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Recommended Citation

Xu, Weiai and Saxton, Gregory D., "Does Stakeholder Engagement Pay Off on Social Media? A Social Capital Perspective" (2018). *Nonprofit and Voluntary Sector Quarterly*. 63.
<https://doi.org/10.1177/0899764018791267>

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Does Stakeholder Engagement Pay off on Social Media? A Social Capital Perspective

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Abstract

Nonprofits use social media to pursue a broad range of mission-related outcomes. Given the centrality of user connections and social networks on these sites, attaining these outcomes is contingent on first generating a stock of online social capital through investing in online relationships. Yet little is known empirically about this process. To better understand the return on social media, this study develops empirical measures of four key dimensions of social media-based social capital centering on the nature of nonprofits' network positions and stakeholder ties. The study then tests a series of hypotheses relating the increase in social capital to different types of stakeholder engagement tactics. Using Twitter data on 198 community foundations, the study finds that content with multiple communication cues and inter-sectoral stakeholder targeting predict higher levels of social capital; communicative and stakeholder diversity thus appear to play a key role in the successful organizational use of social media.

Keywords: nonprofit management, social capital, social media, stakeholder engagement, Twitter

Continuing a trend since the adoption of websites (Dumont, 2013), nonprofits are increasingly turning to social media as a new frontier for strategic public engagement (Campbell, Lambright, & Wells, 2014; Jung & Valero, 2016; Maxwell & Carboni, 2016). The vast majority of large- and mid-sized nonprofits now have one or more social media account (Nah & Saxton, 2013). A sizeable body of research is documenting the different ways nonprofits are using these accounts to communicate with and engage their stakeholders (Eimhjellen, 2014; Svensson, Mahoney, & Hambrick, 2015; Waters et al., 2009). What is less well understood is precisely what nonprofit organizations are getting out of their stakeholder relationship-building activities on social media. Though the platforms themselves are free of monetary cost, social media impose considerable resource constraints regarding time, staffing, and expertise (Zorn, Grant, & Henderson, 2013). Given the costs, the question of outcomes – of how to get a meaningful return from investing in social media – is critical.

We argue the linchpin of any stakeholder engagement effort on social media is *social capital*, or the resources that accrue from membership in a social network (Bourdieu, 1984; Lin, 1999). Offline, a growing body of evidence points to the role of social capital in helping nonprofits and communities meet their mission by delivering outcomes ranging from improved governance (Fredette & Bradshaw, 2012) and information sharing (Baehr & Alex-Brown, 2010) to greater charitable giving (Graddy & Wang, 2009) and enhanced organizational resilience, influence, and reputation (Taylor & Doerfel, 2011). Social capital appears to play an even stronger role in the translation of *online* efforts into meaningful prosocial and voluntary sector returns (Beaudoin & Tao, 2007; Farrow & Yuan, 2011; Saxton & Guo, 2014). Building on such findings, Saxton and Guo (Saxton & Guo, 2015, Guo & Saxton, 2016) have made this logic explicit in positing an investment/return model centered on the key mediating role of social media-based social resources.

The argument is that relationship-building – the social media investment – first leads to new and unique forms of social capital, which in turn must be expended, converted, or mobilized to deliver other useable resources or desired organizational outcomes. The point is that social capital must be developed first before any meaningful social media-driven outcome can hope to be achieved.

The issue is the conceptual model remains largely untested and the measures of social capital underdeveloped. In this study, we adopt a network view of social capital (e.g., Burt, 1992; Lin, 1999) and seek to extend prior research by examining the relationship between two types of social media-based stakeholder engagement – connection-based and content-based – on four key dimensions of social media-based social capital – network size, network position, tie strength, and embedded resources. We test these relationships using Twitter data gathered on the 198 US community foundations with a Twitter presence in 2014 and 2015.

We organize the rest of the paper as follows. We first build our theoretical foundations, covering nonprofits' use of social media, the concept of social capital, and the relationship between the two, ending with the presentation of four testable hypotheses. We then discuss our method and present our results. We conclude with a discussion of the broader practical, empirical, and theoretical issues raised by our findings. As we hope to show in the remainder of the manuscript, the study represents an important practical and conceptual step in helping understand what differentiates successful from unsuccessful online stakeholder engagement efforts.

Theory and Hypotheses

Does Social Media Matter for Nonprofits?

Most organizational studies cast social media as a positive force (Valentini, 2015) that can enhance, among other things, a nonprofit's communication, marketing, fundraising, stakeholder engagement, knowledge acquisition, awareness-building, volunteer management, accountability,

advocacy, and relationship-building activities (e.g., Campbell, Lambright, & Wells, 2014; Farrow & Yuan, 2011; Guo & Saxton, 2017; Svensson, Mahoney, & Hambrick, 2015; Waters et al., 2009). For example, community foundations, whose main goal is to leverage donations and knowledge to address community problems (Guo & Brown, 2006; Phillips et al., 2016), can raise funds by riding on trending hashtags such as #iGiveLocal and #GivingTuesday. They can utilize social media's networking features (Waters et al., 2009) to matchmake community members and donors. They can use social media as a "listening post" to gain critical knowledge of their community (Lovejoy, Saxton, & Waters, 2012). And with the success of their mission increasingly contingent on their ability to foster a "community" that is built less on geographic boundaries than on a sense of belonging (Phillips et al., 2016), social media provide a diverse and transcendent public sphere for engaging stakeholders and catalyzing public dialogue (Svensson et al., 2015).

