Platform Capabilities

INF 251

Jamie Lee

Today's Goals

- Articulate what the terms "platform capabilities" and "social-technical gap" mean
- Explain how the social-technical gap has changed, especially with the rise of social media

What does “platform capabilities” mean? Any examples?

Platform capabilities are the features, functions, or abilities that a platform provides to its users.

Also referred to as “technical capabilities.”

For social media, examples include posting content, commenting, and messaging.

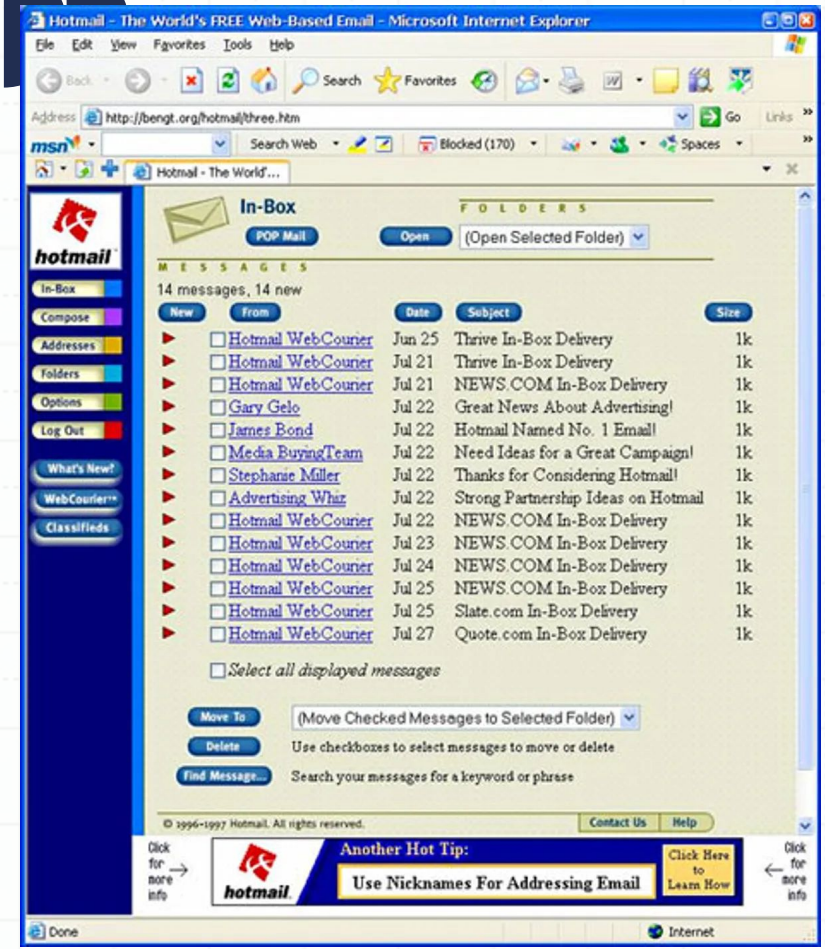
The Intellectual Challenge of CSCW: The Gap Between Social Requirements and Technical Feasibility

Mark Ackerman (2000)

Overview

- CSCW work has found that human activity is highly flexible, nuanced, and contextualized
- Thus, technologies should also be flexible, nuanced, and contextualized
- Ackerman argues that there is a gap between these two, called the social-technical gap
- Goal of CSCW is understand and approach this gap

