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## Enhancing Enterprise Social Network Use: A Control Theory Study

*Research-in-Progress*

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### Abstract

*Organizations employ Enterprise Social Networks (ESNs) (e.g., Yammer) expecting better intra-organizational communication, effective knowledge sharing and, in general, greater collaboration. Despite their similarities with Public Social Networks (PSNs) (e.g., Twitter), ESNs are struggling to gain credence with employees. This paper is part of a larger research project that investigates mechanisms to enhance employees' engagement in the ESNs. Through the lens of Control Theory, this paper reports preliminary findings of a pilot case study aimed to propose formal and informal mechanisms that impact employees' intrinsic and extrinsic motivations to encourage their use of ESNs. The study results highlight (i) the need to better understand employees' extrinsic and intrinsic motivations to use Social Networks, and (ii) that unlike a PSN which acts as a hedonic system, an ESN acts as a utilitarian system, highlighting the importance of supporting intrinsic motivations in its implementation.*

### Keywords

Enterprise social network, promoting mechanisms, control theory, extrinsic motivations, intrinsic motivations.

### INTRODUCTION

Enterprise Social Networks (ESNs) refers to the application of social media platforms that facilitate short message communication and the establishment of social connections within organisations (e.g., Yammer, Jive, Chatter). It allows organisations to create space in which co-workers can connect, communicate, collaborate, and exchange information (Riemer and Tavakoli 2013). ESNs have gained much prominence in contemporary organizations (Qualman 2012). Organizations recognize their potential as a useful tool for seamlessly connecting employees corporate-wide for collaborating and knowledge sharing (Huang et al. 2013). Despite the organizational-wide adoption, and contrary to the wide proliferation of Public Social Networks (PSNs) like Twitter, employees are slow to adopt ESNs (Kugler and Smolnik 2013), with recent studies showing that employers are often unhappy with their uptake (Jarvenpaa et al. 2013).

On the other hand, the growth of PSNs is nothing short of phenomenal (Fosso Wamba and Carter 2013). In the last five years, Facebook, Twitter and other PSNs have been the focus of many industrial and academic studies to understand what motivates such exponential growth in usage (Hoffman and Novak 2012). For example, Facebook had 1.06 billion active users as of December 2012, a 24% annual increase as compared to 2011 (Facebook 2013). Researchers have identified salient motivations for why people use these networks. To name a few: (i) social connections (Boyd and Ellison 2007), (ii) enjoyment (Turel and Serenko 2012), (iii) sharing content (Väyrynen et al. 2012), and (iv) autonomy (Coyle and Newman 2012). Motivations in general are intrinsic (i.e., 'Users interact with a system for no apparent reinforcement other than the process of performing activity per se' (Davis et al. 1992), such as enjoyment, and extrinsic (i.e., 'the performance of an activity because it is perceived to be instrumental in achieving valued outcomes that are distinct from the activity itself' (Davis et al, 1992, p. 1112) such as knowledge or content sharing).

Kang et al. (2013) and Turel et al. (2012) highlighted the importance of intrinsic motivations as the most significant motivations for using PSNs. These findings aligned with earlier studies (Ryu et al. 2009; van der Heijden 2004) classifying social networks as hedonic systems, i.e., 'Systems that provide value internal to the interaction between the user and system, with the primary objective being a sense of fun', such as games (van

der Heijden 2004). As Hsu et al. (2008) noted, in simple terms, if a 'game' is not entertaining, users will not play it. These studies provide evidence that most PSNs are mainly designed and built to fulfil intrinsic motivations. Further, PSNs and ESNs are perceived as voluntary systems (Kugler and Smolnik 2013). Intrinsic values have a greater impact in encouraging system use (Beaudry and Pinsonneault 2010), particularly when the technology use is voluntary in nature (Webster and Martocchio 1992).

Many organizations have adopted ESNs, assuming motivations such as content sharing, finding expertise, and solving problems would lead to wide adoption by their employees (Kugler and Smolnik 2013). However, many of the current ESN initiatives struggle to gain momentum and wider adoption (Majchrzak et al. 2013). From the users' perspective, this research-in-progress paper reports preliminary results of a pilot case study designed to understand how we could enhance ESN use. Using Control Theory (Kirsch 1996), the study makes comparisons with PSNs. Several gaps, which this study wishes to close, were identified. First, the current implementations of ESNs focuses mainly on extrinsic motivations, without considering intrinsic values (Kang et al. 2013; Stocker et al. 2012). Second, to the best of our knowledge, there is a lack of studies making comparative learning observations in PSN and relating those to ESN. We argue that (i) without a thorough understanding of users' motivations to use PSNs, it will be difficult to identify mechanisms to promote ESN use; (ii) in general, since ESNs are perceived as voluntary systems, employees who are users of some PSNs expect intrinsic values such as fun or excitement to use ESN; and (iii) mechanisms employed to enhance ESN use should consider both intrinsic and extrinsic values. We investigated this issue by focusing on fundamentals like intrinsic and extrinsic motivations and through the Control Theory lens (Kirsch 1996), where managers (controllers) can exercise formal and informal controls to ensure that employees (controlees) will achieve organizational goals, namely, participating in ESNs (Soh et al. 2011).

