Ties in Social Media

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Content

Background

Categorization & Two Cases

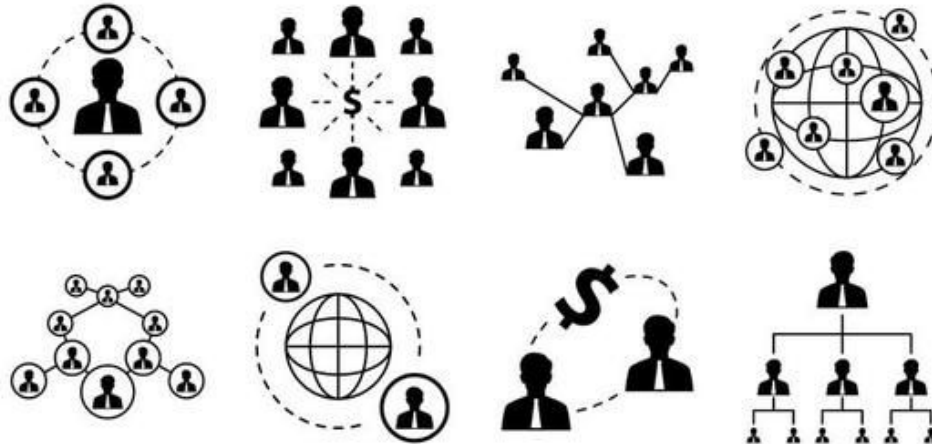Existing Issues

Paper Discussion [3]

A Glimpse at interesting social network theory

"Serendipity"

Background

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- *Karl Marx (Philosopher, 1818-1883)*

"People are the sum total of societal relationships."

Background

Social Ties (in **real world**)   <->   Social Ties in Digital Platform (in **digital world**)

Diverse types of social ties: Family/Friends -> Instagram/Facebook/What's App
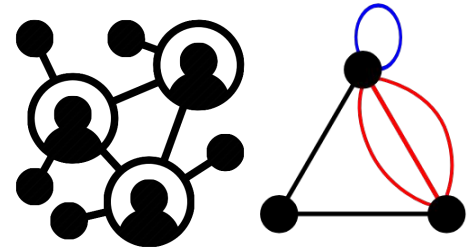Familys/friendships/colleague/celebrity&fan.   Colleagues -> Linkedin; Celebrity&Fan -> Tiktok, YTB,X

Categorization: Ties

From societal perspectives:

Family ties,

friendship ties,

professional ties (colleagues)

community ties,

…

From mathmatical(graph) perspectives:

tie strength (edge weight)

multi-ties (multi edges between two nodes)

…

Categorization: Social Media

*Categorized by **key features** within social media app.*

● Today, we focus on social media **with networking purpose.**

● *For example:*
Facebook,whatsapp,messengers,
Linkedin(professional relationships),
etc.

Sourece link: marketing91com

However, in realworld,
social ties in social media platform is
a mix of *different types !*

Two Case Studies

Case Study 1: Facebook & Messenger

Social Ties:

family, friends, community
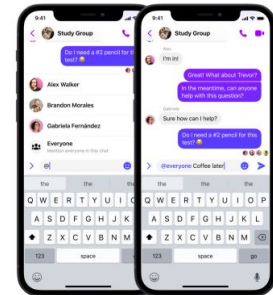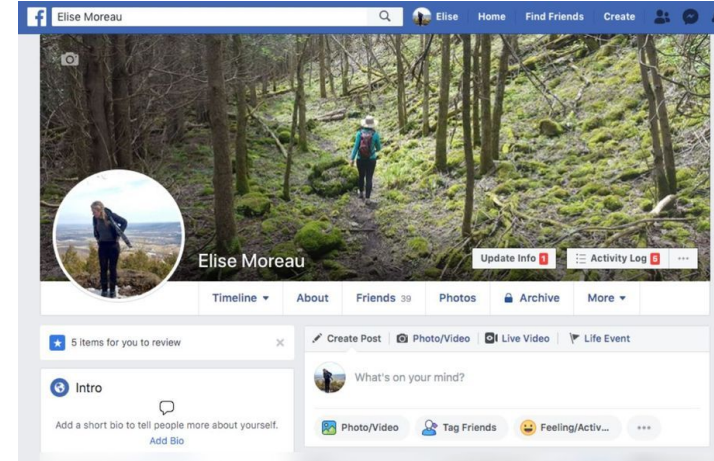
Platform: Mobile(√), Web, public or private?

