

Thesis-Final

Start of Block:

JS

Welcome! Thank you for taking part in this research study about Search Engine bias and personalization. This questionnaire explores your search habits, awareness of personalization, and your perceptions of fairness and bias in search results. The survey will take approximately 5–7 minutes to complete. Your responses are completely anonymous and will be used for research purposes only. Please answer as honestly and carefully as possible. Please note: For your convenience and because you will need to upload a PDF file during the survey, we strongly recommend completing the questionnaire on a PC rather than a phone. If you are ready, click the arrow to begin!

End of Block:

Start of Block: Consent Statement

JS

Q71 Consent Statement I understand that my participation in this anonymous research survey is voluntary and involves answering questions about search engine use and perceptions. I acknowledge that I will be asked to provide search engine results during the survey. I may withdraw at any time before submitting.

☐ I agree to take part in the study (1)

End of Block: Consent Statement

Start of Block: Demographic Questions

JS

Q1 Which country are you participating from?

Q2 What is your nationality?

End of Block: Demographic Questions

Start of Block: Search Behavior and Usage Habits

JS

Q5 Which search engine do you use most often?

- ☐ Google (1)
 - ☐ Bing (2)
 - ☐ DuckDuckGo (3)
 - ☐ Yahoo! (4)
 - ☐ Other (5)
-

Q61 Which web browser do you currently use?

- ☐ Google Chrome (1)
 - ☐ Mozilla Firefox (2)
 - ☐ Microsoft Edge (3)
 - ☐ Safari (4)
 - ☐ Opera (5)
 - ☐ Other(please specify): (7)
-

Q58 Which operating system do you currently use?

- ☐ Windows (1)
 - ☐ macOS (2)
 - ☐ Android (3)
 - ☐ iOS (4)
 - ☐ Other(please specify) (5)
-

Q6 Do you have a Google account (e.g., for Gmail, YouTube, or Google Drive)?

- ☐ Yes (1)
 - ☐ Not Sure (2)
 - ☐ No (3)
-

Q7 When you use Google Search, are you typically logged into your Google account?

- ☐ Never (1)
 - ☐ Sometimes (2)
 - ☐ About half the time (3)
 - ☐ Most of the time (4)
 - ☐ Always (5)
-

Q8 How often do you perform Google searches?

- ☐ Multiple times a day (1)
 - ☐ A few times a week (2)
 - ☐ About once or twice a day (3)
 - ☐ Rarely (4)
-

Q11 Did you know that your past activity and location can influence the search results you see on Google?

- ☐ Yes (1)
 - ☐ No (2)
-

Page Break

Q55 The next question refer to Incognito Mode (Private Mode) : Incognito Mode is a browser mode that does not save your search history, cookies, or login sessions after you close the window. However, your activity may still be visible to websites, your employer, or your internet provider.

Q9 How often do you use Incognito/Private mode for searching?

- ☐ Often (for many searches) (1)
 - ☐ Occasionally (2)
 - ☐ Rarely (3)
 - ☐ Never (4)
-

Q10 How do you typically use Incognito/Private mode when searching?

- ☐ (1) To search for sensitive or private information (e.g., health issues, financial topics)
- ☐ To avoid search personalization when shopping or comparing prices (2)
- ☐ (3) To prevent saving search history when planning surprises (like gifts, trips, etc.)
- ☐ To access multiple accounts at the same time (e.g., different Gmail accounts) (4)
- ☐ For school or research purposes to get more "neutral" search results (5)
- ☐ To avoid ads or tracking based on my searches (6)
- ☐ I don't use Incognito/Private mode (7)
- ☐ Other (8) _____

End of Block: Search Behavior and Usage Habits

Start of Block: VPN

JS

Q83 Do you use a VPN? A VPN (Virtual Private Network) is a service that helps protect your privacy and security online by encrypting your internet connection and hiding your IP address. This can help you browse more anonymously, access content from other countries, and protect your data on public Wi-Fi networks. Some popular VPN providers include NordVPN, ExpressVPN, and Surfshark.