This paper builds on the aforementioned arguments and asks the following research questions. Research question 1: How and why do employees use PSNs compared to ESNs? Research question 2: What possible mechanisms (as per Control Theory) could positively impact intrinsic and extrinsic motivations to enhance ESN use? To the best of our knowledge, this is the first study that investigates possible mechanisms to promote extrinsic and intrinsic values in ESN use. This study is part of a larger research project that investigates mechanisms to enhance employees' engagement in the ESN. Currently, we are in the data gathering phase. We conducted interviews and analysed ESN log files. In this paper, we reported preliminary results of a pilot case study organization that included interviews with eight employees about their Yammer use. The remainder of this paper is organized as follows. First we cover the theoretical foundation of this research. This is followed by the research approach, case description, data collection, and analysis. We then present PSN and ESN patterns of use, and apply our theoretical lens to discuss potential promotional mechanisms. In the final section, we draw implications and limitations, and we outline future work.

## **THEORETICAL FOUNDATION**

Control refers to the mechanisms that govern the actions of a firm's employees (controlees) in a manner that furthers the interests of the firm (controller) (Kirsch 1996; Soh et al. 2011). According to control theorists, control mechanisms can be broadly divided into two categories of formal and informal controls (Kirsch 1996). The formal control involves controlling the employees through rules or policies, either written or spoken, while the informal controls use social or people strategies (Kirsch et al. 2002). The formal control can be further subdivided into outcome and behaviour-based modes. The outcome-based mode includes mechanisms that specify the expected outcomes (Eisenhardt 1989a), whereas the behaviour mode is implemented through the mechanisms of appropriate behaviours (Zu and Kaynak 2012). The informal control consists of clan and self-control modes. Ouchi (1978) describes clan control as a group of individuals who have common values and beliefs. In contrast, self-control is when employees control their own actions (Manz and Angle 1986). The preliminary analysis reported herein makes observations at only the highest level (i.e. formal and informal control). Data collections to validate lower levels of controlling mechanisms (e.g. self controls) are on-going.

## **STUDY OVERVIEW**

### **Research approach and case description**

The case study method is particularly appropriate for the purpose of this study, as the main research questions are 'how' and 'why' questions (Yin 2003). Specifically, the main objectives of this case study are to (1) identify how and why employees use PSNs compared to ESNs, and (2) explain which mechanisms (as per Control Theory) could positively impact intrinsic and extrinsic motivations to use ESNs. This study reports findings of a single case. Three conditions formed the benchmarking for the selection of the case organization. First, the case organization has used an ESN for at least one year and has at least 100 registered users in its ESN, thus having a

mature implementation of that ESN. Second, the organization encourages the use of the ESN to achieve certain objectives like knowledge sharing and collaboration, to investigate what possible mechanisms, if any, they employ to encourage use. Third, the organization encounters problems in getting users to participate in the ESN, to examine why users are not motivated to engage. The case organization, Company A, is particularly appropriate for the purpose as it has used the ESN for knowledge sharing and collaboration for more than a year. Difficulties that the organization encountered in getting people to participate in the ESN convinced us to select Company A as our target case. To maintain confidentiality, the name of the company is kept hidden.

### **Data collection and analysis**

Semi-structured interviews lasting 40-50 minutes were conducted with eight individuals (3 females and 5 males, aged 28-50 years) from the case organization. Participants were selected from both management and the operational levels. They represent high and low use of ESN based on our observations of the ESN over a period of six months, giving us a better understanding of the overall ESN use. The case organization uses Yammer as its ESN. Yammer is the leading Enterprise Social Network used by more than 200,000 companies including 85% of the Fortune 500 (Riemer et al. 2012; Yammer 2013).

Our decision to gather data individually instead of gathering data through a single panel was motivated by: (i) lack of peer influence on answers, (ii) less frivolity, and thus (iii) better concentration of the participants. Two non-probability sampling techniques, purposive and snowball, were used in the selection of interview participants to ensure that they were appropriate representatives with well-developed views on the research topic (Minichiello et al. 1995). At the beginning of the meetings, the respondents were briefed about the objectives of the study. Then they were asked several questions to describe their use of the ESN and their preferred PSNs to gain a deeper understanding of: (1) users' motivations to use PSNs and ESN, (2) the extent of their use of these networks, (3) users' perspective of the ESN's functionalities and the features they like or dislike, and (4) users' perception of their preferred features or capabilities that PSNs have and the ESN lacks. All the interviews were recorded, with notes taken when necessary, and then transcribed. Our interviews, which lasted approximately six hours, were transcribed into 70 pages. Following the guidelines of Eisenhardt (1989b), data analysis was performed in tandem with the data collection to take advantage of the flexibility that the case study afforded. The emergent concepts in one interview are verified in subsequent interviews until the state of theoretical saturation is reached, at which point it is possible to explain comprehensively the findings of the case study (Eisenhardt 1989b). The control literature formed the initial set of themes through which the received comments from the interviewees were analysed. In addition, a systematic verification procedure was established to ensure that each finding was supported by at least two sources of data (Klein and Myers 1999). Data analysis was carried out by recursively iterating between the empirical data, the relevant literature and theories, and the emergent concepts and relationships (Eisenhardt 1989b).

