

Tensions in Scaling-up Community Social Media: A Multi-Neighborhood Study of Nextdoor

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ABSTRACT

This paper presents a study of Nextdoor, a social media system designed to support local neighborhoods. While not the first system designed to support community engagement, Nextdoor has a number of attributes that make it distinct. Our study, across three communities in a major U.S. city, illustrates that Nextdoor inhabits an already-rich ecosystem of community-oriented social media, but is being appropriated by its users for use in different ways than these existing media. Nextdoor also raises tensions in how it defines the boundaries of neighborhoods, and in the privacy issues it raises among its users.

Author Keywords

Social media; Nextdoor; local social media; civic engagement.

ACM Classification Keywords

H.5.3 Group and Organization Interfaces: CSCW.

INTRODUCTION

In 2000, Robert Putnam [30] argued that civic engagement was declining in America's communities due to a lack of discourse and interaction among neighbors within those communities. In the intervening decade, Putnam's work has been critiqued for a variety of reasons [28]. However, no one argues the importance of strong social ties among neighbors; such ties serve as a means of organizing in times of distress (such as to deter crime, or recover after a disaster [36]) and creating higher levels of community attachment and empowerment [13,35].

This raises a question: with increasing popularity of social media, can such systems be purposed to support the development and maintenance of neighborhood ties? In this paper, we report results from a study of *Nextdoor.com*, a so-

cial media system designed for neighborhoods. It is not the first system to emphasize locality; systems like Grindr and others focused on dating exist, as do for-sale sites such as Craigslist. However, to the best of our knowledge Nextdoor, deployed throughout the United States, is the first nationwide system that attempts to create a local social media experience for any neighborhood, offering each their own restricted site within the system.

Additionally, there are other important differences between Nextdoor and these other systems. First, despite its focus on individual neighborhoods, Nextdoor provides identical features to each neighborhood, across the entirety of the U.S. This contrasts with a number of earlier community-tailored systems such as the Blacksburg Electronic Village (BEV) [5]. We wanted to see whether such a "one size fits all" approach could be successful, given that so many earlier systems had arisen more organically from within their own communities.

Second, Nextdoor exists in a world already populated by numerous forms of social media—including Facebook, Twitter, Craigslist, and others—and in many ways, borrows affordances and features from those systems. We wanted to explore how Nextdoor coexists within this already rich ecosystem of community social media.

Third, membership in Nextdoor is restricted via a verification process, ensuring that only people who can prove they are physical residents of a neighborhood can participate in their community's Nextdoor site. While other social networks, such as CouchSurfing.com, may require address verification before allowing full participation, Nextdoor is the first to maintain a one-to-one mapping of real-world community to virtual community. We wanted to understand how this strong real world mapping might influence the ways that Nextdoor is adopted and used.

In this paper, we describe how people are using Nextdoor in three neighborhoods that are all located within the metro-region of Atlanta, Georgia. We present our results organized around five themes. First, we discuss the pre-existing community engagements that many of our Nextdoor users had and how they viewed the system in that context. Second, we discuss Nextdoor in the broader ecosystem of media used for community engagement. Third we charac-

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terize the content shared on Nextdoor, and participants' perceptions of appropriate and inappropriate content. Fourth we describe issues that arise from the physical boundaries of communities and their virtual representations on Nextdoor. Finally we discuss issues of privacy and trust, both with Nextdoor users as well as with the site itself.

Our contributions in this paper focus on providing insight into how this new platform is being used, and how it contrasts to other social media usage (including to other "global scale" social media such as Facebook, as well as to local-scale social media such as Craigslist or neighborhood email lists). We particularly focus on Nextdoor's place within a broader civic media ecosystem, the implications of aligning physical and virtual neighborhood boundaries, and reflect on the social capital produced within the system.

RELATED WORK

In this section we briefly review literature on social capital and the role that social media plays in building it, as well as prior systems designed to promote community engagement and activism.

Social capital and social media

Through simple everyday interactions like asking one another for help and chatting over the fence, communities build social capital. Social capital is often defined as the aggregate value of social interactions and structure [3,8,25]. Much like the analogous financial capital, social capital can be "spent" when communities face challenges requiring collective action. For example, neighborhoods with accumulated stores of social capital can often protect themselves from threats, such as crime [36], or planners who want to replace their neighborhood with high-rise buildings [15]. Various studies support that higher social capital leads to higher community attachment [35] and empowerment [13], watchfulness of neighbors [12], reduced fear and mistrust [33], and lower levels of mental distress [10,33].