But social media use has been increasingly scrutinized, raising issues such as unbalanced representations of viewpoints, audience fragmentation, and the dominance of commercial interests (Bruns & Highfield, 2016). Nonprofits can often struggle online to compete for scarce public attention, and online mobilization is often non-committal or trivial "slacktivism" (Guo & Saxton, 2017). Moreover, while social media's dialogic capabilities are often extolled (e.g., Lovejoy et al., 2012), too many nonprofits rely on one-way communication (Svensson, Mahoney, & Hambrick, 2015), thereby limiting the meaningfulness of online relationships (Valentini, 2015). These pitfalls of social media should be acknowledged. Yet we argue the skepticism results in part from a lack of clear conceptual tools for evaluating social media outcomes. Differently put, the current literature is largely inadequately in answering not only *what* organizations can gain from their social media activities but in *how* they can gain it. We suggest the key lies in relationship building.

Stakeholder Engagement on Social Media

Nonprofits need to partner and collaborate with a wide range of stakeholders to achieve their goals (Doerfel, Atouba, & Harris, 2016; Guo & Acar, 2005). The challenge is building, maintaining, and fostering a complicated series of internal and external stakeholder relationships. Social media represents a new medium for stakeholder relationship-building, offering a relatively low-cost option for interactive two-way communication with large and geographically dispersed audiences (Campbell et al., 2014; Maxwell & Carboni, 2016; Waters et al., 2009).

This diffusion of digital relationship-building capabilities has coincided with a marked “relational turn” in the field of public relations (e.g., Kent & Taylor, 1998), with the emphasis on ways organizations meet their goals through online communicative strategies. These strategies are chiefly put into practice via discrete social media messages, which are the primary dynamic tool afforded by social media for communicating with stakeholders. At the highest level, the literature identifies two broad domains of message-based engagement tactics, which we might colloquially summarize as “what they say” and “who they target” (Saxton & Guo, 2015). The former relates to *content-based* tactics, with organizations seeking to engage their audiences by carefully crafting what to say as well as when and how to say it. Existing research has found audiences respond particularly well to more frequent organizational messages that include multiple forms of visual, textual, and vocal cues (e.g., Lovejoy et al., 2012; Ramanadhan, Mendez, Rao, & Viswanath, 2013). An example of a tweet with “rich” visual cues is one sent by the Rhode Island Foundation that contained an image, a hashtag, a link, and an @ user mention:

See how RI designers and manufacturers can work together to #MakeItHappen bit.ly/1xtKWNv via @projo

By using a link to an article, a categorizing hashtag, a user mention (of the *Providence Journal*), and an image, the organization seeks to engage stakeholders by sharing information that is valuable to the organization's followers while conveying multiple cues.

The second domain of message-based engagement tactics lie in “who they target.” In such *connection-building* tactics (Anagnostopoulos et al., 2016; Saxton & Guo, 2015), organizations' efforts are directed at choosing to whom they wish to target in their communication. Beyond binary friend and follower connections, most social media platforms facilitate richer connections to be built and maintained through social media messages with the use of the “@USER” feature. For example, the following tweet by the Delaware Community Foundation (@DelCommunity) is used to make a message-based connection to the *Philadelphia Business Journal*:

@PHLBizJournal I sent info re a new social impact fund that recycles \$ and ROI to help more NPO projects. Unique nationwide. Possible story?

In allowing organizations to target their social media content at key individuals, these publicly visible *directed tweets* serve as the primary tool for acknowledging or conversing with specific users, in the process creating a message-based connection that can be strengthened through repeated interactions. Research has found that targeted online interactions enhance reciprocity, closeness, and trust (Jang & Stefanone, 2011), and initial research on community foundation practices has found the acquisition of social capital varies according to the number of directed tweets targeted at donors, grant-seekers, and the community as a whole (Saxton & Guo, 2014).

From Stakeholder Engagement to Organizational Outcomes: The Role of Social Media Capital

As alluded to in the above section, in using social media organizations are mostly engaged in an activity whose immediate effect is stronger or deeper relationships. Social media use is, in effect, investing in relationships. Though it is often not explicitly expressed, in the idea of

relationships as an *investment* there is a strong connection between the relationship-building perspective (e.g., Kent & Taylor, 1998) and the social capital perspective (e.g., Lin, 1999). The social capital perspective inherently sees relationship-building as an investment (whether at the personal, organizational, or community level), with the social capital comprising the material and intangible resources embedded in or flowing from the relationships that are built (Bourdieu, 1984; Lin, 1999). Nonprofit organizations' success hinges in large part on their ability to build quality relationships with key sets of stakeholders such as donors, clients, grant-makers and grant-seekers, and the public at large. Nonprofits' social capital thus comprises the resources embedded in these strategic alliances and stakeholder relationships (Doerfel, Atouba, & Harris, 2016).

The current study builds on prior research in testing the causal argument that relationship investment on social media produces social capital. Granted, in an investment-returns perspective, social capital is typically not the ultimate desired outcome. Instead, social capital is valued insofar as it delivers some *resource* that can be leveraged in pursuit of some other valuable individual, organizational, or community outcome – whether a job or a promotion, organizational donations or client satisfaction, or community trust or engagement. There is a growing literature emphasizing this key mediating role of social capital in helping deliver a return on investment from websites (Lin, 1999), blogs (Baehr & Alex-Brown, 2010), and social media (Saxton & Guo, 2014; Herzog & Yang, 2018). Saxton & Guo (2015) and Guo & Saxton (2016) go even further in extending such arguments, explicitly positing social media-based social capital (which they refer to via the shorthand *social media capital*) as *the* proximate resource engendered by social media activities. Due to the low cost, versatility, and connectedness of digital communication (Saxton & Guo, 2015), such social capital is more fluid and diverse than offline social capital and also generally gained – as well as lost – much more quickly. Moreover, no meaningful organizational outcome can be

achieved through social media efforts, they argue, without first accumulating a stock of social media capital that can then be expended, converted or translated to deliver organizational outcomes.