## **IDENTIFYING THE USE PATTERNS**

Since the official introduction of Yammer at Company A in April 2012, the percentage of official Yammer user accounts ranged from 95–97% of the total employees within the organization. Yet, according to the organization's senior management and our observations of Yammer over a period of six months, 'active' Yammer users remained well below 5% of the organization's population. We analysed the access log file to calculate how many times each subject—we use subject, participant and respondent interchangeably—signed in during the previous six months. As illustrated in Figure 1, we classified subjects into four groups according to (i) the number of visits to Yammer (Low – group 1, 2 – is less than twice a week in proportion to the rest of the Yammer community), and (ii) frequency of posts and/or comments since subjects started using Yammer (High – group 3, 4 – is more than five comments a month in proportion to the rest of the Yammer community). Once this was completed, subjects were next classified into High and Low use of PSNs based on their responses to the frequency, duration, and the extent-of-use questions. High was groups 2 and 4, with PSN visits of more than once a day. We explain each group according to the subjects' use and motivations as follows.

### **Group 1: Low use of PSNs and low use of Yammer**

Subjects 3 and 7 (denoted as S3 and S7) were classified as low users of both forms of social networks (Figure 1). In relation to PSN use, 'Social or family connections' (i.e. to connect and keep in touch with family and close friends) was their main motivation. As such, behaviour was goal-directed (Hoffman and Novak 2009) (S3: '*I only use one social network, 'Facebook', a few times a week to check on my son in Sydney and see what he and his friends are talking about*'). Other motivations of PSN use, like sharing contents, entertainment, and professional advancement, were not disclosed by S3 and S7. Although 'family or social connections' is a common motivation across all usage patterns, it was not enough to get them more engaged in PSNs. On the other hand, subjects' low use of PSNs might have reflected on their low use of Yammer. They did not see much value

in using Yammer. When we asked about their use of Yammer, their responses consistently pointed at management pressure as the only reason to use Yammer (*S3: 'When our department head insisted on seeing everyone on Yammer, I started doing so'*). Thus, it was clear that extrinsic motivations were the only motivations for usage of both PSNs and ESNs.

### Group 2: High use of PSNs and low use of Yammer

Group 2 is the most popular one in relation to PSN use (see Figure 1). The subjects' motivations were diverse (both extrinsic and intrinsic) and included social connections, entertainment, self-expression, reputations, arousal, and sharing content. In each interview, we were able to identify several intrinsic motivations (e.g. entertainment) (*S5: 'It is a lot of fun and relaxing to see what everybody is doing, and sometimes hours pass before I realize that I had to do something else.'*). They reported intrinsic characteristics of PSN use: posting on their own space, where they freely and openly commented for no specific reason other than to satisfy their intrinsic needs (*S4: 'Facebook is the first thing to do every time I turn my laptop on. It is like a relaxing area for me after writing reports and doing research, maybe also because I am away from my country and friends.'*). Although they acknowledged some value in participating in Yammer (*S4: 'I know that there are good things related to discussion and maybe knowledge sharing'*), they rarely visited, posted or commented on Yammer (*S4: 'The only time I commented on Yammer was a few months ago when I replied to my published report post'*). They do not see Yammer providing anything other than work business (*S4: Yammer is boring; they only talk about work' events'*). Interestingly, S5 and S6 do not believe that senior officials will provide feedback on what they have to say (*S5: 'I don't think top managers will actually comment on my posts'*). In summary, participants in this group reported that extrinsic and intrinsic motivations were the driving force for the high usage of PSNs and the lack of intrinsic motivations contributed to the low use of ESN.

### Group 3: Low use of PSNs and high use of Yammer

This group was atypical, with S2 demonstrating a low use of PSNs and high levels of Yammer use (see Figure 1). S2's motivations were both extrinsic and intrinsic, but skewed more towards extrinsic values (*S2: 'I am a busy person to be a regular user of social networks and maybe if our department head didn't insist, I would not be that active on Yammer . . . having said that I might still check Yammer to be updated on other departments' business, presentations and future events.'*) Interestingly, the longer S2 used Yammer, the more frequent his visits and posts became, and other intrinsic values, such as enjoyment, started to emerge (*S2: 'As I regularly used Yammer, it became a habit-like thing to do and interesting too. You want to be connected to what other staff are doing here and abroad.'*). Interesting observations were identified in this group: (i) multiple extrinsic and intrinsic motivations could direct high use of ESN; (ii) as soon as user extrinsic motivations such as obtaining needed information or responding to manager pressure were satisfied, these users returned to their previous state of low or no usage unless an intrinsic motivation came into play.

### Group 4: High use of PSNs and high use of Yammer

This group was similar to group 2 in terms of why S1 is a high user of PSNs. However, there were new motivations that were not reported in previous groups. For example, when we asked about Yammer use, S1 was motivated by 'knowledge sharing', as he viewed the posts of others to be of great value that he should not miss (*S1: 'I like Yammer as I see more people on Yammer are sharing their papers, thoughts, lectures, notes, talking about events'*). Intrinsic and extrinsic motivations like seeking support, arousal and situational interest (i.e., related to a specific time and place) were also reported (*S1: 'I need to know what our staff thinks of our last group event'*). Similarly to group 3, the participant substantiates that a combination of extrinsic and intrinsic motivations could maintain high use of ESN.

