Bumble’s early marketing strategies were aimed at attracting the “hard side” of the college campus dating network. Their approach: go after students in Greek life organizations.

Instead of traditional marketing campaigns, Wolfe Herd put together a series of “crazy hacks” to drum up interest in her Austin, Texas-based startup, she said. In one of them, she went to a cookie shop and paid the bakers $20 to adorn yellow-frosted cookies with a white Bumble logo. Then, she took the box to a nearby college sorority.

“Cold Start” example submitted by Emily H.
Announcements

Project proposal + prototype due next Tuesday

- Project proposal will be a contract between you and the TA in terms of the ambition of your project and deployment.
- Want feedback on your idea? Swing by TA or Michael’s office hours!

Assignment 2 will be released after the project proposal is turned in, and will be due after one week.

All-new reading for this week! Let us know what you think.
Last time: prototyping and cold start

Prototyping social computing systems requires a different approach than usual. Use piggyback prototyping to tie together existing social systems in order to understand the social dynamics you’re creating.

The cold start problem occurs when a system is too empty to attract initial usage, so it remains empty. Two solutions:

- Focus on a narrow group initially, and broaden out later
- Be prepared to bootstrap activity
Something From Nothing

✓ Unit 1
Oh #@&%, It Got Popular

Unit 2
Wikipedia’s growth

As Wikipedia emerged as the leading collaboratively edited encyclopedia, it experienced rapid growth

From just a few editors to about 800k active editors each month in just five years

https://stats.wikimedia.org/#/en.wikipedia.org/contributing/editors/normal|line|all|~total|monthly
Wikipedia’s growth and decline

...but then something changed.

https://stats.wikimedia.org/#/en.wikipedia.org/contributing/editors/normal|line|all|~total|monthly
Wikipedia’s growth and decline

...and has continued to change.

What happened? [2min]

https://stats.wikimedia.org/#/en.wikipedia.org/contributing/editors/normal|line|all|~total|monthly
Non-English Wikipedias: same pattern.

They're all different sizes, so it's not that they ran out of articles.

The peak hit at different dates, so it's not exogenous.
So if it’s not because they ran out of content, and it's not because they ran out of people...

What happened?
Saying Goodbye To Stack Overflow.

I've had a registered account on Stack Overflow for six years. I have about ten years total experience in IT. I have followed a few tags on SO to answer questions in some very narrow areas I have particular knowledge which might be helpful to others. I have also asked a question on average every three months, for a total of twenty-five questions over the time I've been registered at SO.

I get that moderators are barraged with low quality questions on SO, but if it's been years since someone's been able to ask a relevant question in spite of being very careful about it, the site is probably useless for most people (and slowly losing utility in a flaming dumpster fire).

I've shown questions to other developers that I've had closed and asked if they thought my question was wrong. At the time, I thought it was me and wanted to fix *my* problem. In every case the feedback was "That's really stupid they closed your question, it's a good one. I'd like to know the answer too. F#ck SO!"

Indeed. Stack Overflow is a toxic cesspool that is utterly useless outside of historical answers. That
Less and less of the editing is on the pages themselves; more and more in the discussion pages. [Kittur et al. 2007]

On CNN.com, the community is becoming more and more downvote-oriented over time [Cheng et al. 2017]
Do communities get worse as they grow?
Is this decline inevitable?
Today: the challenge of growth

What changes about the dynamics of social computing systems as they grow?

What do you need to change, as a designer or community organizer, to keep a social computing system vibrant as it grows?

Topics today:

What changes make maintaining a positive platform more challenging as it grows?

What design techniques help manage those changes?
What changes about a socio-technical system as it grows?
Tempting POV: designs that scale

Use moderators, upvoting, report links, and algorithms to build a design that scales from 1,000 people to 1B people.

In other words, your design should not need changes as your system becomes more popular.
Why that POV fails

It’s not just the design that needs to scale, it’s also the norms.

Recall that these are socio-technical systems, so the design itself is not enough to guarantee the same experience at 1K, 1M, and 1B.

The community leaders that established and enforced norms will no longer be visible to the vast majority of users.
What happened?

Harvard undergraduates
What happened?

Anyone with a college email address
What happened?

International
What happened?

What started out narrow, necessarily broadened. New members mean new norms, culture and contestation.

Myanmar military
What changes about a socio-technical system as it grows?
Broader participation exposes cultural rifts

As trans users start joining Tinder, cis straight men start reporting female-identifying trans women, resulting in auto bans.
Broader participation exposes cultural rifts

Reddit heavily polarized around the 2016 election

However, this was not due to individuals polarizing: it was due to a large influx of far-right participants [Waller and Anderson 2021]
What changes about a socio-technical system as it grows?

