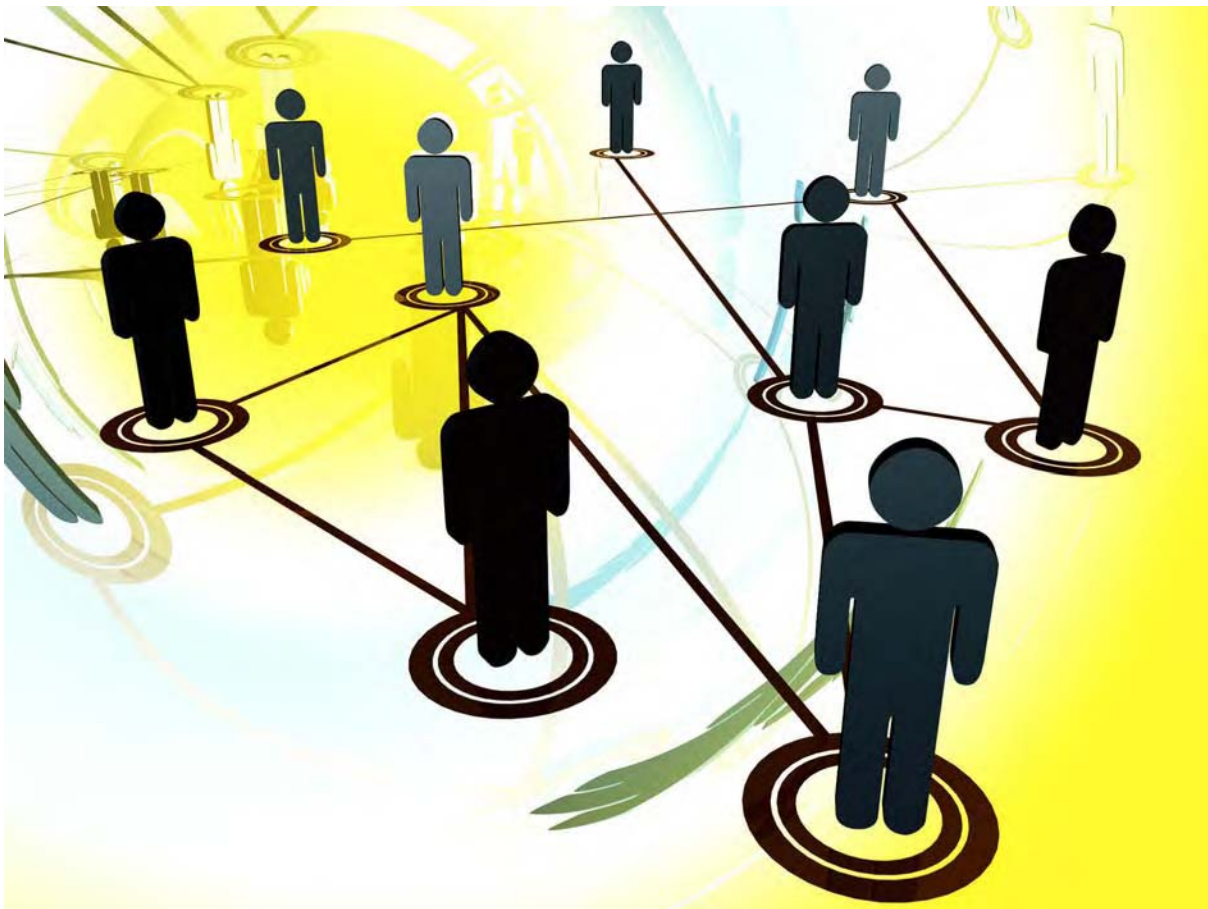# Stephan ten Kate

Trustworthiness within Social Networking Sites:

A study on the intersection of HCI and Sociology

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"I wish you could make a friend of me, Lizzie. Do you think you could? I have no more of what they call character, my dear, than a canary-bird, but I know I am trustworthy."

- Charles Dickens

Trustworthiness within Social Networking Sites:

A study on the intersection of HCI and Sociology

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ABSTRACT

This thesis examines trustworthiness assessments of other people within the online environments of social networking sites and the processes that are in place during those evaluations. By undertaking an exploratory qualitative study focused on Hyves, LinkedIn and IBM's Beehive, trustworthiness assessments and the effects of trustworthiness cues were analyzed.

It can be concluded that social networking sites offer valuable possibilities for trustworthiness assessments. The results suggest that these online assessments have little to do with the simplistic view of merely using online ratings, testimonials and/or recommendations. By exploring an integrative trustworthiness framework, it became clear that these processes are influenced by various factors, especially since the boundaries between offline and online connections are blurring and the self-posted information and identities on social networking sites are perceived as authentic. As such, the trustworthiness dimensions within social networking sites do not differ from dimensions in real life. Users of social networking sites do have an implicit and deliberate arrangement of trustworthiness assessments, based on indications of ability, integrity, benevolence and social dimensions.

Due to trustworthiness its multidimensional character, various aspects influence assessments within social networking sites. The personal characteristics of the trustor (e.g. culture, media schemata, assumptions) bias the setup of mental images significantly. Furthermore, the trustworthiness, perception and dependency of the social networking site its context influence personal evaluations and acting within these sites as well. The cognitive trust aspect explains most of the variance in trusting beliefs. This aspect was primarily shaped by the influential presences and effects of specific trustworthiness cues. These effects were affected by real life experiences and reflections, and the context and goal of the social networking site. Last, social networking sites their design, features and functionality have a significant impact on trustworthiness assessments and the influential presence of cues as well.

The study thus enhances theory about trust within computer-mediated communications, sketches surrounding themes that influence trustworthiness assessments and gives an overview of the value of trust cues within social networking sites. As such, it creates opportunities for further research to apply similar studies on a large scale to deepen and generalize its findings.

Key words: Online Trust, Trustworthiness, Assessments, Social Networking Sites, Cues

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1. INTRODUCTION AND RESEARCH QUESTION

"The only way to make a man trustworthy is to trust him."

- Henry L. Stimson

This study focuses on trustworthiness assessments within social networking sites. By using a qualitative study, it aims to enhance the theory about trust within computer-mediated communications. This paper sketches surrounding themes that influence trustworthiness assessments and gives an overview of the value of trustworthiness cues within social networking sites. As such, this study adds to current literature and research in an exploratory way.

Long before the public release of the World Wide Web in 1993, computer mediated communication already existed and supported interaction between people in different places and/or at different times. Within the area of Human-Computer Interaction, multiple studies have been carried out on the efficient use of these technologies and their criteria. This area of research has become increasingly relevant since the rise of the World Wide Web and its second stage - the Web 2.0 platforms. Good examples of those platforms with a significant size are social networking sites. "What makes social network[ing] sites unique is not that they allow individuals to meet strangers, but rather that they enable users to articulate and make visible their social networks" (Boyd, 2007, p. 211). By using these sites, users can connect with each other and share data. As such, these systems integrate concepts of human-computer interaction, social network analysis and sociology.

Within these new Web 2.0 environments, people are actively participating in creating, sharing and socializing, instead of passively receiving information. Social networking sites play a significant role within these new interactions because most Internet users are members of social networking sites and use them actively. Consequently, social networking sites are (becoming) intertwined with actors' offline and online interactions and lives. Trustworthiness plays an important role within these interactions, since trust is one of the critical components that have to be present to develop valuable connections and relationships from interactions. Online trustworthiness is based on a person's attributes which can be communicated within social networking sites. It can be explained as the belief that someone is worthy to trust – a character that the trustee posses. From this explanation, trustworthiness can be seen as the trustor's subjective degree of belief that the trustee is capable to perform an important action to the trustor.

The most important aspects for inferring trust from a sociology perspective are: the history between people; a person's background; and trustworthiness assessments during a physical meeting. This gives a trustor a belief in trustees' trustworthiness. However, most of these cues are absent on the Internet, especially since there are good reasons to be anonymous on the World Wide Web (Dyson, 1998). It is well known that information influences peoples' judgments about others. What is less clear is what types of information factors affect these judgments (Walther, 2008). Much research on social

networking sites focuses on users' connections and who they trust. However, little is known about what information affect members of social networking sites to address trustworthiness and which factors influence these processes. Many social networking sites allow users to reveal information about themselves, their social connections and the way they behave on the web. This valuable information creates large potential for assessing an actor's trustworthiness. Therefore, this study focuses on information within social networking sites that can function as cues for trustworthiness assessments and surrounding themes that influence these online evaluations.

Hence, followed by this objective, this exploratory study is guided by the following research question:

"How are trustworthiness assessments in social networking sites conducted?"

To give a reliable and valid answer to this research question, the study uses a bilateral approach. A literature study has been done initially, followed by empirical exploratory qualitative research. The literature section lays a theoretical foundation for the study and its research area. It gives an overview of the theories that are in place when people assess others' trustworthiness, with the goal to create a uniform framework for the actual research. This framework has to be made operational and supported by multiple sub questions. These questions can be outlined as:

What is the relevant research area?
What are social networks?
What are social networking sites and in which context are they operating?
What is trust and trustworthiness?
Which requisites are present during trust(worthiness) assessments?
Which aspects are dimensions of trustworthiness?
What information on social networking sites can act as trustworthiness cues?
How can trustworthiness be communicated and interpreted?

After analyzing the above mentioned sub questions, the actual research was executed. This study bears an exploratory and qualitative nature because it focuses on a familiar social phenomenon within a new environment (social networking sites) about which little relevant information is available. The research was conducted during a research internship at the HR department of IBM Netherlands. Following the uniform framework, an exploratory study was undertaken to answer the following questions:

Which dimensions are used to assess others´ trustworthiness on a social networking site?
Which of these dimensions are affective based?
Which of these dimensions are cognitive based?