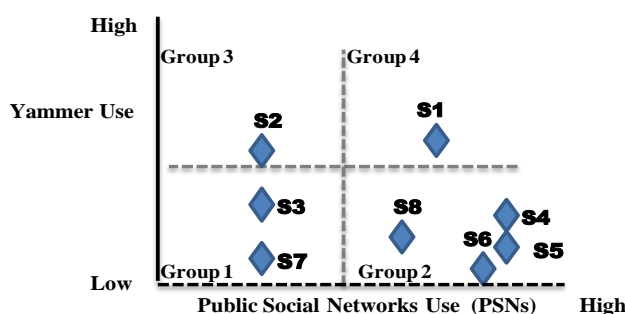


Figure 1: Respondents' Use of Social Networks

## DISCUSSION FROM THE CONTROL THEORY VIEWPOINT

Our findings yielded insights into what motivates employees to use PSNs and ESNs. More importantly, the findings showed how such behaviours can be emulated, enhanced, manipulated, or controlled for effective use of ESNs. I.e., it provided insights into promoting mechanisms. Through the Control Theory lens (Kirsch 1996), we were able to identify formal and informal mechanisms manifested in the following categories: (1) platform design (as formal mechanisms), (2) management's role (as formal and informal mechanisms), and (3) community (as informal mechanisms). Table 1 summarizes the promoting mechanisms and motivations and provides a description of the suggested promoting mechanisms.

### Platform design as formal mechanisms

Many studies assert that platform design is a crucial aspect in gaining user acceptance (Bauer et al. 2006; Davern and Wilkin 2008; Jung et al. 2010; Zhang 2007), both to increase editing contributions on Wikipedia (Nov 2007), and to motivate tagging (Ames and Naaman 2007). Zhang et al. (2011) conducted a group level field study to investigate the effect of design features like navigation and accessibility on collaborative systems. The study, which involved 190 software project teams from a large organization in China, enhanced the team's knowledge of management processes. Zhang concluded that design features have a significant positive impact on a team's capability for collaboration, an extrinsic motivation, which eventually impacted team performance outcomes. In a comparative study of traditional versus game-based training approaches, Venkatesh (1999) found that game-based training was more effective than traditional training as it created favourable (i.e., intrinsically motivated) user perceptions that enhanced user acceptance of a new system. As Warr (2008) points out, one could observe 'gamification', i.e., 'the use of game thinking and game mechanics in a non-game context in order to engage users and solve problems' (Warr 2008) to redesign a social network platform. With this information, one could 'determine design features which may support and facilitate motivational values' (Yetim et al. 2011). In addition, Turel et al. (2010) explains that products that have a fun, or gamification, aspect trigger intrinsic motivations such as multisensory images, fantasies, and arousal.

The platform design category includes 'gamification' and 'platform redesign' mechanisms that reinforce intrinsic and extrinsic motivations. In our case example, lack of intrinsic values such as fun and excitement is one of the most common comments found when employees evaluated their experience with Yammer (S3: *'It didn't interest me. If it does, I might use it more'*). Gamification mechanisms can be executed by enabling features and capabilities, such as a points reward system, compelling content, alluring metaphors, appealing animations, and musical or visual feedback methods (Barnes and Vidgen 2012), as shown in Table 1. A number of participants highlighted the importance of the aforementioned features in enabling intrinsic values in social networks (S4: *'Maybe more features, more interaction would make it exciting like Facebook'*).

In relation to platform redesign mechanisms, other features that participants would like to see in Yammer are the ability to view, access and link their PSN accounts and import content to Yammer. We believe that enabling such features (see Table 1) is not only efficient, but also provides a satisfactory, fun, and exciting experience, as S5 reported: *'My understanding is that Yammer is only for formal department activities; you are not supposed to do something else with it'*. These features would attract others to join and spend more time, which could positively impact engagement (S4: *'I don't use Yammer much because my friends are not there'*).

### Management role as formal and informal mechanisms

Managers can influence employees' user behaviour in a significant manner (Eckhardt et al. 2009). Management's role has received much attention in previous studies that include influencing participation in online forums (Brzozowski et al. 2009), facilitating adoption (Bajwa et al. 2008; Venkatesh et al. 2003), persuading employees (Leonard-Barton and Deschamps 1988; Warkentin et al. 2011), and many others. Using social psychology theories to study user motivations to participate in online communities, Beenen et al. (2004) found that users are more likely to contribute when they are explicitly asked to. Management role category refers to (i) 'management pressure' mechanism, an exercise of legitimate unwritten rules by asking employees to join and/or participate on Yammer; (ii) 'management involvement' mechanism, management officials posting or commenting on Yammer, and (iii) 'incentives' mechanism, or rewards.

Our analysis evidenced the effectiveness of such mechanisms to promote Yammer use. Participants perceived those three mechanisms as the reinforcing mechanisms to be on Yammer initially. The management role category manifested in formal mechanisms: 'Management pressure' (e.g., persuading all users to publish their presentations on Yammer, directly asking staff members to join Yammer), and 'incentives' (e.g., providing some news and announcements exclusively on Yammer). As S3 put it: *'When our department head insisted on seeing everyone on Yammer, I started using it'*. Also, it manifested in informal mechanisms: 'management involvement', such as management officials participating, posting content and providing feedback on others'



posts. All three mechanisms could have a direct impact on intrinsic motivations. For example, there could be management involvement on ‘self-esteem’, that is, ‘an individual’s estimation of his or her own worth’ (Harter 1990). As S8 explained, ‘*It feels good to get feedback from our department head*’.

