People Sensemaking and Relationship Building on an Enterprise Social Network Site

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Abstract
This paper describes a social network site designed to support employees within an enterprise in connecting and learning about each other through personal and professional sharing. We introduce the design concepts and provide a detailed account of the first three months of usage, involving nearly 300 users. Our findings suggest that employees find the site particularly useful as a way to perform people sensemaking of individuals and to connect and maintain relationships with others on the site.

1. Introduction
Inside an enterprise, employees face various people-related challenges such as keeping up with ongoing projects and activities of distant employees, getting to know someone personally, as well as professionally, and locating someone with the right skills to solve a timely problem. These activities can be partially summarized as relationship building within the workplace, but there is an additional aspect to these activities that we describe as “people sensemaking.”

Sensemaking is a general term for the psychological process an individual goes through in order to create a mental model of a process or system based on disparate information [15]. We refer to people sensemaking as the process a person goes through to get a general understanding or gist of who someone is [4]. For example, understanding what someone’s role is within the organization, what they are working on, how approachable they are, and how knowledgeable they are on different topics.

As in many technology-driven enterprises, our company already offers different mechanisms for searching for and finding information about employees. These services present standardized directory listings for individuals and provide relatively little timely or personal information about someone. Recent experiments that augment directory information with automatically imported data and people tagging have been promising [7, 8], but it remains an enormous challenge for the company to motivate employees to update their information in the company directory so that it is up-to-date, accurate and complete. Therefore, the challenges associated with relationship building and people sensemaking are largely unsupported by existing intranet services.

To address this, we designed Beehive, an opt-in intranet web site focused on the production and consumption of social-network-centric information, with the belief that employees would be highly motivated to participate in such a “digital collective” because of their desire to keep up and stay in touch with their colleagues within the company.

This paper reports our discoveries on social networking within an enterprise, with a particular focus on how Beehive has been used for both relationship building and people sensemaking. As will be described, during the first three months of use, Beehive users crafted detailed personal profiles for other employees to view. They also spent time looking at and commenting on the profiles of users they knew and users they did not know, whom they wished to initiate professional contact with.

2. Related Work
There is a significant body of research on how social software is used in a corporate environment. For example, studies have been done on the use of blogging software [11, 12], social bookmarking tools [13] and wikis [10]. This research has found that employees use these tools for search and discovery of new corporate information. Blogs, bookmarks, and wikis represent repositories of information generated by employees, so while part of using these tools is connecting with fellow employees (hence “social” software), the value of these tools for the average employee is more information-centric than social.

Research on the contributors to tagging [17] and blogging [11] systems indicate that they tend to be
providing information and striving to be thought leaders and evangelists, rather than seeking information for themselves or connecting in a social manner with colleagues.

Another example of how professionals use social software is the use of Internet sites designed for professionals. The most popular public site for professional networking is LinkedIn.com, with over 20 million registered users. LinkedIn is most commonly used for generating sales leads, finding potential hires, and in general, leveraging the contact lists of fellow colleagues [16]. Again, the focus of users is on information providing and gathering, not on socializing.

From this evidence, we might expect that employees participating in Beehive would focus on being information providers too. Particularly because Beehive is be hosted by the users’ employer, one might hypothesize that employees would be particularly inclined to use the site for work purposes only.

On the other hand, professionals’ Facebook use largely mimics the patterns of use by college students: it is used by professionals to keep in touch with social friends outside of work [3]. So this provides evidence that when using external, general tools, professionals replicate the usage patterns set in place by the other users and participate to socialize.

Because of these inconclusive patterns of use, we anticipated that the users would exhibit some combination of personal and professional behavior on the site, but before launching the site we did not know how users would balance this or how they would choose to appropriate the technology.

3. Beehive Design

The design of Beehive was inspired by popular social network sites such as Facebook and MySpace. The core difference between Beehive and other social network sites is the special emphasis on the creation of personalized content and the interaction around this content amongst work colleagues. Our design goal was to enable users to express themselves in rich, dynamic ways that people across the company could see.

3.1. Beehive profile page

Profile pages in Beehive are the central place to learn about who someone is. A profile automatically change depending on a user’s activity elsewhere on the site (e.g. creating content or writing comments) and users can customize which information to display and where to display it on the page. Figure 1 shows a typical Beehive profile page.