What information on social networking sites has effect on assessing other users´ trustworthiness within social networking sites?

What social networking sites features allow users to make better/informed trustworthiness assessments?

Do these results differ across various social networking sites?

What can one do to enhance his/her own trustworthiness?

By undertaking an exploratory qualitative study focused on Hyves, LinkedIn and IBM's Beehive, trustworthiness assessments and the effects of trustworthiness cues were analyzed. An integrative theoretical trustworthiness framework was explored to reveal relevant real life processes and themes that occur during trustworthiness assessment within social networking sites, since "the study of trust in online environments requires a strong theoretical basis" (Benbasat, Gefen and Pavlou, 2008, p. 6).

The results lead to new insights about users' trustworthiness assessments and factors that influence these assessment processes. Social networking sites seem to offer valuable possibilities for trustworthiness assessments. It became clear that trustworthiness assessments within online environments have little to do with the simplistic view of merely using online ratings, testimonials and/or recommendations. This is especially true since the boundaries between offline and online connections are blurring. As such, the trustworthiness dimensions within social networking sites do not differ from dimensions in real life contexts. Users do have an implicit and deliberate arrangement of trustworthiness assessments, based on indications of ability, integrity, benevolence and social dimensions. Since trustworthiness is a multidimensional construct, these assessments within social networking sites are influenced by various factors. They can be categorized as personal characteristics, context characteristics, trustworthiness cues effects and system implications.

As such, this study enhances theory about trust within computer-mediated communications, sketches surrounding themes that influence trustworthiness assessments and gives an overview of the value of trust cues within social networking sites. The findings are both interesting from an academic and social system design perspective. Since this study adds to current literature and research in an exploratory way, further research can apply similar studies on a large scale to deepen and generalize its findings.

This master thesis is organized as follows. Chapter two presents the literature review, which acts as the foundation for the uniform framework. Chapter three outlines the methodology and data collection process. Chapter four describes the emerging themes that were discovered during the research and which occur during trustworthiness assessments, while chapter five gives an overview of the research results and an analysis of those results. The results, seen in the light of the uniform framework, are discussed in chapter six, together with the value of these implications for further research challenges and some research limitations. Finally, chapter seven concludes the thesis.

2. LITERATURE BACKGROUND

INTRODUCTION

This section lays a theoretical foundation for the study and its research area. This literature review builds upon relevant available literature and sketches the context of this study. Since this study bears an exploratory character, it does not have the intention to be comprehensive. Instead, it gives an overview of the theories concerning assessing others' trustworthiness. As such, this chapter starts with describing the research area. The next paragraph introduces the topic of social networks and their analysis. Consequently, the social web and its social networking sites are outlined. After these outlines, a broad overview is given of (online) trust and trustworthiness with its levels, definitions, dimensions and dynamics. Next, online information, trust cues and the used communication model will be introduced. The final section concludes this chapter with a recap and visualization.

2.1 CONTEXT RESEARCH AREA

With an increasing number of technologies that facilitate social interaction over distance and time, mediated interactions are getting a substantial interest from scholars in various research areas. Within these computer-mediated communications (CMC), trust is one of the biggest stimulators due to its mediating function (Levin and Cross, 2004).

"(…) designing for trust in mediated interactions has become a key concern for researchers in human computer interaction [HCI]" (Riegelsberger, Sasse and McCarthy, 2005, p. 381). This area is becoming even more relevant since the rise of the World Wide Web and its second stage– the Web 2.0, where everything is focused on doing and connecting socially. The concept of trust(worthiness) is one that is studied within multiple theories and research area's – e.g. economics (Fukuyama, 1995), business studies (Butler, 1991), knowledge management (Levin and Cross, 2004), sociology (Hosmer, 1995), social network analysis (Coleman, 1988) human computer interaction (Jarvenpaa, Knoll and Leidner, 1998) and electronic commerce (Gefen, Benbasat and Pavlou, 2008). Trust has gained prominence in HCI research in the last years. Previous research within the HCI area focused on trust in websites, trust in technologies and trust in humans.

This study focuses on actors' assessment of people's trustworthiness within social network sites. Within these sites, users can connect with each other and share data. As such, these systems integrate concepts of human-computer interaction, social network analysis and sociology. These areas are the focus of this study, since trustworthiness is based on a person's attributes that are relevant for the human-computer interaction and which can be communicated within social networks. This chapter lays a theoretical foundation for the execution of the study, since "the study of trust in online environments requires a strong theoretical basis" (Benbasat, Gefen and Pavlou, 2008, p. 6).

2.2 SOCIAL NETWORKS

Social networks and their internal connections have been studied intensely by scholars within the social network analysis (SNA) area. This research field is not new (it originates from the 1940's and had considerable size in the 1970's), but it has gained renewed interest from different disciplines due to its practical implications within organizations and the rise of social networking sites. Ideas such as 'six degrees of separation'[1] and experiments such as the small world experiment[2] gained more significance by the rise of social networking sites and the usability of social networks within management theory. This paragraph will give a short overview of social network theory. It does not have the intention to be comprehensive, yet it will elucidate some relevant elements for this study.

A social network is a network of people. People within those networks are connected when they have any certain relationship together (Haythornthwaite, 1996). Social networks can be typified by their scale-free character. As Barabási and Bonebeau (2003, p. 52) mention: "some nodes have a tremendous number of connections to other nodes, whereas most nodes have just a handful. The popular nodes, called hubs, can have hundreds, thousands or even million links. In this sense, the network appears to have no scale". These connections of interpersonal relations are based on informal bonding characteristics such as values, visions, friends, relationships, and have a substantial influence on people's personal and professional life (Cross, 2004). "A typical social network analysis uncovers and tracks the number of links among individuals in any of these networks, the frequency with which people communicate, the relative significance of their communication, and the number of people through which a message passes" (Kleiner, 2005, p. 4).

One of the most influential authors within this field is Granovetter. His most widely known work explicated his theory of the strength of weak ties. This theory clarifies that weak ties are far more valuable than strong ties (Granovetter, 1973, 1983). This is because of the diffusion of information within weak ties; a characteristic that strong ties often lack since they are concentrated within the same networks. In practical terms: people who are connected with an actor via a weak tie often have more new and valuable information from sources outside the actor's network. From this perspective, social networking sites are an ideal environment to establish potentially valuable weak ties, since establishing such an online network takes relatively less effort.

Another important aspect of social network theory is betweenness centralization. Centralization has been settled in social network theory since Freeman's (1979) article, where he outlined three aspects of centralization. Initially, the degree of a node, which can be described as the amount of connections with other actors. Secondly control, which refers to the level of dependency of one actor to communicate with other actors. If an actor is the only bridge between two networks, he or

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[1] This refers to the concept that everyone is "an average of six "steps" away from each person on Earth" (Wikipedia, 2008).
[2] Milgram (1967) tested the hypothesis of six degrees of separation by analyzing the average path length between two nodes. For more information, see Barabási (2003).

she acts as a broker that jumps in a structural network hole (Burt, 2000). Finally independence, which relates to control, as it indicates that an actor is connected with other actors via a minimal extent of other nodes.

Ties and centrality are helpful because of their access to information, but the real value of social networks lies in their social capital, which stands for "(…) the ability of actors to secure benefits by virtue of membership in social networks or other social structures" (Portes, 1998). By formulating a building theory of social capital, Lin (1999, p. 35) defines social capital as "resources embedded in a social structure which are accessed and/or mobilized in purposive actions." Social networking sites are a perfect place for sharing information and can act as catalysts for social capital. Nevertheless, information sharing within social relationships does not only depend on the social structure, but also on trust and moral norms within a relationship (Fukuyama, 1995). If people can be seen as nodes, and the connections are their relationships, trust improves its 'bandwidth'. Assessing an actor's trustworthiness is as such an important aspect for information sharing. The next paragraph provides a short introduction of the social web and social networking sites, followed by a paragraph that explains which dimensions are important for the assessment of trustworthiness.

2.3 THE RISE OF SOCIAL NETWORKING SITES

The rapid rise of social networking sites occurred during the parallel expansion and progress of the Web 2.0. This paragraph will not analyze the underlying technologies and the overall development of the Web 2.0. Instead, it takes a glance at the meaning of the concept Web 2.0 and as such, establishes the context in which social networking sites flourished. Thereafter, a more formal definition of these sites and their characteristics is provided.

2.3.1 The web 2.0

The Web 2.0 serves as a social platform, where everything is focused on doing and social connecting: sharing, collaborating and creating. The Web 2.0 itself does not mainly consist of new techniques or infrastructures; most of the technologies that are implemented within the social web already existed before the concept Web 2.0 was created. Programming techniques such as AJAX and RSS do play a role, but the essence is the graphical interfaces which are stimulated by these techniques, and in turn boost social interactions on a global scale. Although the Web 2.0 can thus be seen as a fashionable marketing concept, it can be explained as the evolution from the surfing experience of the web (the nineties), to searching (year 2000) and to doing (present). The Web 2.0 is about connecting with people and making technology efficient for people.

