

Accountability in AI:

Recommender Systems

Engagement and the Ethics of Personalization



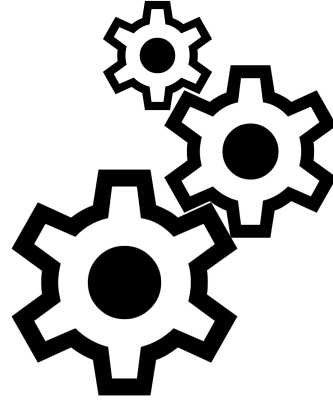




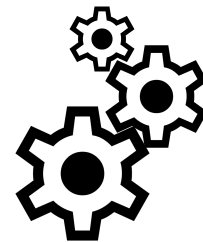
Netflix offers 10,000 movies: Which one should you watch tonight?



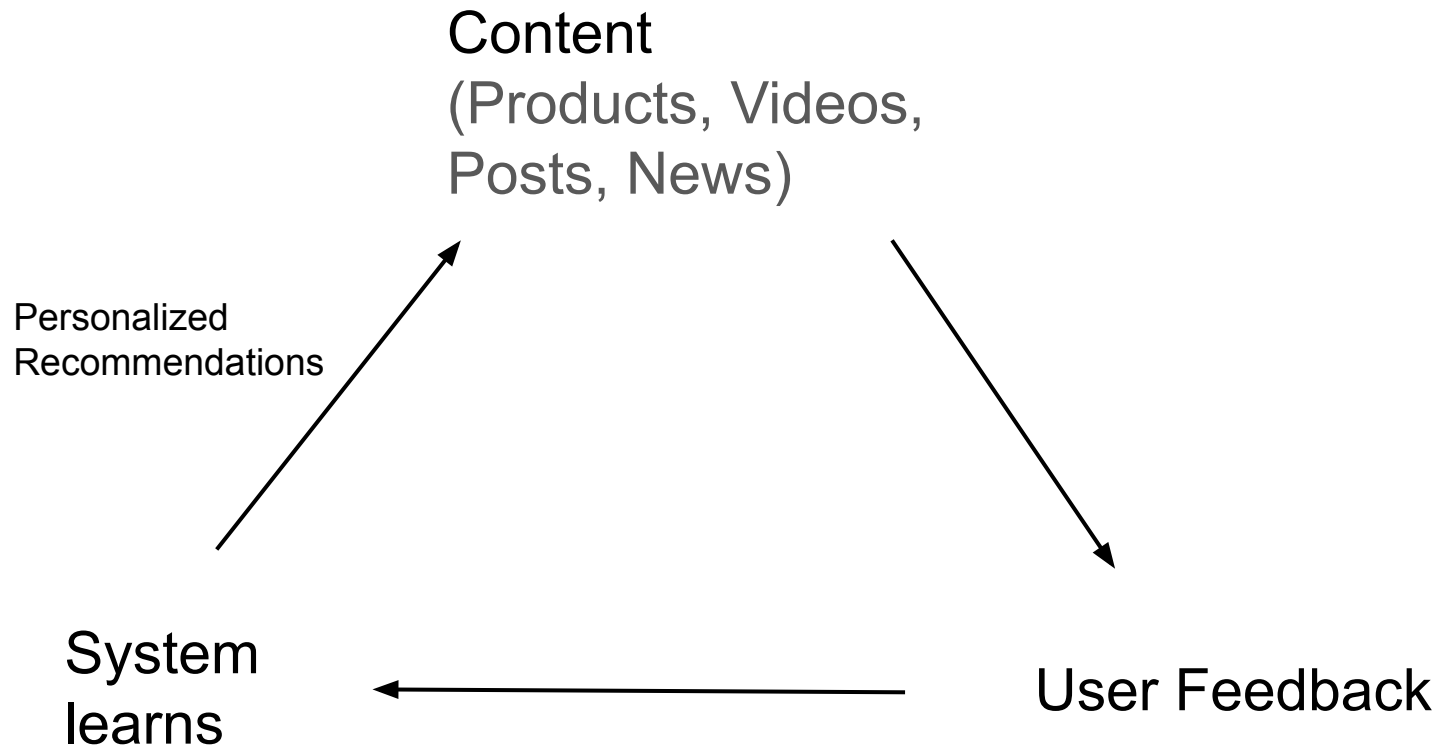
Search



Recommender
System



Recommender
System



Can't be tracked



Truth

Quality

Well
being

Interest



Can be tracked

Clicks

Watchtime

Likes

Scroll depth

Target Metric **vs** Proxy Metric

Sometimes aligned

Sometimes different

When a measure becomes a **target**, it ceases to be a **good measure**.

- Goodhart's law

Studie: Mehr als 100.000 Teenager süchtig nach Social Media

WhatsApp, Instagram und Snapchat können süchtig machen – das ist zumindest das Ergebnis einer Forsa-Studie aus dem Jahr 2018 im Auftrag der Krankenkasse DAK. 2,6 Prozent erfüllen demnach die Kriterien. Das Suchtrisiko wurde erstmals in einer repräsentativen Untersuchung mit dem Deutschen Zentrum für Suchtfragen am Universitätsklinikum Hamburg-Eppendorf (UKE) analysiert.

