, yet the only conclusion is a creation of an ethical solution for AI rather than focusing on the possible differences. There is one study which dives deeply into the racial inequality of the technological systems, where it clearly states the existing bias towards non-white users by evaluating the perception of AI in general terms (Cave & Dihal, 2020, p. 689). The comparison mainly focused on how white users are a norm, which is not adequate to real-life scenarios and that these differences are repeated, some unintentionally.

As there are several relationships between race and AI, the study requires the perspective of people from different races. Race is connected to skin colour; however, individuals define which ethnic group they consider to be a part of. Race is more of a social construct, and skin colour is directly connected to the skin's pigmentation (Mickel, 2024, p. 2485). Self-racial identification varies between people the social context and the upbringing of the person, which can mean deferrer depending on the location.

In regard to the perception of transparency, from a general perspective demographics were mentioned as connecting to location bias, local content, or marketing (Akter et al., 2021, p .4; Dwivedi et al., 2023, p. 6). It has been mentioned that demographics correlate to transparency and depend on personal AI usage. Therefore, the lack of adequate research complicates the ability to reflect on what has been studied, as well as highlights the importance of the research.

2.1.4. Explainability & Interpretability of AI

To study transparency, users of the platform should be able to define and acknowledge how it works. That is when explainability and interpretability are required, as one connects to being able to describe what the system does and the second is to be able to evaluate it. Two components affect how transparent the AI is, as users should be able to explain and interpret it themselves. That's when the concept of explainability comes into play, as it is a way for a machine-learning model to be explained in a way that could be understood and recognized by a human being (Dwivedi et al., 2023, p. 41-42). Due to differences between humans, this definition needs to be evaluated in a general manner as it is almost impossible for all to share the same knowledge. People must first have faith in the shared content's integrity before they can trust AI. Given the volume and complexity of the data involved, it can be difficult to comprehend how AI fosters inclusivity and openness. Even if people do not fully understand how AI operates, they can still grow to trust it because they think the company that created it has good intentions (Ryan, 2020, p. 4). Recent studies often link transparency with trust, suggesting that increased transparency fosters greater trust, which in turn leads to better understanding (Tsamados et al., 2021, p. 104).

On the other hand, interpretability relates to explainability; however, it focuses more on the extent to which a cause and effect can be seen within a system, and the inner understanding of it (Reyes et al., 2020, p. 1). In the technological world, this information would relate to how and in what manner the data input is transformed and evaluated, however, these are not the limitations. AI systems such as chatbots could potentially create harmful content, pursue misinformation, or provide knowledge on unethical actions as they provide room to manipulate information (Dwivedi et al., 2023, p. 55). Such actions are not recent as AI can often be used for malicious acts, that could harm others or even individuals using it, therefore it strengthens the current need to evaluate these systems and study how can everyone make sure that AI is used as a help to humans and not to negatively affect them (Balasubramaniam et al., 2023, p. 11). Furthermore, the act of interpretability considers knowing the data's usage in the creation of the AI system as well as the final product available to the users. In such cases trust is based not so much on the AI but on the people who create it, the way they program the machines and their evaluation of the system's actions (Akter et al., 2021, p. 12). This is the moment that makes the discussion on technology more intriguing, as the public can decide to trust humans to decide and implement algorithms in a way to serve humans, however, AI uses machine learning that can provide surprising outcomes to the creators as the machine can evolve by itself (Ryan, 2020, p. 13). In

such a case, no one person can be held accountable. Therefore, the trust between a company and the users is also built on the accountability that the firm is willing to take when there is a breach, or if their actions do not meet the prior promises.

2.2. Inclusivity of AI

Transparency and inclusivity are two components that when they come together, they create a framework that enhances users' engagement and improves functionality. Integrating these two factors together it ensures that all users are well-informed and included in the process (Heimstädt & Dobusch, 2020, p. 4). The definition of digital inclusion is that it asserts that every person and social entity should have equal access to and ability to utilize information and communication technologies (ICTs) to actively engage in all aspects of a knowledge-based society and economy (Van Den Berg et al., 2022, p. 56). This means that AI should consider and include people in diversity of age, race, gender, and societal background. Due to the rising AI-powered services and products, there is an expectation from those companies to provide both inclusive and personalized content (Trawnih et al., 2022, p. 1475). These two concepts coexist as personalized content should be adjusted per individual, not defined by a pre-made assumption. Therefore, following a customer's likes and dislikes in the results of training the data inclusively (Trawnih et al., 2022, p. 1475). By using diverse data for AI development, it gives the possibility to create a unique user experience as well as reduce bias.

However, the study by Cave and Dihal (2020, p. 668) states that there is a lack of inclusion of people of colour in the development and use of the technology. There is an issue as it seems that the personalized content available is mostly based on data stemming from white users, disregarding other users of colour. Therefore, providing a different experience to the marginalized groups, consequently making the experience unfair to other users. Which essentially creates bias, and that tends to be replicated through machine learning in the AI (Dwivedi et al, 2023, p. 14).

Biases are often difficult to identify, as they are deeply embedded in societies and personal beliefs. Bias in AI tends to be there from the beginning, as it becomes a part of the algorithm, due to the personal biases that the engineers may have (Felzmann et al., 2020, p. 3347). Prejudice is present everywhere, affecting individuals often without their knowledge and influencing those around them in subtle ways. It is one thing to be aware that there are biases in the world, another one is to be able to spot them. The study does not aim to pinpoint the existing biases; however, it aims to guide through the topic and showcase how personal bias affects different racial groups.

Creating a flawless AI system is close to impossible however companies need to try and ensure that different groups are included in the functionality of the AI system (Dwivedi et al., 2023, p. 6). Using representative and varied data companies would be able to foster a more inclusive environment (Balasubramaniam et al., 2023, p. 6). Thereby it would make a more accurate AI that could help people and limit the reappearing prejudice against certain groups. Google has failed before and made a mistake by not training and checking its AI system well enough. Such a situation resulted in pictures of African

American users being recognized as gorillas (Jung et al., 2018, p. 624). Emerging in a huge scandal, which even though was quickly fixed, left the users wondering whether such cases appear more often. Companies make mistakes, and these mistakes sometimes appear from the lack of a proper trial run or pure ignorance. Yet situations like this may lead to a bigger distrust, fear, and discomfort in using AI-powered features (Floridi et al., 2021, p. 21).

The second sub-question aims to highlight the difference in inclusivity experience by different Google AI users, which may appear due to prejudice that one of the groups encounters. Current studies have shown that there is a lack of inclusion, and personalization bias which limit the accessibility of the AI by non-white users (Cave & Dihal, 2020, p. 699). Since biases are deeply embedded in societies, their existence affects the way users, both white and non-white, experience inclusivity sometimes without explicitly knowing so (Felzmann et al., 2020, p. 3347). Lastly, there is a lack of data inclusivity in algorithm training which then causes further disparities in societies and hinders inclusivity (Jung et al., 2018, p. 627).

2.3. Bias of AI

In the world of technology, algorithmic bias occurs when the system produces or continues to share wrongful or unfair information (Akter et al., 2021, p. 2). Such an issue appears from using unrepresentative or limited data that does not include all users who are willing to utilize such a platform. Transparency may allow users to control what kind of algorithms and procedures the tech companies are using, or at least give them the choice to do so. To be able to compare the perception of transparency and inclusivity of white and non-white users, there has to be an understanding of the difference in their perception. AI is used to improve the performance of human actions and help people with completing tasks (Dwivedi et al., 2023, p. 7).

Inclusivity is something that has to be considered and paid more attention to, Katell et al. (2020, p.46) refer to transparency as connected to fairness and accountability. Fairness coexists with inclusivity and is advocated by fostering equality, diversity, and inclusiveness, to avoid bias and discrimination (Balasubramaniam et al.,2023, p. 6).

Bias is shared through much more than just conversation, it is now embedded in society, therefore naturally AI algorithms hold certain biases too. They are present in texts, cultural heritage as well as in images, in both the content available online followed by what image appears in a web search (Reyes et al., 2020, p. 8). The appearing biases are cultivated and often cannot be noticed, due to their embedment in society. The critical race theory is defined as an unnatural way to distinguish humans based on their physical appearance, but it is rather a socially constructed way to oppress minorities (The Editors of Encyclopaedia Britannica, 2024). The theory concludes that inequality is part of the system, especially when looking at AI the theory draws attention to the extent it has become a part of daily life. Cave & Dihal (2020, p. 698) evaluates the critical race theory in a way that preserves the prejudice

towards non-white AI users. The AI algorithms keep the theory alive as well as allow their further development, as one aspect is to detect them, and another is to remove them.

The concern is much larger than a simplified example of individuals receiving limited content. The problem is that more companies such as banks, governments and jobs rely on the help of AI with data analysis and evaluation, making some groups more vulnerable to having fewer opportunities (Akter et al., 2021, p. 13). These concerns extend beyond mere informational limitations and incorporate broader issues, including the use of symbols, metaphors, and imagery that may be biased yet are still distributed (Cave & Dihal, 2020, p. 687). Darwin et al. (2023, p. 2) when studying students' perception of AI, acknowledge that the issues discussed are only towards those who have access to the newest technology, and are privileged enough to use the available AI resources. Still, many people do not have the same access to technology in the same way as it's available and common in Western Europe or the US. Furthermore, there are limitations and differences in the educational levels of users which again limits the global application of such technology. Even within Western countries, cultural differences affect how people perceive and interact with different AI systems. These challenges often arise from a general lack of awareness about their significance (Saka et al., 2023, p. 13). The only way people will reach fairness and inclusivity is if people trust the companies or governments to ensure such procedures and actions (Ryan, 2020, p. 11).

