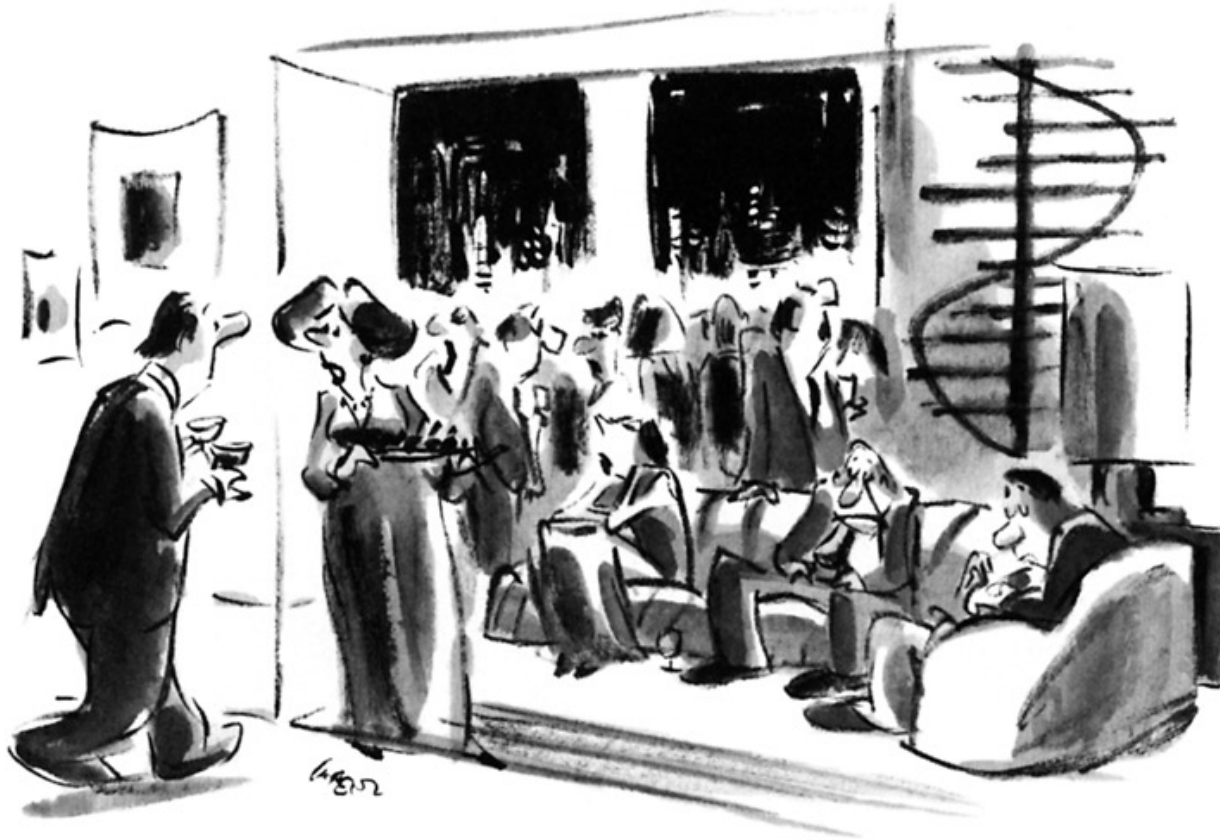


Robin Burke  
University of Colorado, Boulder



# Providers as Collaborators in Recommendation



*"Oh, Lord! We forgot to invite any content providers."*

© The New Yorker collection. All rights reserved.  
From *The New Yorker Book of Technology Cartoons*.

# Why are providers important?

(If you have to ask)