The left of the page displays the corporate directory photo of the profile owner (A). Below this is the user’s current status message which the user can edit by clicking directly on the message. Status messages on Beehive are similar to the text messages supported by twitter.com: they are a short messaging space for updating your network about your activity.

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connections can facilitate contacting people. Profile visitors can navigate from here to a complete list of all connections of the profile owner.

The most recently shared photos and lists of the individual are shown within views that provide links to the items and to collection pages showing all of the individual’s photos or lists (F and G).

The “about you” section (H) portion of the profile is a place where users compose their own question-answer pairs to describe themselves. Unlike profile-based systems and corporate directories, Beehive does not require users to provide information within any specific categories such as job description and background. Instead, by allowing users to compose their own topics, Beehive supports the creation of thousands of questions and highly diverse user profiles [5].

The “buzz” section (I) of the profile is for both user comments and a timeline of the most recent actions done on Beehive by this individual. The actions reported include changes in status messages, additions of new content and connections, and comments on pieces of content.

3.2. Sharing through artifacts

Beehive encourages sharing between users through lists and photos. Lists (called “hive fives”) provide an informal way of expressing opinions, sharing interests, and information, through a collection of five ordered items [9]. Figure 2 shows an example of a Beehive list. The list owner is shown in the left column of the page (A). Lists have a title (B), description and associated tags (C). The list’s five items are displayed as a numbered list (D). As with all content pages in Beehive, lists support discussions via comments (E).

Examples of lists are “Cities I have lived in,” “Last five projects I worked on,” and “People I just met at a conference.” These lists can provide valuable business-related information and also stimulate social interaction between employees because they encourage discussion around these topics.

While lists support the exchanges of ideas and opinions, photos support socializing around shared experiences. Photo sharing is particularly popular today on external social network sites, such as Facebook, but within the workplace there are fewer mechanisms for reflecting on social experiences between coworkers. In designing Beehive, we reasoned that employees might enjoy having the ability to share photos within the context of a company-internal application. The layout and structure of a photo page is similar to the list page: the photo page displays the owner, a title, a description, the photo, tags and the “buzz” comments.

3.3. Privacy and identity on the intranet

An advantage of Beehive being a company-internal tool is that users can share company-internal information on the site. This allows for more sharing of business information than an external site, such as Flickr or Facebook, could support for employees. Another factor we considered in building a solution within the enterprise is that employees are accustomed to seeing the real-name identity of fellow employees across the intranet, rather than user-selected (often anonymous) identities. Therefore, any content that is shared on Beehive is associated with an authenticated employee name. We believe this type of concrete identification engenders trust of the information and a greater willingness for employees to share with one another.

For these reasons, we adopted a simpler access control policy for sharing content than is typical on public social network sites. To control who sees which content, users can limit the visibility of the photos and lists to just their immediate Beehive connections or they can allow any site visitor to see a piece of content.

3.4. Interacting through “the buzz”

We designed Beehive to be a destination for communicating with other people around their shared content. Therefore, users can leave comments on any profile page, photo, or list, by adding to “the buzz” found on every page (Figure 1, label I; Figure 2, label
E). This allows for a conversation to occur amongst people on particular pages on the site. Any user who has permission to view a piece of content has permission to contribute a comment.

3.5. Discovering people and activity

One of the challenges of any community website is maintaining sustained levels of participation in the community [14, 18]. One way of tackling this challenge is to make it easy for users to keep up with others’ activity and be made aware of current activity on the site. Therefore, in designing Beehive, we devised mechanisms for keeping users aware of new activity, with a focus on people.

Notifications of social network activity. When a user first logs into the site, the home page presents a summary of the most recent actions performed by the individuals in the user’s social network, with links to the relevant actions. Users also can get a digest by email (daily or weekly) which summarizes all of the things their network has done in the last day or week. By providing these summaries, we ensure that users are aware of the recent action their contacts have made on the site and we provide a mechanism for the user to quickly access the site content that is of most interest to them.

Serendipitous discovery. The “recent buzz” (e.g. Figure 1 (J)) along the very top of every page on Beehive is a strip of small photos showing the last eleven users to have contributed public content to the site. Any action, from adding content, changing a status message, or commenting on content, will trigger an individual’s photo to appear on the top of the page. With a mouse-over, the user can view the action this individual has taken via a text pop-up and can navigate directly to it.