As biases may expand through user experiences, identifying and addressing them becomes extremely important to fostering inclusive technological practices (Floridi et al., 2021, p. 129). The inclusive design extends beyond racial considerations to encompass age, gender, and social status, recognizing that biases impede system usability (Akter et al., 2021, p. 2). Governmental digital interactions must accommodate diverse users to mitigate exclusionary practices (Van Den Berg et al., 2022, p. 59). The third sub-question is how users experience fairness and possible bias of Google AI systems, which in this section concentrates on the bias. Users often are not aware that the data they are consuming is biased towards some, due to the inadequately represented data (Akter et al., 2021, p.13). Bias appears in different forms and frequency, but has been spotted through recruiting, banking, policing and many more (Balasubramaniam et al., 2023, p. 12). Lastly, Reyes et al. (2020, p. 10) state how biases often go unnoticed due to their embodiment in society, but humans are the ones who need to recognize and change them.

2.4. Fairness of AI

The concept of fairness in research is an aspect that scientists want to achieve, and it acts as a quality requirement in AI, yet it has not been thoroughly discussed in what ways this could be executed (Balasubramaniam et al., 2023, p. 13). For this study, fairness is a factor that represents inclusivity. An AI algorithm that could be considered fair in its processing is, however, close to impossible, as each user will consider different factors to determine its validity. However, fairness is a term which appears all over scientific research when discussing transparency, especially as it goes in hand with adequate

application of AI models (Akter et al., 2021, p. 14). This research discusses fairness from a socio-technological perspective, focusing on evaluating the fairness of an existing Google AI algorithm in various social contexts.

Fairness appears from trust that users have towards to process of AI creation and maintenance, such as trust that it is created fairly to all users (Ryan, 2020, p. 16). There is a close relation between AI and race, certain factors reappear through literature one being there are unequal opportunities for people from different races. The relation is an example of how unfair AI may be to certain groups of people, that is concerning work opportunities, loans or even during emergencies (Intahchomphoo & Gundersen, 2020, p. 76).

In their results, Akter et al. (2021, p. 9) found that fairness appears as one of the findings in several different study types and derived, that reduction of bias goes hand in hand with improving the fairness of a system. The connection between fairness and bias needs to be evaluated from a larger perspective, as many technological systems are intertwined with each other, therefore fixing one may not always solve the reoccurring problem. Therefore, fairness in this research is considered from a broader perspective, and that allows looking at transparency which can be determined by the AI's perceived fairness (Felzmann et al., 2020, p. 3354).

Fairness goes beyond AI availability in different regions as there are limitations and differences in the educational levels that create unequal access. Lack of fairness is present within communities, as there are also cultural barriers that affect the ways individuals portray and acknowledge AI systems (Saka et al., 2023, p. 13). Those challenges usually arise from a lack of understanding of the importance of fair opportunities. The only way people will reach fairness and inclusivity is if people trust the companies to ensure such procedures and actions take place (Ryan, 2020, p. 11). Having accessibility to a contact person or email that users could utilize to contact the company, would increase informational fairness and with that create a more human-focused approach (Felzmann et al., 2020, p. 3352).

Lastly, from many different aspects affecting fairness the differences in cultural and social factors may impact the way that an individual evaluates an AI system. For a machine to function fairly towards all, it needs to be discussed whether this concerns the individual or the global perspective. Representative data would help achieve fairness by focusing on diversity and equality, this solution would work from a global point of view (Balasubramaniam et al., 2023, p. 6). As individual fairness would need to adjust the AI outcome to each person, it would make it inconsistent between users. Fairness acts more as a feeling that people believe they are being taken into consideration, and see that companies try to incorporate various points of view. The third sub-question of the study discussed both the experience of fairness and bias, in this section, it can be stated that users both white and non-white have different experiences. Users' experience of fairness is deeply tied to their perception of inclusivity within the AI system (Akter et al., 2021, p. 9). Therefore, fairness like all other concepts is restricted to what importance users give it and their cultural background. Depending on the access to technology that

users have, defines the way they consider its fairness, therefore the study brings in new insights into possible similarities between the groups of people that are either non-white or white.

In conclusion, all the presented concepts are interlinked which means that one connects to another in several dimensions. There is a lack of research which incorporates skin colour as a factor that could group people's ideas and perception of transparency. Each concept brings in depth, beginning from a focus which is transparency and its complexity. To discuss how inclusivity, more specifically lack of it is portrayed in the studies which then explain the differences of experience between users. Lastly, fairness and bias are experienced in a variety of ways but there has not been a comparison to see if these experiences overlap between users. The theoretical framework creates a base of knowledge which throughout further parts of the research is questioned and further evaluated, as this section shows the big research gap that is present on this topic.

3. Methods

The objective of this research is to determine the way white and non-white Google users perceive transparency in terms of the inclusivity of their experience. A qualitative research method has been selected as a suitable way to determine the underlying meaning of transparency and its association with inclusivity, particularly focusing on racial prejudice. Therefore, this section evaluates the research design conducted for the study, followed by a sampling of participants. Furthermore, the operationalisation of main concepts develops ways in which transparency and inclusivity of the Google platform can be evaluated in the research. The next part discusses data gathering, concluding with a data analysis that goes into detail on the actual process of data transformation. The last subheading discusses the ethics of the study, and addresses concerns that were taken into consideration.

3.1. Research design

A qualitative study was conducted by carrying out semi-structured interviews which explored the perception of transparency of Google for white and non-white users. Such a method allowed the researcher to identify participants' reactions to questions and delve into details, hence having a deeper understanding of what one may think (Darwin et al., 2023, p. 6). The topic is relatively new; therefore, the issue of transparency and its understanding has been evaluated by many scholars who share different outlooks on the topic (Cave & Dihal, 2020, p. 688; Floridi et al., 2021, p. 128). Most research used for this study has created a literature review based on the available research or chosen a quantitative form of analysis (Balasubramaniama et al, 2023, p. 3; Toy, 2023, p. 4). As this study aims to compare two groups conducting semi-structured interviews, it aspires to have the most potential to gather an enhanced and detailed perception of the topic by Google users. The aim has also been a challenge for this study as studies have either focused on white users or only people of colour (Intahchomphoo & Gundersen, 2020, p. 81). Such a modern approach allows exploring possible differences of perception between users and may address existing biases or prejudices that affect users' experience.

Questions were asked in an open-ended manner to let a participant express their perceptions, views, and additional points they find important about their usage of Google AI. The way the questions were asked aimed to allow respondents to freely share their opinions, most importantly, the way they perceive transparency and how Google accommodates their inclusivity. As this research aims to compare two groups, questions were focused on personal experience and let participants express their understanding and involvement with Google's AI system. To ensure that the questions are well understood and dive into participants' perceptions, a pilot study was done. It aimed to ensure the clarity of the questions and provide feedback on any changes necessary. The final list of questions was then created and finalized. The interview guide was created with the use of three main themes and can be found in Appendix A.1. Each theme had several questions, starting with the introduction to research, that explained to the user what kind of topics were going to be discussed. Followed by demographic questions which allowed the participant to express their general information regarding gender, race, and

their current place of residence. To encourage the participants to talk about their perceived culture, a group of questions about their cultural background was asked. The questions allowed them to share the way they see and how they describe their cultural upbringings. When they could not provide an answer, the suggested way to think about their culture was to describe it to someone who may not know anything about the place they are from. Such open questions motivated the participant to think in simple terms about the way they grew up and how their culture has shaped them into who they currently are. There were a few questions dedicated to Google usage itself, where each person described what products and platforms they use, how often, and why they chose these in comparison to other available options. Furthermore, the participants were asked about their understanding of AI and asked to define it in their own words. The more general questions ensured a smooth transition into the more complex ones, which required more focus and attention from the participant.

Before the next part, participants were given a definition and characteristics of what transparency is in this research. This ensured a common understanding of the topic and that all participants considered transparency to have the same factors that affect it. With the definition, users were encouraged to share their examples and the importance that transparency plays for them in using platforms that utilize AI. They were asked for benefits, as well as risks that may appear regarding the transparency of Google AI. Moreover, participants were asked certain difficult questions more specific to AI to compute their awareness of the topic in question (Choi & Drumwright, 2021, p.4). By moving further to the part on inclusivity, participants were familiarized with three definitions: inclusivity, bias, and fairness. Now the questions on perceiving inclusivity, and personal experience of bias or discrimination were asked regarding the Google platforms that use AI. As the study had both white and non-white users, the interview was concentrated on personal experience and examples. Questions that determined bias towards non-white users were asked also to white users, however, in a form that suggested providing an example of their awareness of whether they have seen non-representative data. Lastly, each person could share additional actions that Google could do to improve their current functions and how it could be better in the aspect of inclusivity. Finally, participants were able to share any additional thoughts and opinions on the topic by providing feedback and expressing their conclusions. The semi-structured interviews were able to provide some room for edits through the interview process; however, to ensure constancy and reliability, there were only minor improvements between interviews. To ensure that the questions are well understood and dive into participants' perceptions, a pilot study was done. It aimed to ensure the clarity of the questions and provide feedback on any changes necessary (Bag et al., 2021, p. 2083).

3.2. Sampling and data gathering

The first step to studying the perception of Google users was to find people eligible and willing to participate in the study. A recruitment message was created on Google Forms (see Appendix A.2) and published on the researcher's social media pages and Erasmus University study groups. The

questions that were asked included whether participants are consistent users of any of Google's platforms, which platforms, and how often they use them. Followed by demographic questions on individuals' age, perceived race, and gender. The questionnaire ended with stating whether the person would like to participate in the research; if chosen yes, there is a place to fill in one's email. After that, a selection of six males and six females, where half were white, and the other half were non-white users. White users were defined by perceiving themselves as white or Caucasian. Anyone else, therefore people who described themselves as any other race were considered as non-white users. They were chosen based on the provided availability and diversity of those who have responded.

As a result, in total, 12 participants were individually interviewed. The three non-white males who participated in the research were from India, Thailand, and Aruba. There were 3 white male participants from Russia, Poland, and Denmark/Netherlands. In the case of females, there are 3 non-white female Google users, two from India and one from Thailand. White females were from Poland and Romania. All participants currently live in the Netherlands and are either working or studying. The age varies between 21 to 36; with the average mean of 23.83 years old. Finally, each person expressed that they use technology every day and that Google was the only example of a search engine and email account being used by all the participants.