This central role of social media-based social capital is often made but has been subject to limited empirical testing beyond individual-level survey research. This presents a missed opportunity to tap into the trove of *publicly visible* “digital traces” of organization-stakeholder relationships – the friend-follower ties, @USERNAME mentions, and liking, sharing, and commenting activities – that can be used to develop comparable, quantitative measures of social capital (e.g., Saxton & Waters, 2014; Campbell et al., 2014).

The contemporary social media literature also has not as of yet sought to develop multi-dimensional measures of social capital. A single study, as far as we are aware, has attempted to examine in the social media context the relationship between stakeholder engagement and social capital; specifically, Saxton and Guo (2014) examine how community foundation targeting of different types of stakeholders (donors, grant-seekers, and community) predicts the increase in social media-based social capital held by the foundations. This prior research constitutes an important first step toward building organizational-level social media capital research; however, the study was limited in that it was an exploratory, inductive study involving preliminary correlational statistics covering a limited set of measures of both stakeholder engagement (notably, the number of tweets targeting key stakeholder groups) and social capital (notably, network size).

In effect, the current literature leaves several issues un- or under-examined. To move forward, we need better measures of social media-based stakeholder engagement. We need better measures of social capital. And we need more robust tests of the relationship between the two. We seek to address these shortcomings in conducting a study that relates multiple dimensions of stakeholder engagement to multiple dimensions of social capital. In so doing, we aim to propel the

literature into directions that will help nonprofit organizations better understand how to get suitable returns from the investments they are making in social media.

Hypotheses

Our hypotheses cover the effects of two types of social media-based stakeholder engagement tactics – content-based and connection-based – on the acquisition of social media-based social capital. As summarized in Figure 1, we operationalize the multi-faceted concept of social capital with four dimensions that conform to the network view (e.g., Lin, 1999): network size, network position, tie strength, and embedded resources. We now lay out our hypotheses for each of these four dimensions in turn.

[Insert Figure 1 here]

Network Size. The first dimension of social media-based social capital, network size, reflects the number of social contacts an organization has cultivated and is one of the core measures of social capital (Burt, 1992; Lin, 1999). Existing research shows large online networks are conducive to word-of-mouth (Anger & Kittl, 2011) and charitable giving (Herzog & Yang, 2018), suggesting a large online audience base may be helpful to community foundations for fundraising, raising awareness of community problems, and fostering policy dialogue. Prior studies further show that network size can be boosted by the strategic design of social media messages (Saxton & Guo, 2014) and frequent targeting of a broad array of publics (Yang & Taylor, 2015). Building on these findings, *Hypotheses 1a* and *1b* argue content-based and connection-based stakeholder engagement tactics, respectively, will increase the size of the organization's stakeholder network.

Hypothesis 1a: The size of the network built by an organization will be positively related to the content-based engagement tactics employed in the organization's social media messages.

Hypothesis 1b: The size of the network built by an organization will be positively related to the connection-based engagement tactics employed in the organization's social media messages.

For consistency, all hypotheses are presented with the dependent variable appearing first. Moreover, as will be discussed in the Methods section, connection-based and content-based tactics are each operationalized using multiple measures. To emphasize the conceptual-level relationships, we present two broad hypotheses per dimension of social capital.

Network Position. The second dimension gauges the organization's *centrality* (e.g., Freeman, 1979), or its positioning at the core or periphery of the social network (Granovetter, 1973). Being at the center generally means the organization occupies a more "important" network position, often implying the organization acts as a liaison or broker between other organizations in the network (Burt, 1992). As a result, centrality is associated with a greater in-flow of resources such as higher online visibility (Guo & Saxton 2017) and word-of-mouth (Xu, Sang, Blasiola, & Park, 2014). While existing research on what leads to centrality in social media networks is limited, prior research has found those who are central in online social networks are notably more active in contributing content (González-Bailón, Borge-Holthoefer, & Moreno, 2013). Moreover, Yang and Taylor (2015) suggest centrality can be achieved through strategically designed dialogic and stakeholder targeting approaches. Building on these arguments, our second set of hypotheses focuses on the potential impact of connection- and content-based stakeholder engagement practices on network centrality:

Hypothesis 2a: The network centrality of an organization will be positively related to the organization's content-based engagement tactics.

Hypothesis 2b: The network centrality of an organization will be positively related to the organization's connection-based engagement tactics.

Tie Strength. The third dimension reflects the strength or depth of interactions, with stronger ties indicating greater familiarity, social bonding, cohesion and trust (Granovetter, 1973). At the organizational level, stronger ties have been found to enhance such outcomes as organizational resilience (Taylor & Doerfel, 2011; Lai, Tao, & Cheng, 2017). A central idea of the relationship-building literature is that stronger ties flow from targeted and repeated communicative interactions (Kent & Taylor, 1998; Taylor & Doerfel, 2011). Our hypotheses 3a and 3b build on these findings in arguing that content-based and connection-based tactics, respectively, can improve the strength of the ties an organization has with its stakeholders:

Hypothesis 3a: The strength of ties an organization has with its stakeholders will be positively related to the organization's content-based engagement tactics.

Hypothesis 3b: The strength of ties an organization has with its stakeholders will be positively related to the organization's connection-based targeting tactics.

