Anatomizing Intermediaries
James Grimmelmann
Silicon Flatirons Intermediaries Roundtable
University of Colorado Denver
19 November 2009
What makes different intermediaries different?

- Perhaps “intermediaries” is a useful category.
- But we should also be careful not to overemphasize their commonalities.
- I’ll spend the next few minutes anatomizing online intermediaries—asking what makes them distinctive.
- Following Paul’s request, I’ll focus on Facebook privacy and YouTube copyright issues.
Four broad headings

I. The kinds of risks they pose
II. How much power they possess
III. How well market forces can address those risks
IV. How well regulation can address those risks
I. Risks
Unfair Terms

- An intermediary with undue power might be able to dictate unfair terms to its users.
  - This includes excessive pricing.
  - And oppressive non-economic terms, like copyright.
  - Note the digital-divide issues with the poorest users.
- Facebook has had regular blow-ups about its user agreement; YouTube has had less trouble here.
Mishandling data

- An intermediary trusted with user data can abuse it.
  - It could lose data (as in the Microsoft/Sidekick case).
  - It could alter data (think about health records).
  - It could misroute data (e.g. credit-card breaches).
- Facebook’s privacy issues are all about this problem; YouTube removes audio tracks from “infringing” videos.
Bias

- An intermediary that offers a service to many users could unfairly favor some of those users over others.
  - E.g. eHarmony refused to make same-sex matches.
  - Or a virtual world could nerf a character class.
  - Some bias is essential—think of a spam filter.
- Facebook’s complexity leads to regular cries of bias; YouTube sells “featured” placement.
Harmful user conduct

- Intermediaries amplify their users’ ability to cause harm.
- AutoAdmit gave haters a platform.
- Google helps you find bomb-making instructions.
- The Pirate Bay undermines copyright
- And so on.
- Some of these harms are in the eye of the beholder.
No service

- An intermediary could refuse to provide its service at all.
- We shouldn’t forget that their work is mostly good!
- Overregulation is also a risky outcome.
- Orderly, well-warned shutdowns are vastly preferable to simply turning the servers off one night.
- Facebook and YouTube are both doing okay, but remember the Geocities and Weblogs.com shutdowns.
II. Power
Sensitivity

- How sensitive or important is the data it handles?
  - World of Warcraft is pretty low down on the scale.
  - And electronic medical records are pretty high up.
  - Facebook handles a lot of personal information; YouTube videos are less worrisome.
Visibility

- How visible are your activities to the intermediary?
  - The more it understands, the worse it can eff you up.
- Your searches are very visible to Google.
- Your ISP has to do more work to tell what you’re up to.
- Facebook and YouTube are both very able to tell what you’re doing, although Facebook actions are often socially coded and video is harder to scan than text.
User interactions

- If so, bias issues are all but inevitable.
- And also possibly insoluble, even in theory.
- Facebook has these issues in spades, since they site is built around social interactions.
- YouTube does have its share of “worst video ever,” but it mostly just serves up videos.
Public and private

- Intermediaries that create “private” spaces raise the danger that information will leak outwards.
  - Think of teachers who’re fired over Facebook posts.
- Whereas intermediaries that are “public” more easily cause harm to third parties.
  - Think of the Star Wars Kid video.
III. Markets
Ex ante choice

- The more choices users have up front, the easier it is for them to avoid poorly behaved intermediaries.

- But query how easy it is for them to evaluate the level of quality of service before they start using it.

- Search engines are easy to check out; enterprise-level database systems are hard.

- Facebook and YouTube are both competing in very crowded spaces here.
Ex post choice

- How easy is it for users to change horses midstream?
  - Specific investments make it hard to switch.
  - So does difficulty in getting your data out.
  - As do network effects
- Facebook is more locked-in than YouTube, since your social network is so heavily embedded in the site.
Necessity

- How well can users get by without the intermediary?
  - ISPs are highly necessary
  - Online maps are useful, but less essential
  - 4chan is many things, but “necessary” isn’t one
  - Facebook and YouTube are at the less necessary end, although video hosting is becoming a building block
Platforms

- Is the intermediary a platform?
  - That is, do many other intermediaries depend on its network layer, or on its APIs, or on its business?
  - The deeper you are, the further your tentacles of spread, and the more likely that you have users who don’t realize how dependent they are on you.
- Facebook is making a big platform play with its APIs; YouTube took off because of its easy embedding.
IV. Regulation
Transparency

- How easy is it to tell what the intermediary is doing?
  - Services are less transparent than local software.
  - Closed source is less transparent than open.
  - Secret acts are less transparent than disclosed ones.
- Facebook’s algorithms are inscrutable—no one knows how it picks what stories to put in your News Feed.
- YouTube search is tricky, but hosting is very visible.
Complexity

- How complex are the intermediary’s operations? You can’t regulate what you can’t understand.
- Storage and hosting are pretty clear-cut.
- An ISP’s job—slinging packets around—sounds simple, but has hidden technical dimensions.
- Search engines can be remarkably intricate.
- A regulator could never fully specify how Facebook should work, but YouTube has a simpler model.
Scale

- The more users and data an intermediary works with, the greater the burdens of regulatory compliance.
  - An ISP faces a potentially gargantuan traffic flow and has a strong § 512(a) immunity.
  - Whereas a web host has a smaller burden and a correspondingly weaker § 512(c) immunity.
- Facebook is immense, at over 200 million users.
- YouTube’s traffic load is mind-bogglingly titanic.
Recap

**Risks**
- Unfair terms
- Mishandled data
- Bias
- Harmful user conduct
- No service

**Power**
- Sensitivity
- Visibility
- User interactions
- Public / private

**Markets**
- Ex ante choice
- Ex post choice
- Necessity
- Platforms

**Regulation**
- Transparency
- Complexity
- Scale