1) Broader participation exposes cultural rifts
Popularity challenges authenticity

[Verhaal and Dobrev 2022]

Authenticity is attached to intrinsic rather than extrinsic motivation

So, as popularity increases, it becomes harder for the platform and members to profess intrinsic motivation and disinterestedness in economic performance
What changes about a socio-technical system as it grows?

1) Broader participation exposes cultural rifts
2) Popularity challenges authenticity
Growth leads to context collapse

Recall: we perform different versions of ourselves to different audiences

So what happens when these audiences all start populating the same space?

Context collapse: when separate audiences coalesce into one, making it difficult to navigate the space

“i wouldn’t tweet anything i didn’t want my mother/employer/professor to see” [Marwick and boyd 2010]
Growth leads to context collapse

How can I monitor my kid's activity on Instagram?

The app announced that in December 2022, it would be rolling out new parental controls in the U.S., and then globally. Currently, if both parties opt in to the Family Center feature, adults can get updates about who their 13- to 17-year-old kids follow and are followed by, receive notifications if their child reports other users, and set usage limits by day or for specific times of day. They can also view their child's privacy, messaging, and sensitive content settings and get an update if their child changes any of them.

You can also ask your kid to give you a tour of their Instagram account. Ask them to walk you through their account, explain memes and comments, discuss friends, and share whatever comes up. Or try one of these ideas:

- **Create your own Instagram account and follow your kid.** You'll see what they post (unless they block you), but you won't see their DMs (direct messages).
- **Follow their friends.** It's not unusual for parents and caregivers to be friends with their kids' friends online (but you should hold back on comments). If you're close with your kids' friends, you can follow each other and keep tabs on your kid's doings.

Common Sense Media
Movie & TV reviews for parents
What changes about a socio-technical system as it grows?

1) Broader participation exposes cultural rifts
2) Popularity challenges authenticity
3) Context collapse
Growth leads to rare events

Suppose that just 0.1% of the population were highly aggressive online trolls

When your community is 100 people, you’d be unlucky to get one

When your community is 1000 people, you can block the bad guy

When your community is 100000 people, they can organize and dominate
What changes about a socio-technical system as it grows?

1) Broader participation exposes cultural rifts
2) Popularity challenges authenticity
3) Context collapse
4) More rare events
Newcomers challenge norms

New members of the system are typically more energetic than existing members and also interested in a broader range of discussion than the community’s current focus [Jeffries et al. 2005]

Newcomers have not been enculturated: they don’t know the norms of the system, so they are more likely to breach them [Kraut, Burke, and Riedl 2012]

…and, there are a lot of newcomers, with more constantly joining, exhausting the resources of the existing members.
What changes about a socio-technical system as it grows?

1) Broader participation exposes cultural rifts
2) Popularity challenges authenticity
3) Context collapse
4) More rare events
5) Newcomers challenge norms
Eternal September: the permanent destruction of a community’s norms due to an influx of newcomers

Usenet, the internet’s original discussion forum, would see an influx of norm-breaking newcomers each September as college freshmen arrived on campus and got their first access to the internet.

In September 1993, America Online gave its users access to Usenet, flooding it with so many newcomers that it never recovered. It was the September that never ended: the Eternal September.

Have you ever read: “This was so much better when it was smaller”?
What would Bluesky need to do to maintain this set of norms?

To me, Bluesky currently feels like a simpler time on the internet. It’s a feeds-based social network with a community of at least 20,000 people, meaning there’s a lot of activity and conversation, but so far, I haven’t seen much toxicity or people racing to slam dunk people in quote tweets. It feels like a platform where people are just hanging out and chatting with each other.

one month later

Are Bluesky Social’s Good Vibes Doomed?

As Elon Musk’s Twitter continues to turn off users, the promise of a healthier, more equitable alternative visit...
Surviving massive growth
Surviving an Eternal September

What allows a community to stay vibrant following a massive surge in user growth?

Classic case: small subreddits getting defaulted — added to the default set for new Reddit users
Surviving an Eternal September

Successful cases tend to have strong moderation [Kiene, Monroy-Hernandez, and Hill 2016; Lin et al. 2017]

Imploded due to lack of moderation

(moderated)

We have grown to the kind of size we only dreamed of in the time it takes to get a bad nights sleep. We’ve got so many comments and submissions that we can’t possibly even read them all, let alone act on them as moderators. We wrote software to do most of the moderation for us but that software isn’t allowed to read the Reddit new feed fast enough and submit responses, and the admins haven’t given us special access despite asking for it.