Studie: Mehr als 100.000 Teenager süchtig nach Social Media

WhatsApp, Insta
2018 im Auftrag
repräsentativen
analysiert.

Einfluss auf die Gesellschaft

Radikal dank Facebook

Scheint es nur so, als ob derzeit immer mehr Menschen immer radikalere Positionen vertreten - oder ist es wirklich so? Aktuelle Studien legen nahe: Das Netz fördert gesellschaftliche Extreme.

Von Christian Stöcker

25.01.2016, 14.17 Uhr

Studie: Mehr als 100.000 Teenager süchtig nach Social Media

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Von Christian
25.01.2016, 1

DAK-Studie zu Online-Nutzung

Ein Viertel der jungen Menschen hat ein Medienproblem

Stand: 12.03.2025 • 14:21 Uhr

Stundenlang zocken, Videos auf TikTok schauen oder durch Instagram scrollen - mehr als eine Million Kinder und Jugendliche haben laut einer DAK-Studie einen riskanten oder krankhaften Medienkonsum. Experten sind alarmiert.

Ethical Framework

I / IV

Autonomy

Are users making informed and voluntary choices?

II / IV

Well-Being

Does the system improve the life of the user?

III / IV

Epistemic Integrity

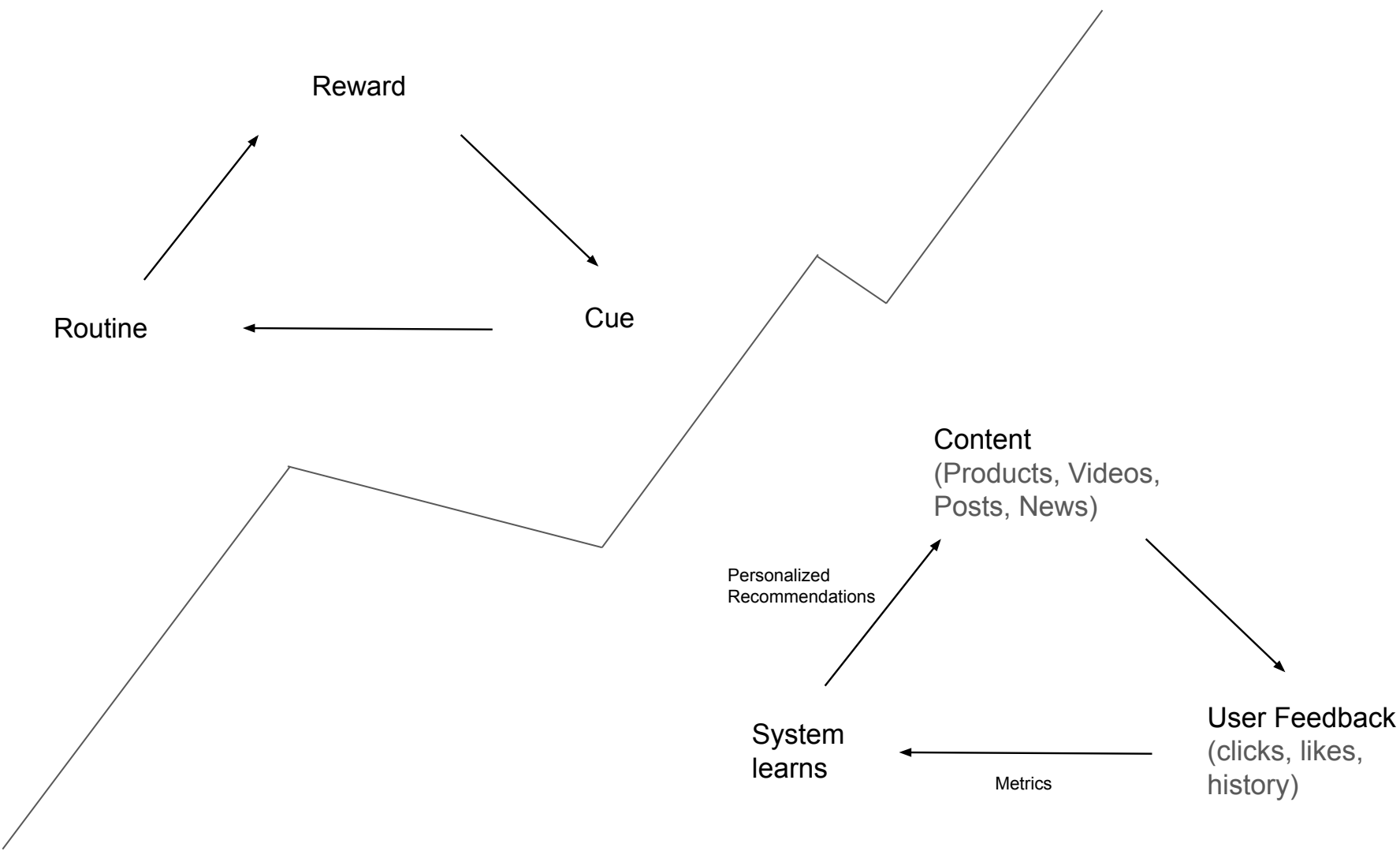
Does the system support an informed understanding of reality?