Simultaneously, we know that social media use often entails a larger and more diverse network of dyads in social networks [17,18], which can lead to success in tasks requiring bridging social capital, such as looking for a job [15]. On social media sites like Facebook, commonplace activities like sharing photos, and reading and posting comments helps build social capital in geographically-distributed social networks [4,14]. In short, social media enriches social networks and makes ties more accessible [31].

As encouraging as these (mostly geographically diffuse) studies are, and despite the recent boom in social media use, national studies have found that only 4% of Americans use the Internet for neighborhood-level interaction [19]. We see this as a potentially pro-social and pro-community opportunity into which Nextdoor has moved. Next, we review attempts to spur community interaction that predate Nextdoor, although at very different scale.

Community Social Media

While community-focused social media may seem relatively new, community informatics has a long history. Systems as far back as Community Memory in 1975 [34], the WELL in 1985 [38], and the Santa Monica Public Electronic Network (PEN) in 1989 [32] represented free messaging systems aimed at allowing community members to interact with each other, sometimes around general topics and sometimes focused on particular issues. For example, PEN allowed homeless and homed community members to discuss how to create employment opportunities [32]. The goal of PEN was to not just cross a digital divide (which it did by locating terminals in public spaces) but to try to connect very different stakeholders in the community together [32]. These systems were designed by stakeholders in their communities for use in those communities, and so could be attuned to particular local issues and constituencies.

Perhaps the most famous such bespoke community social media system is the Blacksburg Electronic Village (BEV) [5,21]. Starting in 1993, BEV was a Virginia Tech initiative to connect the local community by providing ways for members to communicate with each other as well as serving as a repository for information [21]. BEV was developed through a participatory approach allowing community members to adopt and adapt the platform itself for their own purposes [5]. In contrast to these earlier systems, which were created by communities for communities, each with different goals, features, and constituencies, Nextdoor presents essentially the same feature set across the many diverse communities in which it is deployed.

These locally oriented social media systems have the potential to greatly empower their residents. Perhaps most famously, studies of "Netville," a neighborhood just outside of Toronto, Canada, illustrate the role that community informatics systems can play; Netville residents successfully used Internet-based communications technologies to rally, organize, and take action against the construction company that had built their homes [16].

Other work has highlighted some qualities of successful community-oriented social media systems. For example, the importance of local facilitators in ensuring successful community-wide adoption has been shown through experiments such as the Creating Connections System [29]; Nextdoor uses a similar mechanism, allowing local community members to establish and lead individual sites.

Another experiment, HomeNet [22] was an early empirical project focused on understanding domestic Internet usage. HomeNet offered a variety of Internet content including locally oriented newsgroups, which participants reported valuing. HomeNet also highlighted the importance of getting the boundaries of locality right; when teenagers (who were heavy users of HomeNet) discovered that a school list contained people from multiple high schools, they asked for forums that were restricted to their school because they did not want "interlopers" from other communities, as they

described them [22]. Nextdoor also creates boundaries between communities, which may or may not align with how community residents themselves see these boundaries, and our inquiry explores this issue further.

There have also been failures of community informatics systems. For example, HomeNetToo replicated the earlier HomeNet project but in a lower income community in Michigan [20]. One important finding from this study focused on email use, which was far lower in this community than in the HomeNet site. This lower usage was revealed to be a critical mass problem: friends and family were far less likely to be online so participants had less people to email [20]. We were thus interested in exploring a range of neighborhoods with different demographics and adoption rates of Nextdoor, to see if there were differences in usage.

A more recent line of work has focused on engaging communities in activism, often via citizen science [9,39]. A common theme in this literature focuses on the challenge of designing systems that can scaffold and support users beyond data collection and into analysis [9,39]. Because of the datasets required, these systems are often more specialized than technologies such as Nextdoor. However as Netville case shows, even basic systems can support people in organizing and taking political action. We wanted to explore whether Nextdoor was being used for such purposes.

Finally, Erete [11] reports the relationship between community engagement and crime, noting that neighborhoods where neighbors talk discouraged criminal activity. Facilitating such communication may be an important role for systems like Nextdoor.

ABOUT NEXTDOOR

Nextdoor is an online social networking site that connects residents of a specific community together. Each community has its own Nextdoor site that is only accessible by those who are residents of the community. Within Atlanta there are many instances of Nextdoor neighborhoods.

In addition to being a website, users can access Nextdoor in other ways. The company provides mobile phone apps. Also people can sign up for emails (when anyone posts, or in digest form) and text message notifications (such as for urgent alerts). By default, users only see postings created in their own neighborhood. However, in February 2013 (before our study began), Nextdoor introduced the Nearby Neighborhoods feature, which allows users to both share and see content created in their own and adjacent neighborhoods. Further, Nextdoor provides advice on that content, with an FAQ that suggests users post about service recommendations, crime reports, lost pets, event promotion, and so forth; it also explicitly states that self-promotional messages are inappropriate and will be deleted.

