Is Google Neutral?: Unpacking Algorithmic Bias (Shared Google Doc)

[WORKSHOP TEMPLATE]

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Library Workshop [DATE]
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Welcome & Workshop Overview

Learning Outcomes:
Grounding Principles/Shared Agreement
Defining Algorithmic Bias

After reading the definition above of an algorithm, how would you define or describe algorithmic bias?

Opening Poll + Discussion

Poll: To what degree is Google neutral?
Discussion: Google & Neutrality
Discussion: Algorithmic Bias and Everyday Life

Algorithmic Bias in Everyday Life & Society

Video “The Era of Blind Faith in Data Must End” (Cathy O’Neill)
Algorithms of Oppression (Sofiya Umoja Noble)
Video: Introduction to Search Engine Optimization (Digital Garage)
Video: The Social Dilemma: Official Trailer
Video: “How to Find Better Information Online: Click Restraint” (Stanford History Education Group)

Digital Privacy & Personalization: Small Steps for Reducing the “Filter Bubble” Effect

Activity: Google Settings
Other Activities to Try
A Few Privacy Tools

Wrap-Up

So Now What? Taking Action
More Food for Thought
Further Discussion/Questions

Welcome & Workshop Overview

(5 minutes)
Throughout today’s session we’ll have activities and discussion. You can engage throughout our class by adding your thoughts to this Google Doc, and/or by speaking with your microphone.

Learning Outcomes:

● Reflect on the roles of algorithms and algorithmic bias in our everyday lives and more broadly in our society.
● Identify contexts and scenarios in which algorithmic bias may influence the information or the choices presented to you in a given online environment.
● Identify and apply simple strategies for recognizing and counteracting the negative effects of algorithmic bias, including modification of personalization settings, privacy tools, and “click restraint” when reviewing search results.
● Recognize algorithmic bias as a systemic issue that calls for approaching algorithmic awareness and justice as both individual and collective efforts.

Grounding Principles/Shared Agreement

We will touch on some sensitive topics like social inequality and racism during this session. It’s therefore especially important that we all have a shared understanding that we will show mutual respect for one another and cultivate a supportive environment. By participating in this workshop, you agree to honor the guidelines below.

The guidelines below are adapted from the “Guidelines for Dialogue/Community Expectations” from the University of Michigan Program on Intergroup Relations. Available from LSA Inclusive Teaching Initiative, University of Michigan
https://sites.lsa.umich.edu/inclusive-teaching/inclusive-classrooms/discussion-guidelines/

● We will practice mutual respect and listening.
Our primary commitment is to learn from each other. We will practice an appreciation of differences (including in backgrounds, skills, interests, and values). We realize that it is these very differences that will increase our awareness and understanding through this process.

Be mindful of taking up much more space than others. On the same note, empower yourself to speak up when others are dominating the conversation.

If we wish to challenge something that has been said, we will challenge the idea or the practice referred to, not the individual sharing this idea or practice.

Defining Algorithmic Bias

Bias: “a : an inclination of temperament or outlook especially : a personal and sometimes unreasoned judgment : prejudice
“b : an instance of such prejudice
“c : bent, tendency
“d (1) : deviation of the expected value of a statistical estimate from the quantity it estimates (2) : systematic error introduced into sampling or testing by selecting or encouraging one outcome or answer over others”
- Merriam-Webster.com Dictionary


After reading the definition above of an algorithm, how would you define or describe algorithmic bias?
Opening Poll + Discussion

7 minutes

Poll: To what degree is Google neutral?

Please place an X by the category that best describes your view (scale of 1-5).

- 5 - Completely neutral  
- 4 - Mostly neutral  
- 3 - Somewhat neutral  
- 2 - Mostly not neutral  
- 1 - Completely unneutral  
- 0 - Undecided

Discussion: Google & Neutrality

After rating Google’s neutrality in the online poll, please share the reasoning behind your ranking of Google’s neutrality?
Discussion: Algorithmic Bias and Everyday Life

What are some ways that algorithmic bias influences your life, whether large or small?
Video “The Era of Blind Faith in Data Must End” (Cathy O’Neill)

5 minutes
(Watch up to 3:35 mark.)
Did anything from this video surprise you or stand out? Would you add anything to your previous explanation of algorithmic bias?