IV / IV

Accountability

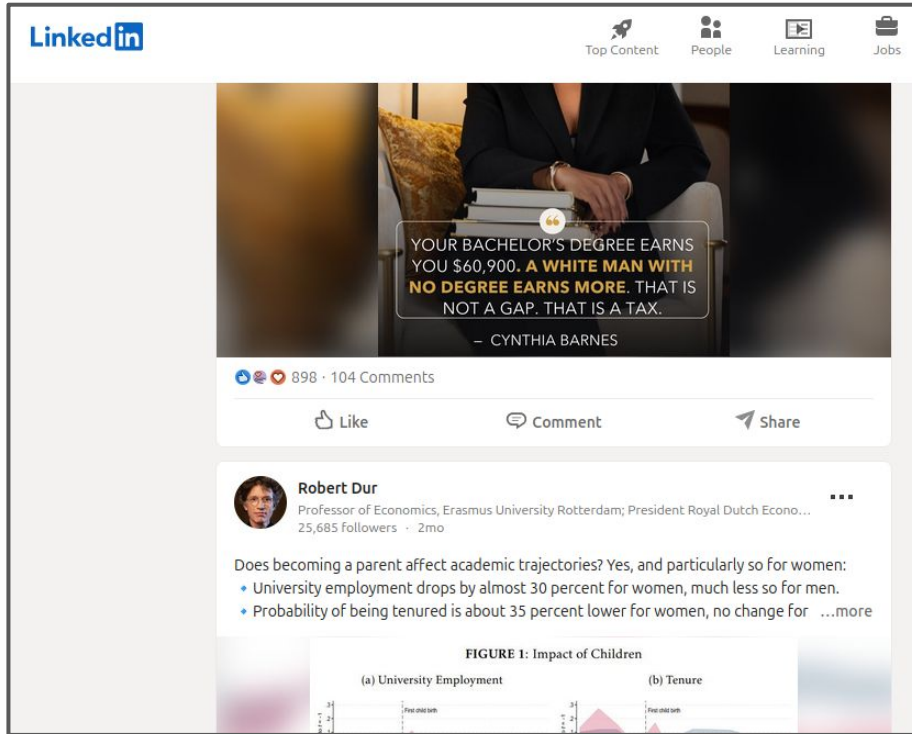
Who is responsible when harm occurs?

Habit Formation and Autonomy

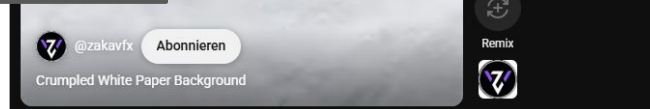


Is this inherently an issue?