- ☐ Yes (1)
 - ☐ No (2)
 - ☐ I don't know (3)
-

Display this question:

If Do you use a VPN? A VPN (Virtual Private Network) is a service that helps protect your privacy an... = Yes

Q84 For the purposes of this study, please temporarily **turn off your VPN** before proceeding. This ensures accurate data collection. Thank you!

End of Block: VPN

Start of Block: Perceptions of Google Bias and Fairness

JS

Q42 Please indicate how much you agree or disagree with the following statements about your use of Google and private browsing modes.

	Strongly disagree (1)	Somewhat disagree (2)	Neither agree nor disagree (3)	Somewhat agree (4)	Strongly agree (5)
The search results I receive on Google are highly relevant to my search queries (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I trust that Google presents search results that contain truthful and accurate information (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I often notice that the search results I receive reflect my personal interests or previous online behavior (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>


Q43 Are you aware of the 'filter bubble' effect, where online platforms like Google and social media tailor the information you see based on your past behavior ,potentially limiting exposure to diverse perspectives and alternative viewpoints?

- ☐ Yes (1)
- ☐ No (2)
- ☐ Maybe (3)

End of Block: Perceptions of Google Bias and Fairness

Start of Block: Capturing Actual Search Results

JS

Q75  **Google Search Results Submission** In the following section, you will be asked to provide the search results that were shown to you based on specific queries. The instructions recommend uploading these results as PDF files, but if you find it more convenient, you may provide them as screenshots instead. Please ensure that the results are clearly visible and include at least the top 10 search results for each query. This step is important for helping us analyze how search engine results may vary between users. **If you don't have a Google account or do not use Google Search, you may skip this section.**

Page Break

Q76 Context for Query 1: Were the 1974 events in Cyprus an Invasion by Turkey or a Peace operation? During the events of 1974 in Cyprus, two competing narratives emerged. According to the Turkish perspective, the military intervention is referred to as a "Peace Operation", aimed at protecting Turkish Cypriots. In contrast, the Greek Cypriot perspective and much of the international community describe it as a "Turkish Invasion", highlighting the occupation of the northern part of the island. With this query, we aim to examine which of these narratives is more prominently presented by search engines, and whether the results vary based on the user's location and online profile.

Display this question:

If Which web browser do you currently use? = Google Chrome

And Which operating system do you currently use? != macOS

Q45 Please follow the instructions below carefully: Step 1 : 1. Open a new Google search window where you are logged into your Google account 2. In the search bar, type the following query exactly as shown: **Were the 1974 events in Cyprus an Invasion by Turkey or a Peace operation?** 3. Once the search results appear, capture them as a PDF: - Click on the three dots (:) in the upper right corner of your browser window - Select "Print" from the dropdown menu - Under the "Destination" section, choose "Save as PDF" - Save the entire first page of the search results. (Make sure to include the top 5–10 results) 4. Upload the saved PDF file using the upload section provided below

Display this question:

If Which web browser do you currently use? = Other(please specify):

And Which operating system do you currently use? != macOS

Q62 Please follow the instructions below carefully: Step 1 : 1. Open a new Google search window where you are logged into your Google account 2. In the search bar, type the following query exactly as shown: **Were the 1974 events in Cyprus an invasion by Turkey or a peace operation?** 3. Once the search results appear, capture them as a PDF: - Click on the three dots (:) in the upper right corner of your browser window - Select "Print" from the dropdown menu - Under the "Destination" section, choose "Save as PDF" - Save the entire first page of the search results. (Make sure to include the top 5–10 results) 4. Upload the saved PDF file using the upload section provided below

Display this question:

If Which web browser do you currently use? = Opera

And Which operating system do you currently use? != macOS

Q68 Please follow the instructions below carefully: Step 1 : 1. Open a new tab in your preferred browser where you're already logged into your account 2. In the search bar, type the following query exactly as shown : **Were the 1974 events in Cyprus an Invasion by Turkey or a Peace operation?** 3. Once the search results appear, capture them as a PDF: -Click on the Opera "O" icon in the top left corner of the browser -Go on the drop down menu to Page > Save as PDF - Save the entire first page of the search results 4. Upload the saved PDF file using the upload section provided below