Nextdoor requires that real names, not pseudonyms, be used, and be visible to other users throughout the system. Nextdoor says that these requirements are motivated by their goal “to create a safe, trusted environment where

neighbors can connect with each other.” Nextdoor community sites include a map and directory allowing users to locate and learn more about their neighbors.

New community sites are created by Founding Members, who define the boundaries of their neighborhood (Nextdoor recommends neighborhoods with at least 100 homes, up to thousands, and requires at least 50). Special users called Leads are responsible for moderating postings, verifying users, and adjusting neighborhood boundaries as needed. Leads may be ordinary residents who volunteer, or may be chosen by Nextdoor (who typically select people with real world leadership positions in the neighborhood).

New users may only join the community after they have verified that they physically live in the neighborhood. For example, after typing in an address Nextdoor will send a postcard with a unique code to the registered address; the user must enter this code at the Nextdoor site to prove that they are at that address. Alternatively, neighbors can vouch for each other, or new users can verify their home address through credit card records.

STUDY APPROACH

Methods

To understand Nextdoor usage, we conducted semi-structured interviews with its users in Atlanta. We chose a qualitative approach because this study was exploratory in nature. To understand how our participants were using Nextdoor, we wanted the ability to follow their explanations including into topics we had not thought to ask about. Qualitative methods such as semi-structured interviews support this approach.

We recruited and interviewed 13 participants. Each person first completed a questionnaire that included basic demographic data as well as some information about their usage of Nextdoor and other social media sites. We used their questionnaire responses to tailor the interviews.

Each interview lasted approximately 45 minutes to an hour; participants were not compensated for their time. We asked questions about how the system was used, how they found out about it, and what other technologies they used in the community. However, we allowed time to follow threads of conversation that the participants brought up. After transcribing the interviews, four researchers independently conducted an inductive thematic analysis [2]. Following that, the researchers met and merged the themes together.

Study Context

With a population of approximately 5.5 million, Atlanta is the 9th largest metropolitan area in the United States, extending significantly beyond the city limits themselves. We recruited people from three of the city’s neighborhoods. One was a small residential exurban community within the greater metropolitan area, but outside the city limits (which we call *Exurban*). The other two were larger “in-town” neighborhoods inside the city limits (which we call *In-town 1* and *In-town 2*). The *In-town 1* neighborhood has often

	Exurban	In-town 1	In-town 2
Total	2	4	7
Male/Female	1/1	1/3	3/4
Age range	36-50	36-50	18-70
Married/Single	1/1	4/0	3/4
Own home	2	4	6
Rent	0	0	1
Live alone	1	0	4
Live w/ family	1	4	3
As resident	6-10 years	6-10 years	1-10+ years
Neighborhood population	500	30,000	7,800
Nextdoor adoption	64%	17%	18%

Table 1. Demographics of participants and neighborhoods. “As resident” and “age range” refer to the ranges reported by participants (min and max). The last row is the percentage of households on Nextdoor at the time of writing.

been described as a “work-play community” because it has a high density of residents who mostly live in condominiums (over 17,000) and also a significant number of high-rise offices. The In-town 2 neighborhood is predominantly single-family residential structures, has far fewer employers, and far less population overall.

Atlanta has a unique system of citizens’ advisory councils known as Neighborhood Planning Units, or NPUs [7]. Established in 1974 by the Mayor, the NPU system was created to give all residents—including those who had been historically disenfranchised—the ability to participate in city decision-making processes. Today, these NPUs meet monthly to discuss issues such as zoning and traffic, and the city sends a government planner to take notes and ensure that neighbors’ concerns are heard by the City Council.

NPUs may influence our study in two ways. First, unlike Wards in other U.S. cities, the NPUs are made up of citizens who live in the represented community; they are also independent of the City Council (NPUs are not governed by an elected official). The NPUs may then catalyze citizen engagement in ways unique to Atlanta. To the extent that Nextdoor is a vehicle for civic engagement we would expect the agendas of the NPUs to be topics for discussion (e.g. zoning issues on a NPU’s meeting agenda). Second, NPUs reinforce local neighborhood boundaries. NPUs are defined by the neighborhoods that they contain, and no neighborhoods are split across NPUs. Further, the official city webpages provide maps for each NPU illustrating which neighborhoods it contains. This serves to reinforce the physical boundaries of each neighborhood, and in fact, in Atlanta, Nextdoor reuses the NPU boundaries to define the delineation of its neighborhood sites. The city govern-

ment itself did not promote Nextdoor nor interact directly with its citizens via Nextdoor, however.