Although there is not a general definition of the Web 2.0, its websites do share some common characteristics, such as online communities, self-expression, user generated content, open source

environment and social networks. It results in a web that develops itself from a platform where information has been sent and consumed, to a platform where content is created, shared, reused, changed and forwarded. This development has boosted due to the expansion of social software. Social software delivers significant value to social connections. It can be defined as "(…) software whose design characteristics is that it treats genuine social phenomena as different from one-to-one or one-to-many communications. It seeks to build one's expectations about the social interactions that the software will facilitate into the design of the platform" (Benkler, 2006, p. 372). It allows for social relations within mediated environments that are almost as rich and valuable as they are in real life, where sociality is key (Bouman et al., 2008). An analogy can be made of the beginning of the web as a digital newspaper. The new (more social) web can be visualized as "a shared canvas where every splash of paint contributed by one user provides a richer tapestry for the next user to modify or build on. Whether people are creating, sharing, or socializing, the new Web is principally about participating rather than about passively receiving information" (Tapscott and Williams, 2006, p. 37).

This participation has been done in various online communities. These communities (such as social networking sites, forums, discussion boards and blogs) are formed by people sharing various multiple characteristics, e.g. geography, age, gender, product usage, ethnicity, religion, hobbies, education, status, technology adoption, life circumstances, and interests (Kania, 2001). The main activities within these networks are sharing connections, knowledge, content, documents, webpages, pictures, and videos. A more formal definition and an overview of the general functions of social networking sites are given in the next paragraph.

2.3.2 Social Networking Sites

Every person in the world acts within communities. Examples are neighborhoods, schools, football clubs and bands. On the web, people engage in online communities. Online communities have existed since the beginning of the Internet and contain communications mediated by various computer technologies. While online communities where niches in the beginning of the Internet (e.g. Usenet, Arpanet and Listserv), it became one of the trendiest words at the end of the 90's (Dyson, 1998). One of the social communities that has boomed in the last few years, are social networking sites (also referred to as social network sites, social network software or social network services). These social software systems are aimed at organizing and maintaining relations.

The main difference between social networking sites and previous digital interactions is their scale and graphical character. Social networking sites changed the landscape of online communities in the beginning of this millennium by visualizing users' social connections, conversations and interactions and extending this on a global scale. Nowadays, most Internet users are subscribed to social networking sites, often more than one. Due to this scale, valuable mass-scale knowledge can be created by combining users' knowledge and input (Tapscott and Williams, 2006). By simplified user interfaces, social networking sites make it easy to share and create information for users. As such,

social networking sites can establish valuable networks for knowledge sharing in a professional context. This is already being done in a light form within medical applications (Luo, 2007) and in organizations' research phases (e.g. IBM's Beehive).

Although social networking sites are now almost completely embedded in social activities and lives, they have only existed since 1997 with the start of Classmates and Sixdregrees and did not reach a considerable size until 2002 with the founding of Friendster (Boyd and Ellison, 2007). Systems such as social networking sites provide capabilities to engage in social networking and maintaining social relationships in addition to physical interactions. This study uses Boyd and Ellison's definition of social networking sites as "(…) web-based services that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system" (Boyd and Ellison, 2007, p. 211).

Although there is general agreement on the features and characteristics of social networking sites, there exists a difference of opinion on the differentiated classification of them (Beer, 2008). While the exposition of 'social networking sites' and 'social network sites' seems identical, there is a difference in the definition of 'network' and 'networking'. Where 'network' can have a broad interpretation, 'networking sites' are applications where networking is the main activity. Within this definition of social networking sites, some classifications can be made, although they are not formally recognized yet. De Jonghe (2008) [3] classifies social network sites into: business networks, friends networks, dating networks, niche networks, video/photo networks and mobile networks. For instance, networks such as Napster and Youtube can be placed within the concept 'social network site', but networking is not the main activity within those networks, so they can not be labeled as 'social networking sites'. Chapter three clarifies the studied sites Hyves, LinkedIn and Beehive.

Social networking sites often have the same basic features and techniques: "network of friends listings (showing a person's 'inner circle'), person surfing, private messaging, discussion forums or communities, events management, blogging, commenting (sometimes as endorsements on people's profiles), and media uploading" (Breslin and Decker, 2007, p. 86). Within these sites, a variety of communication possibilities are present. These can be divided in four main characteristics: user to all (e.g. weblogs or blogs), user to user (private messaging (PM) or e-mail), community discussion (e.g. bulletin boards, forums or wikis) and real world events (communication around event listings) (O'Murchu, Breslin and Decker, 2004).

Since social networking sites are integrated into everyday life, they are intertwined with actors' offline and online interactions. As such, "the everyday sense of friend can often be the SNS [social networking site] friend" (Beer, 2008, p. 520). Within these relationships, trust is one of the critical components that have to be present to establish valuable connections and relationships. Trust

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[3] http://worldwidenetworking.blogspot.com/2008/02/social-networks-around-world-facts.html

within social networking sites is nowadays perceived as ratings or testimonials of users (O'Murchu, Breslin and Decker, 2004). This is a simplistic view, since the boundaries between offline and online connections are becoming blurred. As Fukuyama (1995, p. 25) puts it: "Trust does not reside in integrated circuits or fiber optic cables. Although it involves an exchange of information, trust is not reducible to information". As such, it is vital to have a more broadened and in-depth view of trust and trust cues, based on a discussion from multiple disciplines. This will be done in the next paragraph.

2.4 (ONLINE) TRUST AND TRUSWORTHINESS

Due to its interdisciplinary character, a general definition of trust is lacking. It has been studied in fields of sociology, psychology, economics, organizational behavior and more recently in computer science (Ulivieri, 2005). Besides that, it "encompasses constructs as diverse as ethics, morals, values and natural attitudes" (Kasper-Fuehrer and Ashkanasy, 2001, p. 237). Hence, trust is a complex and multidimensional concept and consequently, it is important to have an overview of its levels, definition, dimensions and dynamics. This paragraph outsets and synthesizes this diverse scope of trust and its relevance with electronic environments. It does not present a comprehensive overview of the psychological literature, since it mainly offers a sociological reading from a human computer interaction (HCI) perspective.

2.4.1 Levels of trust

Looking at various scholars and research areas, it becomes clear that there is a general agreement that trust is a mental phenomenon that occurs within social contexts (a formal definition is given in the next paragraph). It represents a mental model which tries to represent the external reality. This representation leads to a broad trust judgment. Nevertheless, four different levels can be identified where trust acts and has been studied. These are: individual, interpersonal, relational and societal (Chopra and Wallace, 2003). As such, different forms of trust relationships can be expounded:

- Individual trust can be seen as a personal trait of the trustor. It can be defined as a visceral general attitude to trust, that determines the willingness to trust others (Mayer, Davis and Schoorman, 1995). This form of trust is explained later on in this chapter, since it has some influence on the affective based trust (see paragraph 2.4.3.1).
- Interpersonal trust is the most common form of trust studied. This form is based on the relation between the trustor and the trustee, where the trustor forms a belief on the trustworthiness of the trustee and then decides to trust the trustee or not. This rational perspective (Jarvenpaa, Knoll and Leidner, 1998) is the focus of this research, since it studies actors' assessment of people's trustworthiness within social networking sites. It is not to say that this rational perspective means that it is inefficient to pay attention to communities, since the opposite is true most of the time –

most critics of communities also act within and receive value from communities (Fukuyama, 1995).

- Relational trust does not aim at attitudes of trustee, but it emerges as a property of relationships as a whole, and acts as the glue within these relationships (Chopra and Wallace, 2003). This study does not aim at relational trust, since it is focused on trustworthiness assessments of unknown persons, without prior relationships.

- Societal models of trust broaden the scope of trust, since it integrates trust within the functioning of society and systems (Chopra and Wallace, 2003). This trust in systems is a requirement for the correct functioning of the economy as a whole, but any moral community will create a degree of trust among its members too (Fukuyama, 1995). The social networking sites are the relevant systems within this study.

2.4.2 Definition of trust

The value of trust is undisputed in every study, but "unfortunately, there also appears to be equally widespread lack of agreement on a suitable definition of the concept" (Hosmer, 1995, p. 380). This holds for offline and online definitions and understandings. What can be concluded in general is that trust is based on a mental model of cognitive and emotional elements (Rusman, van Bruggen and Koper, 2007) which leads to a subjective degree of belief about agents (Abdul-Rahman, 2000). These beliefs and expectations in turn lead to a degree of willingness, a behavioral intention by the trustor to depend on the trustee (Gefen, Benbasat and Pavlou, 2008). Chopra and Wallace (2003, p. 2) explain three general trust facts derived from trust literature:

- "Trust is an attitude held by an individual. It is influenced by the personality of the trustor and by the attributes of the recipient, and it in turn influences the behavior of the trustor, but it is equivalent to none of them.

- Trust is directed toward a specific other.

- Trust is an attitude composed of two parts: confidence in positive outcomes, and a willingness to modify one's behavior in expectation of those outcomes."

Seen from this point of view, the used definition of trust within this study is Mayer, Davis and Schoorman's (1995, p. 712): "[Trust is] the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party".

2.4.3 Dimensions of trust

As stated earlier, trust is a multidimensional construct. Within social sciences, there are three types/dimensions of trust identified. They are: affective based trust (dispositional/propensity to trust); institution-based trust (system trust); and cognitive based trust (interpersonal trust) (Pavlou, 2002). They are not mutually exclusive and can influence the trust belief and/or influence eachother (Chopra and Wallace, 2003). These three dimensions will be explained in this paragraph, since they have significant effects on the study its subjects.

2.4.3.1 Affective based trust

Affective based trust lies in the implicit or visceral general attitude to trust. Synonyms are disposition to trust, propensity to trust or intrinsic trust. When someone possesses a high disposition to trust, he/she is more willing to depend on, or trust others (Ridings, Gefen and Arinze, 2002). These internal attitudes are influenced by the attributes of the trustor such as culture, previous experience, psychological state and location. This propensity to trust can be short-circuited by custom and habit and decreases the costly and time-consuming process of gathering all the information necessary for a trustworthiness assessment (Fukuyama, 1995).