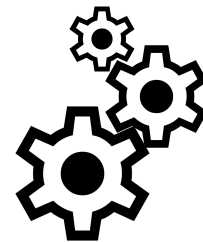
Frictionless design



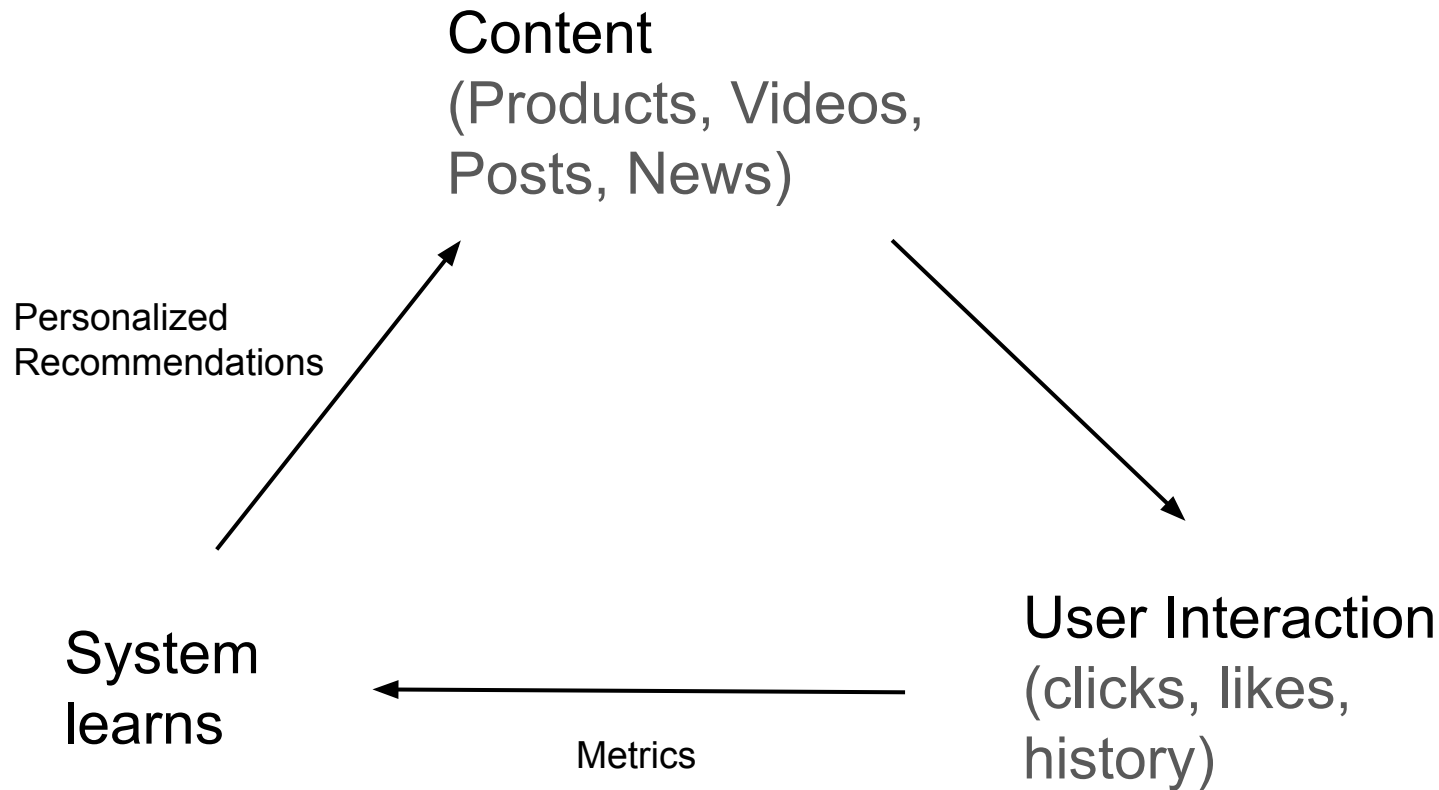
Autoplay aktiviert

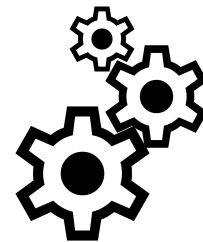


Shared Information Environment

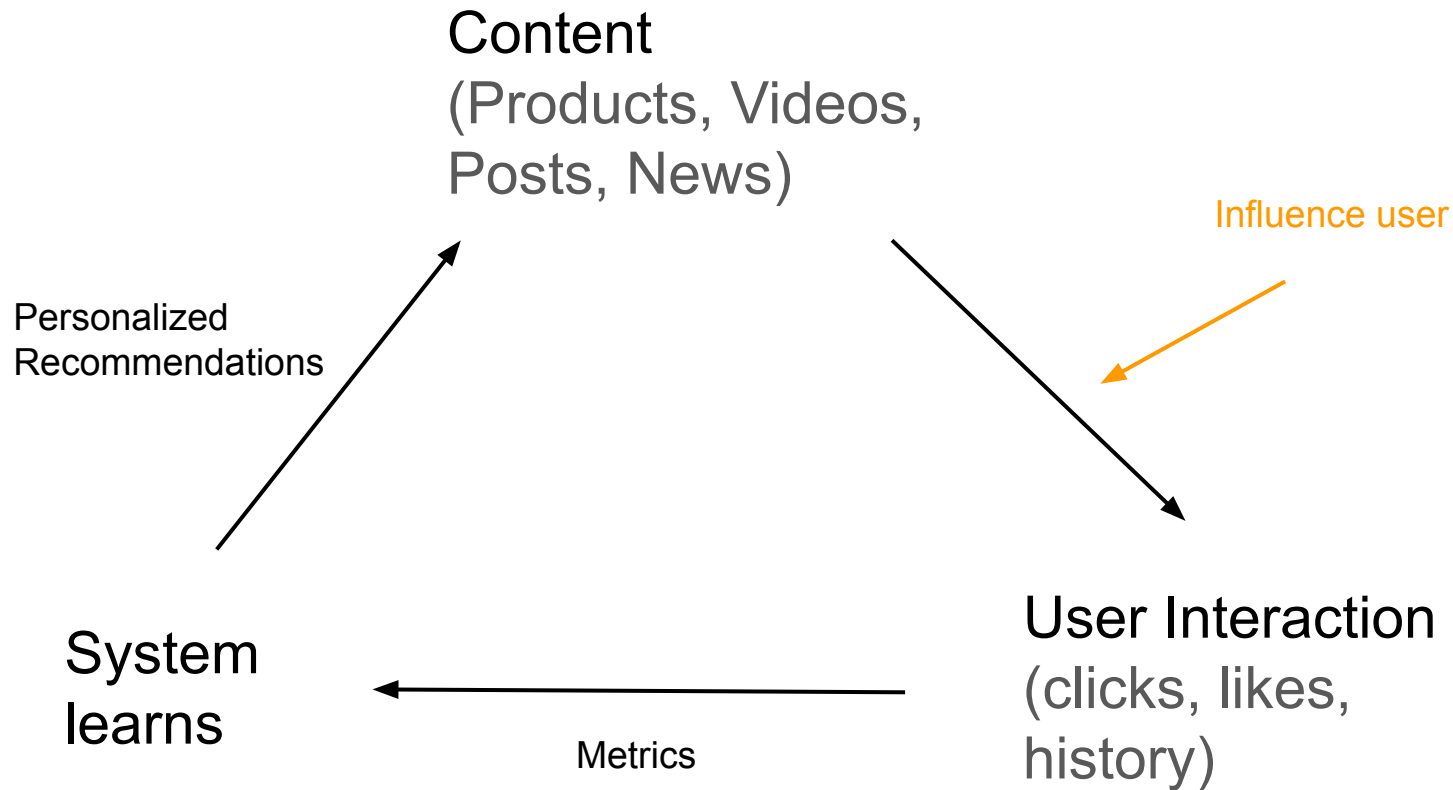


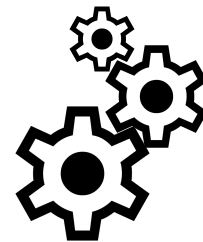
Recommender
System