Participants

We recruited participants by gaining access to the Nextdoor sites via their Leads, and posting a pre-approved call for participation. We also used snowball sampling to recruit participants via respondents to our posting. Participants included the Founders for each of our three neighborhoods.

Table 1 provides an overview of participant demographics, broken down by their neighborhoods, as well as demographic information on the neighborhoods themselves. Our sample biases female, although without a reliable point of reference, it is difficult to say whether this deviates substantially from Nextdoor’s active overall user base. Our participants were also largely middle-aged, married property owners. Since Nextdoor is still fairly new, current site members may be more representative of “early adopters” than the population at large, and our participants potentially especially so: in addition to Nextdoor, all participants reported using other social media sites and technologies heavily, a topic we will reflect on more deeply when we get to our results. Clearly, early participants on a community-oriented social media site may also skew more heavily toward caring about community issues than the population at large.

RESULTS

In this section we present our results organized in the following themes. First, we discuss the pre-existing community engagement that many of our Nextdoor users had and how they viewed the system in that context. Second, we discuss Nextdoor’s role in the broader ecosystem of media used for community engagement. Third we characterize the content shared on Nextdoor, and perceptions of the appropriateness of certain types of content. Fourth we describe issues that arise from the differences between physical and virtual neighborhood boundaries. Fifth and finally we discuss issues of privacy and trust that arise on Nextdoor.

Pre-existing community engagement

One of the most striking things about our participants was how engaged they already were with their communities. Unlike some portraits of American community life [24], our study participants knew their neighbors and actively socialized with them. As one participant explained:

“Oh yes. We all have a courtyard and we all have dogs and we usually have cocktail hour out there just about everyday, so yes. [...] Yeah, we just go there everyday, more on the same schedule.” — P9 (In-town 2)

In addition to these casual gatherings, participants also described devoting time and money to their communities. In some cases, Nextdoor facilitated these types of community activities. For example, one participant explained that she learned about a neighborhood-wide graffiti taskforce via a posting on Nextdoor:

“It was ... Yeah. I met her ... and another woman responded too. So, we all three of us got together and she

gave us little kits of some chemical to get paint off and a scraper to get stickers off and a couple things like that and we sort of talked about private property versus public property and blah blah blah and then we each talked about where we lived and what kind of area we'd like to be responsible for. So now every so often I walk up and down [street] looking for graffiti.”— P5 (In-town 2)

In other cases, Nextdoor was serving to help to connect people with existing civic organizations:

“I’ve talked to Nextdoor neighbors about some of the issues that [the neighborhood association] can help them with.” — P1 (In-town 1)

As we mentioned earlier, In-town 1, the large “work-play community,” has a significant transient population; this includes not only those who commute in and out of the neighborhood daily for work, but also the large number who rent apartments rather than own their own homes. Participants in this neighborhood discussed this transience and saw a role that Nextdoor might play:

“You know, bring people together. Make people talk to each other... So many people visit [neighborhood] every day that don’t live here. So, you don’t know when you’re walking by someone on the street, if it is a resident, or if it is just someone visiting.” — P7 (In-town 1)

As another explained, Nextdoor may present a low barrier for these transient renters to engage with the neighborhood, in contrast to other alternatives such as more formal civic groups or neighborhood associations:

“[Neighborhood] is really transient... So Nextdoor helps that because there’s people that come and go and they’re more inclined to join Nextdoor than they would the civic association cause Nextdoor is more of announce kind of thing whereas [the neighborhood association] is looking for volunteers” — P1 (In-town 1)

In some cases, Nextdoor was seen as augmenting or enhancing existing forms of community engagement, already present among neighbors. For example, P2 noted the opportunity for using technology to facilitate neighborhood watch-types of activities, means to deter criminals (and reflecting Erete’s finding about the role for social media in deterring crime [11]):

“The people who live on our street who have been here for 30-40 years all have this little watch amongst each other, for a lot of the bad things that would happen, and now I think it’s just a lot more new people moving in, different access to communicating via smart phones, taking that to a much deeper level is good for all of us. It keeps criminals away and shows them that we’re really on the watch-out.” — P2 (In-town 1)

Our participants clearly had ties within their community, and felt connected to their neighborhood. Perhaps this represents a bias among our participants (i.e., the most civically engaged citizens may have been the most likely to respond), but it may also reflect the orientation of those who choose to participate in the Nextdoor site—those early to

Nextdoor are likely to care about community issues, and be interested in connecting and sharing with their neighbors.

That said, one Founder also speculated that interest in Nextdoor might be driven more by curiosity about who the neighbors were, and what was going on in the community.