A general trust in people, for example, does have a substantial influence on the expectations of the trustee. In addition, other character aspects such as empathy, intuition and openness of the trustor will influence his or her perception of others' trustworthiness. However, the literature on trust has shown that "trust in a specific person is more relevant in terms of predicting outcomes than is the global attitude of trust in generalized others" (Butler, 1991, p. 647) and this factor explains little of the variance in trust between actors (Jarvenpaa, Knoll and Leidner, 1998).

2.4.3.2 Institution based trust

Zucker (1986) was one of the first scholars to address institution based trust within impersonal relations, where trust was tied to professionalism or third-party insurance. Institution based trust influences trust within mediated environments such as online marketplaces (Pavlou and Gefen, 2004). Within this study, the relevant legal institutions are the social networking sites and their underlying organizations. According to Pavlou (2002, p. 218), who linked institution based trust with online marketplaces, institution based trust can be defined as "the subjective belief with which members of social networking sites collectively assess that favourable conditions are in place to enhance the probability of achieving a successful trustworthiness assessment of others". These conditions can be separated into two constructs: structural assurance (structures such as guarantees and regulations) and situational normality (the environment or situation is perceived as normal or favourable) (McKnight, Cloudhury and Kacmar, 2002).

A final factor that can be of significant meaning for perceiving trustworthiness within computer mediated communication systems such as social networking sites is media schemata. Media schemata are cognitive structures that develop after a "process of trial and error and through conversations about it", where "the users come to understand the media and media schemata develop" (Nevejan, 2007, p. 76). The understanding of someone's perceived ability within social networking sites for instance, is influenced by media schemata, because "the media schemata define how we will perceive and understand the presence perceived" (Nevejan, 2007, p. 77). For instance, a current perception differs from the perception over ten years. Social software related media schemata becomes more relevant since the boundaries between online and physical worlds are blurred. This balance of physical and online contexts is altered via the proliferation of personal computers, Internet and communication technologies, such as mobile computing technologies (Avital and Germonprez, 2003).

2.4.3.3 Cognitive based trust

Most research on (online) trust is primarily concerned with cognitive based trust. McKnight, Cummings and Chervany (1998, p. 475) argue that cognitive trust "relies on rapid, cognitive cues or first impressions, as opposed to personal interactions". This is especially valid within impersonal trust, where initial trust is available. Initial trust relates to trusting an unknown or unfamiliar trustee, where "the actors do not yet have credible, meaningful information about, or affective bonds, with each other" (McKnight, Choudhury and Kacmar, 2002, p. 335). As such, actors develop trusting beliefs about a trustee through trust cues. Chopra and Wallace (2003) emphasize the cognitive dimension, since it "(…) is more prominent when the trustor and trustee do not have an extensive history of interaction, whereas affective trust develops as a relationship deepens over time".

The historical view that 'trust needs touch' (Handy, 1995) is an oversimplified statement, seen in the light of the variety of technologies that enable computer-mediated communication. Instead, it is more valuable to think of different presences within the context of social interaction – the most relevant within this study is witnessed presence (Nevejan, 2007). Since technology mediates presences within social networking sites, this study focuses on the trustee's cognitive attributes that influence the perceptions and expectations of one regarding other's trusted character and trusting behavior (Tanis and Postmes, 2005). Paragraph 2.5 presents an overview of these trustworthiness dimensions - ability, benevolence, integrity and social context. These beliefs are intertwined and affect each other.

An interesting corresponding topic is the trustworthiness of information. This refers to the difference between a trustee's online reputation and real life identity. Reputations are an efficient way for assessments (Ba and Pavlou, 2002). Of course, personal experiences give valuable information and are powerful determinants of a person's reputation, but solely relying on personal experiences is inefficient and perilous (Kollock, 1999). An online identity is based on digital documents and its trustworthiness is influenced by the trustworthiness of the specific system: information on personal social networking sites will be taken less serious compared to information on professional sites.

2.4.4 Dynamics of trust

Trust has been studied in terms of long-term relationships and its longitudinal nature implies that trust depends on previous experiences and not only on one-time interactions (Kasper-Fuehrer and Ashkanasy, 2001). Trust develops gradually through interactions, but can also be established quickly within temporary systems due to swift trust (Meyerson, Weick and Kramer, 1996). Trust can be broken down into two facets: the trusting beliefs and the intention to trust (McKnight, Cummings and Chervany, 1998). These beliefs of persons' trustworthiness (Gefen, Benbasat and Pavlou, 2008) are the focus of this study. Consequently, this trust develops through the transition phase of prediction to attribution, where a stable and enduring trait of trustworthiness extends (Chopra and Wallace, 2003).

2.4.5 Trustworthiness

Trustworthiness is not the same as trust, though both concepts are obviously related. As Corritore, Kracher and Wiedenbeck (2003, p. 741) explain: "Trust is an act of a trustor", while trustworthiness "is a characteristic of someone (…) that is the object of trust". Trustworthiness can be explained as the belief that someone is worthy to trust – a character that the trustee posses. From this explanation, *trustworthiness can be seen as the trustor's subjective degree of belief that the trustee is capable to perform an important action to the trustor*. It involves dependability – to have faith and/or confidence in one another. As such, it strengthens the trustor's confidence that the trustee is willing and able to fulfill the trustor's expectations (Chopra and Wallace, 2003).

2.5 DIMENSIONS OF TRUSTWORTHINESS

As can be seen from the former paragraph, trust is not the same as trustworthiness. Trust is based on beliefs in the trustworthiness of a trustee (Gefen, Benbasat and Pavlou, 2008). Before evaluating user's trustworthiness, his/her attributes have to meet some requirements (Becerra, Heard, Kremer and Denzinger, 2007). As Butler (1991, p. 647) states: "a useful approach to studying trust consists of defining and investigating a number of conditions (determinants) of trust". These intrinsic properties are stable dimensions of a trustee (Riegelsberger, Sasse and McCarthy, 2005) and are well researched within the trust literature. Most dimensions mentioned in the literature can be traced back to Mayer, Davis and Schoorman's (1995) interpersonal classification of ability, benevolence and integrity. A fourth relevant dimension for trustworthiness within social networking sites is the external/social dimension. This paragraph gives an overview of this classification and its relevance within online environments. It does not entail the classification's implication for behavioral intentions of the trustor.

2.5.1 Interpersonal Dimensions

2.5.1.1 Ability

Ability is the most referred construct in the scientific trust literature (Rusman, van Bruggen and Koper, 2007). Ability is a combination of knowledge, skills, attitude and competences (although this last concept is sometimes seen as an equivalent of ability). Ability describes an actor's capability of performing a particular action and how influential he/she is in a certain domain (Ridings, Gefen and Arinze, 2002). Mayer, Davis and Schoorman (1995, p. 717) define ability as a "(…) group of skills, competences, and characteristics that enable a party to have influence within some domain".

Sometimes it is possible that an actor only has a specific competence; which means he/she can only perform the action within a certain context (Becerra, Heard, Kremer and Denzinger, 2007). Otherwise stated: ability is domain specific (Mayer, Davis and Schoorman, 1995), but also has some general elements, e.g. intelligence and expertness (Riegelsberger, Sasse and McCarthy, 2005). To perceive an actor's ability, people must make their assessment of others by using various cues (Jarvenpaa, Knoll and Leidner, 1998).

2.5.1.2 Benevolence and Integrity

Next to the concept of ability, benevolence and integrity also have been shown to be important concepts of trustworthiness. The concept of benevolence is a relatively 'fuzzy' concept within HCI. Benevolence is "the expression of kindness and altruism" (Wikipedia, 2008). Other phrases that are connected with benevolence are: a positive orientation to do good and not to lie (Ridings, Gefen and Arinze, 2002); specific attachment with the trustee (Mayer, Davis and Schoorman, 1995); loyalty (Butler, 1991); and the willingness to protect, support and encourage others (Hosmer, 1995). One important aspect related to benevolence is openness; the willingness to share ideas and information with others (Hosmer, 1995). Without the exchange of knowledge, less value will be created within social structures (Cross and Parker, 2004).

Integrity is an important requirement for trustful relationships. It describes how ethical, honest and moral an actor is and/or behaves. Mayer, Davis and Schoorman (1995) explain integrity as the perception of a set of principles of the trustee that the trustor finds acceptable. Integrity within online communities and social networks are important, since they guide the behavior that is tolerated within those environments (Ridings, Gefen and Arinze, 2002). Integrity is hard to asses, so actors often rely on others' reputation for honesty and truthfulness. This can be based on consistency, predictability, reliability and reciprocity (Hosmer, 1995, Butler, 1991). Trust can be seen as a factor that reduces uncertainty, since it boosts predictability. Nevertheless, predictability itself is not sufficient for trust, since predictability can also be based on external control mechanisms (Mayer, Davis and Schoorman, 1995). One of the factors that can expand a predictable relationship is an actor's reliability. Within

online environments, reliability can be established through repeated interactions over time (Ridings, Gefen and Arinze, 2002), rapid responsiveness to communication (Kleiner, 2002) and reciprocity (Tanis and Postmes, 2005).

2.5.2 External / Social dimensions

The external/social dimension has a substantial influence on the perception of a person's trustworthiness dimensions, because behavior (e.g. trust) is affected by social relations (Granovetter, 1985). As can be seen from paragraph 2.2, authors of social network theories already highlighted the concept of trust within their academic work. This is especially valid within social networking sites, because one of the features of these sites is to display and view their social connections (Beer, 2008).