The purpose of the “recent buzz” is two-fold: first, to make users aware of the recent activity on the site so that the site feels alive, and second, to support serendipitous exploration and discovery of new people. While the site allows for browsing of individuals’ social networks and discovery of people through social browsing, this top strip is a way of presenting individuals that may be outside a user’s current Beehive social network.

These mechanisms emphasize the activity done on the site by people, to assist users in locating people, either those in their network, those who recently added content to the site, or those who created a piece of content that had captured the user’s interest. Our purpose in designing Beehive this way was to encourage users to use the site to learn about people, within the context of looking at content.

4. Field Study Overview

We initially announced Beehive to a group of 50 people in our department and two associated divisions of the company. In this initial launch, we did not open the site up to all employees, but sent invitations to join only to additional people that Beehive users requested that we add into our beta trial. Through this social network adoption scheme, 285 users signed up and used the site during the first three months. While the initial invitation list had limited diversity, of the final 285 users, 48 different departments and 72 different office locations were represented and only 9% (25 users) were from our immediate research division.

To give a sense of the activity on the site, Figure 3 shows the number of users joining each month of the three month trial. Over the last week of this trial period, 35.4% of the user base logged in; during the third month of the trial, 72.6% of users logged in. During each day of our last week of analysis, on average 12.5% of the user base visited.

![Cumulative Users by Month](image)

**Figure 3. Number of users on Beehive**

4.1. Data collection

To evaluate how employees used Beehive, we collected data from server logs and conducted semi-structured interviews. The server logs include a snapshot of the Beehive content database and the browsing behavior of users. Usage by researchers working on this project was removed from the data logs and is not reported.

Our interviews were with nine of the users on the site. We chose these nine based on their high number of connections, amount of content shared, number of comments made, and the amount of content browsing they did. We believe these high-use, early adopters can provide important feedback and an early indication about the use and value of the site. The nine chosen were not affiliated with the project or our department. The interviews were conducted over the phone, with two of our team members asking questions. During the interview, both the interviewee
and the interviewer would browse the site looking at relevant content.

5. Usage Scenarios

Before launching into the quantitative analysis, it is useful to explore some of what we heard in the interviews, to place a framework around the data analysis. In the interviews, we heard stories of people sensemaking, the process of creating a mental model of who a person is, based on the information on Beehive. Additionally, we heard about users connecting to others and having a sense of feeling closer to these people because of new information learned about them. To illustrate both how people sensemaking and relationship building have occurred through and around Beehive, below are three stories explaining what users discovered, learned, and reacted to on Beehive.

5.1. Ricardo

Ricardo (all names have been changed) is a self-described community builder within the company. He described that part of his job is to reach out to different groups in the company and evangelize to them about different technologies. He is very active on Beehive, visiting the site many times a day and following the site’s activity through feeds. When a new person joins Beehive, Ricardo often goes to look at their profile to see if he remembers having met them. If he knows the person directly or if he knows someone in common with the person, he will comment on their profile and connect to them, adding them to his growing list of Beehive connections.

When asked if there was someone on the site that he did not know that was particularly memorable to him, Ricardo offered this story:

“Gosh, let me think about names. One that comes to mind is Pierre. He seems like he works in corporate communications and I have a good network in corporate communications and I didn’t know him.”

The impression he got of him:

“Probably that he is French. And that he works in Japan. And I thought that was quite interesting because he works in one of the cities I wouldn’t mind going to at some point, at some time, which is Tokyo. What is a French guy working in corporate communications doing in Tokyo, Japan? [I get the impression] that he travels a lot.”

The information he learned that the corporate directory does not contain:

“In this particular case, it is funny because when I ran into his profile, I actually saw that he makes connections with people in corporate communications both in Europe and in the States and not in Asia. So I wouldn’t have known about those connections. In fact, he made a connection to a very good friend of mine in Paris that I’ve known for years and I didn’t know he was a connection to him.”

Ricardo subsequently added Pierre as a connection and left this comment on his profile:

“Bonjour, Pierre! And welcome to Beehive! I am glad to see you have started to make use of the hive and started buzzing around! By the way, how does a French? man get to end up working for IBM Japan? Way cool!”

