The Building Blocks of Personalization: Breaking Down Algorithms & the Attention Economy

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Today's agenda

◉ Why algorithmic literacy?
◉ Context for algorithmic literacy workshop at Penn State Berks
◉ Participate in the #ForYou: Algorithms & the Attention Economy Workshop (abridged)
◉ Questions / discussion

Workshop materials: https://tinyurl.com/LOEX2022-ForYou
Share comments, questions, & observations: https://padlet.com/digitalshred/LOEX2022
1. Why algorithmic literacy?
Why teach about algorithms?

- Essential to understanding our continually evolving information ecosystem
- Privacy literacy adjacent
- This is information literacy!

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You don't have to be an expert or technologist!
2. Workshop context
Penn State Berks Workshop Series

- Privacy Workshop
- Digital Leadership
- Digital Shred
- Digital Wellness
- FYS
- Fake News
  #ForYou

Image courtesy of Unsplash
A note on teaching philosophy

- Active learning
- Metacognitive reflection
- Student-interest driven
- Varied participation methods, anonymous options
- Humility in teaching
3. Abridged workshop
#ForYou: Algorithms & the Attention Economy

Alex Chisholm
First Year Seminar Workshop Series
Thun Library | Penn State Berks

What are we doing today?

- Learn about algorithms & examine how they shape our online experiences through personalization
- Reflect on how our online behavior influences how we encounter, perceive, & evaluate information
- Explore ways we can build algorithmic awareness & make informed, intentional choices about our information consumption

#ForYou Workshop Guide: https://guides.libraries.psu.edu/berks_algorithms
DISCUSSION

Where do you usually seek out information / get your news from?

How do you evaluate the information / news you encounter?

How do algorithms work? What do you already know? Feel free to discuss what you don't know!

Where do you encounter algorithms in real life? Can you list an example?
“Falsehood flies, and truth comes limping after it, so that when men come to be undeceived, it is too late; the jest is over, and the tale hath had its effect.”

-from Jonathan Swift's 1710 essay, “The Art of Political Lying”
"Data Never Sleeps" infographic from DOMO
What is an algorithm?

"[Algorithms]...are mathematical objects. They take a sequence of mathematical operations...and translate them into computer code. They are fed with data from the real world, given an objective and set to work crunching through the calculations to achieve their aim." (Fry, 2018)

See also: (Golbeck, 2016)
What *tasks* can algorithms perform?

**Prioritization**  
making an ordered list

**Classification**  
picking a category

**Association**  
finding links

**Filtering**  
isolating what's important

*(Fry, 2018)*
**Types of algorithms**

**Rule-based algorithms**
Instructions are constructed by a human and are direct & unambiguous. *(Fry, 2018)*

**Machine-learning algorithms**
Fits under the broad umbrella of artificial intelligence. You give the machine data, a goal and feedback when it’s on the right track -- and leave it to work out the best way of achieving the end. *(Fry, 2018)*
"The essential function of recommender systems is mathematically predicting personal preference." (Schrage, 2020)
ACTIVITY

Select a technology platform you frequently use from the list & answer the reflection prompts on the Exploring Personalization Algorithms worksheet. Be prepared to share thoughts with the class!
"...[I]n an information-rich world, the wealth of information means a dearth of something else: a scarcity of whatever it is that information consumes. What information consumes is rather obvious: it consumes the attention of its recipients." (Simon, 1971)

See also: Odell, 2019
Persuasive design

- Infinite scroll & autoplay
- Choice architecture
  - push notifications
  - metrics (ex. likes & retweets)
- Sentiment manipulation
A filter bubble ... refer[s] to a state of intellectual isolation that can result from personalized searches when a website algorithm selectively guesses what information a user would like to see based on information about the user, such as location, past click-behavior and search history.

(Wikipedia)
ACTIVITY

As a group, explore the links on the guide. Discuss the reflection questions and respond on the Padlet.
"Every technology is both a burden and a blessing; not either-or, but this-and-that." -Neil Postman
End of #ForYou workshop
Useful resources

◎ #ForYou Workshop - ACRL Sandbox (with lesson plan and materials)
◎ Background reading / inspiration:
  ○ Hello World: Begin Human in the Age of Algorithms by Hannah Fry
  ○ How to Do Nothing: Resisting the Attention Economy by Jenny Odell
  ○ The Attention Merchants: The Epic Scramble to Get Inside Our Heads by Tim Wu
◎ Penn State Berks Privacy Workshop Series
◎ Digital Shred Privacy Literacy Toolkit
thanks!

ANY QUESTIONS?

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Workshop materials:
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