The Intellectual Challenge of CSCW: The Gap Between Social Requirements and Technical Feasibility. Ackerman. 2000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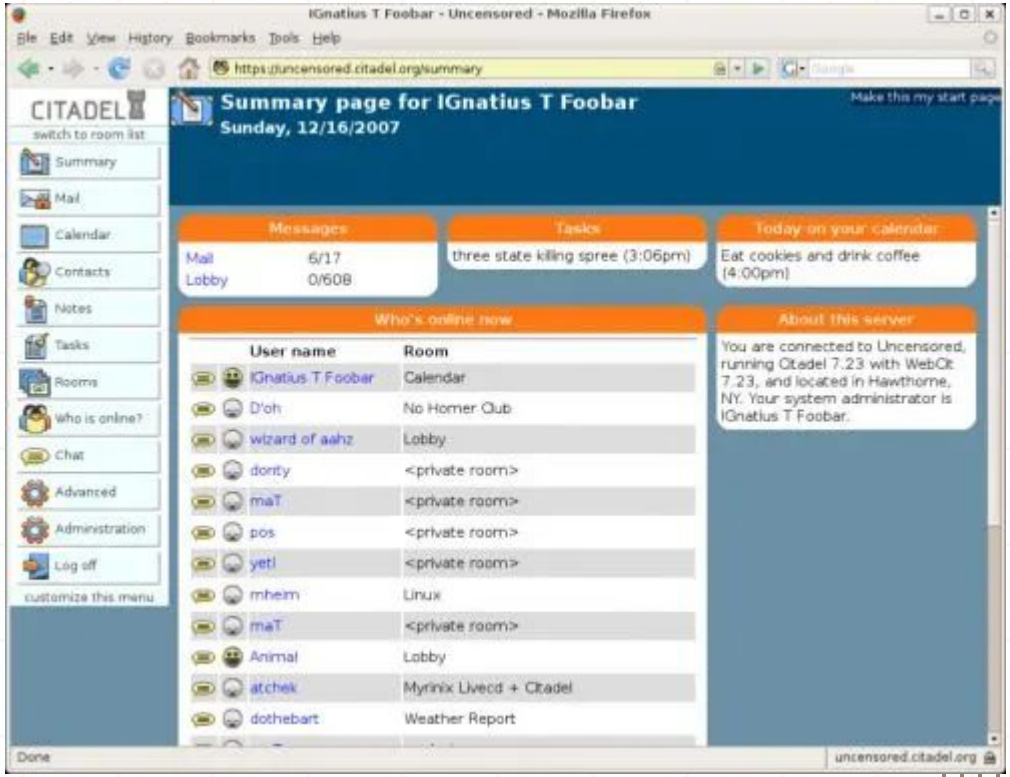
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Summary page for IGnatius T Foobar
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Make this my start page
Messages
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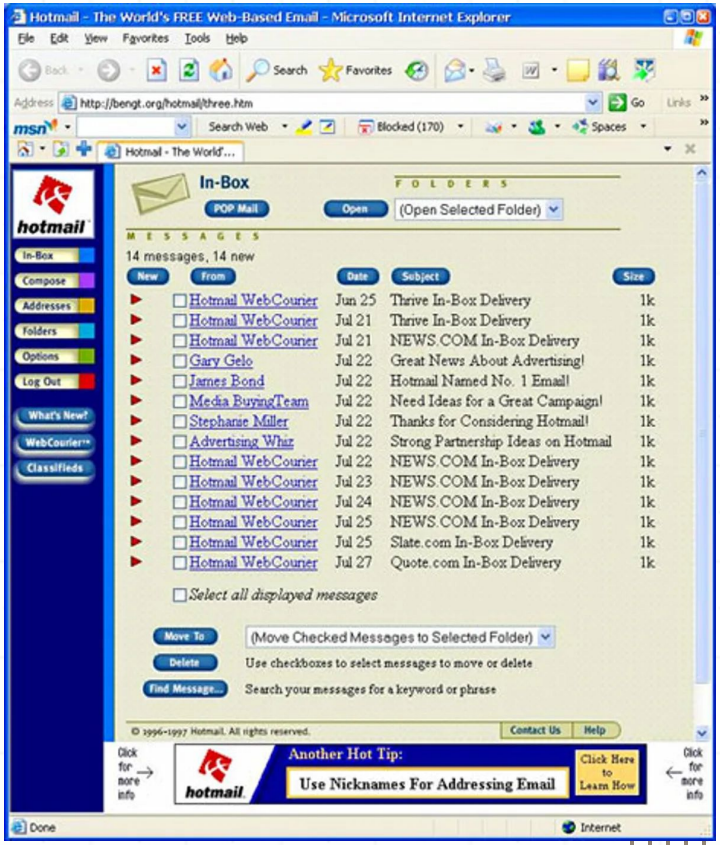
mheim Linux
maT <private room>
Animal Lobby
atchek Myrinix Livecd + Citadel
dothebart Weather Report
About this server
You are connected to Uncensored, running Citadel 7.23 with WebCit 7.23, and located in Hawthorne, NY. Your system administrator is IGnatius T Foobar.
Done
uncensored.citadel.org