Within a day of Ricardo’s comment, Pierre added content to his “about you” section that answered Ricardo’s question more generally:

“So, like, why did you leave [your job]?
The CP headquarters were moving from Montreal to Calgary, and I didn’t want to be that far from home. So I moved to Japan.

Isn’t Japan further from Montreal than Calgary?
I was misinformed.”

Ricardo’s story and the evidence of their communication on the site illustrates how users are able to discover new people, form impressions of them, and connect and communicate with them. As highlighted in both Ricardo and Pierre’s site content, users also often use light-hearted humor to explain who they are and to relate to one another.

5.2. Henry

Henry works with outside business partners to build solutions on top of our company’s products, and is active on Beehive. When asked if there was a memorable photo on Beehive, Henry offered this:

“Definitely Gretchen’s little girl. [It was memorable in] that she looked exactly like Gretchen. Like a shrink ray. And I commented on it: someone must have shrink-rayed her.”

The impression he got of Gretchen because of the photo:

“I knew she was a parent, but I don’t know her in person besides the one conference I’ve seen her at. ‘Oh that’s right, she’s a parent, there’s the child, there’s the husband, I feel closer to her. As close as if I had had dinner at their house.”

Weeks after Gretchen posted this photo and Henry commented on it, they exchanged an instant messenger conversation which Henry described as:

“A conversation we would not have had without that photo, because I wouldn’t have commented on her daughter. And [over instant messenger] she’s decided to
share with me [about her daughter]. Oh, and it goes even further. Gretchen wrote to me 'she makes us watch Lacey and Neil, watch the dance over and over'. Gretchen knows I like 'So You Think You Can Dance,' because I made a [list on Beehive] about 'So You Think You Can Dance.' And this context is completely based around what we did in Beehive.”

As Henry has explained, he knew Gretchen from one professional encounter and, through Beehive, he learned about her personally and this has led to casual communication with her through other media, on topics they would never have broached otherwise.

5.3. Dan

Dan is a third user who, as a manager, feels that Beehive is useful for connecting personally with his employees and that this type of personal connecting is an essential part of his job. When asked if he had shared information on Beehive with his direct reports, he had this to say:

“I don’t think we intentionally used Beehive to share personal info, but I found out several things about at least one person in my team. I found out things like he was in a movie once. [...]"

I feel people will reveal more and more personal information which in my mind helps people work together afterward. [...] [for example] there’s types of jokes he’s told us about his friends so that we can now say he behaves like his friends. It helps us to stick together as a team.”

Dan has used the site to connect more personally with the people who he sees and works with every day. He has a stronger impression of his employee’s personality because of the interaction around content on the site, and in Dan’s opinion, this has resulted in more group cohesion amongst his employees.

6. Field Study Analysis

The three examples above of how employees are connecting on Beehive, shed light on what we believe many of the users are doing. These users are learning about other employees and connecting on a personal level.

By analyzing the content users have added to the site and the access logs of where users have spent their time on the site, we have strong evidence that these examples are not unique. In the following sections, we describe the main reactions we have observed from the users: that Beehive, as a company-internal service, supports people sensemaking and relationship building inside the enterprise.

6.1. Networking inside differs from outside

While many of the features of Beehive can be found on external social network sites, Beehive has a fundamentally different user experience because of its positioning inside the firewall. First, to access the site, all employees must authenticate with their intranet username and password. Next, once a user creates a profile within the site, it is directly linked to their contact information within the corporate directory. Lastly, while many sites on the Internet offer sophisticated ways for users to manage their privacy controls, on Beehive there are just two options: private to a user’s network of connections or public to all employees. Trust and privacy are tremendous issues of concern for users of outside sites [1, 6], but from our prior experience with privacy controls inside the intranet [13], we hypothesized complex controls were not necessary.

In the interviews, when we asked users how they viewed Beehive compared to social network sites on the Internet, they made several consistent comments. In general, users view the audiences of these sites as very different and their reasons for using the sites are distinct from one another. Of the external sites, Facebook is for keeping up with non-work friends [2], Flickr is for sharing the majority of one’s photos, and LinkedIn is for maintaining a professional network outside of the company [16]. Although several users requested that Beehive allow importing of “friends lists” from different services, no users requested that the services be joined into one comprehensive solution. While one of the interviewees stated that he censored his contributions to Beehive to keep them tailored for a business audience, several other interviewees expressed that they were willing to share more information, both professional and personal, inside a company site than on an open Internet site. Two explained that inside they did not have to worry about company confidential information or presenting the company in the best light, because it was not publicly accessible. Three of the interviewees said they never share anything personal, such as photos, on a public social network site, yet they have all shared photos on Beehive.