There is a possible bias that may have appeared during the participant selection. The researcher aimed to create a diverse group of individuals who could elaborately describe their personal experiences and include the opinions of a distinct user group. One limitation that needs to be highlighted is that the researcher is white. Therefore, they may not always be aware of the privileges and biases that they hold. Hence, the choice of each participant must be well justified on why they were chosen, and how the researcher can ensure a safe environment. Especially when bias is transferred socially as well as through other agents such as machines or the internet, it makes the creation of a representative group even more difficult (Cave & Dihal, 2020, p. 689). There were certain hardships regarding the choice of participants, as there were few people who signed up voluntarily. In total, there were 20 sign-ups; however, not everyone was willing or able to participate in the interview. Therefore, the researcher needed to take extra steps to find Google users from a variety of backgrounds such as work, university, and old university connections. The final group of participants showcased interest in the study, and that was their motivation to be a part of the research and share their experiences.

The interviews took between 38-55 minutes long, with an average of 45 minutes, and most were completed in person, in a casual setting such as a study room or a café. Four meetings needed to be moved to an online setting due to the participant's reasons, therefore those meetings were done through Microsoft Team with a camera setting on. All participants have agreed to participate by giving their vocal consent at the beginning of the interviews. During the interviews, participants were able to answer general questions one more time and were informed that at any point they could decide to withdraw from the research. Such information provided them with more freedom and peace of mind. After the interviews were finished, all participants were thanked and ensured that their data would only be used

by the researcher. All interviews were recorded by both a laptop and a phone, which were later transcribed with the use of an AI tool, Trint, and edited by the researcher to ensure all information as well as order was appropriate with the actual interviews.

3.3. Operationalisation

The research centres on the notion of transparency and the perception that non-white and white Google users have in relation to inclusivity. A Google user, in general terms, is considered as someone who simply uses a Google system that operates in support of Artificial Intelligence, as most of them do there is no need to distinguish which one specifically. For this study, the main Google products are considered such as Google Search, Google Photos, Google Maps and Gmail. Google Search relates to the search engine where users can look up things and ask questions, they would like to have an answer to (Dubin et al., 2023, p. 1200). The second one is Google Photos which uses machine learning to analyse images. Lastly, there is Google Maps using data processing and Gmail, which uses AI for data sorting (Burr, 2023).

Three main terms appear in the research question that need special attention. The first one is transparency which can be a difficult task, as there is no common definition that could perfectly define the concept. Therefore, for this research, the definition is that the transparency of AI is interpreted by how explainable and understandable the system is (Felzmann et al., 2020, p. 3335). Transparency is crucial for a software system, as it strengthens trust and supports security in AI (Balasubramaniam et al., 2023, p. 7). An indicator of transparency is the explainability of the AI system, accessibility to the information, and openness in decision-making. In research, transparency was studied with the use of interviews where the questions revolved around one's perception of corporate transparency and the ability of a person to explain it (Balasubramaniam et al., 2023, p. 5). Explainability is studied by the ability of a participant to describe how an AI system works, in simple terms. Accessibility is measured by the perception of inclusivity to all different users. Lastly, the openness of an algorithm is determined by how detectable the practices of the decision-making are. Each lead to creating either a not or transparent content available to the user.

Another term to evaluate is inclusivity, which defines the diversity of information and content provided by Google. This considers the representation of individuals and the equity of interaction that users have with specific content online (Van Den Berg et al., 2022, p. 3). Users may have recognized biases that were directed towards them; however, they may not know that this might be a reappearing issue that many other users face. To study inclusivity, aspects such as accessibility, variety of data, and cultural competence affect how data is portrayed online. Intahchomphoo and Gundersen (2020, p. 81) acknowledge the challenge of managing data published on the internet, emphasizing the difficulty in controlling biased data, including the idea that it may be there from the start. Therefore, to compare users' ideas on inclusivity questions regarding the representation of different stakeholders' perspectives

(Felzmann et al., 2020, p. 3354). To measure inclusivity several aspects, need to be included such as understanding of the concept, attention to bias, and feeling of being represented (Cave & Dihal, 2020, p. 695). The comparison provides insights into the differences in understanding and experiencing Google products with a focus on their AI. However, for the purpose of the study, there is a distinction only between white and non-white Google users. There is a trend of technology being created and enhanced for white users; therefore, this study aims to study users' perspectives on that.

Lastly, when discussing transparency and inclusivity, there needs to be an established level of trust which affects the perspective towards the brand. Fairness is endorsed by the equality and inclusiveness of a service provided (Balasubramaniam et al., 2023, p. 6).

3.4. Data analysis

To investigate the information collected through interviews, thematic data analysis will be used for identifying themes and identifying re-appearing patterns in the interviews. Groups created through the analysis will be formed by using codes that will be detected through a coding process. Thematic analysis allows the researcher to dive deeper into understanding the content and underlying cues of the user's perception of the topic (Intahchomphoo & Gundersen, 2020, p. 75; Janis, 2022, p. 244).

This research uses different comparison criteria which are distinguished between white and non-white participants. The main concepts are transparency and inclusivity, both involving trust and based on users' perceptions they were compared to answer the research question. To analyse the content of the interviews, a tool called Atlas.ti was used. The tool aims to support the researcher in collecting, identifying, and marking codes that appear through the interviews. From the codes, the interviewer finds common topics, and by analysing their meaning, main themes will be derived. Before the procedure, themes such as transparency and inclusion were developed. However, for the analysis process, they were used as guidelines, yet not excluding other possible findings. Aspects such as repetition of information, new ideas, or re-appearing structures were noted and analysed concerning present research (Janis, 2022, p. 247). Due to the limited amount of literature including racial comparison, the researcher was open to new possible insights and findings.

The results of the coding process were that there were 583 codes, from which 18 axial codes were chosen. The codes were all things that relate to the research questions or just seemed to reappear over again throughout the interviews. The examples of the axial codes that were created linked to culture, diversity, preference, transparency, technology, inclusion, benefits, risks, information search, and privacy. As there were many different codes, it needed to be reduced to the ones that were connected best to the interview questions. Therefore, four main themes have appeared and were worked upon for the further evaluation of the study. The first theme is using Google, which shortly describes what actions people use Google for and their dedication to the platform, already connecting to the AI aspect of the platform. The other three themes are perceiving transparency, inclusivity of experience,

and equality & fairness. These three themes are however separated between the results of white and non-white users to clearly distinguish the findings which make it easier for a comparison.

3.5. Ethical considerations for the study

Due to the complexity and sensitivity of the topic, ethical guidelines have played a significant role in the research. The topic of race, especially by a white researcher, brings certain questions to the way that the interviews need to be carried out. Moreover, most participants were from different countries, which naturally created a communication gap between the interviewer and the interviewee. Such a gap appears due to different understandings of concepts, experience, and general perceptions. Therefore, it was extremely important that the questions were not leading and provided a formal definition of the concepts that were being discussed. By having a shared understanding of the topic and by giving the participants the space to share their personal experiences with the interviewer, it acts as one of the stops to ensure ethical consideration for the research (Heimstädt & Dobusch, 2020 p. 5).

As the privacy of their usage was one of the themes, to ensure their data privacy in the research, participants received pseudonyms to protect their privacy, which are all described in Appendix A.3. Moreover, all of them have signed a consent form, which can be found in Appendix A.4. Transparency is one of the factors that are used as an ethical AI guideline; they act both to check the quality and the functionality of the platform to its users (Balasubramaniam et al., 2023, p. 2). As the research question revolves around the Google platform, there has to be a special place to double-check that the information which is provided by Google is indeed current and concise.

Another factor would be inclusivity. Due to the time limitations, the study focused on a small group of representatives from different races. On one hand, there are few participants from the same country, and that could explain why certain views were shared. However, location is one aspect of inclusivity; there are other factors such as age, gender, or religion which could connect to the results (Saka et al., 2023, p. 11). Due to the already difficult topic, other societal issues were not included in the evaluation of Google's AI inclusiveness.

4. Results

To successfully answer the research question, the study uses four separate themes, which together provide results from the data analysis of the interviews. The first part of the research was a general description of participants' use of Google and their varied cultural backgrounds. This was followed by how participants perceive and think about the concept of transparency and its importance in the technological world. As the results section progresses, it discusses the inclusivity of experiences of both white and non-white users, focusing on their key differences. The final component highlights the equality and fairness noted by the participants themselves and compares the users with each other. Since the study has a comparative nature, each topic is discussed from two perspectives; other factors may be mentioned but will act as an additional aspect rather than a significant factor.

This section focuses on how participants use Google, their perception of, and attitude towards transparency, as well as the inclusivity of their experience. The discussion on inclusivity is followed by considerations of fairness and bias. Each section explores the perspectives of both white and non-white users and their opinions on the topics. Following the demographic questions, participants were asked to describe their cultural backgrounds, which led to many sub-questions. Such as "in what sense", "what exactly is cultural background" and "in terms of what". As they could not fully explain their backgrounds, the focus shifted more towards their experiences of living in their home countries. This part aimed to reflect on past personal surroundings, which correlates with how inclusive their environment was. Regardless of their origins, family played an important role in how they described their upbringing, from national traditions to celebrations. Other pointers related to how their countries are being perceived by foreigners or explained to them to provide a clearer way to describe their culture.

All the themes merge to answer the research question, through the evaluation of both white and non-white users' perceptions of transparency. Additionally, the special importance lies in how the inclusivity of Google's AI is reciprocated and evaluated with themes that appeared in the responses of users. Meaning that each aspect aims to showcase how different group perceives the concepts studied.