Key Features in Social Media:

profile, friends, groups

news feed, timeline

marketplace,

messenger ~

Case Study 2: WhatsApp

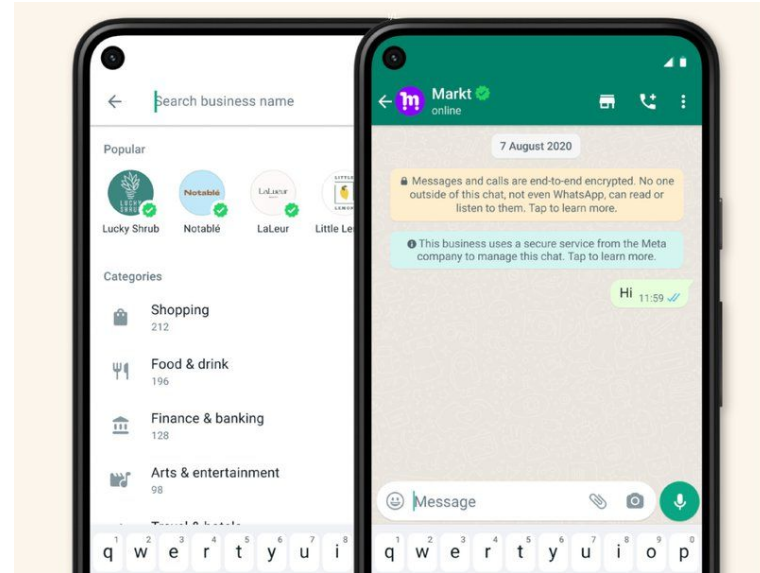**Social Ties:**

family, friends

Platform: Mobile(√), Web

Key Features in Social Media:

Messaging, voice & video call, group chat

End-to-end encryption,

customization options

…

Case Study 3: Linkedin

Social Ties:

professional relations

Platform: Mobile(√), Web

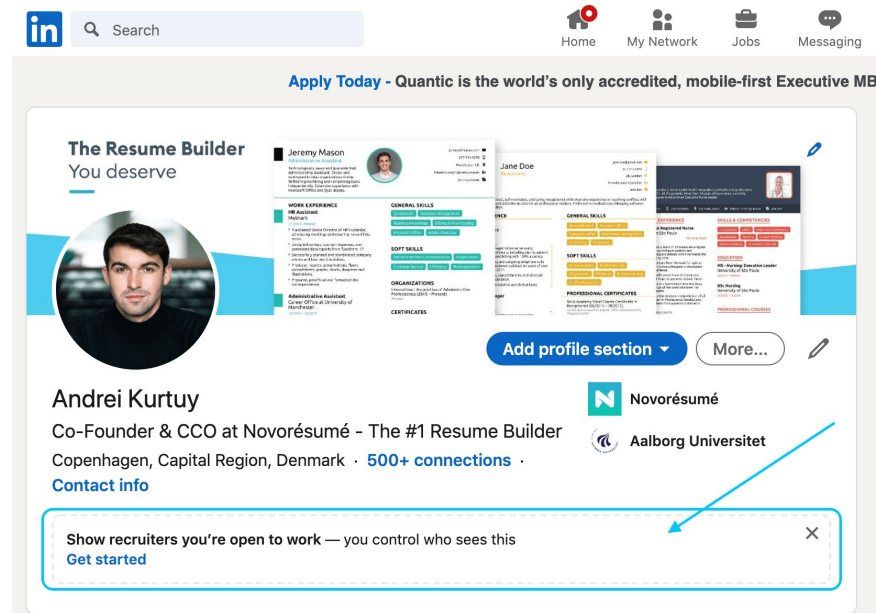**_Key Features in Social Media_**:

profile, connection, groups

feed,

jobs, events, company pages

messaging

…

Existing Issues

Why to explore "social ties in social media" is important ?

For society/individual

- Understand how **online interactions** influence **social dynamics and relationships**.
- Explore the impact of social media on **mental health and well-being**.
- Analyze **social network structures and information flow** within online communities.
- Investigate how social ties **shape attitudes, behaviors, and engagement online**.

For platform:

- Foster community building and engagement on **social media platforms**.
- Address ethical considerations related to **privacy, consent, and data protection** in social media research.

Paper Discussion

Paper list

in chronological order & scope top-down

Paper 1:CACM 15' - Internet Use and Psychological Well-Being:

Effects of Activity and Audience

Keywords: Internet use, well-being

Paper 2:CHI 09' - Predicting Tie Strength With Social Media

Key words: tie strength, prediction model, complementary interviews

Paper 3:CHI 17' - "WhatsApp is for family; Messenger is for friends": Communication
Places in App Ecosystems
Key words: communication place, apps

Paper 1

Paper 1:
Internet Use and Psychological Well-Being: Effects of Activity & Audience

Problem: How does internet use influence psychological well-being ?