From these discussions, it appears that users treat Beehive differently than an external social networking tool, even those with similar features. From the data logs, we also see activity that is oriented from the enterprise perspective.

**Lesser need for privacy settings.** First, the privacy settings available to users on Beehive are rarely used. Of the hundreds of shared lists and photos, only 3% have been flagged as visible to the
direct connections of the owner, meaning that 97% of the content on the site is available for anyone in the company to view. One potential reason the privacy settings are infrequently used is that during the trial period, the number of users has been small in comparison to the entire company (over 300,000), and as the site grows, the proportion of private content may grow. Yet one of the interviewees said that he could not think of a piece of content that he would share with some colleagues that he would not be willing to share with the entire company.

**Content tailored to enterprise audience.** A second observation that indicates that users treat this site as a distinctly different environment from an outside site is that the majority of the photos on Beehive have been uploaded directly to the site. Users have the option of linking to photos hosted on different web servers, by providing a URL to the photo, yet only 26 users (9% of users) have utilized this feature. When interviewees were asked about sharing photos on Beehive as compared to Flickr, they said they would not want to share all of their family vacation photos on Beehive, but rather just one that said something meaningful about themselves.

Our conclusion from this is that users treat Beehive as a “walled garden” within the enterprise. Although users are willing to share personal information, the act of sharing on Beehive is different from sharing on an external site with similar features, even when the social connections on the two sites have some overlap. There is an established culture within the workplace, sometimes dictated by company policy, that people are not anonymous, that employees respect the confidentiality of information inside the company, and that users trust how other employees will treat their private information, as compared with users on Internet social network sites.

### 6.2. Sharing both personal and professional information

Activity on Beehive is centered around sharing content, mainly through photos and lists, but also through the profile page’s “about you” section and status messages. As the designers of Beehive, we did not specify that the content on the site should be strictly personal or professional. Instead we hoped the users would determine their own culture and patterns of use. After three months, the users have shared a tremendous amount of content, and the majority of it could be considered personal information about their lives outside of work. But it is not all about home life: for some content types, the majority is about work and for others, the personal sharing has an emphasis on the social aspects of the workplace. This blending of work and personal lives gives a richness to the profiles that we believe enables the people sensemaking and connecting that the interviewees told us about.

Table 1 summarizes the amount of content shared across all of the content types, broken down into the number of items created, the percentage of users who contributed this type, and the average number of items created by those users who had that content type. As a point for comparison, our company hosts an internal blogging system [11] that today has 1800 active blogs and over 58,000 registered users, so approximately 3% of its users contribute content. While the blogging system has been running for several years and has a larger, more mature user population, our early indication is that Beehive users contribute at substantially higher rates than expected for company-internal social software.

<table>
<thead>
<tr>
<th>Table 1: The content shared on Beehive</th>
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<tbody>
<tr>
<td><strong>Content Type</strong></td>
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<tr>
<td>About You</td>
</tr>
<tr>
<td>Status Messages</td>
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<tr>
<td>Photos</td>
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<td>Lists</td>
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<td>Connections</td>
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<td>Profile comments</td>
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<td>Total comments</td>
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**“About you” descriptions.** In the free-form “about you” section of the profile page, users can ask themselves questions on any topic, and supply any type of answer. Almost half of Beehive users have written “about you” statements about themselves. Of these, the majority supplied work-related information in their “about you’s” (72.9%). Most of the “about you” descriptions explained what the person did at the company, by describing their position and their current project. Others listed past projects, education, prior work experience, and years at the company. The personal information (27.1%) broke down into outside hobbies, interests and where the user is from.

While a company directory often has open fields for background, expertise, and skills, it is a challenge to motivate employees to supply this information. We view the strength of the free-form “about you’s” is that users can craft a personalized message about what they do, which takes into account their perspective and context. For example, one of the users we interviewed posted these four topics about herself: “What am I passionate about at IBM?” “Kelly’s and my [innovation] idea!” “My favorite
express herself in both the topic and her response.