Social structures have a significant influence on perceived trustworthiness. As Coleman (1984, p. 85) argues: "one's actor's placement of trust in a second may be conditional upon that of a third". This triangulation via linkages and dependencies create a social network and a configuration of trust. Granovetter (1985) extends this argument by arguing that economic behavior is embedded within networks of interpersonal relations. As Hosmer (1995, p. 389) interprets: "(…) if a person found that a group of people with whom he or she had conducted economic transactions in the past had acted according to the informal or 'embedded' obligations of the society in the past, he or she would be more likely to trust those group members in the future".

One significant aspect of the influence of social structure on perceived trustworthiness is similarity within computer mediated communication (Walther et al. (1996), in: Jarvenpaa Knoll and Leidner, 1998). Similarity with other actors and/or groups shapes the social identity a person has or aims to have (Tanis and Postmes, 2005). This trust enhancement by similarity is based on social expectations, as exchanges are sometimes limited to people with a common cultural system and shared background expectations (Zucker, 1986, in: Hosmer, 1995).

2.6 ONLINE TRUST INFORMATION AND CUES

In general, there are four main methods to address a trustee's trust dimensions: intuitions, experience, hearsay and record (Becerra et al., 2007). Intuition includes assessment methods without considering a trustee specifically. Experiences contain former personal experiences with a trustee. Hearsay holds opinions of other actors who are not necessarily trusted. Records are data that convey information and cues about a person. Because the design of presence influences the way trust potentially builds or breaks down (Nevejan, 2007), this information is essential for assessing perceived trustworthiness within social networking sites. As such, records within these sites are the focus point of this study.

The most important aspects for inferring trust from a sociology perspective are: the history between people; a person's background; and trustworthiness assessments during a physical meeting. This gives a trustor a belief of trustees' trustworthiness. Within social networking sites, all these

aspects are not available (Golbeck, 2006). As such, trustworthiness within these sites can only be inferred via available information on these sites. It is well-known that information influences peoples' judgments about others. What is less clear is what types of information factors have effect on these judgments. Therefore, this study focuses on information within social networking sites that can function as trust cues. Cues are information that trigger and affect judgments – in this case information that people use for trustworthiness assessments. Since many social networking sites allow users to express information about themselves, their social connections and the way they behave on the web, social networking sites include much valuable information about a person. This paragraph will provide an overview of information and cues, how they can be communicated and interpreted, and what types of cues are available within social networking sites.

2.6.1 Cues, communication models and interpretation

In everyday life, an actor perceives and leaves a significant amount of information on a daily basis. This information can act as cues and can be classified in two types: an assessment type and a conventional type of cue (Donath and Boyd, 2004, p. 73). The former is reliable, as this cue is inherently related to the quality it represents and it is costly to falsify (such as wearing expensive jewelry to express wealth). The latter, conventional type is less reliable, because the connection between the quality and the cue is arbitrary and it is less costly to falsify (Donath, 2008). The conventional cues are the focus of this study, since filling in a profile on a social networking site is a conventional signal.

The communication and interpretation of cues is a complex phenomenon. Information has to be encoded before it can be sent to the receiver by a medium. The receiver must decode these cues into information and then give meaning to this information before it is fully communicated. Throughout all these steps, the initial message can be influenced and/or distorted by various factors such as the encoding process, the decoding process, the medium itself, the characteristics of the sender, the characteristics of the receiver, the setting of the communication, media schemata and semiotics.

These last two factors play a significant role in the communication process of mediated presences. These media schemata are related to a person's previous experience with media, and affect the communication process as such. IJsselstein (2002, p. 255) claims it is cognitive knowledge that "tells us what media can do, and what we can expect in terms of sound, pictures, etc". This memory of media experiences and their functioning and influence varies across different media and time.

Since this is an exploratory study with a novel research focus, aimed on trustworthiness assessments within social networking sites, the research will use a relative simple model of communication where a trustee transmits a message to a trustor via the medium. This mediated communication model is illustrated in figure 2.1. Further research can address a more extended model.

Figure 2.1   Mediated Communication Model
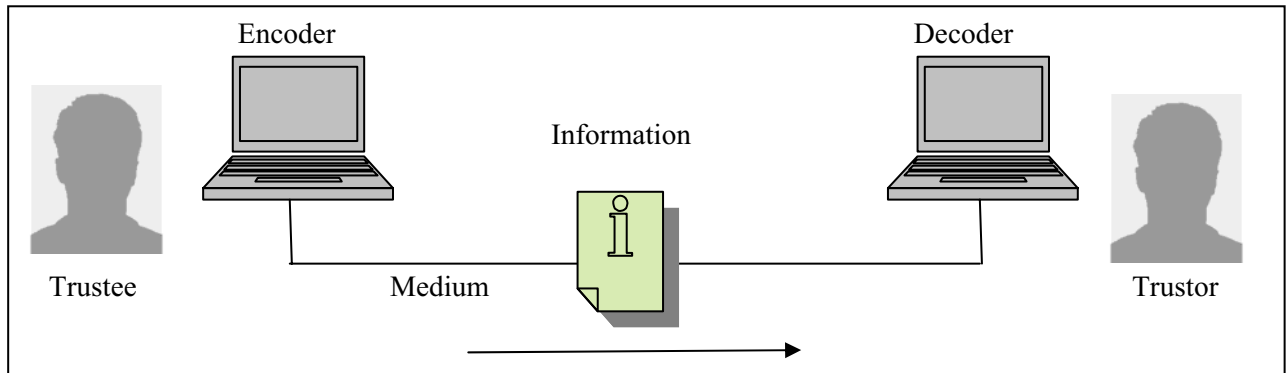
"The trustor's level of trust will be influenced – among other factors such as his/her disposition to trust – by the signals perceived" (Riegelsberger, Sasse and McCarthy, 2005, p. 385). This interpretation of information in cues is often not a rational and objective one. Character, for instance, is hard to assess since it is "a bundle of habits and tendencies and interests, loosely bound together and dependent, at certain times, on circumstances and context" (Gladwell, 2002, p. 163). This especially holds for trust as well. Trust and the interpretation of trust(worthiness) cues are often based on habit, on the shared ethical norms that underlie it and are passed on by generations. Trust is not reducible to information (Fukuyama, 1995, p. 25). Rather it is based on ethical codes and moral rules, embedded in culture. According to this view, an assessment of trust can be short-circuited by habit instead of by gathering all the information and making a purely rational assessment. Although this is a general statement, trust is determined by culture and culture differs by society. A distinction can be made between high trust and low trust societies. The well-being of high trust societies is in general often greater than within low trust societies, since the formers have "a high degree of trust (…) and hence a solid basis for social capital" (Fukuyama, 1995, p. 57). Low trust societies lack this basis and involve higher transaction costs, since the distrust has to be substituted by formal rules and regulations.

This cultural dependency of information interpretation can also be illustrated by semiotics. Semiotics studies the sign processes and how meaning is given to them and how it affects the receiver of the signs. One of the first authors to address this aspect was the French semiotician Barthes. His, originally dated 1957, work 'Mythologies' was a collection of essays where he, among other things, analyzed means of cultural expressions by looking at hidden meanings. He argued that meaning is constructed by the location of the signs, the expression of culture, the context, the expectations of the receiver, and stated that it can differ by reader (Barthes, 2002). From this, the expression that a picture is worth a thousand words becomes realistic, since every receiver interprets cues differently and decodes it in other words. As such, the signaling and interpretation of trust(worthiness) differs among receivers, since these are determined, among other factors, by culture.

2.6.2 Cues within social networking sites

Most information posted on social networking sites is user-generated and the honesty of this communication can be questioned, since some online impressions are controllable and often suspect (Walther et al., 2008, p. 32). There are costs involved in adjusting information, the so-called signaling costs (Spence, 1973). These costs on social networking sites are relative low because of its open character, e.g. the cost element 'time' is low, because adjustments within these environments are easily made: creating pseudonyms is as such not costly (Donath and Boyd, 2004).

Although information posted by a user is verifiable, the meaning of this information within social networking sites is usually not. First, information posted by a user can be seen as direct information (Hancock and Dunham, 2001) and as intentional cues. In addition, there is also a variety of indirect information and unintentional cues available about an actor on a social networking site. Examples are connections with other actors, testimonials from others, publicly available conversations and seemingly irrational behavior such as some blogs and excessive risk taking (Donath, 2008). This is especially true since an actor cannot assess all potential future audiences that will observe the available information: a simultaneous focus on multiple disconnected audiences results (Boyd and Heer, 2006). The same mediated presence today can differ from tomorrow, due to different audiences. This presence on social networking sites is mediated by personal information, the online social context and online interactions within a social networking site. All three elements are explained in table 2.1 with some practical examples. Since the insights into these elements are relative new and barely have been studied, they will be described shortly in the following paragraphs.

Table 2.1   **Examples of types of cues within social networking sites**

Information Source (cues)	Examples
Personal information	Profile information
	Layout of the profile
	Profile photo
	Photos
	Status message
	Blogs / Forums
	Links
	Multimedia content (e.g. pictures, video's, music, games)
Social context	Users' social connections
	Communities an user is engaged in
Interactions	Comments of other users
	Comments on other users
	Content of public interactions

2.6.2.1 Personal information on social networking sites

Personal information posted by users of social networking sites are displayed on their public or semi-public personal profiles. Such profiles generally consist of descriptions about age, location, interests, an 'about me' section, profile photo, multimedia contents and other applications (Boyd and Ellison, 2007). As such, it establishes new forms of self-representation and impression management.