History

- CSCW coined in 1984 by Irene Greif and Paul Cashman
- Collaboration through technology was NEW!
- E.g. email, inventory control systems, collaborative writing applications, work organizational systems



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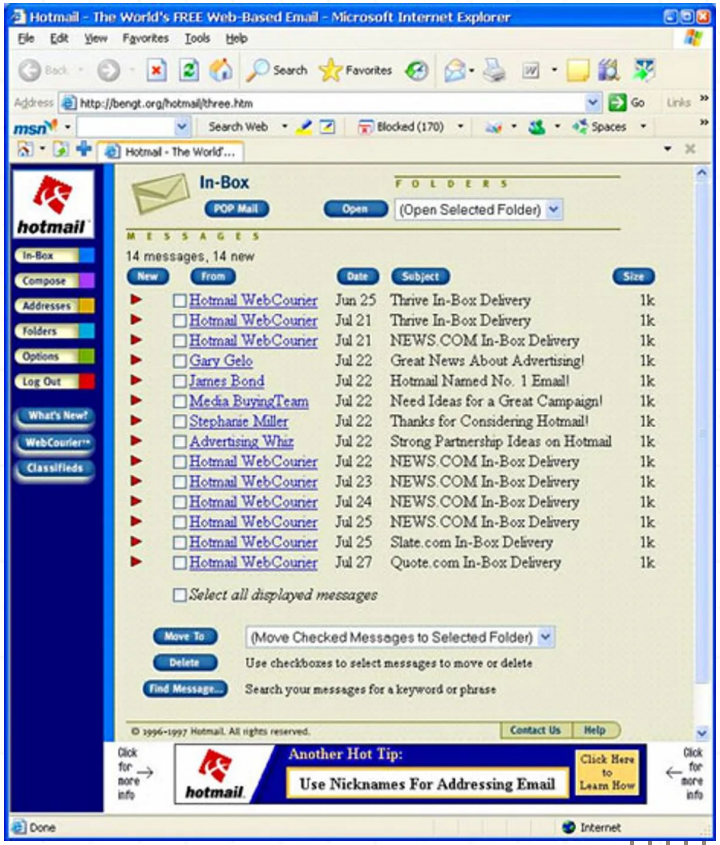
History

- CSCW coined in 1984 by Irene Greif and Paul Cashman
- Collaboration through technology was NEW!
- E.g. email, inventory control systems, collaborative writing applications, work organizational systems

Question: What were some of the "new" platform capabilities of this era?



The Intellectual Challenge of CSCW: The Gap Between Social Requirements and Technical Feasibility. Ackerman. 2000

CSCW Assumptions

“Social activity is fluid and nuanced, and this makes systems technically difficult to construct properly and often awkward to use”

“People not only adapt their systems, they adapt their systems to their needs.”

“With an insufficient number of users, people will not use a CSCW system. This has been found in email, synchronous communication, and calendar systems.”

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Discuss! Do the assumptions still hold true today? How have they changed or stayed the same?

Social-Technical Gap

“The divide between what we know we must support socially and what we can support technically” - Ackerman

Platform for Privacy Preferences Project (P3P): how people manage private information regarding other people, companies, and institutions

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Social-Technical Gap

“There are no current HCI mechanisms to straightforwardly mechanize the naturally occurring, everyday social activity of handling personal information in its entirety.”

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Social-Technical Gap

“There are no current HCI mechanisms to straightforwardly mechanize the naturally occurring, everyday social activity of handling personal information in its entirety.”

Question: 20 years later, are there any HCI mechanisms that can do this? Any that are close?

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Arguments against the significance of gap

Argument 1: Gap resulted from ignorance of designers and researchers.