Embedded Resources. The final dimension of social media-based social capital is *embedded resources*, or the amount and variety of resources available through an organization's network connections (Lin, 1999). Organizations' acquired stakeholders vary in authority, power, insights, and expertise, providing a pool of resources organizations can tap into to accomplish goals (Lin, 1999). Two types of resources stand out. One is stakeholder *influence*. Although influence is a multi-faceted construct, one straightforward indicator of influence on social media is the stakeholder's follower size (Anger & Kittl, 2011). Highly followed stakeholders can propel an organization's messages to a wider audience, increasing its visibility, legitimacy, and influence.

The second type of resource is *diversity*, with a substantial body of evidence showing how diversity in social networks is related to organizational performance (Doerfel, Atouba, & Harris, 2016; Guo & Acar, 2005), innovation (Parise et al., 2015), and the generation of insights and opportunities (Burt, 1992; Granovetter, 1973). While we know much about the outcomes of diverse networks, we know little about the determinants. At a general level, the literature does highlight the need for tailored tie-building strategies in acquiring network resources. For example, Yang and Taylor (2015) suggest connection-building approaches – including dialogue and repeated interactions with targeted stakeholders – can boost network embeddedness, while broad targeting of the general public can increase network diversity. Our final hypotheses add to this nascent literature by examining the ability of content-based and connection-based engagement tactics to foster the two key types of embedded resources outlined above:

Hypothesis 4a: The diversity and influence of the stakeholders fostered by an organization on social media will be positively related to the organization's content-based engagement tactics.

Hypothesis 4b: The diversity and influence of the stakeholders fostered by an organization on social media will be positively related to the organization's connection-based engagement tactics.

Method

Sample and Data collection

The current study uses data on U.S.-based community foundations. Although we expect our model is largely applicable to any nonprofit organization on social media, community foundations are chosen for a key reason: all community foundations tend to have the same core external constituent groups – donors, grant-seeking organizations and the community at large (Guo

& Brown, 2006), which helps control for the types and numbers of stakeholder groups targeted. By limiting the sample to the same type of nonprofits, the study can further control for confounding factors resulting from inter-sectoral variations.

We identified 254 U.S.-based community foundations with a Twitter presence from a complete list of 1,034 community foundations listed on the Council on Foundations website. Using custom Python scripts, we collected all tweets sent by the community foundations as well as all tweets sent to or discussing these foundations over the six-month period from 07/30/2014 to 01/31/2015. To establish the time order condition for causality, the stakeholder engagement (independent) variables were measured using data from the first three months (07/30/2014 to 10/30/2014), while the social capital (dependent) variables were measured using data from the last three months (10/31/2014 to 01/31/2015). We excluded 56 organizations that were inactive on Twitter during the study period, resulting in a final sample of 198. To test the stated hypotheses, the study used a set of ordinary least squares (OLS) linear regression models, with each independent and dependent variable defined below.

Dependent variables: Social capital

As noted in the Hypotheses section, this study investigates four dimensions of social capital: network position, network size, tie strength, and embedded resources.

Network Position was measured by the centrality (Freeman, 1979) of each community foundation in a Twitter-based peer network. The peer network was constructed based on the Twitter following/follower relationships among all community foundations included in the study. Such Twitter relationships signify either mutual or unilateral acknowledgment among peer organizations. The network data were collected using both the Python scripts and NodeXL, a social network analytic tool (Hansen, Shneiderman, & Smith, 2010). Based on the collected network data,

we measured both *In-degree Centrality* and *Betweenness Centrality*, two of the most common centrality measures used to measure social capital (Burt, 1992). In-degree centrality counts the number of incoming social ties (Freeman, 1979), which in the Twitter context means the number of other community foundations who follow each organization's Twitter account. In general, community foundations with a high in-degree are more highly regarded by their peers and have a larger audience base. Betweenness centrality, meanwhile, calculates the frequency with which a network actor (a community foundation in this case) lies in the shortest path connecting everyone else in the network (Freeman, 1979). Betweenness centrality describes a community foundation's broker or liaison role in bridging and connecting other community foundations – the kind of measure that encapsulates the notion of *bridging social capital* (Borgatti, Jones, & Everett, 1998).

Network Size. Data for the remaining three dimensions – network size, tie strength, and embedded resources – were derived from each community foundation's organization-specific stakeholder network over the 10/31/2014 to 01/31/2015 period. This network includes any Twitter user who has reached out to a community foundation by mentioning or replying to the foundation in a tweet; all such users are at least temporary foundation stakeholders, inasmuch as they can help disseminate a community foundation's fund-raising, grant-making, and issue advocacy messages. Stakeholders included in a community foundation's network are considered *acquired* stakeholders in that the stakeholders have actively engaged the community foundation in a communicative process. Such communication signifies stakeholders' acknowledgment of the community foundation's relevance and importance. Our first measure using this stakeholder network data, *Network Size*, was measured as the number of stakeholders a community foundation had acquired over the three-month period.

Tie Strength. Using data from each organization’s Twitter stakeholder network, our measure of the *Strength of Stakeholder Ties* indicates the average number of times each stakeholder interacted with the community foundation over the three-month period.

Embedded Resources. Lastly, the extent of embedded resources was operationalized through two different measures derived from the stakeholder network data. First, based on the idea that stakeholders with more Twitter followers have a greater capacity to help the foundation spread messages and awareness, we measured *Stakeholder Influence* as the average follower size of the foundation’s acquired stakeholders. The second embedded resource highlighted in the literature is diversity (Lin, 1999). To highlight the increasing relevance of diverse cross-sectoral ties (Guo & Acar, 2005), we gauged the sectoral diversity of each community foundation’s potential stakeholder resources. Specifically, *Domain Variety of Acquired Stakeholders* used acquired stakeholders’ Twitter bio descriptions to code each stakeholder as falling into one of six exclusive domain categories: 1) the general public, 2) nonprofits, 3) private sector, 4) education, 5) news media, or 6) government and policy-makers. To facilitate the manual coding, we inductively identified a set of keywords related to each domain (for example, the media domain was identified by such keywords as *news, anchor, reporter, journalist, journalism, coverage, radio, magazine, newspaper, daily*, etc.), and then used the keywords for domain coding. Given that a stakeholder network is more diverse when it includes actors from more domains, our variable is a count of the number of different domains represented by a community foundation’s acquired stakeholders.