“Some people live here and they don’t want to be bothered by anybody else... But there a lot of people that seem to be hungry for information about their neighbors or things going on.” — P8 (Exurban)

In general, though, a striking characteristic of our participants was their sense of connection with—and commitment to—their communities. Nextdoor was seen as a mechanism for facilitating these existing connections in some cases, and potentially as a way to bring new or transient community members into tighter engagement with the community.

Opting in, despite existing community media

Perhaps reflecting this already deep engagement, participants reported using a variety of community-oriented media to stay in touch with their neighbors and neighborhood. These media included mailing lists, Facebook groups for social discussions, and other specialized websites such as Craigslist for information about local yard sales.

However, despite this rich ecosystem of existing community media, participants were still opting in to Nextdoor, and reported a variety of reasons why “yet another social media system” wasn’t superfluous and how Nextdoor served a need that other systems did not meet. At a most basic user interface level, participants felt that the conversation-oriented affordances of Nextdoor—which allow people to see an entire conversational thread in one place on the website (organized much like the comments on a status in Facebook)—were valuable, and an advantage over the community mailing lists they were using:

“Keeping everything in one place, being able to, let’s say, I missed an email, and then with an email people will reply-all. So there’s all this string of communications. So to go to one place and look at a topic and find the communication makes just a lot more sense in getting organized.” — P2 (In-town 1)

However, a more important factor in determining whether Nextdoor was used instead of mailing lists was its ability to scope target audiences at a different granularity than the neighborhood mailing lists that were in use, which tended to fracture around topic lines. This distinction made Nextdoor particularly attractive for certain types of content that participants deemed relevant for the entire community rather than some issue-oriented subset of it:

“Everybody has different mailing lists. We have a neighborhood watch, we have a [neighborhood] connect, we have the education committee list, we have a parents group list, and then we have the Alliance, which is a security you buy into...and then we also have the In-Town1 Neighbors Association.” — P1 (In-town 1)

Yet, in other scenarios, the more fine-grained nature of some community email lists, and their ability to reach a much smaller and more targeted audience, won out over Nextdoor's "whole neighborhood" approach. For example, P9 describes her condominium's Yahoo! Group (and the Google Group that the condo on the other side of the street used). Her Yahoo! Group contained the condo's financial data as well as individual contact information that would not be shared via Nextdoor for reasons of privacy and lack of relevance to the community.

In addition to rather ubiquitous mailing lists, participants also noted a range of other social media that they integrated into their community lives, including Facebook and Craigslist, but articulated different usages for each:

"Well obviously there's a geographical component to it [on Nextdoor] that focuses the discussion and relevancy to the neighborhood. So that's obviously different from a Facebook dynamic where somebody would post about what they had for breakfast that day." — P6 (In-town 2)

"Well, Facebook and Twitter is all about you as a person, so it's stuff that you want to talk about yourself, whereas Nextdoor is... where you tend to notify neighbors of things that are going on in the neighborhood." — P12 (In-town 2)

In sum, Nextdoor found a home among our participants despite their extensive use of a range of other social media systems for connecting with their communities.

Legitimate use and acceptable content

As noted, Nextdoor exists within an ecosystem of community-oriented social media, and our participants commented on what they perceived as legitimate or acceptable uses of Nextdoor, and how these uses differed—oftentimes substantially—from other community social media.

One remarkable aspect of our participants' reports was the lack of divisive or combative content on Nextdoor. In general, there was little reported conflict, even in neighborhoods where major issues played out on other social media:

"Nextdoor doesn't post anything too nuts, it's more of announcements, hey I need this, hey does anybody have a good yard man, does anybody have this, stuff like that" — P1 (In-town 1)

This behavior was notably different from the behavior found on other media such as mailing lists, which one participant described as a "big tent" that brought out those with strong opinions:

"There were so many things if you ever wanted to get a good load of crazy ... the 'big tent' brought them all out. The moderator, any time he'd remove a post, you should have seen the flood of emails after that! [...] Everybody went nuts on that thing, that was just like a nightmare." — P1 (In-town 1)

Another participant (P10) described Nextdoor discourse as being "alarmingly civil," but was also wary about whether Nextdoor would remain free of contention and conflict,

speculating that the upcoming election might bring more polarizing conversation to Nextdoor:

"I'm waiting to see about the politics because we've got a couple of fairly polarizing individuals in the neighborhood and generally speaking, their use of public media has been very respectful. I think it will become very interesting as the elections come up, to see how people use this because there's no throttle on how people use it." — P10 (Exurban)

P1 hypothesized that it was the content itself that didn't invite conflict. For example, when asked to compare Facebook with Nextdoor a participant observed that:

"I just see them very differently. I guess I use Facebook as more chatty. And Nextdoor is ... I don't mean businesslike as in commerce, but businesslike as in factual stuff." — P5 (In-town 2)

And indeed almost universally our participants noted the preponderance of "functional" communications, aimed at passing along crime statistics, notices of lost pets, and upcoming community events, rather than more socially oriented talk, joking, sharing Internet memes, and the like.