The personal profile consists of 'cues to personal identity' (Tanis and Postmes, 2005) and affects perception of others by reducing ambiguity. Photos are one of the most compelling features. As Boyd and Heer (2006, p. 8) state: "photos are the most noticeable component of profile identity performance and active users update their photos regularly to convey various things about themselves". Only seeing a photo is effective in enabling trust within computer-mediated communication (Zheng et al., 2002).

In general, profile similarity is an important aspect within social networking sites. A trustor's impression of a trustee will improve if the profile of the trustee is overall similar with the trustor's profile. As such, "social closeness and taste overlap are required" (Bonhard and Sasse, 2006, p. 84). Profile information also communicates other qualities, such as status and invulnerability. Status can be associated with fashion: the frequent change of information while the social position stays similar (Donath, 2008, p. 243). Another form of communication is risk taking via users' exposure of personal information. These postings can be statements of trusting others with personal sensitive information and can increase trust in ability (Ridings, Gefen and Arinze, 2002). However, this information can also be deceptive through mimicry (Riegelsberger, Sasse and McCarthy, 2002).

2.6.2.2 Social context within social networking sites

"The main point of social networking sites is to help people make new connections" (Donath and Boyd, 2004, p. 77). The result is a visualization of actors' social networks and social context they interact with. This is very valuable information for assessing someone's qualities, since this social context consists of indirect and unintentional cues about a user, which are not distorted by the user itself. Examples are comments of others about the user, group of friends, communities around activities, education and interests. As such, deeper patterns of culture and taste can be harvested (Liu, Maes and Davenport, 2006).

As explained by social network analysis in paragraph 2.2, there are different types of relationships. Varieties of strong and weak ties extend the meaning of social networking sites: "the stronger ties bring reliability to the profile, and a large set of weaker ties expands the scale and scope of the network" (Donath, 2008, p. 237). The difficulty in assessing the social connections of users on social networking sites is that connections are often treated equally (Boyd and Heer, 2006, p. 7). Lately, there are some procedures to enrich these relationship descriptions (Hyves for example asks users to explain how they know another user and LinkedIn demands that you know a person his/her e-

mail address), but assigning weights to user's social context can best be done by analyzing social interactions within social networking sites (see paragraph 2.6.5).

Seen in the light of risk taking as explained by Donath (2008), displaying connections is a method for communicating willingness to risk one's reputation. Reputation can be based on interaction, but also on social connections with others. In this sense, people who visualize their connections are stating that these connections are valuable for him/her, and important in their lives. As such, these connections give valuable information about users and their reputation (Donath and Boyd, 2004, p. 76). Although this social context gives valuable information, there can also be context effects present. Walther et al. (2008) state that "the physical attractiveness of one's friends' photos (…) had a significant effect on the physical attractiveness of the profile's owner" (Walther, 2008, p. 44). Besides this physical impression, Walther et al. (explained by their warranting principle which "suggests that other-generated descriptions are more truthful to observers than target-generated claims", 2008, p. 28) conclude that social statements about an actor by other users are more valuable for making an impression than information posted by the user itself.

Within some social networking sites, the number of connections might initially indicate popularity and social qualities such as attractiveness, but that is not the same as trustworthiness. As such, it is also valuable to look at other information, such as the content of interactions. These will be explained in the next paragraph.

2.6.2.3 Interactions on social networking sites

Interactions within social networking sites are less static than profiles. Interactions give valuable cues about the relationship an actor has with others. Returning to a friend's profile by commenting frequently for instance, gives a good indication that one is willing to spend time to maintain a relationship with her/him. Relevant factors for this relationship assessment are the length, frequency and content of these comments on profiles (Donath, 2008, p. 238). The interpretation of these cues is subjective. For instance, the time spent on commenting to a friend has to be seen in the average amount of time spent on commenting to other friends.

As such, communication of trustworthiness through interaction on social networking sites is hard to address. Kasper-Fuehrer and Ashkanasy (2001, p. 238) define communication of trustworthiness as "an interactive process that effects, monitors, and guides members' actions and attitudes in their interactions with one another, and that ultimately determines the level of trust that exists between them". From this perspective, it is valuable to take a quick look at rich media (e.g. social networking sites) and their components, although there is little research present in relation to trust. Bos et.al. (2002) studied the use of different computer-mediated communication channels within virtual teams and conclude that rich media establishes trust best, although face-to-face was still perceived as the standard to build and maintain trust. Hancock, Thom-Santelli and Ritchie (2004) investigated the impact of communication technology on lying behavior and concluded that the design

features of the communication technologies do affect lying behavior. "(…) the degree to which a medium 1) allows for synchronous interaction, 2) is recordless, and 3) is distributed (i.e. not co present), the greater the frequency of lying that should occur in that medium" (Hancock, Thom-Santelli and Ritchie, 2004, p. 133).

2.7 CONCLUSION AND VISUALIZATION

This chapter synthesized the relevant theory on trustworthiness assessments on social networking sites. It provides an overview of the theories that are in place when people assess others' trustworthiness, without prior relationships between them. A visualization of this is given in figure 2.2. This theoretical foundation, seen from the areas of human computer interaction (HCI), social network analysis and sociology, is important, since "the study in online environments requires a strong theoretical basis" (Benbasat, Gefen and Pavlou, 2008, p. 6).

Social networks and their internal connections have been studied intensely by various scholars, but gained tremendous renewed interest due to the rapid development of social networking sites. These sites are basically new forms of already existing online communities and were boosted parallel with the rise of the Web 2.0. Within these new environments, people are participating in creating, sharing and socializing, instead of passively receiving information. Social networking sites play a significant role within these new interactions since most Internet users are members of social networking sites and use them actively. Consequently, social networking sites are (becoming) intertwined with actors' offline and online interactions and lives. Trust(worthiness) plays an important role within these interactions, since trust is one of the critical components that have to be present to develop valuable connections and relationships from interactions.

Seen from the level of interpersonal trust, this chapter made clear that its multidimensional nature can be divided into three relevant dimensions. They are not mutually exclusive and can influence the complete trust belief and/or influence each other. First, affective based trust lies in the implicit or visceral general attitude to trust, and explains little of the variance in trust between actors. Second, institution based trust is very relevant for the study of social networking sites, since trust in the Internet and these websites influence trustworthiness assessments. The third and most studied trust dimension is cognitive based trust, which is based on rapid cues and first impressions. This is even more relevant within computer-mediated-communications, where trustors mainly develop trusting beliefs about a trustee via trust cues. As such, a trustworthiness assessment is made. This trustworthiness judgment consists of four dimensions. These dimensions are stable traits of the trustee and can be classified in interpersonal dimensions (ability, benevolence and integrity) and social dimensions (social structures).

The most important aspects for inferring trust from a sociology perspective are: the history between people; a person's background; and trustworthiness assessment during a physical meeting. This gives a trustor a belief in a trustee's trustworthiness. Within social networking sites, all these

aspects are not available. As such, trustworthiness within these online environments can only be inferred via available information on these sites. The focus points of this study are these online trustworthiness cues that can be linked with the various trustworthiness dimensions and can influence these judgments. These cues are communicated through information on social networking sites profiles and create a presence within these sites. This presence is mediated by the various information sources on a social networking site; personal information, the online social context and online interactions. Although most of this information posted by a user is controllable, the meaning of this information within social networking sites is usually not. Consequently, trustworthiness assessments are interpretations of information. This interpretation can be influenced by various factors, with a significant role for media schemata and culture.

Figure 2.2   Integrative theoretical visualization
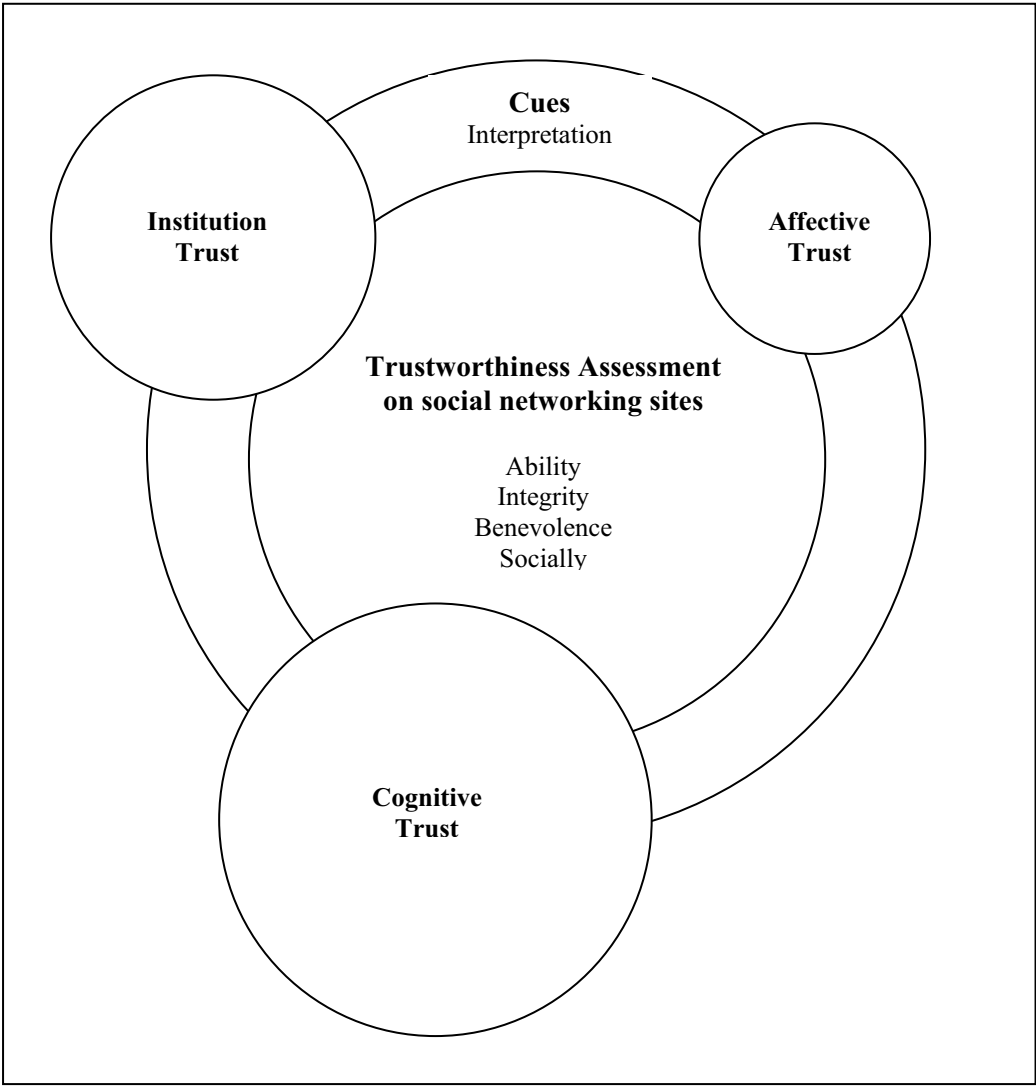
3. METHODOLOGY AND DATA COLLECTION

