

The filter bubble app: how can secondary school students become aware of algorithmic filtering?

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Do you recognize
this?

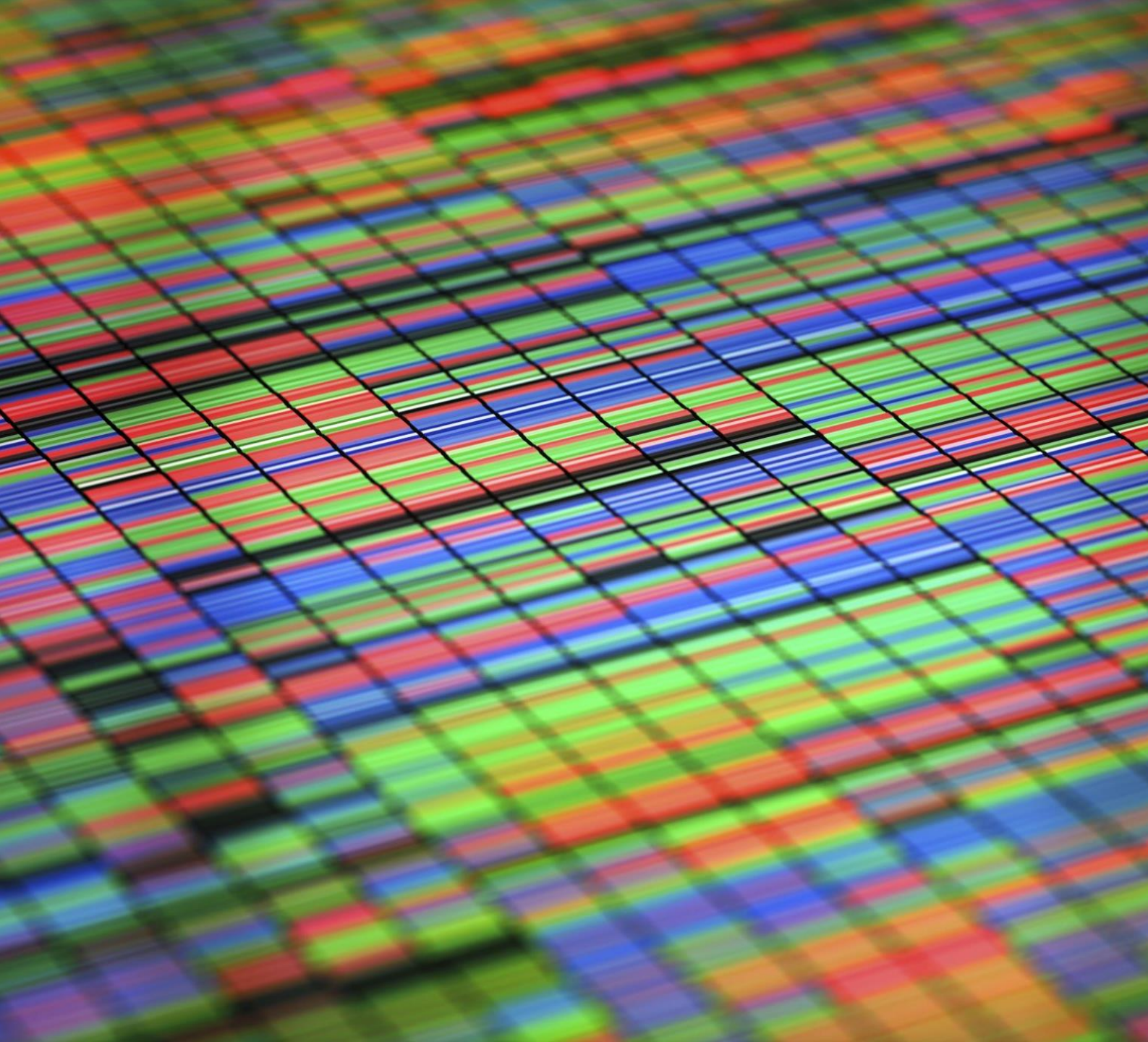
You would like to buy new shoes and after searching for your favorite brand online all of a sudden you are presented with shoes on social media platforms?