Implications:

- Talking with close friends online is linked to improvements in social support, depression, and other measures of well-being, but talking with strangers and reading about acquaintances are not.

- Readers should be skeptical of crosssectional and survey-based studies linking well-being to Internet use. Instead, experiments or longitudinal designs pairing surveys with log data provide more reliable insights.

- Human agency is key: The effect of technology on our lives depends on how we use it, what we talk about, and whom we talk to.

Zooming in :)

P1-Discussion1

*Let's discuss: what's the difference between *strong ties and weak ties* ? (definition, examples) how to *quantify* strong or weak ties ?*

P1-Discussion1

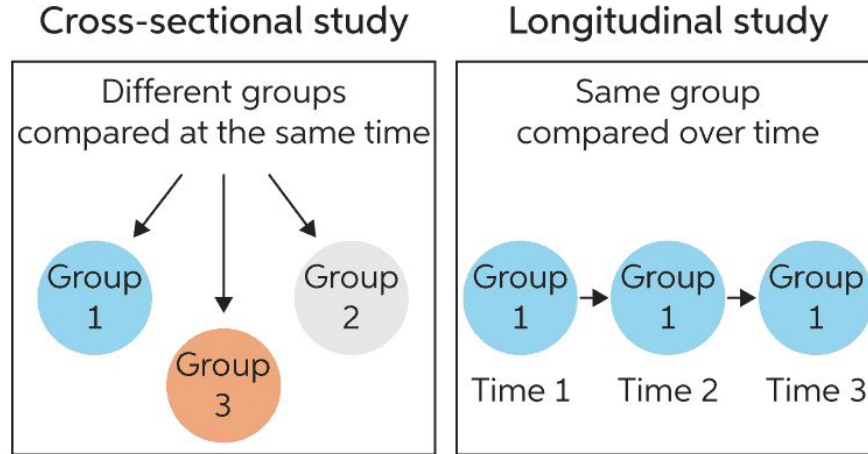| Strong ties	Weak ties
Definitions: - refer to close, intimate, and emotionally significant relationships between individuals. - involve frequent interaction, mutual trust, and deep emotional bonds. **Examples:** - include close friends, family members, romantic partners, and colleagues with whom one has strong emotional and social connections. Valuable: - provide emotional support, practical assistance, and a sense of belonging, but they may also limit exposure to new information and opportunities due to their close-knit nature.	**Definitions:** - refer to more casual, distant, and less emotionally intense relationships between individuals. - involve occasional interaction, limited mutual trust, and weaker emotional bonds compared to strong ties. **Examples:** - include distant relatives, former classmates, and colleagues with whom one has limited interaction or shared experiences. **Valuable**: - providing access to new information, resources, and opportunities outside one's immediate social circle. They facilitate the flow of novel ideas, job opportunities, and diverse perspectives.

P1-Discussion2

Let's discuss: *what's the difference between* *crosssectional and longitudinal design* *?*

P1-Discussion2

Cross-sectional study — Different groups compared at the same time: Group 1, Group 2, Group 3

Longitudinal study — Same group compared over time: Group 1 (Time 1), Group 1 (Time 2), Group 1 (Time 3)

***Let's discuss**: So in paper-1 problem, which study type is more suitable & why? (e.g. data accessibility, logic)*

P1-Discussion3

Let's discuss:

*how to narrow down the scope of Internet use ?
how to quantify the psychological well-being
level?*

P1-Discussion3

- **Use frequency**: heavy use vs. light use
- **Different purposes**:
  communicating with friends and family; communicating in online groups and to meet people; retrieving and using information; seeking entertainment or escape; shopping; and acquiring health information or talking about health.
- **Temporal**: change over time.

Paper 2

Paper 2:
Predicting Tie Strength With Social Media

Problem: Social media treats all users the same(trusted friend vs. total stranger). While in reality, relationships fall everywhere along this spectrum.

Solution: Tie strength prediction model + Error analysis interview(model limitations)

P2-Definition fo "Tie Strength"

Tie strength:The strength of a tie is a (probably linear) combination of the amount of time, the emotional intensity, the intimacy (mutual confiding), and the reciprocal services which characterize the tie.

Dimensions: Granovetter proposed four tie strength dimensions: amount of time, intimacy, intensity and reciprocal services. Subsequent research has expanded the list. Ronald Burt proposed that structural factors shape tie strength, factors like network topology and informal social circles.

P2-Implications

Implications:

- Tie strength dimensions: [1]different dimensions contribute to strength differently (e.g. intimacy contributes most). [2]some variables are hard to quantify(e.g. emotional support).