Ackerman: Prior work has shown that designers and researchers are aware of the gap

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Arguments against the significance of gap

Argument 2: Gap will be solved by new technologies or techniques

Ackerman: Unlikely because “computer science, AI, IT, and information science have attempted to bridge the gap without success for at least 20 years”

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Question: Do you agree or disagree with Ackerman’s statement here? Why or why not?

The Intellectual Challenge of CSCW: The Gap Between Social Requirements and Technical Feasibility. Ackerman. 2000

Arguments against the significance of gap

Argument 3: Gap is a historical circumstance and we will adapt to the gap

Ackerman: Our culture will adapt to any technology, but “a central promise of HCI is that we should not force users to adapt.”

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Platform incapabilities

Issues of technology that causes social-technology gap:

- Systems do not allow sufficient nuance (e.g. need context)
- Systems are not socially flexible (e.g. people do not switch roles explicitly)
- Systems do not allow sufficient ambiguity (e.g. people are inherently ambiguous)

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Question: Do social media systems have these issues?

The Intellectual Challenge of CSCW: The Gap Between Social Requirements and Technical Feasibility. Ackerman. 2000

Ackerman's Solution: Simon

- "Engineering and design are fundamentally different from the sciences"
- Artificial vs Natural
- Science is studying natural; engineering is creation of artificial

CSCW = engineering systems for groups of people
CSCW = social science studying the construction of the everyday experience

The Intellectual Challenge of CSCW: The Gap Between Social Requirements and Technical Feasibility. Ackerman. 2000

Implications

CSCW researchers need to understand the social-technical gap in order to contribute usable, effective systems

CSCW systems need to reflect how people really work and live in groups

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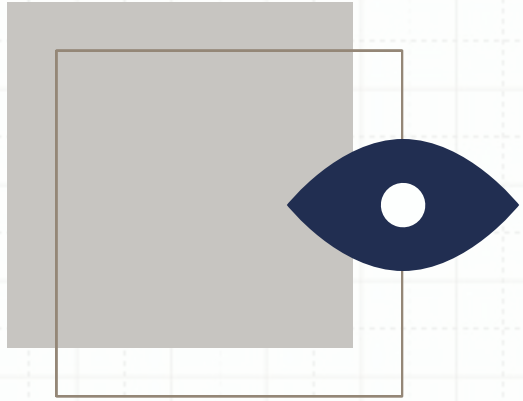

Discuss! Seeing how much we have advanced in platform capabilities, are we closer to closing the social-technical gap? Why or why not?

Form-From: A Design Space of Social Media Systems

Amy Zhang, Michael Bernstein, David Karger, Mark Ackerman
(2024)

Overview

- Goal was to “characterize and distill a concise design space of social media systems”
- Form-From model
- Used model to trace history of social media systems

Form-From: A Design Space of Social Media Systems. A. Zhang, M. Bernstein, D. Karger, M. Ackerman (2024)

Social Media Systems

Systems that directly facilitate the sharing of user generated content between users.

E.g. Facebook, Twitter, Reddit, WhatsApp, Zoom, email, Slack

Different from Carr & Hayes (masspersonal is not a requirement)

Form-From: A Design Space of Social Media Systems. A. Zhang, M. Bernstein, D. Karger, M. Ackerman (2024)

Design Space

Range of possible design options available for a system

Simon: “design is a search through problem space”

Schön: design space = possibilities, opportunities, inspiration

The paper takes a Simonian view.