Independent variables: Stakeholder engagement measures

Our independent variables capture two key dimensions of stakeholder engagement tactics – content-based and connection-based.

Content-based Tactics. We operationalized two dimensions of organizations' social media content tactics over the first three-month period. First, *Number of Tweets* measures the number of original tweets sent by a community foundation. *Cue Richness*, in turn, was measured as the average count of the number of linking (URL), tagging (hashtag), and visual (image or video) message elements in a community foundation's tweets. These message-level variables build on literature that measures Twitter activities through tweet volume and counts of photos, videos and hashtags (e.g., Ramanadhan, Mendez, Rao, & Viswanath, 2013).

Connection-based Tactics. Connection-based targeting efforts are reflected in the number and variety of stakeholders a community foundation attempts to reach in its social media messages. Unlike the *acquired* stakeholders measured above in the later three-month "outcomes" period, in the first three-month period these stakeholders were only *targeted* by the community foundation – only some of whom will be successfully engaged. To capture such targeting efforts, we operationalized four different variables. To start, we used the *Number of Targeted Local Stakeholders* and *Number of Targeted Non-Local Stakeholders* to gauge the degree of targeting efforts that reflect community foundations' local vs. national outreach. We treated in-state stakeholders as local and out-of-state as non-local. Stakeholders' location information was obtained from their Twitter bios. Second, the *Frequency of Stakeholder Targeting* was calculated as the average number of tweets sent from a community foundation to each targeted stakeholder. Lastly, using the six domain categories described earlier, the *Domain Variety of Stakeholders Targeted* constitutes a count (0-6) of the number of unique domains represented by the stakeholders the community foundation targeted in its tweets.

Control variables

As noted earlier, several key factors (such as industry/sector) are controlled for already given the study's focus on a single type of nonprofit organization. Two additional control variables were also included in our statistical analyses. First, *Community Foundation Revenue* is included as a measure of organizational size, following evidence on how size affects organizations' technology use (e.g., Zorn et al., 2013). The information was obtained from the Form 990 filed by the community foundations in 2013 and obtained from GuideStar. Second, based on previous findings that online follower size is a critical determinant of online influence (Anger & Kittl, 2011), we controlled for a community foundation's preexisting online influence by measuring *Baseline Follower Count* as the foundation's Twitter follower count in early October 2014.

Results

Descriptive Results

In Table 1 we present a list of the variables examined, their definitions, and their relationship to the specific dimensions of stakeholder engagement and social capital. Table 2, in turn, presents summary statistics for the variables.

[Insert Tables 1 and 2 here]

We start with the stakeholder engagement variables. For the content-based dimension of stakeholder engagement, a community foundation on average sent 38.09 tweets during the three-month study period. The average *Cue Richness*, meanwhile, was 1.17, indicating the average tweet had just over one linking (URL), tagging (hashtag), and/or visual (image or video) element.

For the connection-based tactics, in turn, organizations generally had a higher *Number of Targeted Local Stakeholders* (with = 7.89) than *Targeted non-local Stakeholders* (mean = 2.20). The average *Domain Variety of Targeted Stakeholders* was 2.27, indicating the typical community foundation tended to engage with stakeholders in more than two of the six primary domains. In

terms of targeting frequency, a typical community foundation interacted on average more than nine times with each stakeholder (mean = 9.5); however, there was great variation across community foundations, as indicated by the high standard deviation ($SD = 92.30$).

Regarding the social capital outcomes variables, the centrality measures, to start, are both based on the Twitter peer network. *In-Degree Centrality* had a mean value of 13.37, meaning that on average a community foundation was followed by 13 other community foundations. *Betweenness Centrality*, meanwhile, had an average value of 294.59. This is the average number of times a community foundation acts as a bridge along the shortest path between two other foundations. Both centrality measures had standard deviations higher than their means, which indicates that the prominence of community foundations in the network is not normally distributed. Namely, the core of the network is occupied by a small minority of community foundations with relatively high centrality scores, with the rest of the foundations residing on the periphery. The remaining variables relate to “acquired stakeholders” and are based on stakeholders’ outreach contacts with a focal community foundation; 39 community foundations were not contacted by any stakeholder during the study period and thus their scores on the corresponding measures are zero. For *Network Size*, a typical community foundation averaged 7.71 acquired stakeholders over the study period. Regarding the *Influence of Acquired Stakeholders*, again a small set of community foundations had highly influential stakeholders, with an average follower size as large as 244,617 ($mean = 3,397$, $SD = 17,903$). The average community foundation had a *Variety of Acquired Stakeholders* score of 1.97 ($SD = 1.46$), indicating the acquired stakeholders typically came from two different domains. Lastly, the typical *Strength of Ties with Acquired Stakeholders* was relatively weak ($mean = .99$, $SD = .62$), indicating that on average each stakeholder interacted

with the same stakeholder once over the three-month period (the mean score is less than 1 given that some community foundations were contacted by no stakeholders over this period).

Multivariate Results

Table 3 summarizes the OLS regressions conducted to test the hypotheses that stakeholder engagement predicts the acquisition of social capital. The set of independent and control variables is the same in each model; what varies is the specific dependent variable that is used to operationalize social capital. All models were significant, explaining between 25% and 63% of the variance in the dependent variable as indicated by the adjusted R-squared.