Do you recognize
this?

You look up a nice holiday destination and
all of a sudden you are bombarded with
posts about this place on your social
media?

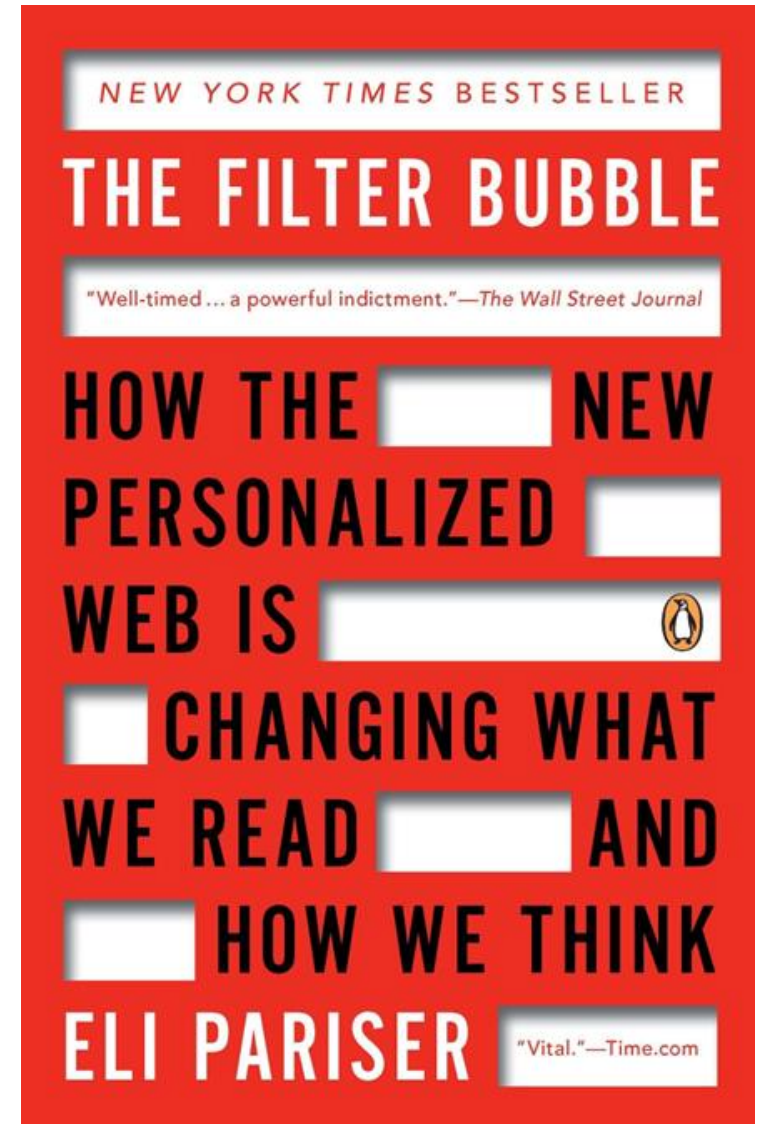




Algorithmic
filtering

Filter bubble

Internet filters look at the things you seem to like – actual things you’ve done, or the things people like you like – and tries to extrapolate. They are prediction engines, constantly creating and refining a theory of who you are and what you’ll do and want next. Together, these engines create a unique universe of information for each of us – what I’ve come to call a filter bubble.
(Pariser, 2011: 9)





Echo chamber



A need for research

- Scientific relevance: New new media ontology (Beer, 2009)
→ reform in critical media literacy
- Societal relevance: Worries of teachers in Utrecht