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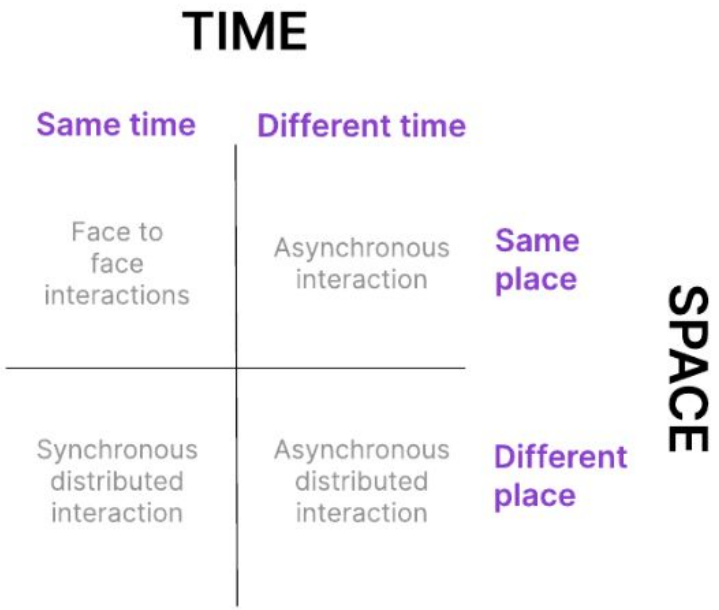
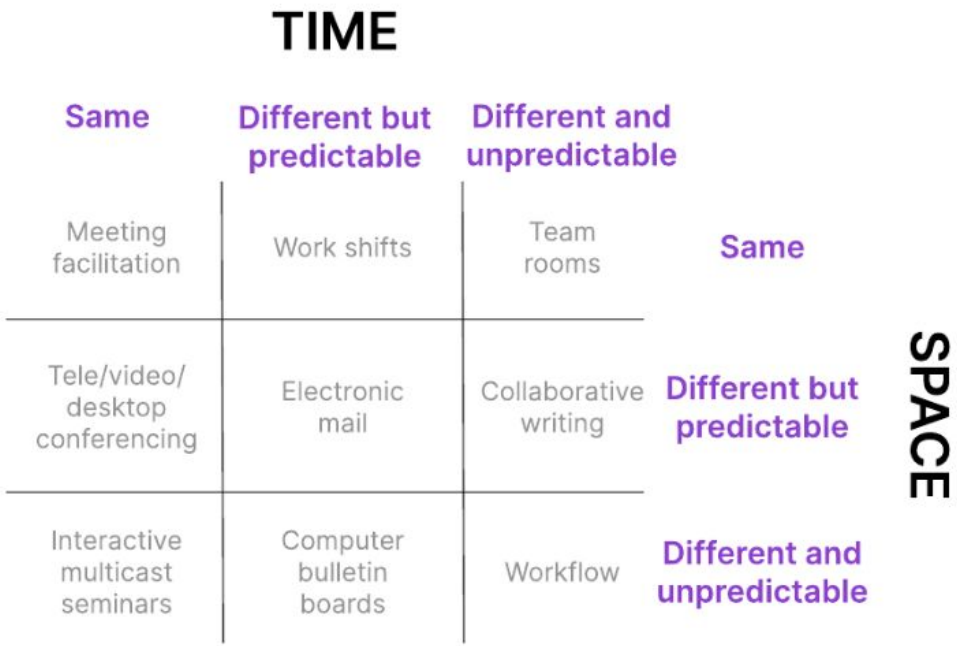


Johansen's (1988) Time-Space Matrix



Grudin's (1994) Time and Space Categorization

Form-From: A Model of Social Media Designs

Form

- How content is organized
  - Threaded: explicitly linking posts to each other
    - E.g. Twitter, Threads, YouTube, TikTok, Reddit
  - Flat: not focusing on linking posts together, instead focusing on interaction with overall stream
    - E.g. traditional chatrooms, instant messaging, old Facebook/Myspace, video livestream on Zoom, Instagram Stories, Snapchat