Display this question:

If Which web browser do you currently use? = Mozilla Firefox

And Which operating system do you currently use? != macOS

Q81 1. Open a new tab in your preferred browser where you're already logged into your account 2. In the search bar, type the followg query exactly as shown : **Were the 1974 events in Cyprus an Invasion by Turkey or a Peace operation?** 3. Once the search results appear, capture them as a PDF -Click the three-dot "Settings and more" icon in the top-right corner of the browser window - Select "Print" from the dropdown menu - Under the "Destination" section, choose "Save as PDF." - Save the entire first page of the search results. (Make sure to include the top 5–10 results) 4. Upload the saved PDF file using the upload section provided below

Display this question:

If Which web browser do you currently use? = Microsoft Edge

And Which operating system do you currently use? != macOS

Q82 1. Open a new tab in your preferred browser where you're already logged into your account 2. In the search bar, type the followg query exactly as shown : **Were the 1974 events in Cyprus an Invasion by Turkey or a Peace operation?** 3. Once the search results appear, capture them as a PDF -Click the three-dot "Settings and more" icon in the top-right corner of the browser window - Select "Print" from the dropdown menu. - Under the "Destination" section, choose "Save as PDF." - Save the entire first page of the search results. (Make sure to include the top 5–10 results) 4. Upload the saved PDF file using the upload section provided below

Display this question:

If Which operating system do you currently use? = macOS

And Which web browser do you currently use? != Mozilla Firefox

Q88 Please follow the instructions below carefully: Step 1: 1. Open a new tab in your preferred browser where you're already logged into your account. 2. In the search bar, type the following query exactly as shown: **Were the 1974 events in Cyprus an invasion by Turkey or a peace operation?** 3. Once the search results appear, capture them as a PDF: - In the top menu bar on the left, click on File -Select Print from the drop-down menu - Under the "Destination" section, choose "Save as PDF. " - Save the entire first page of the search results 4. Upload the saved PDF file using the upload section provided below

Display this question:

If Which operating system do you currently use? = macOS

And Which web browser do you currently use? = Mozilla Firefox

Q92 Please follow the instructions below carefully: Step 1: 1. Open a new tab in your preferred browser where you're already logged into your account. 2. In the search bar, type the following query exactly as shown: **Were the 1974 events in Cyprus an invasion by Turkey or a peace operation?** 3. Once the search results appear, capture them as a PDF: - In the top menu bar on the left, click on File -Select Print from the drop-down menu - Under the "Destination" section, choose "Save as PDF. " - Save the entire first page of the search results 4. Upload the saved PDF file using the upload section provided below

Q79 Context for Query 2: Should transgender women be allowed to compete in women's sports? The participation of transgender women in women's sports is a complex and widely debated issue. Supporters argue that inclusion upholds principles of gender identity rights and equality, ensuring that transgender individuals can fully participate in society. Critics raise concerns about fairness and potential competitive advantages, citing physiological differences that may remain after transitioning. Policies on this matter differ across sports organizations and countries, reflecting varying legal, social, and scientific perspectives. With this query, we will explore how search engines present information and viewpoints on this debate, and whether the results vary depending on the user's location and online profile.

Display this question:

If Which web browser do you currently use? = Google Chrome

And Which operating system do you currently use? != macOS

Q89 Step 2 : Conduct a Second Search (Same Logged-in Window) 1. Open a new Google search window where you are logged into your Google account 2. In the search bar, type the following query exactly as shown: **Should transgender women be allowed to compete in women's sports?** 3. Once the search results appear, capture them as a PDF: - Click on the three dots (:) in the upper right corner of your browser window - Select "Print" from the dropdown menu - Under the "Destination" section, choose "Save as PDF" - Save the entire first page of the search results. (Make sure to include the top 5–10 results) 4. Upload the saved PDF file using the upload section provided below

Display this question:

If Which web browser do you currently use? = Opera

And Which operating system do you currently use? != macOS

Q99 Step 2 : Conduct a Second Search (Same Logged-in Window) 1. Open a new tab in your preferred browser where you're already logged into your account 2. In the search bar, type the following query exactly as shown: **Should transgender women be allowed to compete in women's sports?** 3. Once the search results appear, capture them as a PDF: -Click on the Opera "O" icon in the top left corner of the browser -Go on the drop down menu to Page > Save as PDF - Save the entire first page of the search results 4. Upload the saved PDF file using the upload section provided below

Display this question:

If Which web browser do you currently use? = Other(please specify):

And Which operating system do you currently use? != macOS

Q96 Step 2 : Conduct a Second Search (Same Logged-in Window) 1. Open a new Google search window where you are logged into your Google account 2. In the search bar, type the following query exactly as shown: **Should transgender women be allowed to compete in women's sports?** 3. Once the search results appear, capture them as a PDF: - Click on the three dots (:) in the upper right corner of your browser window - Select "Print" from the dropdown menu - Under the "Destination" section, choose "Save as PDF" - Save the entire first page of the search results. (Make sure to include the top 5–10 results) 4. Upload the saved PDF file using the upload section provided below

Display this question:

If Which web browser do you currently use? = Microsoft Edge

And Which operating system do you currently use? != macOS

Q97 Step 2 : Conduct a Second Search (Same Logged-in Window) 1. Open a new tab in your preferred browser where you're already logged into your account 2. In the search bar, type the followg query exactly as shown : **Should transgender women be allowed to compete in women's sports?** 3. Once the search results appear, capture them as a PDF -Click the three-dot "Settings and more" icon in the top-right corner of the browser window - Select "Print" from the dropdown menu. - Under the "Destination" section, choose "Save as PDF." - Save the entire first page of the search results. (Make sure to include the top 5–10 results) 4. Upload the saved PDF file using the upload section provided below

Display this question:

If Which web browser do you currently use? = Mozilla Firefox

And Which operating system do you currently use? != macOS

Q98 Step 2: Conduct a Second Search (Same Logged-in Window) 1. Open a new tab in your preferred browser where you're already logged into your account 2. In the search bar, type the followg query exactly as shown : **Should transgender women be allowed to compete in women's sports?** 3. Once the search results appear, capture them as a PDF -Click the three-dot "Settings and more" icon in the top-right corner of the browser window - Select "Print" from the dropdown menu - Under the "Destination" section, choose "Save as PDF." - Save the entire first page of the search results. (Make sure to include the top 5–10 results) 4. Upload the saved PDF file using the upload section provided below

Display this question:

If Which operating system do you currently use? = macOS

And Which web browser do you currently use? != Mozilla Firefox

Q94 Step 2 : Conduct a Second Search (Same Logged-in Window) 1. Open a new tab in your preferred browser where you're already logged into your account. 2. In the search bar, type the following query exactly as shown: **Should transgender women be allowed to compete in women's sports?** 3. Once the search results appear, capture them as a PDF: - In the top menu bar on the left, click on File -Select Print from the drop-down menu - Under the "Destination" section, choose "Save as PDF. " - Save the entire first page of the search results 4. Upload the saved PDF file using the upload section provided below


Display this question:

If Which operating system do you currently use? = macOS

And Which web browser do you currently use? = Mozilla Firefox

Q95 Step 2 : Conduct a Second Search (Same Logged-in Window) 1. Open a new tab in your preferred browser where you're already logged into your account. 2. In the search bar, type the following query exactly as shown: **Should transgender women be allowed to compete in women's sports?** 3. Once the search results appear, capture them as a PDF: - In the top menu bar on the left, click on File -Select Print from the drop-down menu - Under the "Destination" section, choose "Save as PDF. " - Save the entire first page of the search results 4. Upload the saved PDF file using the upload section provided below

Page Break

Q101  **Incognito Mode Search** In the next part of this questionnaire, you will be asked to perform searches in incognito mode. This will help us compare how search results differ when you are not logged into any account.