4.1. Using Technology in the Modern World

4.1.1. Using Google

Before delving into how people perceive AI, the research first explores how people use technology and their awareness of the functions provided by Google. Every participant responded that they use technology daily, if not all the time, from checking simple things such as the weather forecast to using Google products for work-related activities. Using technology was a straightforward question, yet some participants could not name all the features or products they use, as there are so many. Every participant stated that they frequently use Google products, such as the Google search engine, Gmail, Google Drive, or Google Maps. However, when asked why they chose these products in comparison to other available options, many users said that Google is "universally" known and used by many people. Some mentioned that their parents had a Gmail account, which encouraged them to choose it as their

main mailbox. Another said that they have been using Google products for most of their life, therefore the choice is more of a habit rather than a preference.

The features that make Google stand out compared to its competitors include the simplicity of the product, the clear design, and the overall customer experience, which has been consistent over the years. Due to the large amount of data available to Google, the developers have managed to allow each user to have a personalised experience, perceivable regardless of their gender, age, or race. Google has been using AI in almost all their products to enhance the customer journey and provide better solutions to the problems their customers face (Akter et al., 2021, p. 17). Often, customers do not even know what else they could possibly want, especially as they tend to be more ignorant of the technology that has become a part of their lives. As many participants were in their twenties, it means that Google already existed when they were born. There is a huge difference in technology between 1998 and 2024, however, these developments were gradually introduced (Choi & Drumwright, 2021, p. 3). Due to such popularity, Google has become its own verb; people no longer tell others to check the information in a book, now they refer to it as "google it". It is crucial to understand the participants' attitudes and knowledge of the platform, as it reflects how much they may know about the actions that the company takes.

The last question asked to the users was whether they think the content provided by Google is reliable. The question is broad and refers to the individual perception of the company and the available products. Each person initially said yes, yet many took a moment to then reconsider the question. It appears that many had never questioned the content provided; they just accepted it as is. The interesting finding was that, as the question was asked, participants started questioning their own behaviour and, in a way, their ignorance of the information. By focusing solely on whether the content is reliable, the aim was to help participants dive deeper into their daily practices. This part focused solely on the perception; all people had similar experiences, therefore there was no need to compare white and non-white users with each other. An answer that reappeared was an additional question, depending on the information or action needed; they either put their trust in the system or not. The question asked about Google in general, therefore not focusing on the AI practices or the web search results.

4.1.2. ChatGPT as an AI Representative

One of the fascinating results was that each interviewee talked about ChatGPT as a representative of all AI systems that they know and use. The platform, which appeared in November 2021, has become a new competitor to Google, especially when discussing searching for information (Dwivedi et al., 2023, p. 3). ChatGPT has offered a new range of possibilities, from providing short general answers to creating content and providing feedback to the user. With these features, it takes a step forward from Google as it gives a simple answer rather than a direct link to the page which could provide the required answer. As James (white, male) looks back at his usage of the chatbots, he explains it is because it is "short term, fast, lazy approach for me to just find certain information". Previous

research that compares these two platforms with each other in the ability to provide the best possible information on medical issues (Dubin et al., 2023, p. 1199). Such study resulted in both platforms having dissimilar results which proved that there is a difference in what information the platforms are showcasing. Participants, when asked about an AI system they know, could mostly only give ChatGPT as an example, however, only one person was able to explain how such a chatbot works. It shows again that no matter if it's a Google product or an online chatbot, participants do not know how it works or where it comes from. Understanding how a technology works is one aspect; another is knowing where the data used for such a product is coming from.

The chatbot is used for tasks such as work, university assignments, or even personal research, which aligns with the activities that users tend to utilize Google for. Ben (male, non-white), when asked where the data comes from, answered without certainty, saying "the internet, right?". He was not the only one unsure about where the data came from or what exactly was happening to the data. As ChatGPT became popular, people began to test its limits and began to trust it. Many users verify the information provided by the chatbot, and they do so using Google. An interesting phenomenon appears; as discussed earlier, Google users also do not know where the appearing information comes from, yet they consider it to be a greater truth.

To further understand the lack of engagement in the process of finding information on ways in which the platforms utilize AI, participants were asked if they have ever read the terms and conditions of the platforms they use. Christina (female, white) then answered that she does not read them; however, since they are there, it gives her greater peace of mind knowing that others could find that information. Companies are required to share their practices in data processing, however, it's the customer's obligation to review it or give feedback when something is inappropriate (Busuioc et al.,2022, p. 101). Now the shift of trust has moved from the internet space to other active users. Interviewees expressed their interest in getting more information on the topic without realising that all of that is indeed being communicated by Google, yet again they have missed that information.

4.2. Transparency as Not Achievable

As each individual perceives transparency in their own way, several factors have become a requirement in the scholarly world for an AI system to be considered transparent (Balasubramanian et al., 2023, p. 3). These characteristics include privacy of the data, understanding of the information being shared, and accessibility to that information, and they were provided to participants along with the definition used for this study. Interviewees, when asked about what AI they would consider transparent, many could not answer that question as they either needed more information about the question or simply said, as Ben (male, non-white), "I don't look for transparency". Not searching for information about the transparency of AI is one thing; however, neglecting it proves that maybe companies do not share their information in a way that can be easily accessible by the public (Felzamn et al., 2020, p. 3339). Other interviewees have pointed out that transparency seems to be a utopian dream that may not

be possible to achieve. As Liam (male, non-white) said in his interview, "I don't see that a fully transparent AI exists out there which will give you the full information". A new dimension appeared through not having access to full information; in this case, having a deep knowledge of the practices related to AI will affect the way users perceive transparency. Following the pattern of knowing a company's actions, Jana (female, non-white) wants to know how her data is being targeted, but she also accepts that there are many benefits to her using the AI without knowing all its functions. There is a duality in how users answer and perceive transparency; one being accepting of how things are, and another questioning the way that companies create the systems they use every day.

In comparison to white users, there is a similarity in participants not being able to point out a transparent AI, yet the reasoning connects more to the human actions that are behind the system. Amelia (female, white) mentioned the human factor in comparison to AI, tends to appear as if people cannot be considered transparent, how can one talk about an AI system that is created by humans to be. Transparency often acts as a guide for companies to show their interest in user's well-being, yet users themselves are not often transparent (Ryan, 2020, p. 16). Jacob (male, white), on the other hand, discusses how AI systems have already achieved transparency to its fullest potential. He believes that the data used by the different systems, with this, Google is being protected and taken care of by the companies who manage that. Such a positive attitude was surprising as most participants, especially non-white ones, did not express a similar point of view in the slightest. Just a simple thing, such as the importance of transparency, is understood differently by each user, from the positive opinions of Christina (female, white), such as "Google is pretty transparent". To more ignorant ones like " I don't know any" by Nate (male, white). Users again vary in their knowledge of the system and Joanna (female, white) agrees that Google is an example of a transparent company. When asked why, the answer mentions that those who use it have autonomy in the information they are searching as well as how data is being processed by the AI system. Autonomy exists on both sides, the user and the AI, however, companies are the ones responsible for the functioning of the algorithm (Ryan, 2020, p. 16). There is a more positive trend in perceiving transparency by white users as most stated that they consider Google's AI to be transparent. One person questioned transparency in a more philosophical way which does not remove the possibility of it not being transparent.

Non-white participants tended to express scepticism or ambiguity regarding Google's transparency, connecting it to the bigger picture of data privacy and the way it is being handled. White users expressed a more positive attitude and believed in the adequacy of the way that AI currently communicates with its audience. Meaning that there is a difference in perceiving transparency, depending on the group who answered with two perspectives. One side is distant towards what is achieved, and another strongly positive about how transparent Google is.

4.2.1. Benefits of Google's Transparency

To grasp the way participants, perceive transparency, other than justifying their reasoning for using the platform, they were encouraged to come up with benefits that Google may have from being more transparent.

The way users see the potential advantages of AI depends on their personal experience; as people use Google for different tasks, it will have a varied impact on their lives. By focusing on benefits users had to think of ways in which more transparency of Google would benefit the user. Focusing on the positives, aimed to encourage participants to evaluate the importance and necessity of transparency. James (male, non-white) considers personalised content through AI a benefit of transparency, yet it does not seem to relate to how open the company is about its practices; it is more about what they do. The way he explained it, he connects transparency with knowing how data is being handled to benefit the user. These benefits are better personalisation of the product and therefore accuracy in searches (Trawnih et al., 2022, p. 1475). By having AI create a personal shopping list or discounts, he considers that for the company to be transparent. Better transparency then leads to information being considered more credible and therefore users such as Anna (female, non-white) would be able to trust the content more. She believes that companies sharing their practices, makes people feel "safer", as they are being both considered and informed in the process.

When looking at other participants, more familiarity with actions related to AI would strengthen the trust that users have towards Google (Barabara, female, non-white). When trust is strong, there is a tendency for users to repurchase or reuse the service provided, and that is due to their satisfaction with a product (Bag et al., 2021, p. 2081). Trust is built upon creating a safe environment for users to purchase and use products and is maintained by ensuring transparency (Trawnih et al., 2022, p. 1473). Christina (female, white) believes that more transparency would improve customer experience as everyone would have better knowledge of the companies' practices. Amelia (female, white) states that improved transparency would make it "easier to look for data that we really need without exposing our privacy". The connection of privacy with transparency relates to the characteristics of a transparent AI which can be seen both through literature as presented quotes (Felzmann et al., 2020, p. 3340). Privacy was mentioned multiple times by James (male, white) as the most important factor that is connected to transparency, as "something which I of course utmost prioritizes a lot" due to the possibility of them being wrongfully used. Therefore, all aspects ensure possible benefits for both the companies and the users to have access to information about the AI. By doing so, participants seem keener on using the products available.

4.2.2. Risks in Lack of Transparency

To be able to discuss the perspective of transparency, it must be understood what it means when there is none. Jana (female, non-white) mentions that lack of information about companies' AI practices causes unease and the possible absence of safety for the consumer; it could potentially lead to a

"technological disaster". The absence of a safety net for the consumer allows growth to other ways that AI can unknowingly harm those who use it (Busuioc et al., 2022, p. 100). Such negative actions can cause a domino effect or just let certain issues clutter. As there are many negative ways in which the non-existing transparency can negatively affect its users, Liam (male, non-white) mentions other serious issues that affect the users.