The widening price gap between mined and lab diamonds

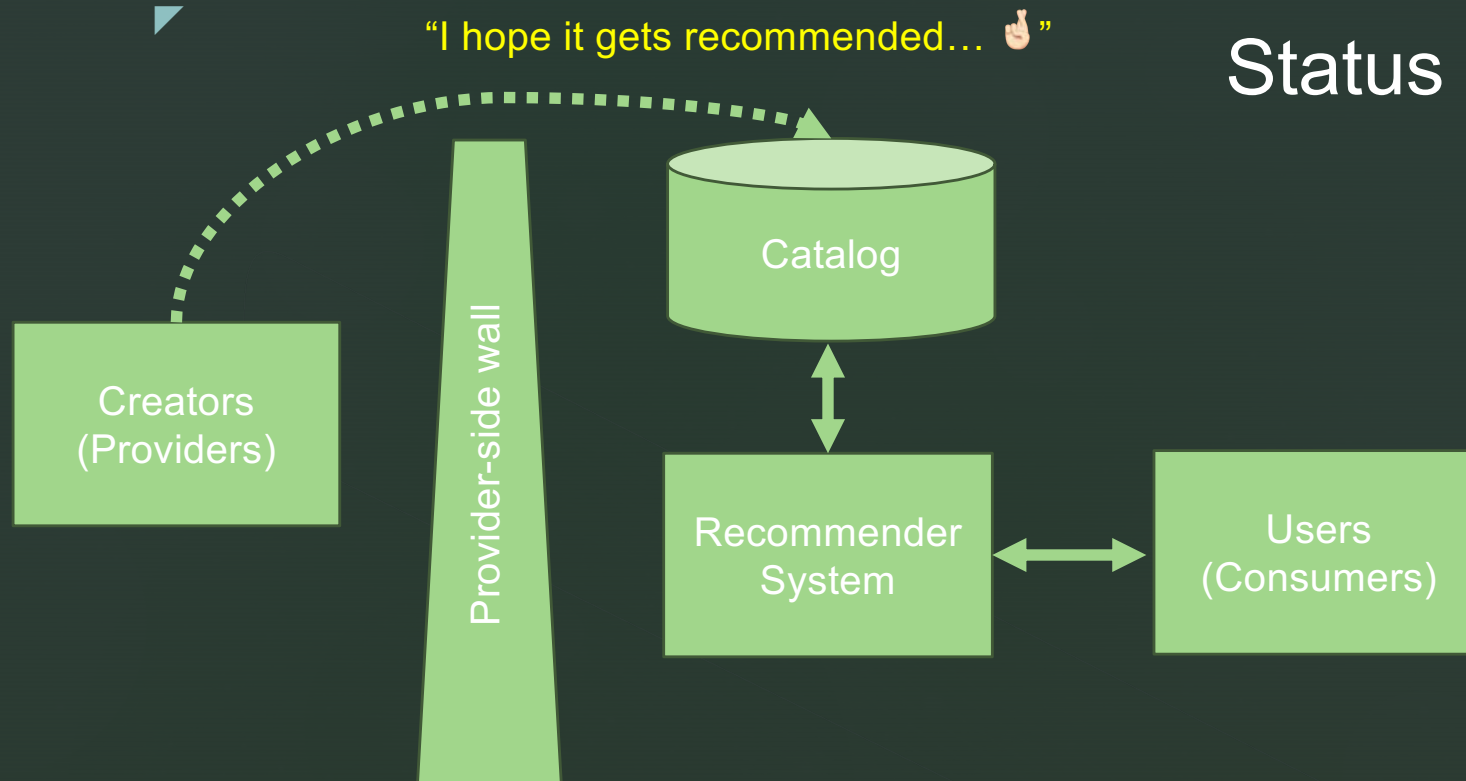
1 carat diamonds, retail price in USD



All diamonds are generic, round in shape, very slightly included in clarity, near-colorless, and very good to ideal cut.

Source: [Paul Zimmisky](#)


# Status Quo



# Why does this wall exist?

- Adversarial issues
  - Creator **manipulation** / **deception** is real (see history of early Web search)
- Platforms typically want providers to **pay** for first-class treatment
  - rather than making it the default
- There's an rhetorical frame that recommendation is **all** about the "**end-user experience**"
  - even though that doesn't match reality

We are partly responsible for this myth



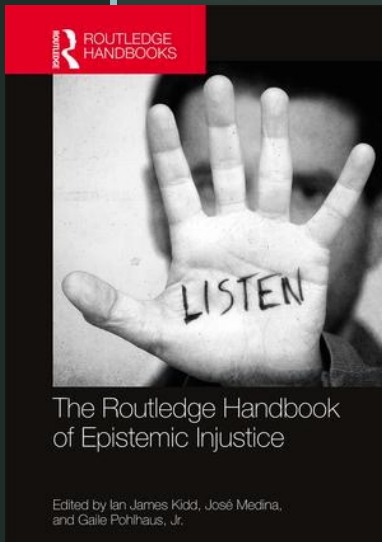
# The wall doesn't have to exist

- Consider Google Ad Words
  - Extensive provider-side **interface**
  - **Visibility** into the performance of ads
  - How often they are shown, to whom, etc.
- **Why** is this?
  - Ad Words algorithm is known to be **incentive-compatible**
    - It **costs** the provider if they are wrong
  - Advertisers are the **customers**
  - Not beholden to the **user experience myth**



<https://ads.google.com/>

# Epistemic Injustice



- “**Epistemic injustice** is injustice related to knowledge. It includes **exclusion** and silencing; systematic distortion or misrepresentation of one's meanings or **contributions**; undervaluing of one's status or **standing in communicative practices**; unfair distinctions in authority; and unwarranted distrust.” (Wikipedia)
- Coined by feminist philosopher Miranda Fricker, 1999