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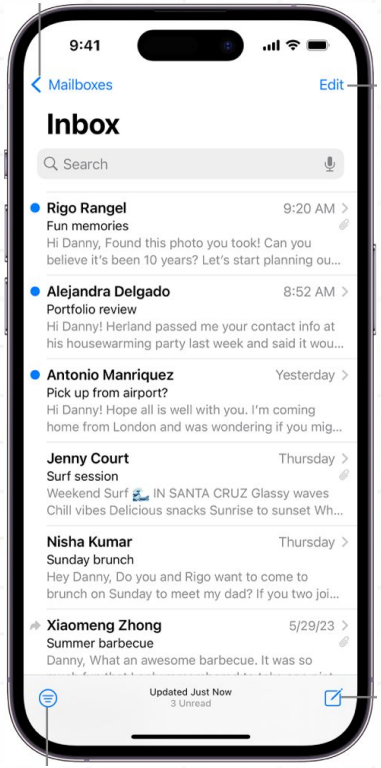
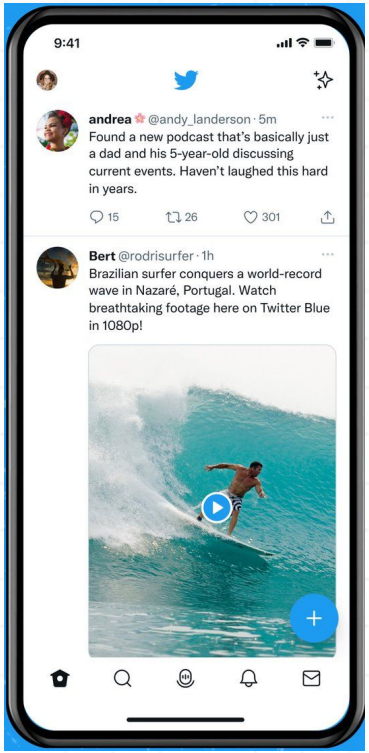
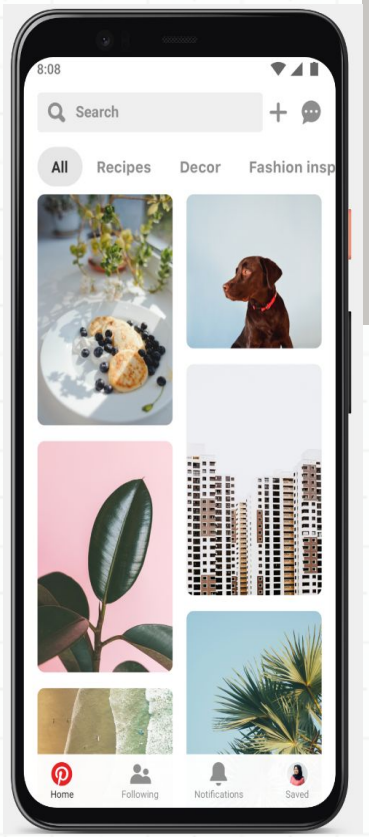
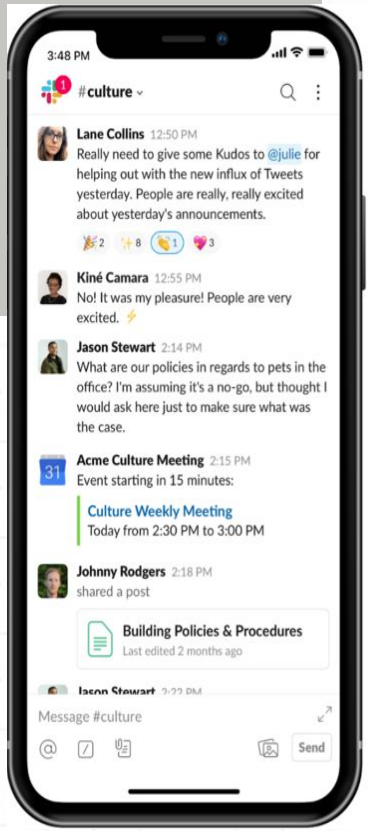




Threaded: **explicitly** linking posts to each other





Flat: interaction with overall stream

Form-From: A Model of Social Media Designs

From

- Process by which content is delivered
  - Spaces: shared space (e.g. channel, group chat)
  - Network: shared to accounts that have connected (e.g. Facebook, Twitter)
  - Commons: shared to entire platform (e.g. TikTok, Pinterest)

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FORM

Flat Emphasizes posting *without* explicit links to other posts	**Threaded** Emphasizes posting *with* explicit links to other posts, e.g., by replies
IRC BBS (early) Slack Discord Clubhouse	Email FidoNet 4chan Reddit Quora
SixDegrees Friendster LinkedIn (pre-2014) MySpace Facebook (pre-2009)	LiveJournal Flickr Instagram Twitter Tumblr
Pinterest Snapchat Discover Tinder ChatRoulette	TikTok Instagram Reels Threads YouTube Shorts