I would say there is also a huge risk of fraud because people can now take that information, start their own program which is fully biased because they have an agenda they want to push; they want to do harm.

In his quote, Liam (male, non-white) refers to cybersecurity issues as well as possible biases that can be used to harm other humans. Technology has evolved to the point that if companies share too much information on their practices, that knowledge could be used in an abusive way (Akter et al., 2021, p. 12). Companies that fail to address ethical issues may therefore have to face its consequences such as limited trust, yet with Google's current position it's not an aspect that can affect them profoundly.

The seriousness of the issue was mentioned by all participants; some mentioned "legal risks", Christina (female, white) while questioning what is happening with the data that they put into the Google platform. Other concerns related to monetary fees that could be applied when the apps are not transparent about their actions; such cases appear and could negatively affect future consumers (Jacob, male, white). Another serious allegation that connects again to data usage is data manipulation by companies such as Google having the power to affect political decisions of the country. Nate (male, white) states that the company has access to all his accounts, passwords and data which could be used in a manipulative manner. In a way that, depending on what they decide should be available through their platforms, they can help a certain political party be more represented or be portrayed in a better light, which would give them a competitive advantage, Amelia (female, white) explained. The lack of transparency highlights the possible issues that may arise from Google not taking transparency as a serious argument.

4.3. Inclusivity of Experience

Each participant grew up with a different surrounding that has affected the way they are right now. In discussing inclusivity, it has been crucial to focus on how white and non-white users answered the questions. Before the theme of inclusivity, interviewees were provided with definitions of the topic. Inclusivity is judged by personal experience and the attention the participants have towards inclusivity through their day-to-day usage. The question that brought the most interest to both groups of users was their opinion on how representative the usage of Google products that use AI is. To be more precise, interviewees were supposed to share how they see a representation of different users from diverse racial or ethnic backgrounds. There is a strong disparity in opinion between white and non-white users.

4.3.1. Inclusivity by Non-White Users

In her interview, Anna (female, non-white) simply said that Google is not representative, as "I would say no because whenever I've searched certain topics on Google on certain things, I believe [the response is] like from a Google's perspective". Afterwards, she goes more into detail on how Google, being an American company, tends to promote and monopolize the information that is collected in the US (Katell et al., 2020, p. 47). However, to be considered inclusive, they would need to incorporate more research and data from all over the world. James (male, non-white) shared the same experience that the data is mostly from the US; however, his usage of the platforms has been adjusted because he is not white. To answer the question, he said that he needs to be "more attentive to what to watch me as I was not Caucasian". He realized that he needed to specify his words and certain terms to find solutions that worked for him. Another opinion was that Ben (male, non-white) changed his answer, making a distinction between putting the answer in a specified way.

If I ask Google to write it, give me a response as if a black person would reply to me, the accent on the language of the AI of the response will change a little bit. If I ask the same question and ask it to answer me as an Indian student who is 18 years old and just moved to the Netherlands, the answer will be modified or shifted towards actually an Indian-like response, which will sound like what an Indian student would use. And the words and the vocabulary it will use will be a little bit more common to what Indian people use.

Such an answer shows awareness that the details and phrasing of the questions act to define the response the AI will provide. Jana (female, non-white), on the other hand, has not experienced such differences, as she also explained that she did not pay enough attention to how representative the answers or experience are; she takes it as it is. Yet, through her personal research, she is now aware that race, age, gender, and economic situation affect the way banks accept or reject loan applicants. Moreover, she explains that Caucasian applicants and their attractiveness affect the way AI would categorize them. Such findings from her sideshow that even with some knowledge of existing discrimination, she chooses to not consider it while she uses her platforms.

4.3.2. Inclusivity by White Users

In comparison to non-white users, all white users consider Google's platform that uses AI to be inclusive in the representation, and Christina (female, white) says, "I don't know how they would discriminate against users, honestly, because I feel like it's pretty objective". It is interesting that since the content is mostly created in a way to fit her personal characteristics, she does not even see a way in which content could be not representative. The whiteness of data has been normalized so that it is not visible to white users, yet others can sometimes spot it once they pay attention (Cave & Dihal, 2020, p. 694). Another interviewee, Amelia (female, white), expressed how she does not know if Google is inclusive, as she never paid attention to it; therefore, she cannot say. That is an answer in itself; not paying the slightest attention to the data that one consumes is a problem. Jacob (male, white) could not

even form a proper answer, as like other users, he "didn't, I didn't really think of that before". He investigated his personal experience, where he personally never realized the lack of inclusivity in Google products. It is quite interesting to see, as he brought up his friends who are from different races, and he never heard anything from them; therefore, he believes that the AI system is inclusive. Lastly, Nate (male, white) states that he sees that most of his content is white oriented, but after discussing the topic for some time he begins to question whether it's the fault of society or the company.

4.3.3. Location

Another disparity in answers that has been pointed out by non-white users was the differences in the results provided depending on the location where they were. One reason for such differentiations could be the fact that they grew up in a completely different place than they currently reside in. When discussing AI, it is difficult to connect it to the location; however, in the example of Google search that uses AI, it will affect the way users consume the content. Liam (male, non-white) when asked about whether he has seen any differences in the way Google works between countries, answered right away that the experience is "highly dependent on location". Other users compared that back in their home country, depending on what they are trying to do, will provide them with a different outcome compared to when they are in the Netherlands. Interviewee James (male, non-white) has discussed that obviously, the products promoted by Google will vary depending on where one is. The same was mentioned by Anna (female, non-white), as she says that "SEO optimization works based on your location as well". Such responses were only provided by non-white users, as white users did not see any differences between the country they lived in and even when they were suggested to compare it to their holiday destinations. When people go on vacation, their Google usage is mostly local and does not include further consideration (Amelia, female, white). Since governments have certain control over what data they are making public, they can also manipulate the information available to the common user (Heimstädt & Dobusch, 2020, p. 9).

4.4. Equality and Fairness

The part that was the most complex needed extra attention to ensure that participants were able to speak freely about their experiences with fairness and equality of the systems. Participants were asked a series of questions that encouraged them to share their personal experience with Google's AI by looking at both products and usage history. Therefore, these results focus on two big reappearing themes, which are bias and fairness. They are connected to each other by being opposites, and participants were able to tell their experiences with both terms. Bias exists everywhere and is being shared through technology, people, and overall societies (Reyes et al., 2020, p. 10). It is usually difficult to spot; however, it also depends on which group that bias is aimed towards. This part highlights how bias and fairness, which are both connected to inclusivity are perceived by participants.

4.4.1. Bias in Google's AI

Bias happened to be a re-appearing theme throughout the interviews, especially non-white users who discussed the bias of information available online. Some participants found it easier than others to describe the biases they encountered across various online platforms. In the last part of the interview, participants were asked if they had ever faced bias in using Google. The first response provided by Anna (female, non-white) was to say "of course", as facing bias was something casual and a recurring act. She describes that the technology "does not have its own human brains to actually contemplate and think whether it's providing reliable information". Comparing an AI with a human brain is an interesting connection, as certain AI technologies mimic the way that humans work, but it is not the same. Anna (female, non-white) also, in her quote, expresses that the human brain can be reliable, which is something that she later goes against by saying that there is not a single person who is bias-free. James (male, non-white) acknowledges the existence of biases and explains it by the disproportionate amount of data from Western sources in comparison to other sources. There is more content available, it is easier to share the most popular content. So, he is aware of the biases that exist, but he can explain it. Lastly, Barbara (female, non-white) takes it a step further by explaining that in comparison to other users,

There's definitely another angle to the people that have been discriminated against than people who haven't because it makes you second guess a lot of things. But in the AI's that I use, I do not think that they're very biased.

She points out that facing discrimination in the real world, makes a person more aware of the possibility of it happening online. People of colour have been faced with mistreatment as well as automation, which possibly results in different outcomes for users depending on their race (Cave & Dihal, 2020, p. 700). White users, on the other hand, again did not face or see any biases. It is not surprising, as this seems to be a recurring theme in the results that, as Joanna (female, white) says, "I did not see any racial bias I think or the information that it has shown me, but I don't know how it is for other people." She does mention that other users could have a different experience with the bias of information, but for her personally, she does not think she searched for information that could not be representative. Such a claim is difficult to believe since all participants use Google daily and have been for a long time. Overall, by delivering disparate experiences to different groups, the system inherently creates an uneven playing field for users. This disparity is essentially a form of bias that is often perpetuated by the machine learning algorithms within AI systems (Dwivedi et al., 2023, p. 14).

4.4.2. Perceived Fairness of AI

All participants were asked to share an AI that they believe is fair in its operations. The only answers received were AI chatbots on the websites ChatGPT, and Google, or an answer that has also appeared was that there is not one. This shows that this is not something people are aware of, especially it's link to transparency. This shows that fairness is understood differently between users, and one will

not see the same message as fair, due to their personal experiences or their perception of the world. In her interview, Jana (female, non-white) talks a lot about cultural differences in the way people perceive things such as beauty, and that bias in one country may not be considered as one somewhere else. Such results make the discussion on fairness extremely complicated, as people may agree with a common definition but will experience it differently from each other. Again, ChatGPT has been pointed out as a fair AI system since the information it provides is mostly credible. Yet, when asked why information is more credible from ChatGPT than Google, participants were not able to provide a reasonable answer. What the research shows is the lack of knowledge that people have on the things they use, and with fairness being an important factor in a well-functioning AI. There is not enough cohesiveness between the users to give a strong result. Currently, the tasks that were mainly discussed included retrieving information, which limits the other things that AI systems can do and should be considered when evaluating fairness in action (Saka et al., 2023, p. 18).

