The Role of Social Media for Knowledge Sharing and Collaboration in Distributed Teams

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Conceptual Model: Social Media in the Workplace
What is a social network site?

SNSs are “web-based services that allow individuals to
1) construct a public or semi-public profile within a bounded system,
2) articulate a list of other users with whom they share a connection, and
3) view and traverse their list of connections and those made by others within the system.” - boyd & Ellison (2007)
Then: Friends List

Add Joshua as a friend?

Joshua will have to confirm that you are friends.
Add a personal message...

Add Joshua to a Friend List

Add Friend  Cancel
Now: Social graph
Then: Ability to View and Traverse Connections
Definition of SNS (2007)

SNSs are “web-based services that allow individuals to
1) construct a public or semi-public profile within a bounded system,
2) articulate a list of other users with whom they share a connection, and
3) view and traverse their list of connections and those made by others within the system.” - boyd & Ellison (2007)
A social network site is a *networked communication platform* in which participants

1) have uniquely identifiable profiles that consist of *user-supplied content, content provided by other users, and/or system-provided data*

2) can publicly articulate connections that can be viewed and traversed by others; and

3) can consume, produce, and/or interact with *streams of user-generated content* provided by their connections on the site.

- Ellison & boyd, 2013
Graph search

Movies liked by my friends

Dead Soon movie (a.k.a. The Fugue)
Movie
• 109 like this
• People also like I'm Just Saying - Official Movie Page, Fear House and ... Richard Rushfield, George Jackson and 9 other friends like this

Food Inc
Movie
• Directed by Robert Kenner
• 632,343 like this
• People also like The Hangover, Food Matters and other movies
• Al Cadenza, Jesse Engel and 15 other friends like this

Blade Runner
Movie
• 1,020,868 like this
• People also like Star Wars, Batman: The Dark Knight and other movies
• Jorge Peña, Charlie Breindahl and 15 other friends like this
Rapidly shifting domains: how do we ensure our research is relevant even when the tools change?

How do we avoid re-inventing the wheel when it comes to identifying organizational patterns of use?

How can we move beyond descriptive work?
DORITOS ARE GREAT FOR KINDLING IF YOU CAN'T FIND ANY
Tech Affordances which Support Collaboration in/out of the Workplace

- Affordances of proximity that support collaboration:
  - Events can bring together those with shared interests and expertise
  - Individuals can communicate identity information through their self-presentational choices
  - Being proximate facilitates communication & interaction, which enables knowledge-sharing and question-asking
SNSs have social and technical affordances that help individuals maintain, invest in, and benefit from their social networks.
SNSs facilitate social interaction by making commonalities visible
SNSs enable the sharing of identify information and expertise

- {image removed for web}
... and the presence of a social network serves to warrant identity information (Walther & Parks, 2002)
Social Capital: Facebook contains a set of social and technical affordances that can help people mobilize resources in their social networks.
Social Capital

- Describes the benefits we get from our social connections (e.g., information, social support)
- Lin (2001): Social capital as an “investment in social relations with expected returns in the marketplace”
- Putnam distinguishes between bridging & bonding social capital
reflects **strong ties** with family and close friends, who might be in a position to provide **emotional support** or access to scarce resources
Bridging Social Capital

is linked to “weak ties” (Granovetter, 1982), loose connections who may provide useful, novel information or new perspectives for one another.

“... technologies that expand one’s social network will primarily result in an increase in available information and opportunities — the benefits of a large, heterogeneous network” (Donath & boyd, 2004).
Numerous studies have identified and replicated the link between SNS use and social capital (Burke et al., 2010, 2011; Ellison et al., 2007; 2010; 2011; Stutzman and Yoder, 2011; Stutzman 2011; Venezuela, Park, & Kee, 2009)

Many of these dynamics can be found in organizational settings
Current Research with Facebook, Inc.: Question-asking in Facebook

Nicole Ellison
Hey, social network -- What are some good day trips we should do with the kids before leaving Boston?
21 hours ago · Like · Comment

Jessica Vitak
Providence is not too far and has a great children's museum!
21 hours ago · Like · 1 person

Cliff Lampe
There's kiddie cage fighting in South Boston I think.
21 hours ago · Like

Rebecca Gray
Walk the freedom trail, and make sure to check out Paul Revere's house.
17 hours ago · Like