### Community as informal mechanisms

Like the mechanisms in the management role category, the user communities in Yammer (i.e., ‘peer or social pressure’, ‘expertise’) can also play an important role in encouraging Yammer use. Previous studies (Jung et al. 2010; Lin and Lu 2011) have focused on the ‘peer or social pressure’ impact on the level of participation in electronic forums. An empirical analysis of Hewlett-Packard (HP) social forum logs shows that peer activities (e.g., posts) positively influence other users in becoming active participants in the forum (Moon and Sproull 2008). Co-worker activities impact users’ initiating or participating in social networks (Kim et al. 2011). It is a mechanism which some participants found important (S6: ‘*If more people are using Yammer I think I might as well use it*’).

On the other hand, the activities of expert users were a key reinforcement for impacting motivations like ‘information’, ‘social connection’, and ‘expertise’. The participation of and feedback from experienced staff members well known for their academic or professional expertise was also a key reinforcement. The way users value expert posts and feedback was found in previous studies to be an important motivator to join and participate in special interest social networks like health social networks (Coyle and Newman 2012; Hoffman and Novak 2012). Further, on average, an employee’s time spent searching for the right information consumes 15%–35% of his/her working day (Review 2011). Experts’ feedback will be of great value to others, an extrinsic motivation (Hoffman and Novak 2012). As S5 explained, ‘*[It] depends on who is there; maybe if I know our experts like Mr... will post about things like how to be a good project manager, I think I would be there*’). In summary, ‘peer or social pressure’ and ‘expertise’ mechanisms influence users by triggering extrinsic motivations like ‘social capital’ or intrinsic motivations like ‘arousal’ (S1: ‘*I need to know what our staff thinks of our last group event*’).

Table 1. Mechanisms

	Promoting mechanisms	Impacted Motivations*	Description/Examples
<b>Formal Mechanisms</b>	Platform redesign	Sharing content, social connections, user control	<ul style="list-style-type: none"> <li>➤ Integrate PSN access feature (i.e., single sign in) that allows users to access their PSNs to (i) simplify sharing contents on Yammer; (ii) draw others to engage in social and personal levels, which could lead to more engagement; (iii) help spend more time on Yammer and access it more often.</li> <li>➤ Provide users with more autonomy or control over ESN settings like the ability to change page layout, profiles, and privacy options.</li> </ul>
	Gamification	Enjoyment	➤ Incorporate fun, entertaining, or exciting features in Yammer (e.g., a points rewarding system for commenters).
	Management pressure	Rewards, social capital	➤ Exercise legitimate unwritten policy or rules (e.g., all should publish their work and presentations on Yammer).
	Incentives	Arousal, information	<ul style="list-style-type: none"> <li>➤ Publish some news or announcements exclusively on Yammer.</li> <li>➤ Conduct discussions on interesting topics.</li> </ul>
<b>Informal Mechanisms</b>	Management involvement	Social capital, self-esteem	➤ Appoint management officials to contribute on Yammer by frequently posting content and providing feedback.
	Peer or social pressure	Social capital, network externalities	➤ Raise awareness (e.g. possibly using other mediums like email & face-to-face meetings) of activities and events that are taking place on Yammer and the great value (e.g., new knowledge) of these activities that other employees should not miss.
	Expertise or champions	Information, collaboration, self-esteem	<ul style="list-style-type: none"> <li>➤ Assign experts to share their knowledge and provide feedback.</li> <li>➤ Provide positive feedback on others’ posts. Most people enjoy the regard and admiration given by others, and it could positively extend their contributions to an online community (Wang and Fesenmaier 2004).</li> </ul>

\*This is not a complete list of motivations. Due to space limitation we have included only a few motivations.



## CONCLUSION, IMPLICATIONS, LIMITATIONS AND FUTURE WORK

The primary objective of this paper was to demonstrate possible formal and informal mechanisms that could impact employees' intrinsic as well as extrinsic motivations to further use of ESNs. It observed PSN and ESN use of employees and made comparative arguments based on both Control Theory and intrinsic and extrinsic motivations to enhance ESN use.

It is a valid assumption that many employees are already familiar with a number of PSNs. To make comparative observations of PSNs and relating those to ESN use, we classify the use of PSNs and ESNs according to high and low use (see Figure 2). Our study found why certain individuals (group 2) have a high use of PSNs but a low use of ESNs. Similarly, but contrary to popular belief, we found certain users demonstrated high levels of ESN use, but low levels of PSN use (group 3). At the outset, we were unable to find any demographic characterizations (e.g., age or gender) that describe the different levels of use. Our investigation not only found explanations for the behavioural groups in Figure 2, but also suggests how organizations could promote ESNs. Thus, we address the concerns outlined by researchers (Jarvenpaa et al. 2013; Majchrzak et al. 2013) regarding the importance of enhancing ESN use.