5. Discussion

The research studied the comparison between white and non-white users in participants' perception of transparency of Google AI products with special attention on inclusivity. The final chapter of this study aims to answer the research question, by reflecting on the literature together with the interview results. Special attention is put on the reflection of the research, which evaluates the way the study was conducted, and questions actions taken that could have affected the results. Furthermore, limitations and suggestions provide an overview of points of improvement for future studies while considering certain limits to the current research. Finally, the paper ends with implications for future research and explains the necessity of additional attention that should be given to the topic of transparency of Google's AI.

5.1. Key findings

To answer the research question of how Google users perceive transparency with a focus on the inclusivity of the products utilizing AI, several findings that should be considered. The main finding of this research is that there is a significant difference in knowledge and perception of Google's AI depending on where the interviewees are from. All participants use Google for similar tasks and share its convenient usage, yet some are more critical than others. A reappearing theme was that people perceive ChatGPT to be an adequate representation of AI, disregarding that AI is being used in many platforms that they use daily (Saka et al., 2023, p. 2). Moreover, ChatGPT has begun to provide a similar experience to what Google offers, yet they can do it in a simplified form which makes it even easier to use. ChatGPT is expected to have the dataset of Google, as well as have adequate recency of the information which for a free platform is a lot to ask for. The past research highlights the difference between these platforms as one is an AI chatbot, and another utilises AI to improve customer experience (Dwivedi et al., 2023, p. 46). ChatGPT was a platform mentioned by all participants which is used for similar actions as Google, however, there is certain controversy in what has been said by participants. The main inconsistency was that users check information provided by ChatGPT with Google; however, some participants still find the chatbot to be more reliable than the one they use to verify information. Such an interesting finding sheds some light on how there is limited knowledge on understanding of how platforms use AI and hidden controversy that users do not even see. The further key findings are discussed from two perspectives, one being non-white users and one being white users, then these findings are discussed to show the disparity between the participants.

5.1.1. Key findings non- white participants

By studying the responses of non-white users there have been multiple interesting findings that bring in new information to the existing research. Literature on transparency in AI takes into consideration the individual nature of using technology and the awareness of the way that humans work (Toy, 2023, p. 5). However, an aspect that is disregarded is race, which especially in this study is an extremely valuable factor. One of the key findings was that non-white users have been more critical of

the content and products which they utilize daily. From being able to provide examples where they were faced with wrongful information or inadequate responses to their questions. Another valid insight is that they were able to spot differences in the way platforms work depending on the location they were in. Such findings can improve for example the search of information that users are looking for, yet it could provide a disparity in what can be found in one country in comparison to another (Saka et al., 2023, p. 16)

Non-white users had an inconsistency in how they perceive the current transparency of Google's AI, but all are aware that it is indeed an important factor. They paid attention to how they discuss transparency, especially how it is close to impossible to achieve it. In past research, transparency has been interlinked with fairness and, more importantly, the recognition of its necessity by users (Shin, 2020, p. 546). Moreover, participants perceived Google's AI as not always inclusive by discussing how there is this gap between the AI being able to adjust to their preferences. On one hand, the company has so much data about them, yet still, there is data discrimination and constraints, which limit the experiences of other users (Intahchomphoo & Gundersen, 2020, p. 76).

5.1.2. Key findings white participants

Regarding white participants, the main finding has been that they seem to be quite ignorant of the things happening on the internet. It does not mean that they do not pay any attention to the programs they are using, however, not a single person could describe any type of AI system. As AI is created for white users, it is adequate that they do not see many issues with the existing processes or features that Google uses. Participants were not able to determine the fairness and inclusivity of the AI, they did however begin to think about their lack of attention towards the information consumption. Many search results or popular pages have been created in a way that portrays prejudice, since it's not towards white users they are not the ones being affected by it (Cave & Dihal, 2020, p. 691). This general trend can be seen not only on the internet, as it goes further to movies, shows and basic communication between users.

Secondly, white users seem to believe that the AI they use is all transparent, and inclusive, and as much as there is room for improvement, they could not define what things could be adapted. An issue that has seemed to bring some concern when it comes to Google's AI is data privacy, more specifically how Google platforms collect and store private data. On one hand, users were aware and okay with the amount of data they put out into the apps and websites they use. On the other hand, one of the participants suggested a consent form which would more specifically describe what happens to the data. Interestingly, this does exist, yet people tend to ignore it and as in this case, refer to something which already exists. As stated in Van Den Berg et al. (2022, p. 64) such behaviour indicates a lack of responsibility from the user, yet new ways of delivering information aim to improve usage through ensuring transparency.

5.1.3. Comparison

In conclusion, there has been a big disparity in how white and non-white Google users perceive transparency and inclusivity of experience while using AI-powered products. Non-white participants exhibited a more sceptical attitude towards Google's transparency, linking it to broader concerns about data privacy and manipulation. The literature reflects on the importance of an AI system to recognize bias and ensure transparency, which connects to non-white users who are more sceptical of Google's transparency due to unrepresentative data and privacy concerns (Felzmann et al., 2020, p. 3340). In contrast, white users displayed a more positive perception, often considering Google's AI systems as transparent, largely due to their lack of negative experiences with these systems. There has been a big difference in awareness and knowledge of AI functionalities, with non-white users being more distant and aware of possible biases. This is mainly because they are affected and aware of possible prejudice that could directly influence their usability of AI (Heimstädt & Dobusch, 2020, p. 4). Whereas white users accepted the AI outputs without much scrutiny and were less aware of the underlying technologies.

Experience of inclusivity varied significantly between users as non-white users reported that they have often felt that the AI did not fully provide an experience that would include their cultural and individual needs. They have explained how certain actions were created for predominantly white users, which has affected the way they perceive it. Consequently, Intahchomphoo and Gundersen (2020, p. 76) discuss the systematic review of AI and race, which supports the findings that there is a significant disparity in how inclusivity is perceived by different racial groups. As white users believe that the experience is neutral for all users, and that represents people from different backgrounds. Not a single person has expressed any negative experiences that could potentially appear during their use of the platform.

Non-white users tend to be more critical and sceptical, likely due to a heightened awareness of potential biases and a greater impact of these biases on their interactions with Google AI. On the other hand, white users generally view Google's AI algorithms as more transparent and inclusive, likely because their experiences have not forced them to evaluate its actions so closely. These findings suggest that Google should address these disparities by enhancing the inclusivity and transparency of their AI systems, ensuring that they provide a similar experience to all user groups.

5.2. Reflection on research

The study has been successfully carried out and developed. The main results which highlight the differences in perceived inclusivity, especially regarding transparency show that white and non-white users have varied experiences. Transparency is an important factor in recognizing companies' actions, and this research enriches the scholarly world with further discussion on the current lack of understanding and knowledge of AI by users. The results of the study connect to previous research with the integration of transparency, fairness, and inclusivity with each other (Balasubramaniam et al., 2023,

p. 6). The terms are interlinked with each other, and by paying attention to them users can benefit from having a safer and better functioning service.

The semi-structured interviews were a suitable method to discuss with participants their personal experiences and history with using Google products. Certain interview questions were difficult to answer, which responded to the researcher. Although, they could have made participants feel slightly uncomfortable. Such responses showed that users are often not aware of how the technology around them works. The researcher also asked why participants use Google, as that knowledge enhances the way AI can be further utilized (Choi & Drumwright, 2021, p. 10).

By reflecting on the analysis process, there should have been more time assigned to go through the data more thoroughly. Due to the limited time to complete this research, there could be additional underlying results or surprising findings that could have been missed unintentionally. Having an additional researcher could also improve the data analysis process from two perspectives. One is that the researcher is white, therefore having a non-white researcher would be beneficial for analysing the results, as well as understating certain issues that were mentioned. Another one would be a second opinion to limit personal bias and provide an alternative analytical approach that could have generated different insights. The aspect of the racial dataset should be as important to participants, as well as researchers to improve the fairness as well as transparency of the study (Intahchomphoo & Gundersen, 2020, p. 76). Since everyone was faced with different biases, an additional researcher would have been able to study these nuances more adequately.

5.3. Limitation and suggestions

Despite the findings, the research faced many issues, the biggest one being that there is limited research on the topic. Google has been existing for 25 years; therefore, it has not been around for a long time. Especially since the platform is constantly changing and evolving. This creates a big limitation on research on that topic, considering the niche of such a study. Google is like nothing else; it has a monopoly in the world when it comes to providing information and some services. Such power to one platform limits critical thinking as well and it cannot be compared to anything that does exist. The experience of Google depends on a variety of factors, one of them being the way someone chooses to communicate (Van Den Berg et al., 2022, p. 70). The personal interface makes it difficult to compare users as the researchers themselves receive different prompts and experiences than each interviewee. A further limitation of the research is that it considers a small sample size of 12 participants, 6 non-white and 6 white, that lack diversity. More participants, especially from South America, Africa, and the Middle East, could have provided better insights into cultural differences in perceptions of AI transparency and therefore limited some findings. To have a complete overview of the perception of transparency, there should be more attention to the precise way in which companies share their information.

Interviewees experienced a level of uneasiness when they did not like the moments when they could not answer the question, certain people said that they did not want to be perceived as ignorant. The whiteness of AI has been normalised to some extent, therefore making it difficult for even non-white users to see to what extent something has been affected (Cave & Dihal, 2020, p.695). Additionally, Google AI is a complex concept as it consists of several different features of Google that use different sets of artificial intelligence. The study did not choose one, however, this could have led to misunderstanding the specifications of certain questions.

Towards suggestions on such a topic, there needs to be a conversation started between users questioning the content they are consuming. Understating how AI has been communicated and used by a variety of people, will provide a solid base for further studies. Lack of inclusivity in AI is an issue that correlates to a much bigger problem, which is social injustice (Cave & Dihal, 2020, p 699). The large inconsistency in between countries with data privacy, user protection and user experience would need to be better developed. Right now, countries vary between each other in the importance of AI, however, at the end of the data Google has billions of users in multiple languages that it is providing content for. The governments should create a base of regulations or standards that companies should be able to refer to in case of an issue (Ryan, 2020, p. 102). Furthermore, AI needs to be considered from a bigger perspective as something that evolves and will keep on affecting humans. The technology develops quickly, therefore there needs to be additional attention to how they should be managed to limit possible consequences in the future. With the constantly changing topic such as AI, and its recency, a suggestion could be holding a longitudinal study which would be able to evaluate their user's experience over the years. Furthermore, it would be interesting to use an AI system to compare research results that can provide in comparison to humans.