Brandon Brooks
If they like baseball, you could go to a Boston Red Sox game.
7 minutes ago · Like

Write a comment...
Calling All Facebook Friends: Exploring Requests for Help on Facebook

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Abstract
Past research suggests Facebook use is linked to perceptions of social capital, a concept that taps into the resources people gain from interactions with their social network. In this study, we examine a sample of public Facebook status updates (N=20,000) for instances in which users request a response from their network. These attempts to mobilize resources offer insight into the mechanisms through which Facebook is used for social capital conversion. After identifying mobilization requests (N=856), we categorize them by cost (i.e., effort needed to satisfy the request) and type (e.g., opinion, information, social coordination) in order to describe the prevalence of these requests and the extent to which they require effort on the part of the potential responders. Finally, we examine characteristics of these users and the linguistic characteristics of status updates that contain mobilization requests.

Introduction
Facebook, the most heavily used social network site (SNS) in the world, recently announced it supported one billion active monthly users (Facebook 2012). As of 2013, 67% of American Internet-using adults reported using a social network site, up from a mere 5% of adults in February 2005 (Pew Internet and American Life Project 2013), and 92% of Facebook users have at least one friend on the site. Asking and making requests of one’s network via Facebook status updates. Recent SNS scholarship describes the ability to broadcast requests for information and social support as a possible mechanism through which social capital accrual occurs in SNSs (Gray et al. 2013). On the site, status updates enable users to share content directly with their entire network (or a subset thereof), and to make direct requests through use of text, images, links, or video; users’ Friends can reply directly by commenting on the update or through other channels, both within the site or via other channels (e.g., phone calls, text messages).

This study explores one pathway through which social capital conversions are likely to occur: requests for some
<table>
<thead>
<tr>
<th>Facebook Relationship Maintenance Behaviors (FRMB)</th>
</tr>
</thead>
<tbody>
<tr>
<td>When I see a friend or acquaintance sharing good news on Facebook, I try to respond.</td>
</tr>
<tr>
<td>When I see a friend or acquaintance sharing bad news on Facebook, I try to respond.</td>
</tr>
<tr>
<td>When I see someone asking for advice on Facebook, I try to respond.</td>
</tr>
<tr>
<td>When a Facebook friend has a birthday, I try to post something on their wall.</td>
</tr>
<tr>
<td>When I see someone asking a question on Facebook that I know the answer to, I try to respond.</td>
</tr>
</tbody>
</table>
Facebook Relational Maintenance Behaviors (FRMB): powerful predictor of bridging social capital. Why?

- Norms of reciprocity associated with social capital
- Social grooming: These activities signal “I am paying attention to you” via investments in one’s network
- Technical: They train Facebook’s News Feed algorithm
- Social network: Commenting on Friends posts = Access to new networks (Friends of Friends)
Social Media Affordances that Support Knowledge-Sharing

- Context awareness
- Identifying Expertise
- Network transparency

Looking forward:
- How do affordances enable knowledge sharing in organizations?
- Does social media support an increase in team effectiveness?
Bring social into the organization
Estimated to be a $4.6 billion industry this year according to eMarketer

In 2008, 77 percent of companies in the US utilized at least one social media channel
- By 2009, that number reached 92 percent (Inc. Magazine; estimated)

Enterprise social networking systems formalize knowledge seeking channels within the organization
- Designed to facilitate information sharing and to increase connectedness
Bringing social media into the workplace provides employees with new affordances (Treem & Leonardi, 2012)

- High degrees of visibility, association, persistence, editability

- Affordances facilitate opportunities for a host of new behaviors – positive and negative
Organizational Networks

- Organizations are trending towards networked patterns of organizing (Podolny & Page 1998; Powell et. al. 2005)
  - Non-profits (Shumate, 2005, 2008)
  - Scientific knowledge (Margolin et. al., 2012)

- Network oriented technology enhances this ongoing shift in organizational behavior
Organizational Networks & Knowledge

- Networks and knowledge are a central focus of organizations today
  - Consciously & subconsciously

- Knowledge must be able to be shared across contexts through relationships and networks, (Kanter, 1988)
  - Distributed teams facilitate the acquisition and application of knowledge (e.g., Madhavan & Grover, 1998; Sole & Edmondson, 2002)
    - Provide access to relevant expertise across the globe (Kirkman et al., 2002)
    - Create diverse knowledge (Gluesing & Gibson, 2004)
The connection between network, access to knowledge and performance in the workplace is well established