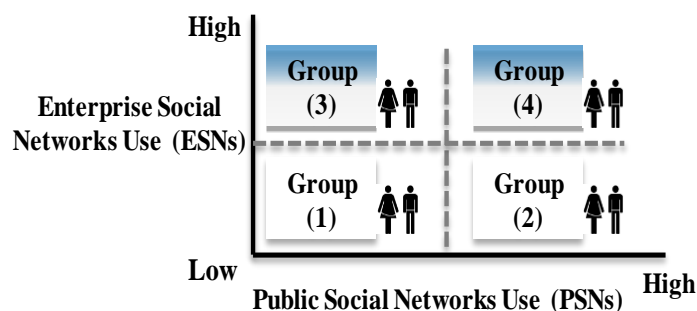


Figure 2: Quadrant of Social Networks

From the theoretical perspective, this study provides a better understanding of the importance of intrinsic motivations in employees' use of Yammer. It uses the theoretical lens of Control Theory to understand, classify, and propose promoting mechanisms in the context of corporate use of ESNs. It shows that promoting mechanisms, whether they are formal (e.g., platform redesign) or informal (e.g., social pressure), can fulfil enjoyment, self-esteem and other intrinsic motivations. The same mechanisms can also facilitate extrinsic motivations like social capital, information, and sharing content. From the practical side, our case provides evidence that implementing an ESN by providing support to extrinsic motivation values (e.g., knowledge sharing) without supporting intrinsic values is a mistake. We showed that employees, whether they are low or high users of PSNs, expect intrinsic satisfaction from an ESN. We propose mechanisms that organizations can exercise to promote ESN use.

This study is limited in the following areas: (i) Control Theory may not be the only theoretical lens to elucidate promoting mechanisms. (ii) There are other prompting mechanisms that could promote Yammer's use (e.g., social media policy). (iii) Other intrinsic motivations could be investigated to see whether proposed mechanisms could have an influence on, such as altruism or flow-experiences. (iv) The sample size, Yammer's implementation lifetime, and the respondents' use experiences may limit this study in detecting other promoting mechanisms or motivations. (v) We intentionally did not include mechanisms that are obvious (e.g., training, organizational support), or previously tested (e.g., Sykes et al. (2009) on peer support, Chandra et al. (2009) on trust). (vi) There could be drawbacks embedded in our proposed mechanisms, for example, management pressure enforcing rules that could hinder ESN use. Finally, (vii) other environmental, organizational, and technological factors that are not covered by this study might also deter ESN use.

Our preliminary study results are encouraging, and further work is underway to investigate other mechanisms that could directly or indirectly enhance ESN use. In the second phase of the research, we conducted a pilot case study to validate our findings and explore the influence of other mechanisms. Then, we will observe the impact of a working governing tool (i.e., social media policy and guidelines) to further our understanding of ESN usage in the presence of a governing tool that is supposed to protect and aid employees' ESN usage. A functional governing tool can be a mechanism to aid ESN use by providing clear and easy-to-understand guidelines to help employees' 'know how' or for collaboration, or to find solutions. Additionally, it would be worthwhile to investigate the evolution of users' motivations after their initial participation in ESNs. We intend to replicate and test our findings by performing a survey as our final validation.