**Status messages.** The status messages on Beehive, like the “about you’s,” have no specification as to how people should use the message. Three interview subjects stated that when they went on vacation, they put a comment about this into their status message, and when they returned, they said something about being back from vacation and catching up on work. They also remembered seeing others mentioning vacation in their status. Because the Beehive status messages persist after a user logs out, users tend to change it more on the scale of once a week, rather than daily, and they craft it knowing it will persist after they leave the site. As shown in Table 1, over half of the users have set a status message at least once and, on average, each of them have set theirs 3.7 times.

The most common topics for status messages (comprising 70%) are either a description of the user’s current work activity, a reference to the user’s mood or state of mind, or a statement about his/her physical location. Examples included: “challenged by time management,” “getting another coffee...,” “In Minneapolis. Back at Watson Tue July 17th,” “lamenting the lack of LEAP authentication on the iPhone.”

The interviewees said they felt status messages were usually a witty or amusing comment and less relevant to exactly what a user was doing at that moment. Some examples of these type of messages are “[User] is ambiguously exact,” “in a rest stop off the information superhighway, wondering where to go next,” and “so very awake ... *yawn*.”

**Photos.** 44.2% of users added at least one photo to the site and on average they share between 5 and 6 photos. We categorized all of the photos and found that 29.8% were related to work in some way, most often pictures of a group of employees either working or socializing. The remaining portion of the work-related photos was comprised of screenshots of work-related applications, professional self-portraits, and pictures of the outside of different office buildings. 70.2% percent of the photos were personal pictures. The personal snapshots were most frequently scenery shots taken on a vacation, followed by pictures of family, pets, and miscellaneous objects and subjects.

How are users choosing which photos to share on Beehive? The strongest message communicated by the photos has to do with travel, conveyed through the high number of photos from vacations, of general scenery and of business events at unique locations. Another second major focus was on people the user cares about: their families and their close colleagues in the office.

**Lists.** 40.7% of the users created at least one list, and on average, each user created 3.7. As with photos, we categorized all lists into work-related and personal. Similar to photos, 30% of all lists related in some way to the work context. They were used to share current work assignments or projects, technologies of interest, technology reviews and criticisms, humor about technology and corporate culture, and work-related web sites. Of the 70% of lists that contained personal information, the majority of the lists provided information about or opinions of the individual, for example, places they live or would like to live, vacation spots and photos, recommendations, favorite everything (including books, movies, actors, authors, TV shows, etc.). Figure 2 shows an example of a work related list in which the user is sharing her tips on “Questions to Ask Yourself Before You Send That E-mail.” Below the list, co-workers discuss the topic and add their own additional suggestions.

When we asked the interviewees why they created lists, the overwhelming answer was to share information about themselves with other coworkers. It seems that beyond the creation of work-related content, lists have been used as an additional fun way for the users to express or describe themselves. As such, lists have provided a valuable source to learn about someone personally and professionally [9].

What we have seen from the different content types on Beehive, from the “about you,” the status messages, the photos, and the lists, is what we had hoped for: users are blending their personal and professional lives. The personal information that is shared is selected for the audience, one’s coworkers, and the work-related information includes humor and the social aspects of one’s work.

**6.3. Relationship building**

The most popular action on Beehive is connecting with others, with 81.4% of users making at least one connection on the site. On average, a user with connections has 13.

The first step to connecting with someone on Beehive is to look at their content. The interview subjects reported that they often browse their friends’ connections lists looking for people they know or are interested in finding out more about. By analyzing the access logs, we also found that users spend more of their browsing time on the pages of other people than on their own. Table 2 outlines the percentage of
the page views on the site that fall on the people pages of the site, divided out by page views to the person’s own content versus page views to someone else’s content. 47.6% of the traffic to Beehive is generated from views of other people’s profile pages, their network pages, photos, and lists.