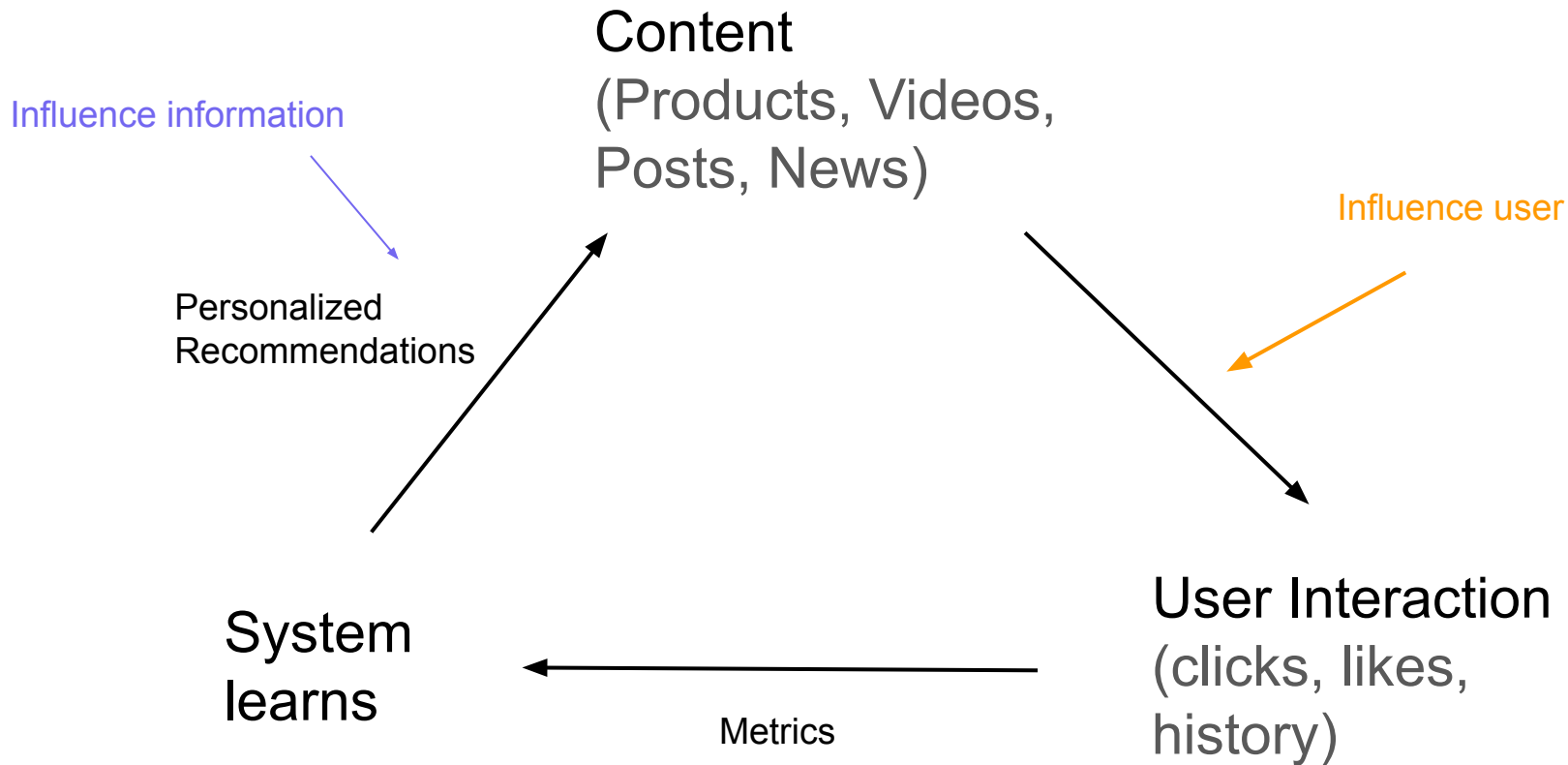


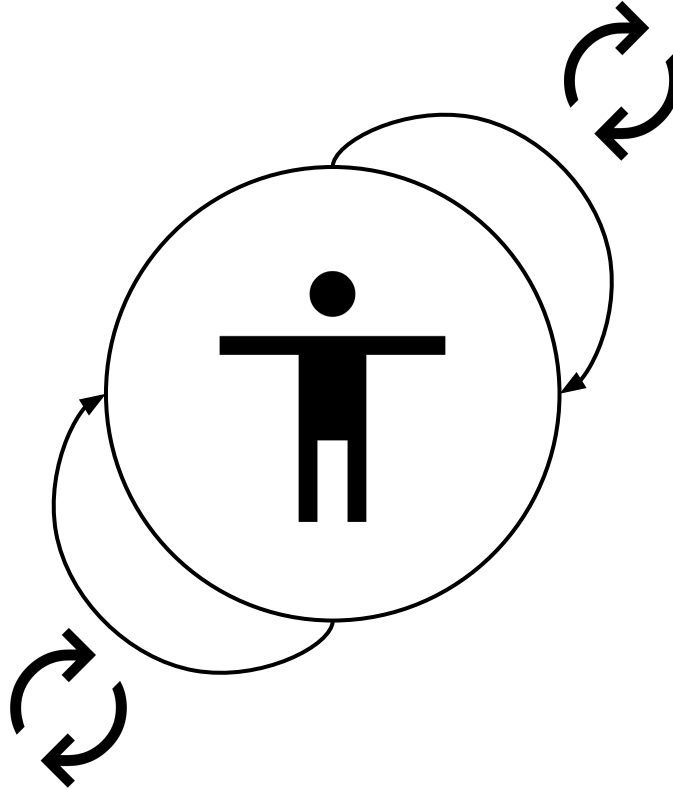
Recommender
System



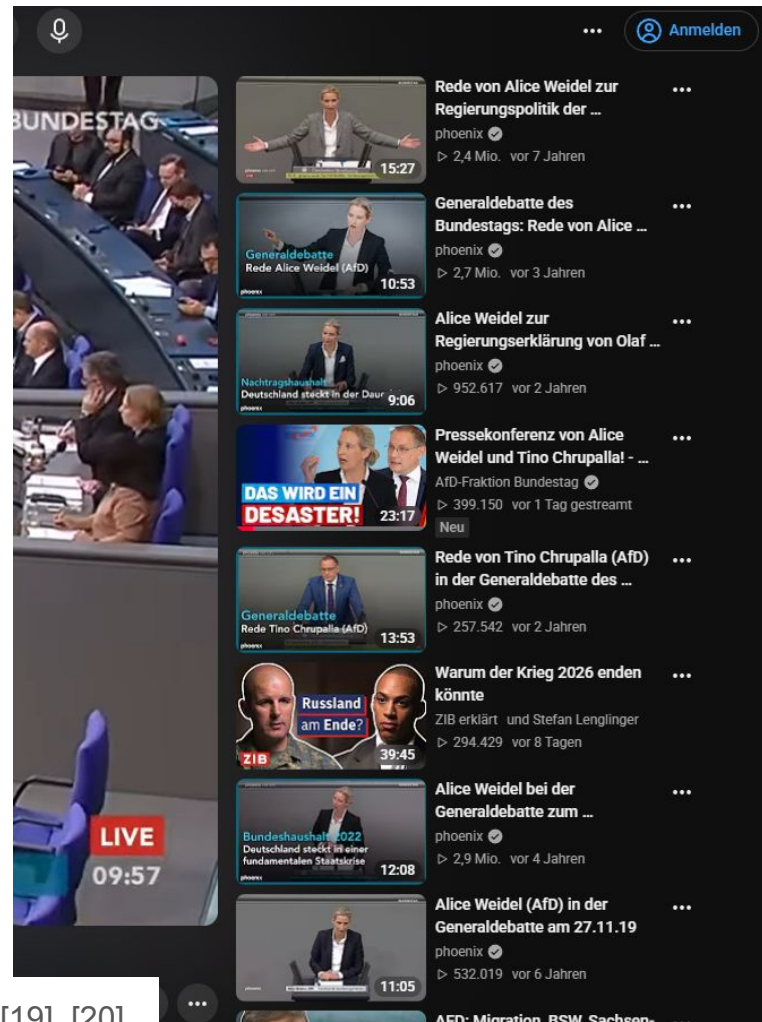


Recommender
System

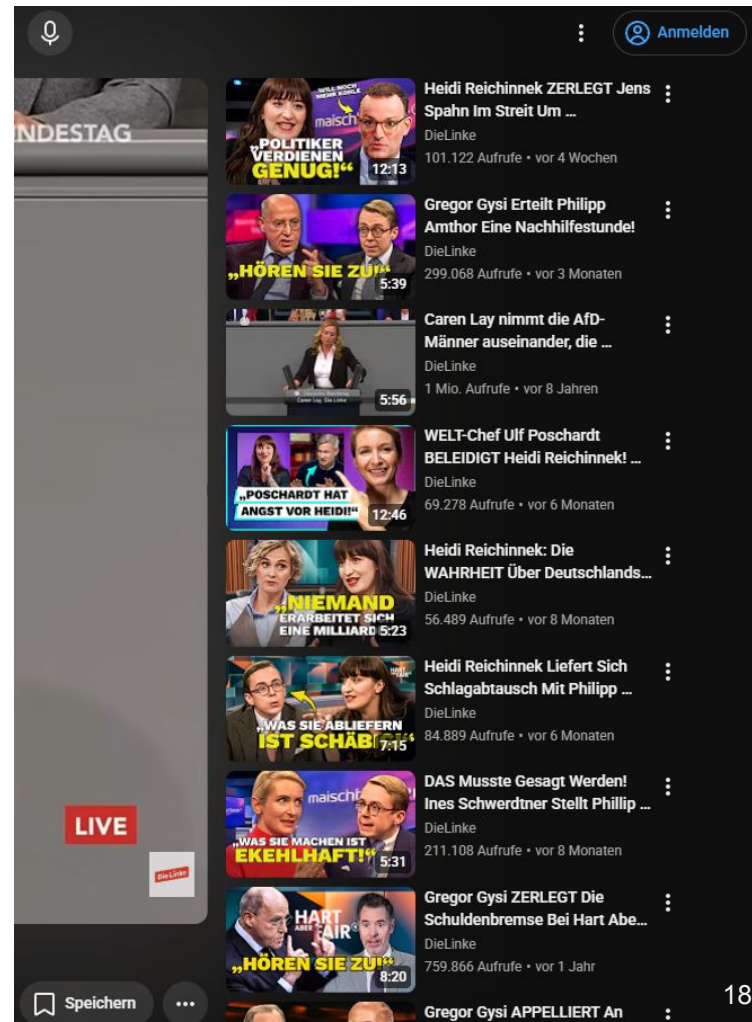




Is this inherently an issue?



← →
< 3 min



Recommender systems are needed to use the modern