INTRODUCTION

In chapter two, a theoretical overview of the relevant literature was given. However, previous research alone is not sufficient to answer the research question, since the focus of this study is new and little has been written about it. This study bears an exploratory and qualitative nature because it focuses on a familiar social phenomenon within a new environment (social networking sites) and little relevant information is available. The research has been done during a research internship at the HR department of IBM Netherlands. This chapter describes how the research has been conducted, and will first explain the rationality of the studied subjects and the sampling. Thereafter, the interview method will be explained as well as the instrumentation development. After this, the processes of data collection and its conditions will be introduced. Consequently, the methods that are used for the data analysis and interpretation will be described. Finally, the chapter concludes with an overview of the different stages of the research process.

3.1 SOCIAL NETWORKING SITES AND THEIR SUBJECTS

3.1.1 The study's context –social networking sites

The focus within this study is on three social networking sites: Hyves, LinkedIn and Beehive. A qualitative study consisting of active users of these three social networking sites was carried out to achieve a literal replication within social networking sites in general (similar results), and a theoretical replication between the different social networking sites (opposite results for predictable reasons) (Yin, 2003). These websites are especially interesting for this study, due to its members and applications. Hyves is a Dutch social networking site, aimed at friend relations. It is the largest social networking site within the Netherlands with more than 5 million Dutch members (Knol, 2008) and as such, it is a logical choice for this Dutch oriented study. LinkedIn is an international social networking site aimed at professionals. It has a global coverage with 35 million registered users. It has less interactive applications than Hyves, since it mainly consists of a database of professional résumés. Beehive is a research project of a social networking site within IBM with approximately 50 thousand users, and combines both characteristics. It has similar applications to Hyves, but also has the professional look and personal distance of LinkedIn. Beehive has a more dependent character compared to Hyves and LinkedIn. Where the latter two are completely voluntarily networking sites, Beehive is part of IBM. Although membership of Beehive is also voluntarily, behaviour on it is linked with the IBM organization. As such, members are more restricted, since their salary (and job security) depends on the organization. Table 3.1 gives an overview of the different social networking sites and their main characteristics.

Table 3.1   **Main characteristics studied social networking sites**

Name	Focus	Registered Users	Business Model	Alexa Page Ranking[1]
Hyves	General	8.283.853[2]	Advertisements and paid pro accounts	163
LinkedIn	Professional	± 35.000.000[3]	Advertisements, paid pro accounts, paid job postings	150
Beehive	Organizational	± 50.000[4]	Free of charge (funded as a research project within IBM)	- (Beehive is not public, but behind the IBM firewall)

These three social networking sites were chosen for three reasons:

1. Maximum variation - with social networking sites aimed at friends, professionals and employees/colleagues, the three biggest general target groups are present. As such, selective samples are used to generalize as much as possible (Hutjes and van Buuren, 1996, p. 62).

2. Practical – within the three types of social networking sites (personal, professional and internal), the selected sites gave the best user access. Since Hyves is the biggest social networking site within the Netherlands (compared to Facebook, MySpace, Netlog, Orkut, etc), access was easily retrieved. LinkedIn is the most used professional social networking site in the Netherlands (compared to equivalent sites such as Xing, Plaxo and Ryze). Access to internal social networking sites is difficult to obtain, but since this study was executed during an internship at IBM, researching IBM's Beehive was a logical choice.

3. Link with IBM's recruitment - IBM recruits external and internal. For external recruitment, it is valuable to gather applicant information within informal (Hyves) and professional (LinkedIn) social networking sites. Since it is easier to retain good employees than recruiting new candidates, large organizations as IBM also applies internal recruitment (Beehive).

The main objective of this study is to give an insight in people's trustworthiness assessment on social networking sites, and factors and features that influence these assessments. Paragraph 2.6.2 presented information sources that can act as trustworthiness cues. These information sources are present within almost each studied social networking site, with the exception of LinkedIn where there is no possibility to upload photos or multimedia content. The labels and practical translation for every social networking site is given in table 3.2.

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[1] http://www.alexa.com, visited on February 19th, 2009
[2] http://www.hyves.nl, visited on February 19th, 2009
[3] http://www.linkedin.com/static?key=company_info, visited on February 19th, 2009
[4]
http://www.computerworld.com/action/article.do?command=viewArticleBasic&taxonomyName=Networking+and+Internet&articleId=322857, actual amount is not public known

Table 3.2   Types of cues within studied social networking sites

Information Source (cues)		Hyves	LinkedIn	Beehive
Personal information	Profile information	Profiel	Profile	Profile
	Profile layout	Pimp	Layout	Layout
	Profile photo	Profielfoto	Profile photo	Profile photo
	Photos	Foto's	- *	Photos
	Status message	WieWatWaar	What are you working on	[user] is…
	Blogs / Forums	Blog	Q&A	Hive5s
	Links	Links	Links	Links
	Multimedia content	Gadgets	- *	Widgets in section [about you]
Social context	Social connections	Vrienden	Connections	Connections
	Communities	Hyves	Groups	Events
Interactions	Comments of others	Krabbels	Recommendations	The buzz
	Comments on others	Krabbels	Recommendations	The buzz
	Content interactions	Content	Content	Content

*: LinkedIn does not include functions of placing photos and multimedia content.

Regarding the focus of this study (trustworthiness assessments within social networking sites), the intentions of the sites' software are not explored or analyzed. Social networking sites' integrity is not studied (e.g. social rules, sanctions, connection stimulating applications), since the study purely focuses on the user (trustworthiness) experiences.

3.2.2 Research subjects –users and their profiles

This study does not have the intention to cover all users of social networking sites. It is focused on the qualitative exploration of the area of online trustworthiness to get valuable and interesting insights from this area. As such, samples from the social networking sites were not chosen randomly; the study concentrates on active users within the relevant site. Accordingly, the group of research subjects can be identified as an expert group, active within the business areas of Web 2.0 and social networking sites. These expert consultations can lead to more objective descriptions and determination of opinions (Hutjes and van Buuren, 1996). These early adopters are well informed and as such, are valuable for answering the determined research question as they function as informants instead of respondents (Yin, 2003). The acquisition of these users was done in multiple ways, as can be seen in table 3.3.

Table 3.3   Acquisition of research subjects

Social networking site	Method of acquisition of research subjects
Hyves	• Posts on weblogs on Hyves with a request for bringing in suggestions for potential research subjects. • The sending of e-mails to connections with a request for bringing in suggestions for potential research subjects.

LinkedIn	• The sending of e-mails to connections with a request for bringing in suggestions for potential research subjects. • The sending of internal mails to connections with a request for bringing in suggestions for potential research subjects.
Beehive	• The sending of e-mails to connections with a request for bringing in suggestions for potential research subjects.

These activities resulted in multiple potential research subjects. Familiar research subjects were disregarded, since those can have a potential increase in the interviewees' bias. The selection of the subjects was based on two main criteria. First, from each social networking site, active users were selected from a professional perspective (expert groups). The quest for research subjects was aimed at Dutch interviewees, since this is a Dutch oriented study. However, it turned out that there were no Dutch experts within Beehive. As such, Dutch interviewees were selected for Hyves and LinkedIn, while international interviewees were selected for Beehive (for a short description of these informants, see tables 3.6 – 3.8).

Besides the criteria of business expertise, the research subjects from Hyves and LinkedIn were selected according to their potential for starting at IBM to draw better practical implications. Hence, young high potentials were identified. Young high potentials are often cited in management and recruitment topics, but have not been explicated in general. Within this study, young high potentials are defined as starters on the job market with a maximum of two years relevant job experience. The concept of a young high potential is operationalized through IBM's foundational competencies. These competencies are identified by IBM to "provide the foundation for an employee's professional growth" (IBM, 2008), and are represented in table 3.4.

Table 3.4   IBM's foundational competencies

Competency	Topics
Adaptability	Demonstrate flexibility in dealing with situations involving changing demands. Maintain focus despite conflicting demands.
Client Focus	Build rapport with clients. Understand and respond to clients' businesses, needs and goals.
Communication	Speak and write in a clear, concise and organized way. Communicate openly and honestly. Listen carefully to others to ensure understanding.
Creative Problem Solving	Apply logical methods to solve problems. Conduct thorough fact-finding and appropriate analysis to create appropriate solutions.
Drive to Achieve	Overcome obstacles consistently to produce high-quality results.
Passion for the Business	Display enthusiasm and pride in your work.
Taking Ownership	Identify and take responsibility proactively for tasks and decisions in a timely manner.
Teamwork & Collaboration	Collaborate and work effectively with individuals and teams. Respect and value differences. Achieve win-win solutions.
Trustworthiness	Demonstrate integrity and professionalism.