5.4. Implications

The research can enhance both the theoretical and the practical application of the discussed theories. One of the aspects is the evolution of the critical race theory, which substantially brings to light the dominating whiteness in the world through symbols, images, and societies themselves (Cave & Dihal, 2020, p. 687). This research, therefore, builds upon theories to provide more insights into the differences in the perception of transparency and inclusivity in Google products. It builds upon the disparity in experience, depending on whether the users are white or non-white. The variety of perspectives allows us to fill in the gaps between Western and non-Western focus studies in comparing two groups. To make the study more reliable there should be a better understanding of the usability of the platform and a clear distinction between the different AI systems that Google uses. There should be additional comparisons that would focus on the age of the participants, as well as gender could be an interesting perspective to investigate the functionality of the technology (Choi & Drumwright, 2021, p. 10). Another implication would be to go into details about the existing transparency actions that Google is taking, to evaluate what information can be found in comparison to what people may know about it.

Since this research focused on the transparency and inclusivity of Google, extra research could point out the gaps in the functionality of the platform. The research complies with the definitions of transparency by Felzmann et al. (2020, p. 3334), however, an aspect of basic knowledge of practices should be added. This means that the new definition should include, that transparency of an AI is what companies' actions are known, and how explainable and understandable they are.

From a more practical perspective, a company such as Google has already a strong market position. Additional steps could be making transparency more accessible and easier to understand. Improving transparency would affect users' trust, could improve customer engagements and by that positively affect the inclusivity of the platforms (Akter et al., 2021, p. 17). Once Google can showcase their data processes, and algorithms it could have many benefits on the perception of the platform. Naturally, as this study confirms people tend to be more passive and take information provided as a given, without second guessing. However, when asked to evaluate the platforms they tend to see new concerns such as privacy issues or data usage. Similarly, to other research, there should be an additional form of evaluation of what participants think about the topic, such as using a mixed method for such a study (Van Den Berg et al., 2022, p. 72).

In conclusion, there is a lot of room for improvement from all stakeholders and neither should be forgotten. The study highlights the importance of transparency and ethical AI to ensure a safe environment for all its users. Lastly, it's time to start evaluating how technology will evolve in the future and how can consumers adapt to the rapidly changing world.

5.5. Theoretical contribution

This research fills in theoretical gaps and strengthens the current theoretical discussions related to AI transparency and inclusivity. When looking at the way participants discuss and feel about AI, there should be more focus on educating users on how to manage the technology safely. People will reflect on what they know and understand, therefore, this study highlights the power that Google currently has as it is a call for help for users to be more attentive to the platforms they use.

Another contribution is the connection of AI to transparency. The results show that transparency expands to more than just the visibility of a company's action but expands to the functionality of the system. Such a change in understanding transparency may provide an incentive to communicate and address companies' actions. Furthermore, privacy is a concern that people are worried about and tend to lack knowledge of its regulations and presumable actions. Expanding on Heimstädt and Dobusch (2020, p. 17) need for governmental protection in data handling to users' awareness of the actual steps being taken by companies.

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7. **Appendix:**

Appendix A.1. Interview guide

1. **Introduce yourself and the project**

   Before we begin I want to explain how the interview will look like. We will begin with some general demographic questions followed by three separate parts. With each part I will provide definitions and examples of the concepts we will be discussing. If you need further clarification or more examples please just let me know we can go more in detail about it.

2. **Demographics**

- Where are you from?
- What is your level of education?
- How old are you?
- What ethnicity can you most identify yourself with?

- What is the country that you have lived in for the longest?
- How often do you use technology? Please give examples of what you use

3. Cultural backgrounds

how that might influence what they think about your 3 major concepts. Ask what have they heard from people in their close social circle and cultural groups.

- Could you please say how you perceive your cultural background?
- Can you explain to what extent you think that your cultural upbringing affects your day-to-day life?
- Did culture play a large part in your upbringing? Were you surrounded by it, or was it more passive? Please elaborate on that
- Do you feel understood and that your culture is taken into consideration when studying, working, research etc doing daily activities?
- How do people in your surrounding perceive AI?

4. Using Google

- What do you typically use Google for? Do you use other features such as Google Photos, Gmail or Google Maps?
- Could you tell me why you are using such products?
- Would you say that the content of these products is reliable? For example if you would compare it with another AI driven platform such as Bing?
- What is AI:

5. Transparency

Before we begin, here is the definition of transparency: transparent AI is interpreted by how explainable and understandable the system is (Felzmann et al., 2020).

- Here are some characteristics of a transparent AI: accountability to actions being taken both in the development and practices of the company that created the AI. Other aspects are privacy of the data, understanding of the information that is being shared and accessibility to that information. Based on those characteristics could you give me an example of an AI who you would consider to be transparent?
- Based on the definition, to what extent do you take into consideration the transparency of the AI when choosing a search engine or a platform to work on?
- Could you share any actions that the platforms you use utilise AI?
- Have you ever wondered what is behind the AI system which you were using? For example how it works, what data it uses etc.
- Would you consider transparency as an important factor in using Google? If yes/no, why is that?

- What are some possible risks and benefits they can think of regarding transparency when it's applied to google AI services?
- Could you please talk a bit more about how you perceive the actions of Google's AI?
- Please give an example where Google AI provided you with some wrongful information?
- How do you consider a reliable source?

6. **Inclusivity**

Before we begin these are the definitions I used for this research, if you need further clarification or examples please let me know. Inclusivity: digital inclusion asserts that every person and social entity should have equal access to and ability to utilize information and communication technologies (ICTs) to actively engage in all aspects of a knowledge-based society and economy (Van Den Berg et al., 2022, p. 56). This means that AI should consider and include people in diversity of age, race, gender, and societal background.

Bias: is being inclined to an opinion that favours one point of view. "Part of the appeal of algorithmic decision-making is that it seems to offer an objective way of overcoming human subjectivity, bias, and prejudice,... but many of the algorithms ... replicate and embed the biases that already exist in our society". *(Y.K. Dwivedi et al., 2023)*

Fairness: fairness is advocated by fostering equality, diversity, and inclusiveness. To avoid bias and discrimination (Balasubramaniam et al., 2023, p.6)

- Have you ever faced a situation where Google provided you with biassed information? This could be through a Google Search that showed you inaccurate or wrong information? Please give an example of how you have realised it.
- In your opinion, how might your personal experiences of unfairness and bias shape your perceptions of AI?
- Can you provide an example of an AI-driven service or product that you believe is fair in its operations?
- How do you perceive the inclusivity of Google's AI algorithms in terms of representing users from diverse racial or ethnic backgrounds?
- Do you think Google's AI algorithms are biassed or fair in their treatment of users from different racial or ethnic backgrounds? Please explain why you think that.
- Can you recall a situation where Google has provided you with different information depending on where you were? Where was it and what did you think about it?
- Please give me examples of ways in which you believe Google could improve the inclusivity of its AI algorithms and products?

- What are some possible risks and benefits they can think of regarding inclusivity when it's applied to google AI services?
- If there is one thing to change about google what would it be?

   7.   Thank the interviewee for participating in our project

Appendix A.2. Google Form

Do you use Google?	Which Google platforms c	How often do you use any	Where are you from?	What is your gender?	What is your ethnicity?	What is you age?	Would you like to participa
Yes	Google Search, Gmail, G	Daily	India	Female	Asian	23	Yes
Yes	Gmail, Google Drive/ Goc	Daily	Poland	Female	Caucasian	22	Yes
Yes	Google Search	Daily	France	Female	Caucasian	22	Yes
Yes	Google Search, Gmail, G	Daily	Russia	Female	Caucasian	22	Maybe
Yes	Google Search, Gmail, G	Daily	Serbia	Female	Caucasian	23	Yes
Yes	Google Search, Gmail	Daily	London	Female	Caucasian	25	No
Yes	Google Search, Gmail, G	Daily	The Netherlands	Female	Asian	24	Yes
Yes	Google Search, Gmail, G	Daily	Aruba	Male	African American	36	Yes
Yes	Google Search, Gmail, G	Daily	Thailand	Male	Asian	24	Yes
Yes	Google Search, Gmail, G	Daily	Denmark and Netherland	Male	Caucasian	22	Yes
Yes	Google Search, Gmail, G	Daily	Thailand	Female	Asian	22	Yes
Yes	Google Search, Gmail, G	Daily	India	Male	Asian	21	Yes
Yes	Google Search, Gmail, G	Daily	Poland	Female	Caucasian	22	Yes
Yes	Google Search, Gmail, G	Daily	India	Female	Asian	23	Yes
Yes	Google Search, Gmail, G	Daily	Poland	Female	Caucasian	24	Yes
Yes	Google Search, Gmail, G	Daily	Russia	Male	Caucasian	22	Yes
Yes	Google Search, Gmail, G	Daily	Romania	Female	Caucasian	24	Yes
Yes	Google Search, Gmail, G	Daily	Ireland	Male	Caucasian	26	Maybe
Yes	Google Search, Gmail, G	Daily	Germany	Male	Caucasian	25	Yes
Yes	Google Search, Gmail, G	Daily	Poland	Male	Caucasian	24	Yes

Appendix A.3, Pseudonyms

Number	Pseudonym	Gender	Race	Age
Interviewee 1	Liam	Male	non-white	36
Interviewee 2	Anna	Female	non-white	23
Interviewee 3	Jana	Female	non-white	23
Interviewee 4	James	Male	non-white	24
Interviewee 5	Ben	Male	non-white	21
Interviewee 6	Amelia	Female	white	23
Interviewee 7	Joanna	Female	white	22
Interviewee 8	Christiana	Female	white	24
Interviewee 9	Barbara	Female	non-white	22
Interviewee 10	Jacob	Male	white	21
Interviewee 11	Nate	Male	white	22
Interviewee 12	James	Male	white	25

Appendix A.4. Consent Form

CONSENT REQUEST FOR PARTICIPATING IN RESEARCH

FOR QUESTIONS ABOUT THE STUDY, CONTACT:

Julia Baranowska: 528330jb@eur.nl

DESCRIPTION:

You are invited to participate in research regarding Googl's AI practices and the transparency of the product. The purpose of this study is to understand how individuals perceive the company and their actions, by incorporating users perception and opinion. You can participate by being interviewed by the researcher. The interview questions will pertain to understanding transparency, Googles practices and external communication, your expertise, and the importance of sustainability. The data collected from interviews and observations will be used exclusively for academic purposes, such as further research, and academic meetings.