internet, but there are also **tensions** with certain **ethical concepts**.

Can we **design** different recommender systems?

Optimize for Long-Term Human Values

What are we optimizing for?

Explore objectives beyond
pure engagement.

Goal: Make value choices
transparent and intentional
rather than implicitly optimizing
engagement.

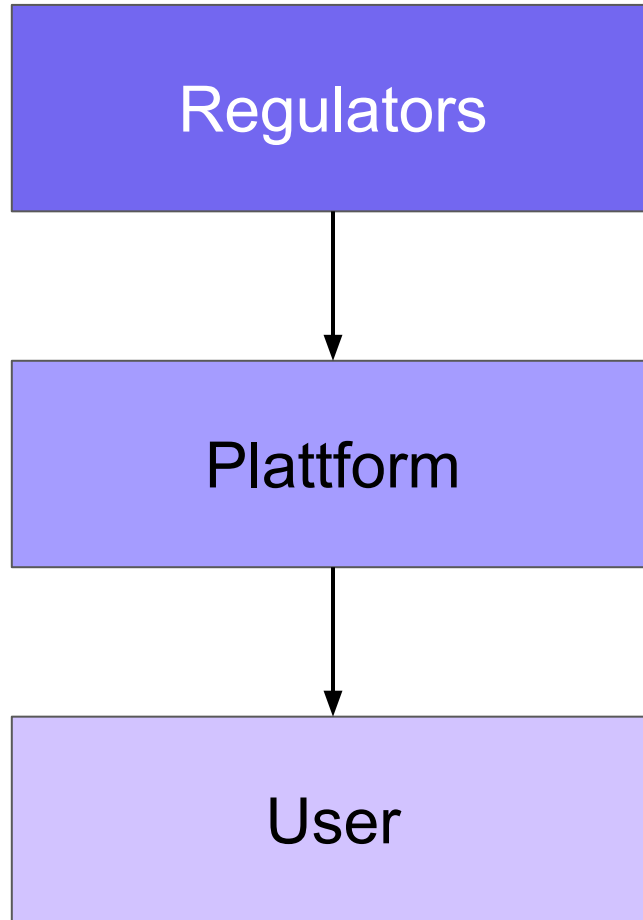
Give Users Meaningful Control

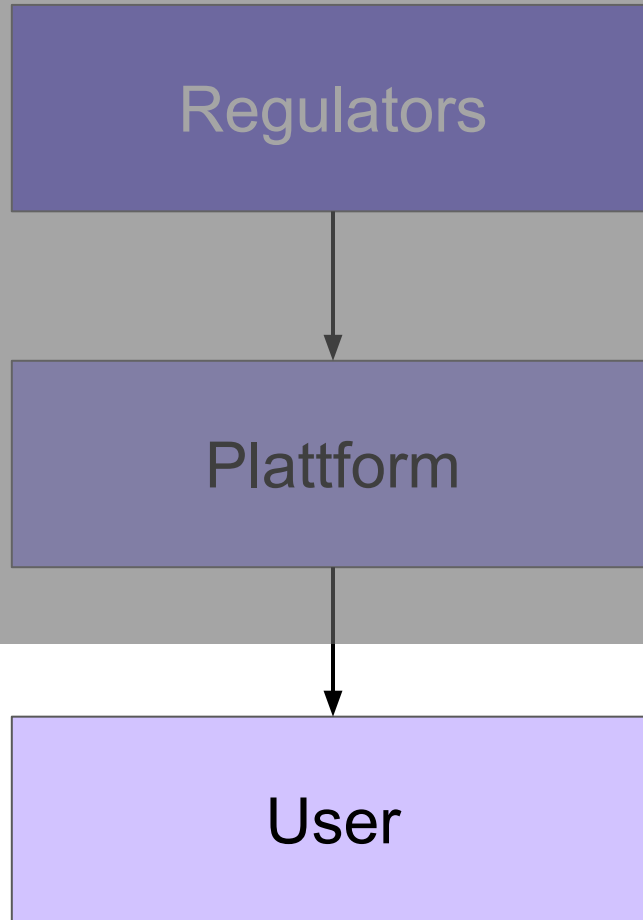
Personalization should be
adjustable, not invisible.

Goal: If value conflicts cannot
be resolved globally, perhaps
users should participate in the
optimization process.