- Practical implications: apply tie strength modeling in social media(e.g. privacy control, media type, adapts with time).

- Theoretical implications: more variance to understand(e.g. Do we miss some important signal/predictor? Continuous or discrete value ? Properties of the link ?)

P2-Discussion1

Let's discuss: *what's the limitation for this paper ?*

Paper 3

Paper 3:

"WhatsApp is for family; Messenger is for friends":
Communication Places in App Ecosystems

Problem: How & Why users distribute their contacts within their app ecosystem?

Implications:

- Key factor: contact within app -> conversation, communication patterns, quality of relationship.
- Apps: features and technical constraints of apps guide the users with membership rules, perceived purposes, and emotional connotations.
- Users: shift the boundaries of their communication places to accommodate changes in their contacts' behaviour, the dynamics of their relationships, and the restrictions of the technology.

P3-Discussion1

Let's discuss:
*We argue that communication apps should support creating multiple communication places within the same app, **relocating conversations across apps**, and **accessing functionality from other apps**.*
Agree or disagree?

A Glimpse at "interesting " social network theory

Have fun :)

- **Small world theory:** refers to the idea that social networks are characterized by short paths or chains of connections between individuals. In a small world network, most people can be reached through a relatively small number of intermediaries, commonly referred to as "**six degrees of separation.**"

- **Strengths of weak ties:** suggests that weak ties (i.e., casual acquaintances) are often more valuable for accessing new information and opportunities than strong ties (i.e., close friends). Weak ties **provide bridges between different social networks**, exposing individuals to novel ideas, resources, and opportunities outside their immediate circle.

- **Centrality & Power**: Nodes with high centrality are often considered **influential or powerful** within the network, as they have greater access to information, control over communication flows, and potential for brokerage or mediation between disconnected groups.

"Serendipity"

Booklist

- **Linked:** The New Science of Networks - Albert-László Barabási
- **Bursts:** The Hidden Patterns Behind Everything We Do, from Your E-mail to Bloody Crusades
- **Superconnect** (weak ties) - Richard Koch
- **The social animal** - Elliot Aronson
- **Connected:** The Surprising Power of Our Social Netw James H. Fowler, Nicholas Christakis
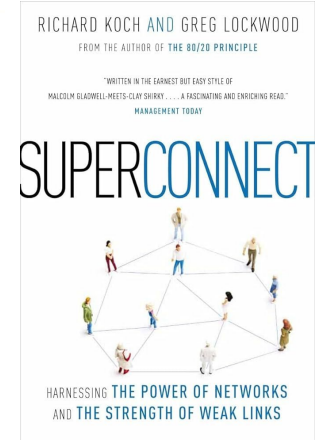- **Mining massive datasets** - Jure Leskovec
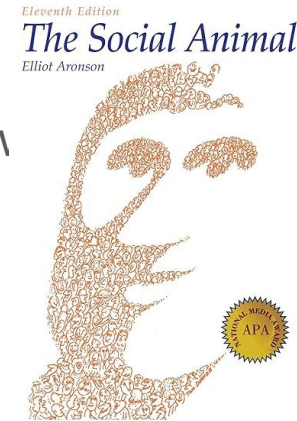
At last

Bridge

Hub

NETWORK EFFECTS
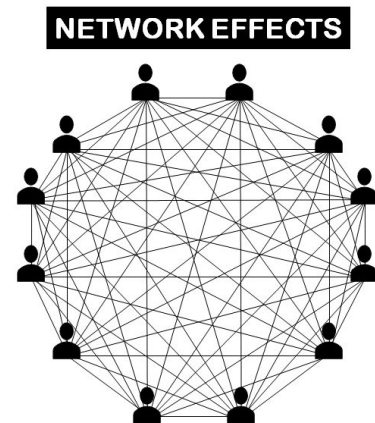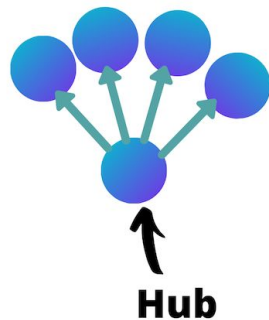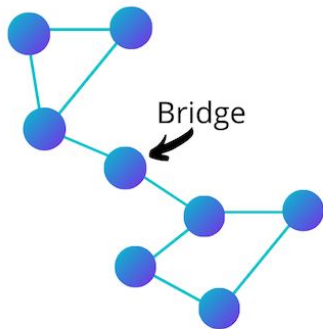
So "ties", is not only a research topic
but also an angle to view the world
which can guides our life trajectory, hapiness(robust social network),
also can learn to use the **"ties"** to reach our goal !

END
Thanks :)