Finally, many respondents articulated behaviors that they deemed to be inappropriate for Nextdoor based purely on content reasons, most often centering around commercial posts such as goods for sale:

"I don't want to see people's crap on there. You know I don't care if you want to sell your leftover kayak or whatever. [...] I would rather you post stuff... there's a new business coming in, or something that is going to benefit me as a neighbor. If I want to find a kayak I will go to Craigslist or EBay or something." — P7 (In-town 1)

Local businesses in this regard were in a dilemma: participants liked and wanted to support local (and especially non-chain) businesses, and so wanted to see postings from them; but they did not want overt advertising or sales pitches.

Overall, Nextdoor's content focused strongly on functional rather than social communications. By its nature, this sort of content—self-curated by its users—may lead to less conflict, yet it raises the question of *why* users are using Nextdoor for this sort of content only, whereas other social media seem to have more content diversity. We return to this question, and reflect on the nature of content and its relationship to civility, in the discussion section.

Location verification and divided neighborhoods

As noted earlier, one aspect of Nextdoor that is different from many other community-oriented social media is the fact that the site verifies members' residential addresses. Thus, the participants in our study expressed confidence that others on the site are actual residents of the neighborhood; this confidence is in contrast to mailing lists, Craigslist, or Facebook groups.

This rigid assignment to a neighborhood, however, was at times problematic; one participant described the "islanding"

effect that occurs, as users of adjacent neighborhoods are separated from each other, despite physical proximity. As P1 explained:

“I do like [the address verification]. I think it’s kind of an island effect. People live on an island called [neighborhood] and don’t care what happens across the street of the next neighborhood. That’s the only thing I don’t like about it, it creates the island effect, but I do like that you’ll at least know who is living where.” — P1 (In-town 1)

Interestingly, the presence of islanding was felt, along with the divisions it created, even after Nextdoor introduced the Nearby Neighborhood feature. Many participants reported wanting to know more about the neighborhoods nearest to them:

“Sometimes since we’re only separated by the pavement on the street, if I’m talking about [street] and the traffic congestion on and we’re trying to solve a problem, I can’t block off my street and assume I’m not impacting [nearby neighborhoods]. It would be nice if I could click on them all as well. If I’m planning on lobbying downtown for something” — P1 (In-town 1)

Posts that *did* span neighborhoods were also problematic, however, reflecting a tension between a poster’s desire to share information widely and readers’ desires not to be overburdened with information they consider irrelevant.

“When they combined the in-town neighborhoods together, it was a couple of months ago, they did it for a month or two ... that was ridiculous ... and I think they got feedback from that. I care about what happens in [next neighborhood over] and maybe I want to go look there, but I don’t care as much about the day-to-day things.” — P2 (In-town 1)

Indeed, Nextdoor has continued to evolve this feature. Currently, the system allows any user to switch on and off the neighborhoods of potential interest and also view discussion of just their own neighborhood or also posts from nearby ones.

Privacy and Trust

Virtually all participants expressed that privacy concerns caused them to moderate what they posted on Nextdoor. Some called out the profile information and explained how they moderated what they put there. For example:

“I like Nextdoor ‘cause you can put whatever you want to put on there. If you don’t want people to know that you have a 4-year old and a 12-year old daughter, just don’t put it down.” — P1 (In-town 1)

Despite the fact that Nextdoor bills itself as being much more geographically focused than global social media sites such as Facebook or Twitter, participants were acutely aware of the risks of even community-oriented social media. Most had strongly held beliefs about what information they would be willing to share via Nextdoor, and how Nextdoor’s restricted community focus might still be insufficient to protect them. For example, when asked about whether they would post asking for a housesitter while they

were out of town, the size of the Nextdoor community (hundreds to thousands of homes) was articulated as a reason for not sharing:

“No. Actually I probably wouldn’t post on Nextdoor that I was going out of town. I would just tell my block captain, and I’m a member of the [neighborhood] alliance. You have to pay to be in the service. You get extra protection from the off-duty police that are getting paid. So, I would not post that on Nextdoor.” — P4 (In-town 2)

Related to this was a concern that parents had when seeking babysitting help. While people were willing to post generic requests for recommendations about people for such duties, most were unwilling to specify a particular evening to avoid revealing that they would not be home at that time.