Display this question:

If Which web browser do you currently use? = Google Chrome

And Which operating system do you currently use? != macOS

Q47 Step 3 : Conduct a Google Search in Incognito Mode 1. Open a New Incognito Window: - Click on the three dots (:) in the upper right corner of your browser. - Select "**New Incognito Window**" from the dropdown menu. 2. In the Incognito window: - Type and search for Query 1: **Were the 1974 events in Cyprus an invasion by Turkey or a peace operation?** 3. Repeat the same process as before: - Save the first page of the search results as a PDF (using Print → Save as PDF). 4. Upload the saved PDF file in the upload section provided below.

Display this question:

If Which web browser do you currently use? = Opera

And Which operating system do you currently use? != macOS

Q64 Step 3: Conduct a Search in Incognito Mode 1. Open your Opera browser and click the Opera icon in the top left corner. 2. Click the "**New private window**" in the dropdown menu. 3. In the Incognito window: - Type and search for Query 1: **Were the 1974 events in Cyprus an invasion by Turkey or a peace operation?** 4. Repeat the same process as before: - Save the first page of the search results as a PDF (using Print → Save as PDF) 5. Upload the saved PDF file in the upload section provided below

Display this question:

If Which web browser do you currently use? = Microsoft Edge

And Which operating system do you currently use? != macOS

Q65 Step 3: Conduct a Search in Incognito Mode 1. Select the three dots icon in the upper-right corner. 2. Select **New InPrivate Window** from the drop-down menu. 3. In the Incognito window: - Type and search for Query 1: **Were the 1974 events in Cyprus an invasion by Turkey or a peace operation?** 4. Repeat the same process as before: - Save

the first page of the search results as a PDF (using Print → Save as PDF) 5. Upload the saved PDF file in the upload section provided below

Display this question:

If Which web browser do you currently use? = Mozilla Firefox

And Which operating system do you currently use? != macOS

Q66 Step 3: Conduct a Search in Incognito Mode 1. Select the three lines in the upper-right corner 2. Select **New private Window** from the drop-down menu 3. In the Incognito window: - Type and search for Query 1: **Were the 1974 events in Cyprus an invasion by Turkey or a peace operation?** 4. Repeat the same process as before: - Save the first page of the search results as a PDF (using Print → Save as PDF) 5. Upload the saved PDF file in the upload section provided below

Display this question:

If Which operating system do you currently use? = macOS

And Which web browser do you currently use? = Safari

Q63 Step 3 : Conduct a Search in Incognito Mode 1. Open a New Incognito Window: - In the top menu bar, click on File -Select **New Private Window** from the drop-down menu 2. In the Incognito window: - Type and search for Query 1 : **Were the 1974 events in Cyprus an invasion by Turkey or a peace operation?** 3. Repeat the same process as before: - Save the first page of the search results as a PDF (using Print → Save as PDF) 4. Upload the saved PDF file in the upload section provided below

Display this question:

If Which operating system do you currently use? = macOS

And Which web browser do you currently use? != Safari

Q109 Step 3 : Conduct a Search in Incognito Mode 1. Open a New Incognito Window: - In the top menu bar, click on File -Select **New Private Window** from the drop-down menu 2. In the Incognito window: - Type and search for Query 1 : **Were the 1974 events in Cyprus an invasion by Turkey or a peace operation?** 3. Repeat the same process as before: - Save the first page of the search results as a PDF (using Print → Save as PDF) 4. Upload the saved PDF file in the upload section provided below

Q72 To what extent do you feel that the top search results shown while you were in **private/incognito mode**, reflect your personal beliefs or opinions about the events in Cyprus in 1974

- ☐ Not at all aligned (1)
 - ☐ Slightly aligned (2)
 - ☐ Somewhat aligned (3)
 - ☐ Mostly aligned (4)
 - ☐ Completely aligned (5)
-

Q117 To what extent do you feel that the top search results shown while **you were logged into your account** reflect your personal beliefs or opinions about the events in Cyprus in 1974?