[Insert Table 3 here]

Network Position. Models 1 and 2 predict the network position dimension of social capital. The betweenness centrality of a community foundation in the peer network was positively predicted by cue richness ($\beta=.14$, $p<.05$) and the domain variety of targeted stakeholders ($\beta=.34$, $p<.001$), but was negatively associated with the number of targeted local stakeholders ($\beta=-.23$, $p<.05$). In-degree centrality was positively predicted by cue richness ($\beta=.17$, $p<.05$) and the domain variety of targeted stakeholders ($\beta=.39$, $p<.001$), but was negatively associated with the number of targeted local stakeholders ($\beta=-.29$, $p<.05$).

Network Size. In Model 3, network size was positively predicted by cue richness ($\beta=.14$, $p<.05$), the number of targeted local stakeholders ($\beta=.23$, $p<.05$) and the domain variety of targeted stakeholders ($\beta=.18$, $p<.05$).

Tie Strength. Model 4 captures the tie strength dimension of social capital. Tie strength was positively associated with the domain variety of targeted stakeholders ($\beta=.30$, $p<.05$) and cue richness ($\beta=.21$, $p<.05$).

Embedded Resources. The final two models predict levels of resources embedded in the stakeholder network acquired. In Model 5, the influence of stakeholders was positively predicted by cue richness ($\beta=.19$, $p<.05$). In Model 6, the domain variety of acquired stakeholders was positively predicted by cue richness ($\beta=.12$, $p<.05$) and the domain variety of targeted stakeholders ($\beta=.30$, $p<.001$).

Control Variables. In all six models, the size control (*Community Foundation Revenue*) was positive and significant, suggesting that larger organizations are generating more social capital from their social media efforts. A similar relationship was found with the *Baseline Follower Count*, though the variable was not significant in Models 4 and 5 (which predict tie strength and the influence of stakeholders, respectively).

Discussion and Conclusions

The study offers a broad contribution to the literature on how social media empower nonprofit organizations to reap benefits from social media engagement. Our findings suggest, at the broadest level, that effective acquisition of social capital depends on *how much* and *how well* organizations connect with stakeholders. The study specifically introduces two primary stakeholder engagement tactics, content-based and connections-based, and shows that both tactics matter. But perhaps the most notable finding is how the success of acquiring social capital appears to rely less on the quantity of organizations' stakeholder engagement than on the *diversity* of that engagement – both in terms of the diversity of stakeholder connections and the diversity and complexity of message elements.

Contemporary nonprofit organizations operate in an increasingly inter-connected environment. Community foundations, in particular, are expected to function as bridges to bring inter-sectoral resources to address community needs (Guo & Brown, 2006). Community

foundations' stakeholders should span across the general public, other nonprofits, governments and the private sector, making it appropriate that they leverage the interactive features of social media to branch out (e.g., Campbell et al., 2014). The organizations in our sample appear to benefit from engaging with stakeholders in diverse domains. The findings suggest inter-sectoral stakeholder targeting builds more diverse stakeholder networks and fosters stronger stakeholder ties, whereas organizations who target locally are generally less central (and less influential) in the peer organization network. At the time of the study, community foundations mostly targeted their nonprofit counterparts in the same state. This may reflect community foundations' practical need to work with nonprofit counterparts in serving local communities. Worth noting is that although community foundations are geographically bounded, the very definition of "community" has undergone changes. Geographic places still matter, but a community increasingly refers to a shared fate and belonging (Phillips et al., 2016). Therefore, community foundations could bring resources from non-local partners granted that the non-local partners have a shared interest in local affairs. In that sense, a chiefly local outlook in stakeholder engagement may limit organizational abilities to acquire a broader array of resources.

In addition to the benefits from targeting across regions and sectors, we find messages result in better outcomes when they contain rich and diverse communicative cues such as hashtags, hyperlinks, images, and videos. Posting multi-media content increases organizations' level of transparency and social presence, resulting in a higher degree of trust and engagement from social media audiences (Han, Min, & Lee, 2016). A post-hoc analysis shows that hashtag use alone has the single largest effect on social capital acquisition. We suspect that hashtags provide *community cues*. Considering that hashtags are a popular way to join conversations and activist efforts with like-minded users, organizations' extensive use of hashtags conveys the image that they are active

conversants and conveners in various issue networks. Their presence in online public conversations also helps attract attention from like-minded stakeholders.

Managerial Implications

We seek to use the findings to address some of the challenges facing community foundation practitioners, and by extension, any nonprofit manager that uses social media. First, community foundations' goals have shifted from grant-making to community leadership (Phillips et al., 2016). Their success is increasingly gauged not only by financial performance but also by community engagement (Phillips et al., 2016). Compared to financial performance, these relational and community-oriented outcomes are more difficult to capture, and our study provides a conceptual and empirical framework for measuring key outcomes of online community-engagement efforts. Second, community foundations compete with other local philanthropic organizations (Graddy & Wang, 2006), prompting them to use social media as a relatively inexpensive means of increasing organizational visibility. This study strongly implies that strategic effort in content and relationship development pays off. Practitioners are particularly advised to use hashtags to join broader issue conversations and use the targeting features of social media to build a diverse, strategically relevant network. Of course, social media-based engagement and social capital should not replace their offline counterparts. Stronger relationships must be built through both offline and online channels.