Algorithms of Oppression (Sofiya Umoja Noble)

5 minutes
First we'll watch this video “Your Search Engine Results Could Be Perpetuating Racism” (Safiya Umoja Noble - Global Thrive) (1:44)

Do Noble’s thoughts on or experiences with search algorithms like Google challenge or affirm any of your own previous views or experiences? How (not)?
Video: Introduction to Search Engine Optimization (Digital Garage)

5 minutes
Has anyone heard of search engine optimization (SEO)? What is it? How does it affect you as an information consumer?
Let’s watch about 1.5 minutes of this video about SEO. As you watch
consider: - What are some key points the speaker makes about SEO?
- Who is the speaker’s intended audience?

You can share key points below, or speak with your microphone.

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Video: The Social Dilemma: Official Trailer
Algorithmic Awareness, Algorithmic Bias, and Social Justice
By Andrea Baer

5 minutes
(Watch up to the 1:25 mark) https://www.youtube.com/watch?v=uaaC57tcci0

Please respond to one or both of the following questions by adding your thoughts below:

● What key points are made here?
● How does this video compare with the previous one?

Video: “How to Find Better Information Online: Click Restraint”
(Stanford History Education Group)

4 minutes
This short video introduces the practice of click restraint, which involves skimming a page of search results before choosing which links to click on. The video stresses that the first results on a search results page aren’t necessarily the most relevant or useful; rather often the first results are at the top because of marketing search engine optimization. Through click restraint, internet
users can evaluate search results more critically and with algorithmic awareness.

Digital Privacy & Personalization: Small Steps for Reducing the “Filter Bubble” Effect

Activity: Google Settings

7 minutes

**Part 1: Google Account Settings:** Look at your university or personal Google account settings. Go to: Manage my Google account>Data and personalization> Manage your data and personalization

**Group discussion:** What options do you have for limiting how much information is stored about you? What information about you does Google have stored?
Part 2: Browser Settings

In the browser of your choice (e.g., Chrome, Firefox, Safari), open the Settings. What options do you have for limiting the information stored about you?

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Other Activities to Try

3 minutes

- Try searching in Google when logged into your Google account. Then try searching Google in incognito mode. Do you notice a difference?
- Do a search in Google and in an alternative search engine like DuckDuckGo. How do the results compare?

A Few Privacy Tools

10 minutes

- Terms of Service; Didn’t Read https://tosdr.org/
- Web browser Mozilla Firefox
- Search engines like DuckDuckGo

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Ad blockers:
- uBlock Origin
- AdBlock Plus
  - "How to Debug Your Content Blocker for Privacy Protection" (Electronic Frontier Foundation)
- Privacy Badger
- More Privacy Tools (Penn State University Libraries)

Advocacy Groups:
- Electronic Frontier Foundation (EFF)
- Electronic Privacy Information Center (EPIC)
- Center for Democracy & Technology (CDT)

Wrap-Up

So Now What? Taking Action

10 minutes
At the beginning of today's session you considered what role algorithms play in your life, whether large or small. Would you add to or modify your earlier thoughts?

What can you do to counteract algorithmic bias?
More Food for Thought

- Check out this TED Talk “The Moral Bias behind Your Search Results” from Andreas Eckstrom. Does this complicate how you think about the concept of algorithmic bias?
- Watch the short video “The Miseducation of Dylann Roof” (Southern Poverty Law Center). What argument is the speaker making? What connections or differences do you see between this video and Sofiya Umoja Noble’s arguments in the introduction to her book Algorithms of Oppression?

More Resources

- Algorithmic Bias & Search Systems LibGuide (Rowan University)
- "Weapons of Math Destruction Outlines Dangers of Relying on Data Analytics."
Algorithmic Awareness, Algorithmic Bias, and Social Justice
By Andrea Baer

(Interview with author and mathematician Cathy O'Neill). All Things Considered, NPR. September 12, 2016.

Further Discussion/Questions
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