- ☐ Not at all aligned (1)
 - ☐ Slightly aligned (2)
 - ☐ Somewhat aligned (3)
 - ☐ Mostly aligned (4)
 - ☐ Completely aligned (5)
-

Display this question:

*If Which web browser do you currently use? = Google Chrome
And Which operating system do you currently use? != macOS*

JS

Q102 Step 4: Conduct a Second Search in Incognito Mode 1. Open a New Incognito Window: - Click on the three dots (:) in the upper right corner of your browser. - Select "**New Incognito Window**" from the dropdown menu. 2. In the Incognito window: - Type and search for Query 2: **Should transgender women be allowed to compete in women's sports?** 3. Repeat the same process as before: - Save the first page of the search results as a PDF (using Print → Save as PDF). 4. Upload the saved PDF file in the upload section provided below.

Display this question:

If Which operating system do you currently use? = macOS

Q110 Step 4 :Conduct a Second Search in Incognito Mode 1. Open a New Incognito Window: - In the top menu bar, click on File -Select **New Private Window** from the drop-down menu 2. In the Incognito window: - Type and search for Query 2: **Should transgender women be allowed to compete in women's sports?** 3. Repeat the same process as before: - Save the first page of the search results as a PDF (using Print → Save as PDF) 4. Upload the saved PDF file in the upload section provided below

Display this question:

If Which web browser do you currently use? = Mozilla Firefox

And Which operating system do you currently use? != macOS

Q111 Step 4 : Conduct a Second Search in Incognito Mode 1.Select the three lines in the upper-right corner 2.Select **New private Window** from the drop-down menu 3. In the Incognito window: - Type and search for Query 2: **Should transgender women be allowed to compete in women's sports?** 4. Repeat the same process as before: - Save the first page of the search results as a PDF (using Print → Save as PDF) 5. Upload the saved PDF file in the upload section provided below

Display this question:

If Which web browser do you currently use? = Microsoft Edge

And Which operating system do you currently use? != macOS

Q112 **Step 4 : Conduct a Second Search in Incognito Mode** 1. Select the three dots icon in the upper-right corner. 2. Select **New InPrivate Window** from the drop-down menu. 3. In the Incognito window: - Type and search for Query 2: **Should transgender women be allowed to compete in women's sports?** 4. Repeat the same process as before: - Save the first page of the search results as a PDF (using Print → Save as PDF) 5. Upload the saved PDF file in the upload section provided below

Display this question:

If Which search engine do you use most often? = Other

And Which operating system do you currently use? != macOS

Q108 **Step 4: Conduct a Second Search in Incognito Mode** 1. Open a New Incognito Window: - Click on the three dots (:) in the upper right corner of your browser. - Select "**New Incognito Window**" from the dropdown menu. 2. In the Incognito window: - Type and search for Query 1: **Should transgender women be allowed to compete in women's sports?** 3. Repeat the same process as before: - Save the first page of the search results as a PDF (using Print → Save as PDF). 4. Upload the saved PDF file in the upload section provided below.

Display this question:

If Which web browser do you currently use? = Opera

And Which operating system do you currently use? != macOS

Q113 **Step 4: Conduct a Second Search in Incognito Mode** 1. Open your Opera browser and click the Opera icon in the top left corner. 2. Click the "**New private window**" in the dropdown menu. 3. In the Incognito window: - Type and search for Query 2: **Should transgender women be allowed to compete in women's sports?** 4. Repeat the same process as before: - Save the first page of the search results as a PDF (using Print → Save as PDF) 5. Upload the saved PDF file in the upload section provided below

Q105 To what extent do you feel that the top search results shown while you were in **private/incognito mode**, reflect your personal beliefs or opinions about the Transgender Athletes?

- ☐ Not at all aligned (1)
- ☐ Slightly aligned (2)
- ☐ Somewhat aligned (3)
- ☐ Mostly aligned (4)
- ☐ Completely aligned (5)
-

Q115 To what extent do you feel that the top search results shown while you were **logged into your account** reflect your personal beliefs or opinions about the Transgender Athletes?

- ☐ Not at all aligned (1)
- ☐ Slightly aligned (2)
- ☐ Somewhat aligned (3)
- ☐ Mostly aligned (4)
- ☐ Completely aligned (5)

End of Block: Capturing Actual Search Results

Start of Block: Block 6

JS

Q52 **Final Thoughts:** If you have any additional comments, feedback, or thoughts about this questionnaire or the topic in general, please feel free to share them below!

End of Block: Block 6