The filterbubble project



The screenshot shows the website for 'The Filter Bubble Project' at Utrecht University. The header includes the Utrecht University logo, a search bar with 'uu.nl' and a magnifying glass icon, and the language 'Nederlands'. Below the header is a breadcrumb trail: 'UU.nl > Organisation > Development & Education of Youth in Diverse Societies > The Filter Bubble Project'. A horizontal row of five images depicts various scenes of children and young people in educational or social settings. Below this row is a yellow banner with the text 'Development & Education of Youth in Diverse Societies'. A dark navigation bar contains links for 'Research', 'Education', 'Our team', 'Tools', 'News and media', and 'Contact'. On the left side, there is a vertical menu with the same links. The main content area features the title 'The Filter Bubble Project' followed by a paragraph of text and a photograph of three children looking at a smartphone together.

Utrecht University

Search uu.nl

Nederlands

UU.nl > Organisation > Development & Education of Youth in Diverse Societies > The Filter Bubble Project

Development & Education of Youth in Diverse Societies

Research Education Our team Tools News and media Contact

Research
Education
Our team
Tools
News and media
Contact

The Filter Bubble Project

On social media information is filtered and adapted for the individual user making use of algorithms. Algorithms can create unpredictable and invisible boundaries between people, sometimes referred to as 'filter bubbles'. These result in individualised spaces for socialisation and learning that escape the supervision of schools as well as democratic control. Educators worry that the information their students see on social media is one sided, and might have impact upon their opinion formation in undesirable ways.



Key concepts

Before designing an intervention, we should first understand what young people already know about the working of algorithms and what literacy processes they develop in interaction with platforms and their algorithmic functions (Koenig, 2020).

Key concepts

- Algorithmic imagination
- Critical evaluation
- Algorithmic power



‘the way in which people imagine, perceive and experience algorithms and what these imaginations make possible’ (Bucher 2017, p 31).

Algorithmic imagination



Critical evaluation of the influence algorithms over us as individuals, as well as what impact they have on our society

Critical evaluation

Algorithmic power



How users actively influence the algorithmic workings of platforms to engage in conscious, instrumental interactions with algorithms, or in other words, how they 'game the system' (Cotter, 2019)



Methods

- Design based research project
- Sample: 18 secondary school students
- Duo interviews
 - Walk through exercise
 - Vignette



Results – Algorithmic imagination

Learning from experience:

‘Ehh, for example, if you like a video about Israel or Palestine, you immediately get a whole ‘For You Page’ with Israel and Palestine.’

Algorithmic imagination

Doubts about algorithmic filtering:

“Ehh, people who ehh, mostly support (my opinion), that's what I encounter most, but, I think that is because, that's more what I want to see, I don't know why I only encounter that.”





Algorithmic imagination

Algorithmic imagination is situational:

- Perception that all users see the same online content
- No recognition of an echo-chamber
- Perception that content online is “what all people think”

Interviewer: But do you ever get messages from people who are more for Israel, do you sometimes see that too?

Muzna: No, because not much happens in Israel.



Critical evaluation

“Yes, I find it (algorithmic filtering by the platform) useful. Now I do not have to put effort in looking things up myself.”