Limitations

Our study has several limitations. First, we must be cautious in extrapolating results to other contexts given that our study is based on a single (albeit important) type of nonprofit organization in a single country. Second, the study implicitly assumes Twitter serves as a meaningful proxy for community foundations' general stakeholder engagement efforts on social media; whether the relationships examined hold on other platforms such as Facebook or Instagram

or LinkedIn remains an empirical question. Third, several of our measures, while appropriate for a first test of the relevant relationships, are rather blunt. Namely, the way domain variety is coded does not distinguish the variety of resources within the same domain; in the nonprofit domain, for example, grant-seekers and donors offer different and unique insights and support. Similarly, for the local/non-local geographic categorization of stakeholders, which admittedly overlooks more nuanced layers of geographic diversity. Future studies could thus extend our study by developing and testing more fine-grained measures of these concepts.

Future directions

Future studies can build on the current study in several other ways. First, future research should apply the model to other types of nonprofits. A particularly interesting application is how online-only organizations (such as the hacker group *Anonymous*) and social movements (such as #MeToo or #BlackLivesMatter) acquire and then leverage online social capital. Unlike established organizations with offline entities, these decentralized, often ephemeral grass-root phenomena count only on online relationships to advance their causes.

Second, future research can expand on the ways stakeholder engagement and social capital are measured. Social capital has multiple dimensions, with some more strategically important than others. A medium-term goal would thus be to develop an index of social media capital that could help organizations measure the effectiveness of their outreach activities. The quantification of message-based engagement could also broaden its focus to account for variations in such aspects as linguistic styles and thematic differences. Future studies might also categorize tweets to uncover different motives in stakeholder targeting. We also recommend applying different statistical models to predict the temporal effects of stakeholder engagement on social capital.

Third, the online social capital highlighted in the study should be related to offline social capital (e.g., the number of stakeholders acquired through traditional offline communication channels, the number of sponsors or donors, etc.). More importantly, research should examine how such social capital is “converted” to produce tangible benefits or financial, human, symbolic, and cultural capital. A critical question to be tackled in future research is whether and how such diverse linking translates into future collaborations, the receipt of grants, and the influx of knowledge, ideas, and donations. To answer this question, a case study with in-depth interviews to contextualize findings from the current study could be particularly valuable. Interviews with social media managers could also help shed light on the “dark side” of social media engendered by the commercialization of audiences or the increasing use of automated customization algorithms.

Conclusions

This study has empirically developed a multi-dimensional construct of social media-based social capital, which we then employed to test a series of investment-return hypotheses centered on the relationship between stakeholder engagement tactics and the accumulation of social capital. Our findings show that social media-based social capital is largely not inherited but actively accumulated through the strategic use of social media. We show the diversity of sectoral ties and of communicative tactics seems to underlie the successful acquisition of social media capital. Inter-domain targeting appears to yield the biggest return. This finding is in line with the role of community foundations as inter-domain bridges in local communities. Building on these theoretical findings, we urge practitioners to view social media as an integral part of organizational operations. We also call for strategic considerations of the return-on-investment in social media use. Social media platforms may be “free” but they are certainly not without cost. While we shed

some light on how nonprofits can obtain a meaningful return on their social media investment, the literature has only taken the first steps to fully understanding this process.

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#nonprofits #BigData #accounting #communication #CSR #dataanalytics

Table 1. Variable Definitions, Organized by Main Concepts and Sub-Dimensions

Variable Name	Variable Definition
<i>Social Media Capital Variables</i>	
<u>Network Position</u>	
Betweenness centrality	The frequency with which a community foundation lies in the <i>shortest path</i> connecting every other foundation in the community foundation peer network (network based on Twitter follower relationships)
In-degree centrality	The number of incoming social ties in the community foundation peer network (network based on Twitter follower relationships)
<u>Network Size</u>	
Size of acquired stakeholder network	The # of unique stakeholders contacting or mentioning a community foundation in an @USERNAME reply tweet or mention tweet
<u>Embedded Resources</u>	
Influence of acquired stakeholders	The average # of followers of a community foundation's stakeholders (defined as above as stakeholders contacting or mentioning the community foundation through Twitter replies or mentions)
Variety of acquired stakeholders	The # of unique domains represented by a community foundation's acquired stakeholders (defined as stakeholders contacting or mentioning the community foundation through Twitter replies or mentions)
<u>Tie Strength</u>	
Strength of ties with stakeholders	The <i>average</i> # of times a stakeholder had contacted a given community foundation through Twitter replies and mentions
<i>Stakeholder Engagement Variables</i>	
<u>Connection-based</u>	
# of targeted local stakeholders	The # of in-state stakeholders targeted by a community foundation in its tweets
# of targeted non-local stakeholders	The # of out-of-state stakeholders targeted by a foundation in its tweets

Frequency of stakeholder-targeting	The summed weight of outreaching ties from a community foundation divided by the # of unique stakeholders targeted in these outreaching ties
Variety of targeted stakeholders	Count of unique domains of stakeholders targeted by a community foundation (education, media, policy, nonprofit, private sector, the general public) in its tweets
<u>Content-based</u>	
# of tweets	The total count of original (non-retweet) tweets sent by a community foundation
Cue richness	Calculated as (# of tweets with hashatags + # of tweets with URLs + # of tweets with embedded photos/videos)/(3* # of tweets)
<i>Control Variables</i>	
Community foundation revenue	Community foundations' revenue reported on 2012 tax form
Baseline follower count	Community foundation's Twitter follower count collected in October 2014, during the investment period