Spaces
Shared in a distinct space with a unique location (e.g., channel)

Network
Shared to accounts that have connected (e.g., followers)

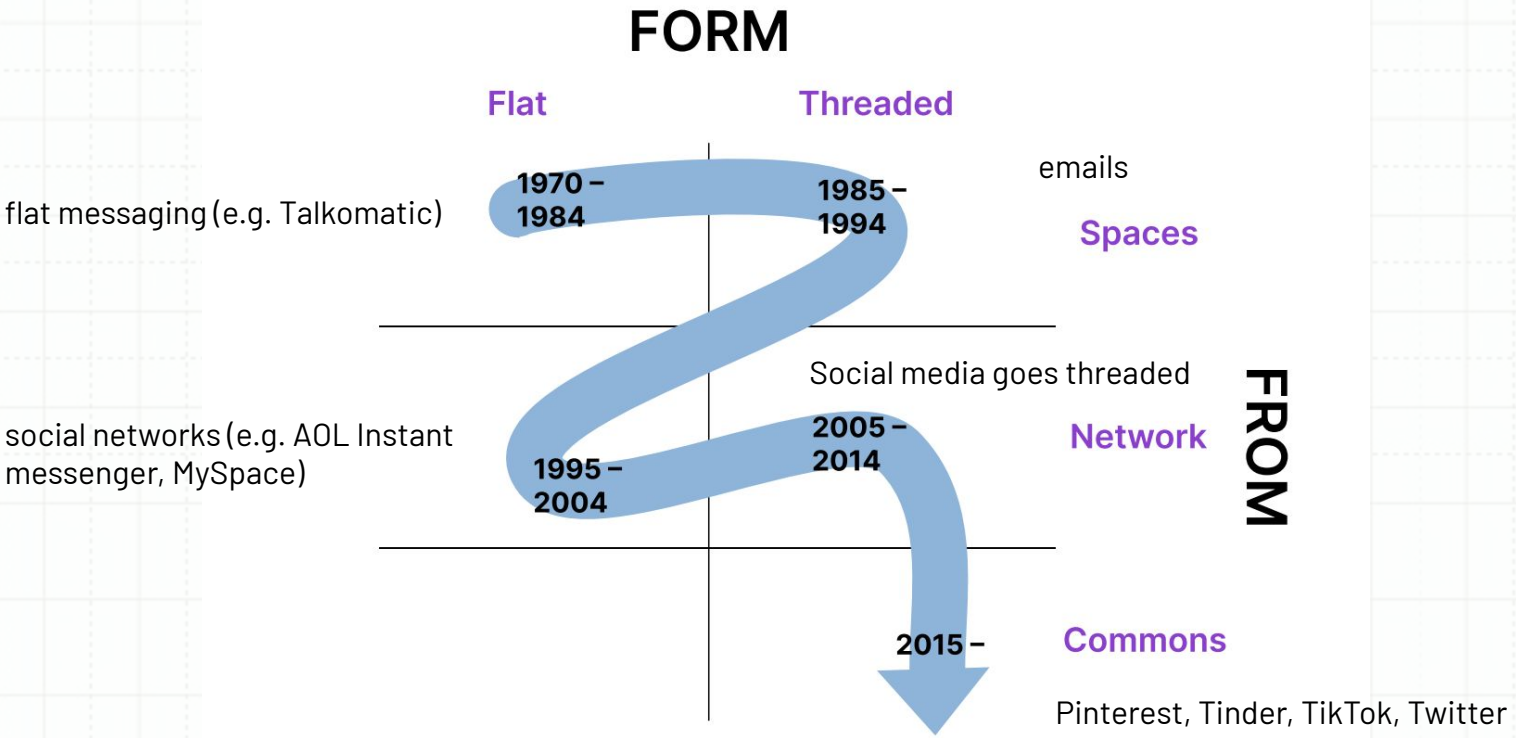
Commons
Shared to the entire platform (e.g., For You)