- Structural holes = increased likelihood of promotion, mobility and adaptability (Burt, 1992; Podolny & Baron, 1997)

- Centrality in informal networks increases the likelihood of promotion (Brass, 1984)

Knowledge-intensive work

- Knowledge is increasingly central to accomplishment of day-to-day work (Hansen, Mors, & Lovas, 2005; Leonardi & Bailey, 2008; Winter, 1987)

- Knowledge ties across boundaries (physical, divisional, hierarchical) can increase employees’ ability to complete tasks successfully (Cross & Cummings, 2004)
IBM, Social Media & Sales

- Large multinational knowledge-intensive firm, headquartered in the United States
  - More than 50,000 employees
  - Sells technology products and consulting services
  - “Inside Sales” accounts for approximately 18 percent of the company’s annual revenue

- 2011 – 2013 Inside Sales operations
  - 2,275 representatives covering specific brands (Brand Reps)
  - 850 representatives covering regions/sectors (Coverage Reps)
43 sales locations worldwide
80% of salesforce is in large or regional centers

Locations by Region
- 10 NA
- 9 NE
- 8 SW
- 2 Japan
- 14 GMU
- 43 Total

<50 FTEs (23 Centers)
50 – 300 FTEs (15 Centers)
>300 FTEs (5 Centers)
<table>
<thead>
<tr>
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<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
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<tr>
<td>Tenure</td>
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<td>-0.05</td>
<td>-0.03</td>
<td>-0.02</td>
</tr>
<tr>
<td>Client</td>
<td>0.08*</td>
<td>0.10**</td>
<td>0.11**</td>
<td>0.11**</td>
</tr>
<tr>
<td>Training</td>
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<td>0.04</td>
<td>0.05</td>
<td>0.06*</td>
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<td>Task Interdependence</td>
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<td>0.01</td>
<td>0.00</td>
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<td>Twitter Use</td>
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<td></td>
<td>-0.01</td>
<td>-0.05*</td>
</tr>
<tr>
<td>LinkedIn Use</td>
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<td>0.11**</td>
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<tr>
<td>Use of IBM Connections</td>
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<td>0.08*</td>
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<tr>
<td>Use of External IBM Connections</td>
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<td>Model 1</td>
<td>0.011*</td>
<td>0.007</td>
</tr>
<tr>
<td>Model 2</td>
<td>0.018*</td>
<td>0.010*</td>
</tr>
<tr>
<td>Model 3</td>
<td>0.028*</td>
<td>0.021**</td>
</tr>
<tr>
<td>Model 4</td>
<td>0.049*</td>
<td></td>
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</tbody>
</table>

*p < .05, ** p < .01, *** p < .001
Knowledge seeking as part of task defined interaction

Knowledge seeking outside of task / outside of a given team
“I talk with my BPs every day. My field rep is calling me regularly too, because - the thing is we really need to work together to get deals closed.

But when I need to find something, you know - like information, or I need to know something about a product I’m selling, or if I’m not sure I have the right information… that’s when I’m sticking my head over the row or hopping onto [the company directory]”

-Coverage sales rep., Toronto
“Technically I’m covering three countries and I have 10 brands. I’m certainly not going to be an expert on all of these yet. So when I have a question, I turn to [enterprise social networking site] to find someone who does know. Then I can just ping that person, and find out what I need.

We all work that way.”

-Brand sales rep., Dublin
Lessons Learned & Direction Forward

- **Affordances matter (!)**
  - Tools enable different types of connections – internal and external
  - External connections access more diverse knowledge; contribute to a growth in social capital

- **Social media impacts interpersonal relationships, and affects the organizational culture**
  - Connections to performance remain unclear, but directionally there is an impact

- **Future Studies**
  - Prioritize multilevel perspectives – individual -> team -> organization
  - Connect various framings – individual -> interpersonal -> team -> organization
Social Media in the Organization

Diagram:
- Organizational Level
- Interpersonal Level
- User Level
- Social Media Affordances
- Team Knowledge Sharing
Thank you!

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This research was made possible by support from the National Science Foundation & IBM.