The dominant privacy concern then seemed to focus on people revealing whether or not they were home at particular times. This differs from reports of privacy concerns on Facebook. In their study of why people leave Facebook, Baumer, et al. [1] found that a substantial number of those who left had privacy concerns about how easy it was for others to see their personal information more generally.

However, we found a second privacy concern similar to one described by Baumer et al. [1]: a concern about what Nextdoor would do with its users’ personal data. Two of our participants, both founders of their local Nextdoor community expressed concern about Nextdoor’s business model. Specifically, they noted that it was a Silicon Valley startup and wondered how Nextdoor would become financially viable, given that they were not charging neighborhoods or individuals for participation; they expressed an awareness that their data is owned by the site, and that the current restrictions on its use may not always be in place, concerns aptly noted by P10:

“I don’t think they tell their story about data privacy very well. They have a very California kind of feel, that we’re going to protect you and we’re not going to tell anyone about it. But it’s not a commitment that we’re not going to use this for marketing. Actually they stated they’re going to do that but they’re not making it very clear what that is or when they’re going to start it or what that’s going to look like nor if they were to be purchased by someone else, what that would look like.” — P10 (Exurban).

P10, a local site founder, also noted that this concern led to challenges in recruiting neighbors to the site. Baumer et al. [1] report that nearly 1/5 of their sample had similar concerns about what Facebook was doing with their data, and with policies around privacy and data usage. Like Baumer, et al., [1] who discuss the potential skew in their survey data, we wonder whether these people as creators of their Nextdoor communities might be especially sophisticated social media users, both concerned about what they were inviting others into, and familiar enough with technology to reflect on how social media largely supports itself by monetizing personal data. However, as this model for social media continues to develop it will be interesting to see whether

this more sophisticated understanding of personal data usage makes it way into the general population over time.

DISCUSSION

Nextdoor is the first site to scale up community social media across the United States. Our participants reveal a complex set of issues at work as a result. In this section we discuss the civic media ecosystem and Nextdoor's place within it, the implications of the community boundaries created by Nextdoor, potential impact of Nextdoor on the social capital of the neighborhoods in which it is deployed, and several opportunities for design.

Civic media ecosystem

Our interviews tell the story of Nextdoor interacting with pre-existing community social media tools, including email lists, Facebook and Craigslist. First and foremost, we found it intriguing that Nextdoor looked like the calm, reasonable forum, as compared to "the good load of crazy" on traditional mailing lists. What is at work here? Are Nextdoor moderators stamping out uncivil or controversial posts before they flame up? Why wouldn't email list moderators do the same? It could be that simple norms are at work in the two media, and that Nextdoor needs time to establish the uncivil, combative tone that has already taken hold in email lists. Alternatively, perhaps media affordances explain the difference in tone. On Nextdoor, people's identities are represented with far greater fidelity than on traditional mailing lists. It could be that the identity cues afforded by Nextdoor stamp out bad behavior before it begins (i.e., people can see each other's faces and addresses, so they self-moderate). More work is needed to disentangle these two.

Despite these pre-existing community social media, our participants felt that Nextdoor organized and archived their conversations in ways that added value, above and beyond what they could accomplish with traditional media. At the same time, participants noted repeatedly that the neighborhoods sometimes got too large to post the things they wanted to say. At these moments, they turned to hand-curated email lists and Facebook groups. There is evidently a design space in between the thousands-scale Nextdoor neighborhood and the tens- to hundreds-scale Facebook group or email list.

Boundaries

Nextdoor has chosen a physically based mechanism to scope relevant messages: once you verify that your address falls within the boundary of a certain neighborhood, you can interact with that neighborhood. Nextdoor members more-or-less uniformly found this to be an improvement over location-agnostic platforms like email or Facebook. They knew, at least within the margin of trusting Nextdoor, that the person posting a certain message belonged to the corresponding community. There was a certain amount of trust delegated to Nextdoor here, and it resulted in perhaps a more frank and open discussion than would have happened otherwise.

At the same time, this machinery broke down under certain contexts. Issues exist that cut across cleanly defined neighborhood boundaries, such as traffic (noted by our participants) and crime. While the map lines defining outsider and insider may make sense externally, the reality is clear that certain phenomena transcend easy political boundaries, and may transcend even those boundaries citizens themselves perceive: a motorist cares about getting to work on time, not about each individual neighborhood that crosses her path. Issues like these clearly upset the demarcation Nextdoor wants to establish.