FROM

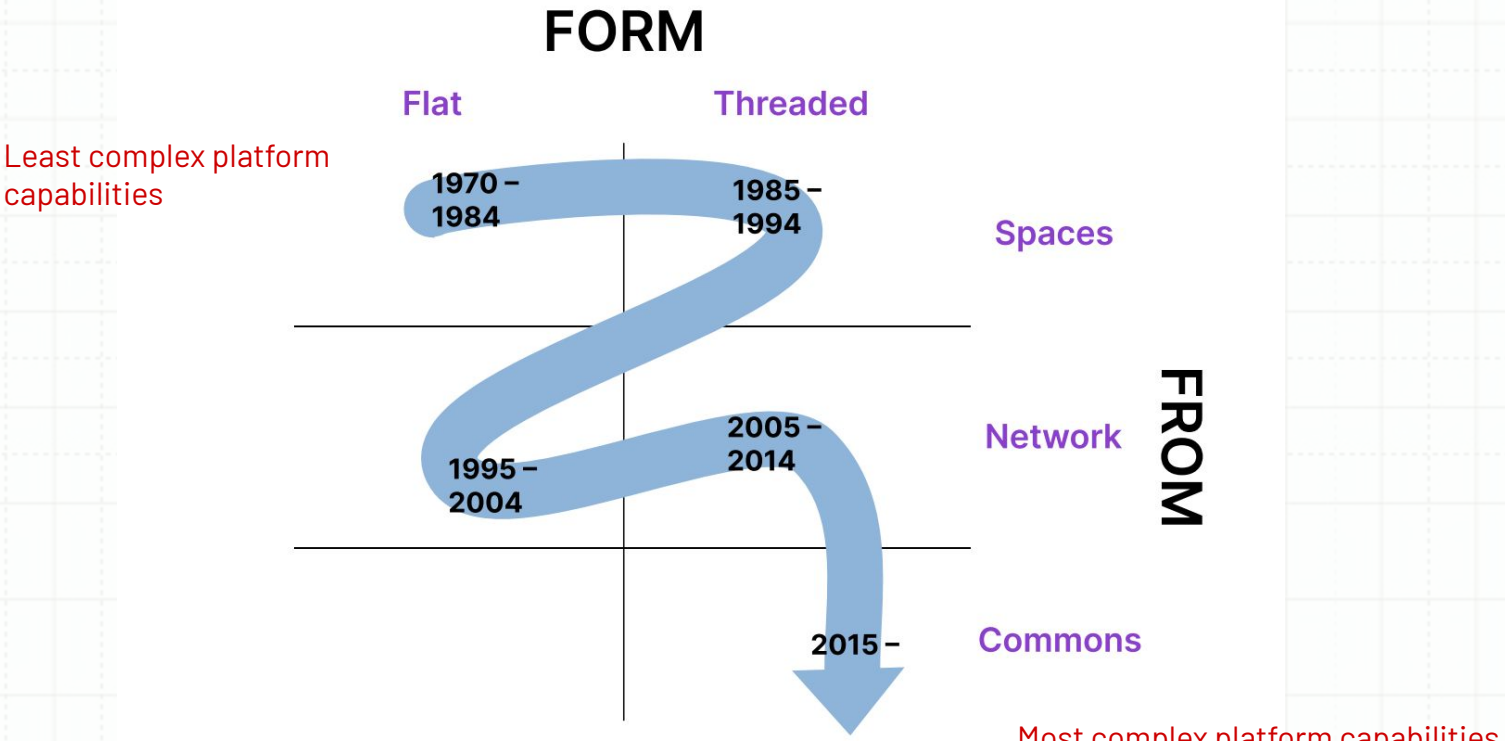
The full model has 62 dimensions. What are your thoughts on the complexity of the model? Does it accurately capture social media or is it trying to take on something too big?

Follow up question:
What are the limitations of this model?

Evolution of Social Media



Evolution of Social Media



Implications

Practitioners and designers to find design inspiration and explore alternatives using this model

“If we don’t design with intent, we default.”

Form-From: A Design Space of Social Media Systems. A. Zhang, M. Bernstein, D. Karger, M. Ackerman (2024)

Any questions or ideas to further discuss?

Thank you!