# Testimonial Injustice



- Unfairness in which the speaker is **not believed** or not allowed to enter into the **conversation**
  - The harm of **not having a voice** and / or an ability to assert truth
  - Example: women's claims of sexual harassment being downplayed or ignored
- In recommender systems,
  - providers do not have a way to assert their truth about **what their content is about**
    - forced to resort to work-arounds
  - we see this frustration expressed by **many creators** in HCI studies

[https://www.washingtonpost.com/lifestyle/style/believe-women-was-a-slogan-believe-all-women-is-a-strawman/2020/05/11/6a3ff590-9314-11ea-9f5e-56d8239bf9ad\\_story.html](https://www.washingtonpost.com/lifestyle/style/believe-women-was-a-slogan-believe-all-women-is-a-strawman/2020/05/11/6a3ff590-9314-11ea-9f5e-56d8239bf9ad_story.html)

# Hermeneutical Injustice



- Unfairness in which an individual lacks the **interpretive resources** to make sense of their situation
  - The harm of not having a way to **gather information** or talk about their situation
  - Example: when **#MeToo** hashtag became a way to talk about sexual harassment, its pervasiveness became better understood.
- In recommender systems
  - Providers lack the ability to understand **how the recommender is treating their content**
  - Impossible to know why some posts “go viral” and others don’t

[https://www.washingtonpost.com/lifestyle/style/believe-women-was-a-slogan-believe-all-women-is-a-strawman/2020/05/11/6a3ff590-9314-11ea-9f5e-56d8239bf9ad\\_story.html](https://www.washingtonpost.com/lifestyle/style/believe-women-was-a-slogan-believe-all-women-is-a-strawman/2020/05/11/6a3ff590-9314-11ea-9f5e-56d8239bf9ad_story.html)

So?

Provider-side wall

- The provider-side wall is a form of **epistemic injustice**
- If we care about **fairness** in recommender systems
  - then we should care about the **exclusion of providers** and their enforced ignorance of recommender systems operations
- **Adversarial**, blah, blah, blah
  - Yes, and that becomes a **key problem** to solve
  - Rather than an excuse to take an easy way out



# Collaborate with providers instead!

- What does that look like?
- Talk to providers about their **experiences**
- Build provider-side **interfaces**
- Build **robust multistakeholder** algorithms

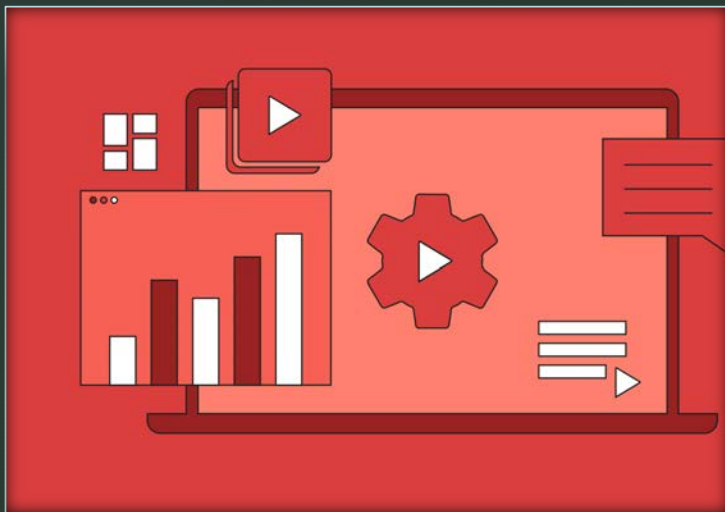
# Talk to providers



- What do they **want to know** about how their content is treated, their audiences / customers?
- Don't assume that they want everything to be shown to everyone
  - **Ask better questions**

<https://www.justinmind.com/wp-content/webp-express/webp-images/uploads/2020/07/user-centered-design.png.webp>

# Provider-side interfaces



- Study **existing platforms** (Ad Words, but also social media, Amazon marketplaces, etc.)
  - What do they **show / hide**?
  - How do providers **use** these interfaces?
- Think about transparency techniques
  - **visualization**
  - **explanations**

<https://media.sproutsocial.com/uploads/2022/07/YouTube-Creator-Studio.svg>

# Multistakeholder algorithms



- How to build algorithms that are **robust**?
- \$\$\$: We know that **Ad Words** works.
  - Can an internal (token) currency work?
- Prediction markets: Provider-side input is (kind of) a prediction on who will click / buy.
  - Can robust ML results in **prediction markets** be applied?
- Name and shame: **Publicize creator inputs**
  - Is that enough to keep inputs honest?

<https://www.artsper.com/us/contemporary-artworks/painting/2150832/fight-club-mechamovie>



# But

- 🤔 I really don't know how to do this
- 🗣️ I want to hear from you all
- 🙏 Thanks!

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