## REFERENCES

- Ames, M., and Naaman, M. 2007. "Why We Tag: Motivations for Annotation in Mobile and Online Media," *Proceedings of the SIGCHI conference on Human factors in computing systems*: ACM, pp. 971-980.
- Bajwa, D.S., Lewis, L.F., Pervan, G., Lai, V.S., Munkvold, B.E., and Schwabe, G. 2008. "Factors in the Global Assimilation of Collaborative Information Technologies: An Exploratory Investigation in Five Regions," *Journal of Management Information Systems* (25:1), pp. 131-166.
- Barnes, S.J., and Vidgen, R. 2012. "User Acceptance and Corporate Intranet Quality: An Evaluation with Iqual," *Information & Management* (49:3), pp. 164-170.
- Bauer, H.H., Falk, T., and Hammerschmidt, M. 2006. "Etransqual: A Transaction Process-Based Approach for Capturing Service Quality in Online Shopping," *Journal of Business Research* (59:7), pp. 866-875.
- Beaudry, A., and Pinsonneault, A. 2010. "The Other Side of Acceptance: Studying the Direct and Indirect Effects of Emotions on Information Technology Use," *MIS Quarterly* (34:4), pp. 689-710.
- Beenen, G., Ling, K., Wang, X., Chang, K., Frankowski, D., Resnick, P., and Kraut, R.E. 2004. "Using Social Psychology to Motivate Contributions to Online Communities," *Proceedings of the 2004 ACM conference on Computer supported cooperative work*: ACM, pp. 212-221.
- Boyd, d.m., and Ellison, N.B. 2007. "Social Network Sites: Definition, History, and Scholarship. 2007," *Journal of Computer-Mediated Communication* (13:1).
- Brzozowski, M.J., Sandholm, T., and Hogg, T. 2009. "Effects of Feedback and Peer Pressure on Contributions to Enterprise Social Media," *Proceedings of the ACM 2009 international conference on Supporting group work*: ACM, pp. 61-70.
- Chandra, S., Srivastava, S., and Theng, Y. 2009. "Role of Cognitive Absorption and Trust for Collaboration in Virtual World," *Proceedings of the Pacific Asia Conference on Information Systems (PACIS)*.
- Coyle, V.C., and Newman, D.L. 2012. "Motivation in Online Environments," in *Encyclopedia of Cyber Behavior*. IGI Global, pp. 1212-1224.
- Davern, M.J., and Wilkin, C.L. 2008. "Evolving Innovations through Design and Use," *Commun. ACM* (51:12), pp. 133-137.
- Davis, F.D., Bagozzi, R.P., and Warshaw, P.R. 1992. "Extrinsic and Intrinsic Motivation to Use Computers in the Workplace1," *Journal of applied social psychology* (22:14), pp. 1111-1132.
- Eckhardt, A., Laumer, S., and Weitzel, T. 2009. "Who Influences Whom? Analyzing Workplace Referents' Social Influence on It Adoption and Non-Adoption," *Journal of Information Technology* (24:1), pp. 11-24.
- Eisenhardt, K.M. 1989a. "Agency Theory: An Assessment and Review," *Academy of management review* (14:1), pp. 57-74.
- Eisenhardt, K.M. 1989b. "Building Theories from Case Study Research," *Academy of management review* (14:4), pp. 532-550.
- Facebook. 2013. "Investors Relations, Facebook Reports Fourth Quarter and Full Year 2012 Results," Retrieved April 22, 2013 From : <http://investor.fb.com/releasedetail.cfm?ReleaseID=736911>.
- Fosso Wamba, S., and Carter, L. 2013. "Twitter Adoption and Use by Smes: An Empirical Study," *The 46th Hawaii International Conferences on System Sciences (HICSS), Maui, Hawaii, January 7-10, 2013*. Available at SSRN: <http://ssrn.com/abstract=2137479>.
- Harter, S. 1990. "Causes, Correlates, and the Functional Role of Global Self-Worth: A Life-Span Perspective," in *Competence Considered*, R.J.S.J. Kolligian and Jr (eds.). New Haven, CT, US: Yale University Press, pp. 67-97.
- Hoffman, D., and Novak, T. 2012. "Why Do People Use Social Media? Empirical Findings and a New Theoretical Framework for Social Media Goal Pursuit," *National Science Foundation (Grant)*.
- Hoffman, D.L., and Novak, T.P. 2009. "Flow Online: Lessons Learned and Future Prospects," *Journal of Interactive Marketing* (23:1), pp. 23-34.
- Hsu, C.-L., and Lin, J.C.-C. 2008. "Acceptance of Blog Usage: The Roles of Technology Acceptance, Social Influence and Knowledge Sharing Motivation," *Information & Management* (45:1), pp. 65-74.

- Huang, J., Baptista, J., and Galliers, R.D. 2013. "Reconceptualizing Rhetorical Practices in Organizations: The Impact of Social Media on Internal Communications," *Information & Management* , pp. 112-124.
- Jarvenpaa, S.L., Lim, R., and Tuunainen, V.K. 2013. "Ambidextrous Socialization: Exercising Control in Social Media Environment," *46th Hawaii International Conference on System Sciences*,: IEEE, pp. 660-669.
- Jung, J., Schneider, C., and Valacich, J. 2010. "Enhancing the Motivational Affordance of Information Systems: The Effects of Real-Time Performance Feedback and Goal Setting in Group Collaboration Environments," *Management science* (56:4), pp. 724-742.
- Kang, Y.S., Min, J., Kim, J., and Lee, H. 2013. "Roles of Alternative and Self-Oriented Perspectives in the Context of the Continued Use of Social Network Sites," *International Journal of Information Management* (33:3), pp. 496-511.
- Kim, Y., Sohn, D., and Choi, S.M. 2011. "Cultural Difference in Motivations for Using Social Network Sites: A Comparative Study of American and Korean College Students," *Computers in Human Behavior* (27:1), pp. 365-372.
- Kirsch, L.J. 1996. "The Management of Complex Tasks in Organizations: Controlling the Systems Development Process," *Organization Science* (7:1), pp. 1-21.
- Kirsch, L.J., Sambamurthy, V., Ko, D.-G., and Purvis, R.L. 2002. "Controlling Information Systems Development Projects: The View from the Client," *Management science* (48:4), pp. 484-498.
- Klein, H.K., and Myers, M.D. 1999. "A Set of Principles for Conducting and Evaluating Interpretive Field Studies in Information Systems," *Mis Quarterly*), pp. 67-93.
- Kugler, M., and Smolnik, S. 2013. "Just for the Fun of It? Towards a Model for Assessing the Individual Benefits of Employees' Enterprise Social Software Usage," *46th Hawaii International Conference on System Sciences*,: IEEE, pp. 3614-3623.
- Leonard-Barton, D., and Deschamps, I. 1988. "Managerial Influence in the Implementation of New Technology," *Management science* (34:10), pp. 1252-1265.
- Lin, K.Y., and Lu, H.P. 2011. "Why People Use Social Networking Sites: An Empirical Study Integrating Network Externalities and Motivation Theory," *Computers in Human Behavior* (27:3), pp. 1152-1161.
- Majchrzak, A., Faraj, S., Kane, G.C., and Azad, B. 2013. "The Contradictory Influence of Social Media Affordances on Online Knowledge Sharing," *Journal of Computer Mediated Communication*.
- Manz, C.C., and Angle, H. 1986. "Can Group Self-Management Mean a Loss of Personal Control: Triangulating a Paradox," *Group & Organization Management* (11:4), pp. 309-334.
- Minichiello, V., Aroni, R., Timewell, E., and Alexander, L. 1995. "In-Depth Interviewing: Principles, Techniques," *Analysis* (2nd ed.). Melbourne: Longman).
- Moon, J.Y., and Sproull, L.S. 2008. "The Role of Feedback in Managing the Internet-Based Volunteer Work Force," *Information Systems Research* (19:4), pp. 494-515.
- Nov, O. 2007. "What Motivates Wikipedians?," *Communications of the ACM* (50:11), pp. 60-64.
- Ouchi, W.G. 1978. "The Transmission of Control through Organizational Hierarchy," *Academy of Management Journal*), pp. 173-192.
- Qualman, E. 2012. *Socialnomics: How Social Media Transforms the Way We Live and Do Business*. Wiley.
- Review, H.B. 2011. "Increase Your Company's Productivity with Social Media, Harvard Business Review Blog Post , Retrived on June 12, 2012 From: <http://www.businessweek.com/management/increase-your-companys-productivity-with-social-media-09272011.html>."
- Riemer, K., Scifleet, P., and Reddig, R. 2012. "Powercrowd: Enterprise Social Networking in Professional Service Work: A Case Study of Yammer at Deloitte Australia,").
- Riemer, K., and Tavakoli, A. 2013. "The Role of Groups as Local Context in Large Enterprise Social Networks: A Case Study of Yammer at Deloitte Australia,").
- Ryu, M.-H., Kim, S., and Lee, E. 2009. "Understanding the Factors Affecting Online Elderly User's Participation in Video Ucc Services," *Computers in Human Behavior* (25:3), pp. 619-632.
- Soh, C., Chua, C.E.H., and Singh, H. 2011. "Managing Diverse Stakeholders in Enterprise Systems Projects: A Control Portfolio Approach," *Journal of Information Technology* (26:1), pp. 16-31.