Table 2. Percentage of total page views on the people-centric pages within Beehive
(*17.3% of views were on home and account pages)

<table>
<thead>
<tr>
<th></th>
<th>User’s own content</th>
<th>Other people’s content</th>
<th>TOTALS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profile pages</td>
<td>3.2%</td>
<td>23.0%</td>
<td>26.2%</td>
</tr>
<tr>
<td>People lists pages</td>
<td>9.2%</td>
<td>3.2%</td>
<td>12.4%</td>
</tr>
<tr>
<td>Photo pages</td>
<td>10.9%</td>
<td>10.3%</td>
<td>21.2%</td>
</tr>
<tr>
<td>List pages</td>
<td>11.8%</td>
<td>11.2%</td>
<td>22.9%</td>
</tr>
<tr>
<td><strong>TOTALS</strong></td>
<td><strong>35.1%</strong></td>
<td><strong>47.6%</strong></td>
<td><strong>82.7%</strong>*</td>
</tr>
</tbody>
</table>

The other way people connect on the site is through comments. 40.4% of users contributed at least one comment to the site which is a very high level of participation for a community site [14]. When a person comments, provided the content they are commenting on is public, their comment is visible to the entire site. These comments reveal existing relationships and the established common ground between people, for others to become aware of. The communication between people also represents a conversation between colleagues, and our usage scenarios in the previous section highlight that these conversations are personal connections that made people feel closer and sometimes led to connections within other technologies or face-to-face.

6.4. People sensemaking

As the interview with Ricardo highlighted, people on Beehive are looking at profiles of people they do not know and they are coming to conclusions about those people, which we term people sensemaking. In Ricardo’s case, he reached out and connected to Pierre because he was interested in knowing more about him. To determine if this is happening across the site, we analyzed Beehive’s access logs for how users find others and how frequently they look at content of people they have not connected to as friends.

To analyze the page views on content pages, we divided a user’s views into the page views the user made on his/her friend’s pages, versus the page views the user made on pages owned by non-friends. We found two interesting things. First, users spend the most time (i.e. generate the most page views) looking at the content of their friends (68% of page views on content pages). This indicates that users are focusing their time on the site learning about their social network. The second thing we discovered is that when examining the number of different people users look at (i.e. the unique page views on content pages), users look at more people they don’t know than they do know (54% non-friends, 46% friends). This indicates that, while users look with great depth at their social network, they explore new people with greater breadth.

7. Conclusion

The introduction of a social network site into a corporate environment provides a valuable opportunity to learn about these digital collectives because it places the technology into a new environment with a new set of user incentives. Discovering whether these tools are successful inside the workplace informs both our understanding of the value of social network sites and the needs of users within an enterprise context.

As discussed in this paper, there is evidence in both the usage data and the interviews of Beehive users that employees are treating Beehive differently than they do externally-hosted social network sites such as Facebook and internally-hosted sites such as blogging environments. They are sharing a blend of both personal and professional information that is tailored for their business colleagues, they are connecting with people on a personal level, and they are learning about people they do not know, opening the possibility for making connections in the future, either through the site or elsewhere. One of our surprises about the site has been the enormous enthusiasm users have shown for sharing with each other, particularly sharing personal information that they are not willing to share on non-work, public social network sites. In this initial beta launch of Beehive, there is already evidence that this type of sharing has the potential to lead to greater connections between employees.

To support relationship building, we found the ability to comment on Beehive was essential for supporting the connecting between people. The model of allowing comments on different types of media is found on many social network sites, but less so in the corporate environment. The communication on Beehive conveys to users that people are enjoying their content and establishes a social connection between groups of users. As we found in interviews, this communication can lead to real-world connections between people.
A frequent request from users is that Beehive import the social network connections users have built up on the many different social network sites available. We plan to deploy such a feature, but do not plan to automatically import information across services from either inside or outside of the company. Feedback indicates that users craft the content on each site to their perceived audience. While selective importing and exporting of content between services will be useful, automatic importing would dilute the ability for a site to build a unique, vibrant community.

The larger questions that remain for corporate social network sites include issues around multiple profile management and the process that we have called people sensemaking. With multiple social networking options available, users often juggle multiple online personas, or users attempt to cater to multiple audiences using one profile, distorting the purpose of the social network site. Identity management and people sensemaking are tightly coupled and, with Beehive, we are beginning to understand how design choices impact the types of identities crafted and their impact on people sensemaking. As the site continues to grow, and as we build and refine the site’s features, we plan to continue to evaluate the usage of the site, exploring in more depth issues of privacy within the workplace, cultural differences between users, and the impact on social capital within the company.

References