For social computing, this raises the question: What is the right size for delineating a neighborhood? Clearly, it must be difficult to find the appropriate boundaries for any given neighborhood for any given city when you are a company located elsewhere, which is why Nextdoor delegates part of this process. At the same time, we must also consider Nextdoor's point of view: critical mass matters, and the more they carve up individual neighborhoods the less likely any one of them is to engage very actively. To us, it seems that there is a tradeoff: you can carve up localities to make them endlessly relevant at the expense of sacrificing engagement, or you can aggregate localities. In the latter case, Nextdoor's approach ends up with a higher likelihood of engagement, perhaps at the expense of dealing with complex issues that cut across crisply defined neighborhood boundaries. At the moment, it remains unclear which wins out, only that they excel at different things. One conclusion from this paper is that technologies that permit fluid expressions of boundaries present an interesting opportunity for exploration in the space of civic social computing.

Moreover, lines on a map are only one kind of boundary that Nextdoor draws. Whereas in email lists a moderator had "god-like" power to accept or deny a post, or to accept or deny membership, in Nextdoor the company has taken on the role of membership arbiter. This has its pros and cons. On the one hand, no single individual is responsible for defining the norms of the community; on the other hand both the companies and a set of its chosen representatives now exert control of what people say.

Boundaries also speak to non-use [37], in the sense that they create non-users through exclusion even though they maybe included in other media used by the community (e.g., mailing lists). What effects will this non-use have on those who happen to reside near, yet just outside, the boundaries of a community? We do not yet know. Finding other non-users—those who actively resist Nextdoor—may also provide deeper insights into the limitations of these systems, and help shed further light on issues around privacy in particular.

Social Capital

We found that Nextdoor members primarily used the site to "do business" rather than to chat as they would on, say, Facebook. This finding is not entirely unexpected; in the studies of Blacksburg Electronic Village (BEV), re-

searchers discovered much the same thing [5]. As BEV started with activists and people already civically involved in their communities, the discussion revolved around democratic action rather than everyday chit-chat. However, this changed as more people came to the site, and the focus shifted to tie maintenance. It may be that we are witnessing a similar moment in the lifecycle of Nextdoor where the early-adopting, civically engaged user base primarily uses the site to do business. That respondents seemed to be already heavily active in their communities corroborates this hypothesis.

At the same time, it seems equally plausible that the lack of everyday chit-chat on the site stems from the ubiquity of social platforms and tools not present during the days of the BEV. With Facebook and highly topical email lists, perhaps Nextdoor participants simply can get the function elsewhere. Ultimately, we find it interesting that socializing doesn't seem to happen on the site, and it remains an open question whether the tool doesn't support it for some reason, or whether citizens just find that elsewhere. If it is the former at work, there may be space to design for everyday sociality at the very local level.

Design

As a new kind of social network, Nextdoor opens up conversations about how to design support for community connectedness. We offer reflections on three opportunities for design: scoping of messages, support for less functionally oriented communication, and adaptable moderation systems.

Participants spoke of needing to turn off Nextdoor email notifications due to volume. Features to allow fine-grained scoping of messages may be essential as communities grow and the scale afforded by Nextdoor may be too large. Additionally, there may also be a need to extend the scope of messages to include other neighborhoods, or scale down in order to address just a few streets.

There is also room to support communication that tends less towards the functional and more towards building connections and social capital. Users are easily able to treat Nextdoor as a kind of alert system and never interact with another user; without interaction, it is doubtful that genuine connections will be fostered. Methods of digitally facilitating these interactions may involve encouraging diversity of content [27] not currently facilitated by Nextdoor's categorization system for posts.

Moderation structure and power dynamics are a concern in any online community [23,26]. Issues may arise specifically in local community social media: micro-culture, length of time lived in community, and physical availability may play a role in how moderators are chosen. Nextdoor may do well with a more "grassroots" moderation rather than the top-down approach it is currently using.

CONCLUSION

In a survey of community-oriented research, Carroll and Rosson [6] argue that "An irony of the contemporary burst of interest in community networking is that in many ways community networks are *less* interactive and *less* community oriented than they were 15 years ago." (p. 387, italics in original). A decade later, Nextdoor presents an opportunity to return to questions focused on distinct neighborhoods and the content they create.

In this study, we have illustrated some of ways in which neighbors are finding a role for Nextdoor as another tool in their civic media eco-systems. We have discussed the opportunities and pitfalls that remain for community-based social media platforms. In particular, we highlighted tradeoffs in designing these systems: the scale of communication in supporting large and small conversations, defining boundaries to create meaningful communication channels, and the type of information that is appropriate to share in community-based social media.

However, there remain open questions about Nextdoor and community-based social media. As Nextdoor grows in adoption, its role in the ecosystem of social media might evolve. In this line of research, we hope to continue to build on a growing theme of community computing within HCI.

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