- Stocker, A., Richter, A., and Riemer, K. 2012. "A Review of Microblogging in the Enterprise," *it - Information Technology* (54:5), 2012/10/01, pp. 205-211.
- Sykes, T.A., Venkatesh, V., and Gosain, S. 2009. "Model of Acceptance with Peer Support: A Social Network Perspective to Understand Employees' System Use," *Mis Quarterly* (33:2), p. 371.
- Turel, O., and Serenko, A. 2012. "The Benefits and Dangers of Enjoyment with Social Networking Websites," *European Journal of Information Systems* (21:5), pp. 512-528.
- Turel, O., Serenko, A., and Bontis, N. 2010. "User Acceptance of Hedonic Digital Artifacts: A Theory of Consumption Values Perspective," *Information & Management* (47:1), pp. 53-59.
- van der Heijden, H. 2004. "User Acceptance of Hedonic Information Systems," *Mis Quarterly* (28:4), pp. 695-704.
- Väyrynen, K., Hekkala, R., and Liias, T. 2012. "Knowledge Protection Challenges of Social Media Encountered by Organizations," *Journal of Organizational Computing and Electronic Commerce* (23:1-2), 2013/01/01, pp. 34-55.
- Venkatesh, V. 1999. "Creation of Favorable User Perceptions: Exploring the Role of Intrinsic Motivation," *Mis Quarterly*, pp. 239-260.
- Venkatesh, V., Morris, M.G., Gordon, B.D., and Davis, F.D. 2003. "User Acceptance of Information Technology: Toward a Unified View," *Mis Quarterly* (27:3), pp. 425-478.
- Wang, Y., and Fesenmaier, D.R. 2004. "Towards Understanding Members' General Participation in and Active Contribution to an Online Travel Community," *Tourism Management* (25:6), pp. 709-722.
- Warkentin, M., Johnston, A.C., and Shropshire, J. 2011. "The Influence of the Informal Social Learning Environment on Information Privacy Policy Compliance Efficacy and Intention," *European Journal of Information Systems* (20:3), pp. 267-284.
- Warr, W.A. 2008. "Social Software: Fun and Games, or Business Tools?," *Journal of Information Science* (34:4), pp. 591-604.
- Webster, J., and Martocchio, J.J. 1992. "Microcomputer Playfulness: Development of a Measure with Workplace Implications," *Mis Quarterly* (16:2), pp. 201-226.
- Yammer. 2013. "About Yammer, Retrieved July 22, 2013 From : <https://About.Yammer.Com/Who-We-Are/>."
- Yetim, F., Wiedenhofer, T., and Rohde, M. 2011. "Designing for Motivation: Focusing on Motivational Values in Two Case Studies," in *Social Informatics*. Springer, pp. 255-268.
- Yin, R.K. 2003. "Case Study Research: Design and Methods, Volume 5 of Applied Social Research Methods Series." Sage Publications, Thousand Oaks, USA.
- Zhang, P. 2007. "Toward a Positive Design Theory: Principles for Designing Motivating Information and Communication Technology," *Advances in Appreciative Inquiry* (2), pp. 45-74.
- Zhang, X., Venkatesh, V., and Brown, S.A. 2011. "Designing Collaborative Systems to Enhance Team Performance," *Journal of the Association for Information Systems* (12:8), pp. 556-585.
- Zu, X., and Kaynak, H. 2012. "An Agency Theory Perspective on Supply Chain Quality Management," *International Journal of Operations & Production Management* (32:4), pp. 423-446.

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