Algorithmic power



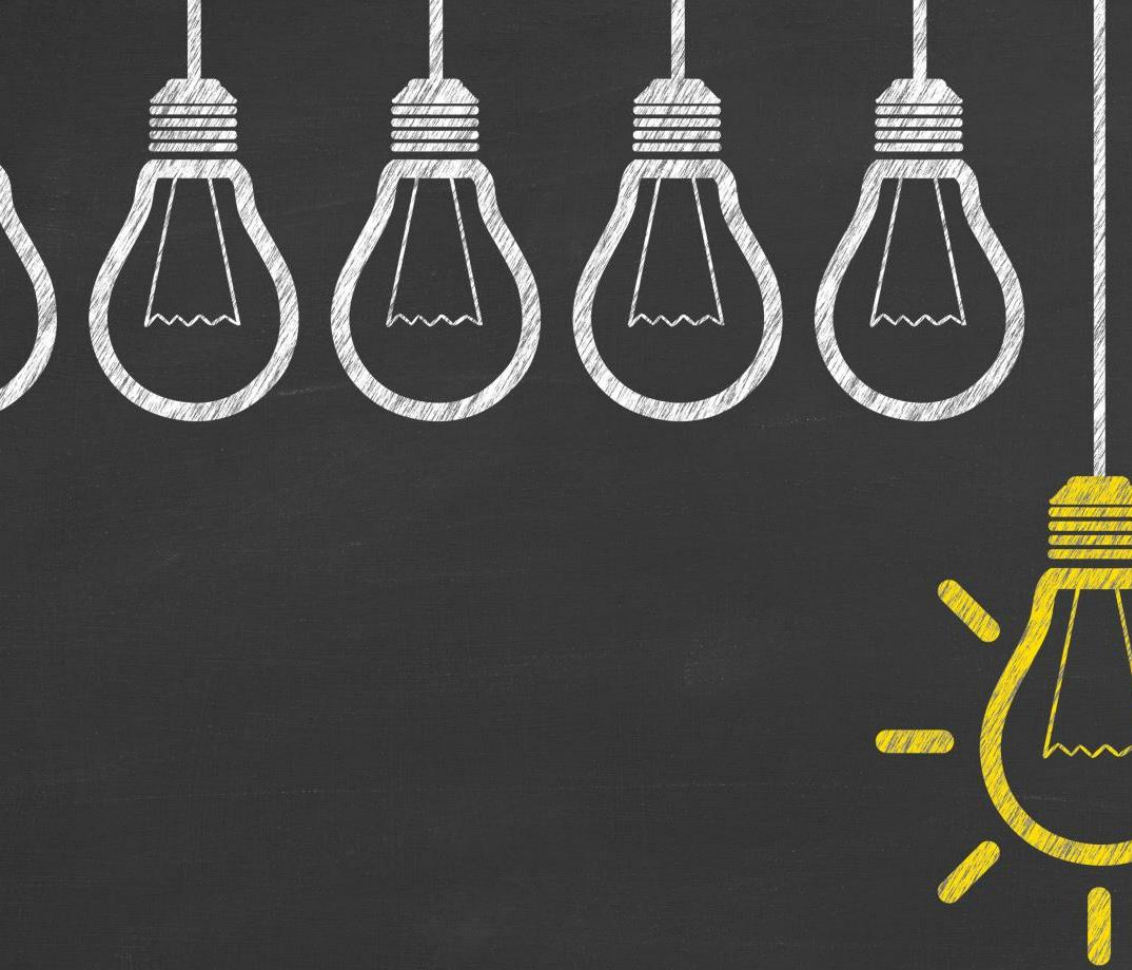
'I would not like to change it (the algorithm) because I just have a sort of power to change it by 'liking' things, so... '.



Discussion

- Imagination is limited
 - Experiential
 - Situational
- Critical evaluation: are youth in control?
 - A result of limited understanding?
 - A result of the deliberate design by platform developers to create a sense of agency/power?

What is the influence on algorithmic awareness of growing up with a 'for you' page?



Implications

- Experiential knowledge is not enough →
 - Learning how algorithmic filtering works (up to some extent)
 - Critically analyzing interaction with the system
 - Considering societal consequences
 - Gaining agency/power through knowing how to act



**Utrecht
University**

Sharing science,
shaping tomorrow

For discussion:



- Do you think there is a difference between youth's awareness of algorithmic filtering and other age categories?
- What do you recognize yourselves when hearing about youth's algorithmic imagination, critical evaluation and algorithmic power?



Research questions:

- Are secondary school students aware of the algorithmic workings of their social media apps and how do they imagine such workings? (algorithmic imagination)
- How do they evaluate and reflect upon the (ethical) effects of such algorithmic workings? (critical evaluation).
- What do they do to influence, resist or work around such algorithmic workings? (algorithmic power)