RISKS AND BENEFITS:

There are no foreseeable risks associated with participating in this research. Your name or other identifying information will not be used in the study without your verbal or written consent. Pseudonyms will be used to identify participants.

TIME INVOLVEMENT:

Your participation will take approximately 45 to 60 minutes. You may interrupt your participation at any time.

PAYMENTS:

There will be no monetary compensation for your participation.

PARTICIPANTS' RIGHTS:

Participation in this project is voluntary, and you have the right to withdraw consent or discontinue participation at any time without penalty. You also have the right to refuse to answer specific questions. If preferred, your identity will be disclosed in all written data resulting from the study. Otherwise, your privacy will be maintained in all published and written data.

CONTACTS AND QUESTIONS:

If you have questions about your rights as a participant or are dissatisfied with any aspect of the study,

you may contact Vivian Chen at chen@eshcc.eur.nl.

SIGNING THE CONSENT FORM:

Signing this consent form is optional. If you choose to provide consent orally, it will be sufficient. By giving consent to be audiotaped during the study, you acknowledge your agreement.

Participant's Name: _____

Participant's Signature: _____

Date: _____

Interviewer's Name: _____

Interviewer's Signature: _____

Date: _____

Appendix B. Table of codes

Themes	Sub-themes	Open codes
Google	Usage	Google Maps
		Gmail
		Google search
		Google Drive
		Google scholar
		Google Photos
		Google AI
		helps with everything
		Gemini
		shopping area
		price comparison
		every day
		use it a lot
		all the time
		about anything
		work
		univeristy
		optimisation
		navigation
		research

		privacy
		workspace
		entertainment
		daily activities
		weather
		analysis
		banking
		ads
		locatipn
		assignments
		thesis
		uni
	perception	positive
		reliable
		trust
		constanlty
		search engine
		fan of it
		since the beginning
		different presentation
		feeding me
		better SEO
		the best
		only
		transaprent
		diverse
		well representative
		influence
		data
		save
		time efficient
		effective
		ethics
		concerns
		inclusive
		faith

		global
		everywhere
		security
		trustworthy
		optimisation
		helpful
Reliability		definietly
		good
		really good
		privacy
		Trust
		depends
		sometimes yes
		not real
		wrong
		not correct
		inadequate
		love
		different presentation
		quality
		efficiency
		what happens to data
		valid
		support
		knowledge
		performance
		technology
		recent
		updated
		responsive
		non-human
		human brain
		comes from US
		good source
		academic
		rechecked

			corrected
			not 100%
			amazing
			popular
			family and friends
			wouldn't say
			longitudinally
			research
			pretty good
			most of the time
ChatGPT	general use		extra research
			analysis
			small projects
			learning
			finding places
			visit
			definition
			no sources
			own knowldege
			background
			information
			time efficient
			quality
			quick
			answers
			no citations
			primary use
			like Google
			every time
			makes things up
			research
			investing
			papers
	comparison with Google		not accurate
			made up
			check information

		relevance
		outdated
		misleading
		wrong
		incorrect
		not reliable
		privacy
		data originality
		personalisation
		easy to use
		direct
		one choice
		a simple answer
		less bias
		personal preference
		learning
		development
		further questions
		references
		not check information
		duplicity
	Representation of AI	accuracy
		simple
		compare with
		check
		research
		find
		look up
		get feedback
		extra things
		not recent data
		lack of accuracy
		no knowledge
		information
		definitions
		making things up

		check with
		receive responses
		british
		american
		very specific
		actual person
		scared
		taking the world
		fear of what will happen
		future
		internet
		websites
		specific questions
		understanding
		inclusive
Background	culture	good
		old
		from a long time ago
		values
		not that open
		straight to the point
		don't waste time
		discriminated
		differences
		everywhere
		big role
		actively affect it
		carry it with me
		everywhere
		family
		heritage
		nice
		hospitality
		collectivistic
		colorful
		not independent

		passive
		depends on family
		not conservative
		present
		considered
		not mentioned
		international
		freedom
		inclusivity
		some extent
		not a lot
	traditions	important
		religion
		christmas
		easter
		family
		celebration
		national holiday
		differences between cities
		perception
		cultural upbringing
		guests
		parents
		food
		meals
		baptised
		proactive
		often
		church
		communion
		age
		generational gap
		old traditions
		similar
		school
		festivals

		events
	day to day life	integrates with life
		personal
		close to me
		not forget
		important
		long time
		became important
		warm
		collective
		differences
		shared perspectives
		positive
		liberal side
		loose
		more freedom
		mindset
		close relations
		open
		difficult to explain
		not many traditions
		exams
		not considered
		not enough info
		difficult to explain
		moments
		disparities
		would there not here
	upringing	big role
		surrounded by it
		not passive
		remember it
		not definitive
		high extent
		regional
		praying

		religion
		food
		own values
		family values
		respect
		older people
		lucky
		international
		values
		warm
Transparency	awarness	own values
		own filters
		personal biases
		feed information
		less influence
		change VPN
		medical
		privacy
		latest version
		struggle
		confidential information
		encrypted information
		depends on a person
		pay attention to
		laws
		lack of availability of info
		data breech
		sources
		credible
		quoting
		know about it
		practices
		data regulations
		warnings
		highly accountable
		understanding it

		output
		input
		familiarize
		results
		formula
		algorithm
		popular
		used a lot
		all information
		consent
		safe
		marekting
		data analysis
		right command
		does not matter
		nice
		good to know
	Benefits	easier to look for data
		without exposing
		privacy
		everyone liking
		trust
		invloved in decisions
		consent
		safe information
		older generation
		benefits at work
		satisfaction
		safely
		specific tool
		customer satisfaction
		GDPR
		assure
		practcable
		creadability
		sense of

		data being used
		easier for companies
		wordlwide
		a lot of people
		safe use
		process data
		attract user
	Concerns	lack of trust
		not legit
		not relevant
		misinformation
		non-transparent
		troubles
		reshape
		not trusting
		divide people
		political divide
		manipulation
		conflicts
		show one side
		not positive
		negative impact
		less accesible
		cannot invest
		brand image
		legal processing
		affect
		shocked
		repuation
		not accurate
		tracing back
		knowldege
		data leak
		rules
		conditions
		do not know

		not read
		for free
		exaggerating
		lack of transaprency
		limited knowledge
		actual affects
Diversity	fairness	definitio
		unfair
		not necissarily
		programm to use
		cookies
		searching
		history
		don't get me wrong
		driven by my search
		think it's one thing
		75%-80%
		majority
		good enough
		contradict
		general public
		articles
		USA
		Britain
		rest of the world
		national channels
		stimulated by humans
		human impact
		bias free
		for me vs for someone else
		even 50% would be good
		agree with
		judging people
		good information
		identity
		recommendations

		metrics
		banks
		beauty
		skin color
		race
		religion
		gender
		age
		nose
		face structure
		ChatGPT
		policy
		rules
		majority
		most users
		Covid cases
		not recongisned
		does not know
		does not matter
		more common
	inclusivity	private spehere
		considering
		different people
		points of view
		willing to listen
		predominated
		not meeting criteria
		bash
		wrong or right
		both opinions
		perspectives
		belief system
		gender
		religion
		representation
		giving reliable info

		early internet
		creators of internet
		personal
		critical asses
		equal access
		social entity
		diversity of people
		avoid discrimination
		open minded
		Google's perspective
		prioritise information
		location
		difficult
		indifferent
		tailored
		racial groups
		represenative
		experience bias
		more opportunities
		understand more
		some people are some not
		informed information
		feedback
		cultural context
		new
		respects
	bias	certain situations
		rated
		maps
		disadvantages
		depends on situation
		wronful information
		wanted to know
		the right answer
		exactly what I wanted
		read my mind

		know who I am
		confusing
		innovation
		developing countires
		studies
		research
		gender
		racism
		studies
		america
		lack of diversity
		homogenuity
		variety of people
		location
		certain bias aspects
		very biases
		who makes them
		don't think
		not on purpose
		the way you get info
		results
		unfairness
		news
		shape
		talking
		society
		growing up
		place
		somewhere
		not much
		type of language
		less influence
		search
		regional
		cultural
Data privacy	general	assure

		know the real agenda
		a lot of places
		competative
		technology
		AI
		innovation
		data gets stored
		fear
		learning
		questionable use
		where does it go
		what happens with it
		where is it stored
		manipulated
		changed
		used for wrong reasons
		memorize it
		audiences
		understaning of it
		sensible device
		protect
		governemnt
		actions
		collection
		abusing
		now new
		closley monitored
		less private
		trustworhty
		don't care
		pay attention to
		matter
		everyone does it
		each company
	location	depends
		countires

			places
			the way you phrase it
			wording
			previous searches
			past
			other users
			the internet
			gets it from
			taboo
			not acceptable
			most searched
			opinions
			most people
			common idea
			cultural context
			percentages
			algorithms
			track
			suggested
			address
			gender
			demographics