Table 2. Descriptive Statistics

Variable Name	Count	Mean	Std. Dev.	Min.	Max.
<i>Outcome Variables: Social Media Capital</i>					
Betweenness centrality	198	294.59	921.92	0	11,613.95
In-degree centrality	198	13.37	19.12	0	134
Size of acquired stakeholder network	198	7.71	18.69	0	206
Strength of ties with acquired stakeholders	198	.99	0.62	0	4
Influence of acquired stakeholders	198	3,397.36	17,903.59	0	244,616.8
Domain variety of acquired stakeholders	198	1.97	1.46	0	6
<i>Stakeholder Engagement Variables</i>					
Number of targeted local stakeholders	198	7.89	11.32	0	62
Number of targeted non-local stakeholders	198	2.20	4.06	0	27
Frequency of stakeholder targeting	198	9.50	92.30	0	1,296
Domain variety of targeted stakeholders	198	2.27	2.02	0	6
Number of tweets (volume of messages)	198	38.09	35.11	1	253
Cue richness (richness of messages)	198	1.17	0.36	0	2.13
<i>Control Variables</i>					
Community foundation revenue (1,000,000s)	198	26.7	62.6	.06	4,911,700
Baseline follower count	198	921.85	1,282.88	3	9,133

Table 3. Regressions Predicting Social Media Capital from Social Media-Based Stakeholder Engagement

	<u>Network Position</u>		<u>Network Size</u>	<u>Tie Strength</u>	<u>Embedded Resources</u>	
	Betweenness Centrality (Model 1)	In-Degree Centrality (Model 2)	Stakeholder Network Size (Model 3)	Tie Strength (Model 4)	Influence of Stakeholders (Model 5)	Domain Variety of stakeholders (Model 6)
<i>Stakeholder Engagement Variables</i>						
# of Targeted Local Stakeholders	-.23* (.11)	-.29* (.12)	.23* (.09)	.00 (.12)	.05 (.12)	.12 (.10)
# of Targeted non-Local Stakeholders	.01 (.09)	.06 (.10)	-.02 (.07)	-.09 (.09)	-.02 (.09)	-.08 (.08)
Frequency of Stakeholder Targeting	-.05 (.06)	-.08 (.06)	-.04 (.05)	-.005 (.06)	.002 (.06)	-.04 (.05)
Domain Variety of Targeted Stakeholders	.34* (.10)	.39** (.11)	.18* (.08)	.30* (.10)	.18 (.10)	.30* (.09)
# of Tweets Sent	.03 (.07)	.03 (.08)	-.03 (.05)	.04 (.07)	.02 (.07)	-.01 (.06)
Cue Richness	.14* (.06)	.17* (.06)	.14* (.05)	.21* (.06)	.19* (.06)	.12* (.05)

Controls

Community Foundation Revenue	.19*	.17*	.23**	.31**	.31**	.18*
	(.07)	(.08)	(.06)	(.08)	(.08)	(.07)
Baseline Follower Count	.32**	.17*	.35**	-.001	.08	.33**
	(.07)	(.08)	(.06)	(.08)	(.08)	(.06)
<i>N</i>	198	198	198	198	198	198
<i>F</i> (8, 189)	14.87**	9.19**	40.28**	11.00**	10.88**	27.47**
Adj. R²	.36	.25	.62	.29	.29	.52

Note: Table cells show regression coefficients with standard errors in parentheses. Each regression contains the same set of independent and control variables. What varies across models 1-6 is the specific measure of *social media capital* as dependent variable.

All variables entered as standardized Z-scores. The dependent variables (except for Domain Variety of Stakeholders) were log-transformed to fix skewed distributions.

* $p < .05$ (two-tailed), ** $p < .01$ (two-tailed)

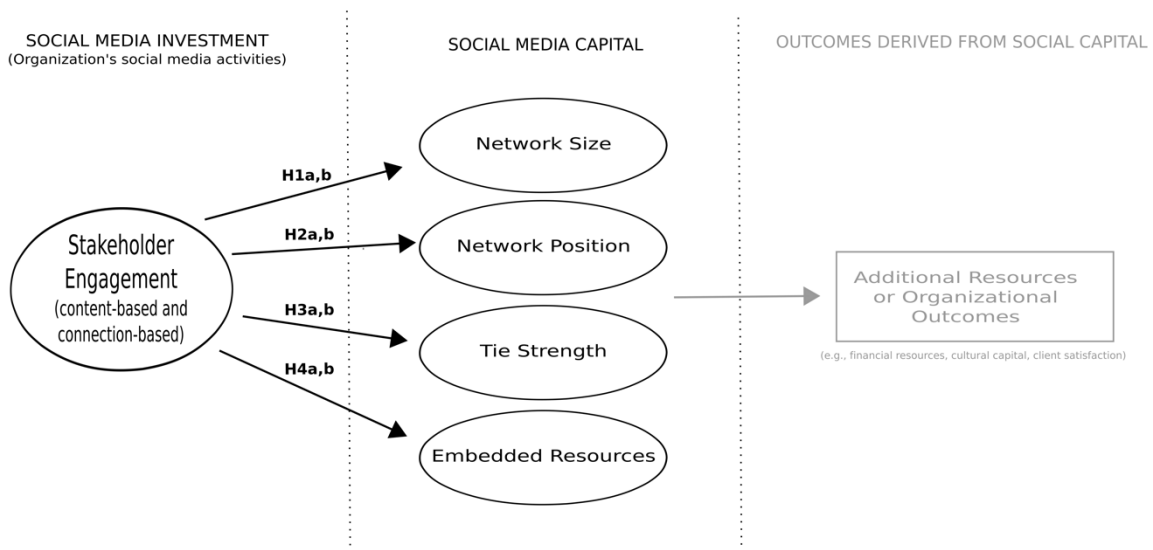


Figure 1. Causal Model of Relationships between Stakeholder Engagement and the Acquisition of Social Media-based Social Capital