Recommender systems are needed to use the modern internet, but there are also **tensions** with certain **ethical concepts**.

Who should be responsible for deciding which **trade-offs** a recommender system should make?





Regulators

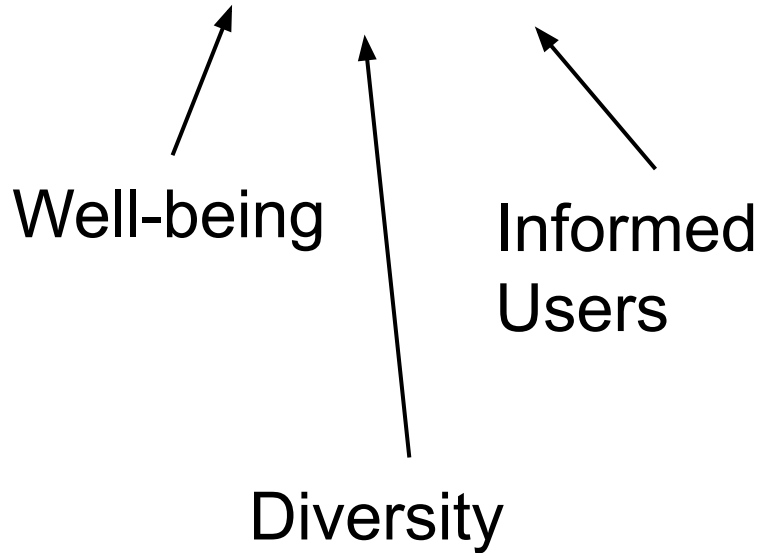
```
graph TD; Regulators --> Platform; Platform --> User;
```

A vertical flowchart with three rectangular boxes. The top box is dark purple and contains the text 'Regulators'. A black arrow points down from the bottom center of this box to the top center of the middle box. The middle box is light blue and contains the text 'Plattform'. Another black arrow points down from the bottom center of this box to the top center of the bottom box. The bottom box is a medium purple and contains the text 'User'.

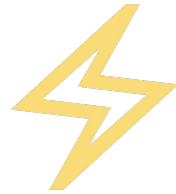
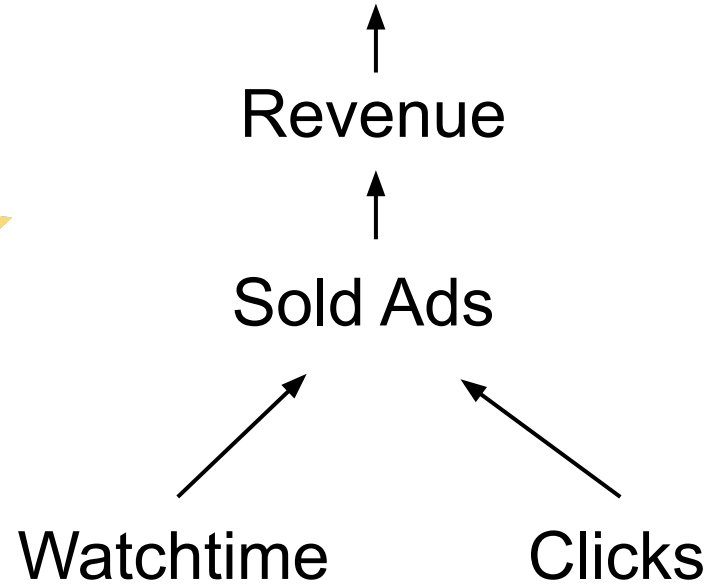
Plattform

User

Social Goals



Platform Goals



Regulators

```
graph TD; Regulators[Regulators] --> Platform[Platform]; Platform --> User[User];
```

A vertical flowchart with three rectangular boxes. The top box is blue with the text 'Regulators' in white. A black arrow points down from the bottom of this box to the top of the middle box. The middle box is light purple with the text 'Plattform' in dark grey. Another black arrow points down from the bottom of the middle box to the top of the bottom box. The bottom box is light purple with the text 'User' in dark grey. The background is white for the top half and grey for the bottom half.

Plattform

User

Article 27

Recommender system transparency

1. Providers of online platforms that use recommender systems shall set out in their terms and conditions, in plain and intelligible language, the main parameters used in their recommender systems, as well as any options for the recipients of the service to modify or influence those main parameters.

Article 34

Risk assessment

1. Providers of very large online platforms and of very large online search engines shall diligently identify, analyse and assess any systemic risks in the Union stemming from the design or functioning of their service and its related systems, including algorithmic systems, or from the use made of their services.

Article 38

Recommender systems

In addition to the requirements set out in Article 27, providers of very large online platforms and of very large online search engines that use recommender systems shall provide at least one option for each of their recommender systems which is not based on profiling as defined in Article 4, point (4), of Regulation (EU) 2016/679.

The impact of recommender systems depends on what we **optimize** for.

1. Should recommender systems optimize for what users **want**, or for what **is good** for them?
 - Who should decide what a "good" recommendation is?
 - Could there be hidden objectives that users do not fully understand or agree with?
2. Would you be willing to receive **less personalized** recommendations?
3. Should recommender systems be responsible for the **collective effects** they create, even if each individual recommendation seems **harmless**?

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