We’re suffering from success and our Discord was the first casualty. You know as well as I do that if you gather 250k people in one spot someone is going to say something that makes you look bad. That room was golden and the people that run it are awesome. We blocked all bad words with a bot, which should be enough, but apparently if someone can say a bad word with weird unicode icelandic characters and someone can screenshot it you don’t get to hang out with your friends anymore. Discord did us dirty and I am not impressed with them destroying our community instead of stepping in with the wrench we may have needed to fix things, especially after we got over 1,000 server boosts. That is pretty unethical.
Governance arises [Frey et al. 2022]

Across platforms such as Minecraft, World of Warcraft, and Reddit, the size and complexity of a community’s governance is positively associated with the community’s size.

Implicit rules when there are no rules:
1. No formal positions exist
2. Anyone can enter
3. Everyone can take every possible action
4. Members act independently

(Darker dots are generally in the upper right corner)
Rules rule [Fiesler et al. 2018]

Adding rules may not be the most exciting design decision, but they become increasingly necessary as you grow.

As an online community becomes more popular, the more statistically likely it is to have publicly posted rules.

The vast majority of these rules are restrictive (e.g., don’t harass people, don’t spam, don’t use hate speech) and focused on content.

r/science Rules

1. Must be peer-reviewed research
2. No summaries of summaries, rehosts, or reposts
3. No editorialized, sensationalized, or biased titles
4. Research must be less than 6 months old
5. No off-topic comments, memes, low-effort comments or jokes
6. No abusive or offensive comments
7. Non-professional personal anecdotes will be removed
8. Criticism of published work should assume basic competence of the researchers and reviewers
Resisting growth

One approach is to try to shape the growth or stay small [Hwang and Foote 2021], to signal clearly who the space is for: “This is Disneyland, not Six Flags”.

Example: Snapchat →
How do you test new ideas?

How do you A/B test new ideas, when there’s no easy way to bucket people into group A or B? Everyone’s connected...

The most common answer is country comparisons, where versions are launched to different countries that have similar properties.

  e.g., launch one version in New Zealand and another in Australia

Adam Mosseri, Instagram: https://www.instagram.com/reel/CmKEKWiJg_8c/
What we know so far

Challenge | Strategies [2min]
--- | ---
Cultural rifts | ?
Challenges to authenticity | ?
Context collapse | ?
Rare events | ?
Newcomers challenge norms | ?
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**Strategies**
- Governance and rules; moderation
- Unsolvable?
- Create subcommunities
- Governance and rules; moderation
- Governance and rules; moderation
The elephant in the room

“Here is how platforms die: first, they are good to their users; then they abuse their users to make things better for their business customers; finally, they abuse those business customers to claw back all the value for themselves. Then, they die. I call this enshittification, and it is a seemingly inevitable consequence arising from the combination of the ease of changing how a platform allocates value, combined with the nature of a ‘two-sided market’, where a platform sits between buyers and sellers, hold each hostage to the other, raking off an ever-larger share of the value that passes between them.”

Enshittification is a term coined by writer Cory Doctorow in November 2022 to describe a pattern of decreasing quality observed in online services and products such as Amazon, Facebook, Google Search, Twitter, Bandcamp, Reddit, Uber and Unity. The American Dialect Society selected the term as its 2023 Word of the Year. Doctorow has also used the term platform decay to describe the same concept.
Back to the beginning
Wikipedia’s growth and decline

Returning to the original question:

What happened?

https://stats.wikimedia.org/v2/#/en.wikipedia.org/contributing/active-editors/normal|line|All|~total
Growing pains [Halfaker et al. 2012]

1. Wikipedia starts small, with little moderation needed and strongly motivated contributors

2. The formula works — Wikipedia grows

3. As Wikipedia grows, the percentage and volume of low-quality contributions rises, creating strain on the reputation of Wikipedia and the Wikipedia editors
Growing pains [Halfaker et al. 2012]

4. To manage the strain, Wikipedia admins stem the tide: they reject more contributions and create bots and tools to help them quickly revert bad work [Suh et al. 2009]
Growing pains [Halfaker et al. 2012]

5. The increased rejections leads newcomers to be less likely to stay
Growing pains \cite{Halfaker2012}

1. Start small, little moderation
2. Get popular and grow
3. Strain under newcomer contributions
4. Institute policies to reduce junk
5. Lose newcomers w/ new policies
Not just Wikipedia [TeBlunthuis et al. 2018]

Replicated across hundreds of Wikia wikis
e.g., runescape, yugioh, harrypotter, ewrestling, onepiece, clubpenguin

1. Start small, little moderation
2. Get popular and grow
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Summary

Communities can't maintain the same design as they grow. Newcomers change the dynamics, even if they absorb the norms and oftentimes they don't absorb the norms.

Growth begets contention and rulemaking, which can push off newcomers.

Moderation and governance are key tools in managing the growth.
References


Social Computing

CS 278 | Stanford University | Michael Bernstein

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