Certainly, the identification of such competencies from users' profiles is part of this research's goals and could not be executed completely before this study is done. Therefore, a rough identification of subjects was present, guided by these competencies. Since Beehive is still a research project and most starters within IBM are not active within Beehive, it was not possible to identify starters that were very active on Beehive. As such, international 'expert users' were chosen as interviewees.

Consequently, selective samples were identified, evaluated and chosen. After this selection, the potential research subjects were contacted by e-mail and asked to join the qualitative research. There were no rejected invitations. After the invitation by e-mail, each interview was planned with consideration of the interviewees' preferences for a proper place, date and time. Table 3.5 shows the demographics of the sample, while tables 3.6 - 3.8 give an overview of the interviewees to attain a more thorough insight into the research subjects. The informants' names were kept anonymous and replaced by fictitious names (with consideration of their culture), because of confidentiality.

Table 3.5   Demographics of sample

Characteristics	Amount	Percent
Subjects	12	100%
Age		
< 30	8	66.7%
≥ 30	4	33.3%
Gender		
Male	9	75%
Female	3	25%
Social networking site		
Hyves	4	33.3%
LinkedIn	4	33.3%
Beehive	4	33.3%

Table 3.6   Description of Hyves research subjects

Property / Name	Pieter	Guido	Maud	Lisa
Nationality	Dutch	Dutch	Dutch	Dutch
Current Country	The Netherlands	The Netherlands	The Netherlands	The Netherlands
Gender	Male	Male	Female	Female
Age	26	23	25	23
Function	New media consultant	Msc. Economics Student	Msc. Economics Student	Bsc. Political science student and employee of Hyves
Average Usage	Daily	Daily	3x / week	Daily
First notification of the system	Request of friends to join Hyves	Marketing e-mails by Hyves with overview of friends that already joined.	Marketing e-mails by Hyves with overview of friends that already joined.	Request of a friend to join Hyves.

Table 3.7   Description of LinkedIn research subjects

Property / Name	Aziz	Erik	Martijn	Maikel
Nationality	Dutch	Dutch	Dutch	Dutch
Current Country	The Netherlands	The Netherlands	The Netherlands	The Netherlands
Gender	Male	Male	Male	Male
Age	25	22	22	25
Function	Social strategy consultant	Social media freelancer	Social media specialist	Project manager of social networking company
Average Usage	Daily	4x / week		3x / week
First notification of the system	Invitations to join LinkedIn.	Article about LinkedIn in NRC Next (Dutch paper)	Professional interest in the Internet leaded to LinkedIn.	Academic interest in the Internet leaded to LinkedIn.

Table 3.8   Description of Beehive research subjects

Property / Name	Murat	Lucio	Kathy	Deacon
Nationality	Turkish	Spanish	American	American
Current Country	Australia	Spain	United States	United States
Gender	Male	Male	Female	Male
Age	43	36	37	48
Function	Executive IT architect	Knowledge manager	Instructional designer	Senior technical service professional
Average Usage	Daily	Daily	Daily	Daily
First notification of the system	Introduction of Beehive by an IBM colleague.	Invitation from an IBM colleague.	Read about it via TAP (IBM's Technology Adoption Program)	Via a search within IBM's intranet.

3.2 INSTRUMENTATION DEVELOPMENT

The study of trustworthiness within social networking sites is appropriate for a qualitative study, due to its germane character and the limited academic literature that is available on this topic. Due to its discovery-led focus, data was collected through interviews.

For this qualitative study, personal interviews were held with twelve users of social networking sites on a 1-on-1 basis: four interviews per social networking site. These individual interviews are "ideal to learn how each person feels and thinks about a topic or a design, without concern for the influence of others" (Laurel, 2003, p. 25). This does not mean that the interviewer does not have any influence. On the contrary: interviewer errors are a major source of response bias. Methods that are applied to reduce this bias in this study are: executing interview procedures; establishing appropriate interview environments; no inappropriate influencing of behaviour; no failure to record answers accurately and completely; and no physical bias (Cooper and Schindler, 2003, p. 333-334). These methods are explained across this chapter.

The interviews were formatted by a combination of the general interview guide approach and the standardized open-ended interview (Patton, 2002). This is done because of the combination of a mature topic (trust) within a novel computer-mediated-communication environment (social networking site), and because it "offers the interviewer flexibility in probing and in determining when it is appropriate to explore certain subjects in greater depth, or even to pose questions about new areas of inquiry that were not originally anticipated in the interview instrument's development" (Patton, 2002, p. 347). As such, the interviews were semi-structured and appeared as guided conversations; most questions were a starting point of the interview, where specific questions adapted to the function and perspectives of the interviewees. The advantage of this method is the efficient use of available time for a systematic and in-depth data collection.

The construct validity of the study attempts to "identify the underlying constructs being measured and determine how well the test represents them" (Cooper and Schindler, 2003, p. 232). Yin's (2003) three principles to strengthen the construct validity (using multiple sources, establishing a chain of evidence and reviews of the study draft by key informants) were all utilized within this study. Since trust is a mature research object, the used dimensions of trustworthiness were all retrieved from multiple foregoing relevant researches. The translation from key constructs to interview questions was also based on previous academic literature when possible. Especially within the literature on trust(worthiness), multiple survey questions and interview questions were available that have been proven to be reliable and valid. The following literature was used for inspiration and development of the interview guide: Rempel, Holmes and Zanna (1985), Cross and Parker (2004), Becerra, Heard, Denzinger and Kremer (2007), Rotter (1967), McKnight, Choudhury and Kacmar (2002), Butler (1991), Ridings, Gefen and Arinze (2002), Pavlou and Gefen (2004), Pavlou (2002) and Jarvenpaa, Knoll and Leidner (1998). The formation of these constructs and the operationalization of them were

not definite; they were sensitizing concepts (Bulmer, 1979). They acted as guiding concepts that were realized by empirical results during the research. Establishing a chain of evidence includes making the correlation between the interview questions and conclusions explicit. One pilot interview was undertaken to increase the validity and reliability of the interview. This interview was conducted with a LinkedIn user and to reduce bias, it was communicated as part of the original study instead of a pilot interview. As such, an improved interview list originated. Further adjustments subsequently improved the preparation for the actual interviews. The phrasing of the questions was done using guidelines from Patton (2002) and Yin (2003). The interview had a fixed order and consisted of 7 parts. The interview topics are explained in table 3.9. The interview list is included in appendix one.

Table 3.9   Interview topics and explanations

Topic	Explanation
Introduction and usage	General introductory questions about the SNS topic. General introductory questions about subjects' SNS usage.
Trust and trustworthiness in general	General introductory questions about trust and trustworthiness topics.
Affective based trust	Specific questions about subjects' disposition to trust in real life and online.
Institution based trust	Specific questions about subjects' trust in the Internet and the SNS.
Cognitive based trust	Specific questions about subjects' cognitive trustworthiness dimensions and cues.
Reputation and identity	Specific questions about assumptions of online reputations and identities that can influence trustworthiness assessments.
Improvements	Specific questions about improvements and (dis)advantages of the relevant SNS in the context of trust and trustworthiness.

Note: the abbreviation 'SNS' stands for 'social networking site'.

3.3 DATA COLLECTION

Each interview took approximately one hour and was carried out in the most appropriate language, considering the nationality and current home countries of the interviewees. As such, the interviews with Hyves and LinkedIn users were conducted in Dutch, while the interviews with Beehive users were conducted in English. The users of Hyves and LinkedIn were interviewed during a physical meeting (scheduled with agreement of the interviewee). During these interviews, the interviewee had the availability of a full colour print-out of a profile of the relevant social networking site. This was done to visualize the profile of the relevant social networking site (see appendix two for the print-outs). The interviews with the international Beehive users were established by using Skype or IBM Sametime VoiceSuit (an internal IBM equivalent for Skype). During all interviews, a topic list was used to secure comprehensiveness of the data collection. Although the semi-structured interview provided flexibility, the questions followed the interview list's sequence. This was done to reduce the disadvantage of too much flexibility, which can potentially lead to bias.

The registration of the data was done as soon as possible. All interviews were recorded (with the interviewees' consent) and during the interviews, notes were taken of the conversation. The

physical interviews with users of Hyves and LinkedIn were recorded via a digital voice recorder. The digital and mediated interviews with users of Beehive were recorded by the recording software Audacity. The entire interview process was documented in writing by making transcripts directly from the recordings. These transcripts were returned to the interviewees for a check of inconsistent information and as such, enhanced the study's accuracy and construct validity (Yin, 2003). Further processing and revision of the raw data was done by qualitative analysis. This will be explained in the next paragraph.

3.4 DATA ANALYSIS

The twelve interviews revealed valuable tacit knowledge and resulted in a large amount of data, since the entire research process was documented in writing. Because this can lead to indistinct data and ambiguity, a reduction of the data was required (Hutjes and van Buuren, 1996). The used general analytic strategy in this study relied on broad theoretical propositions (Yin, 2003), as expressed in the literature background. The previous literature and its gaps led to this study's propositions. These general propositions have been explored in the interviews, from which new themes and patterns emerged. As such, the data analysis process can be characterized as an iterative process, where the processes of data collection, data reduction, data display and conclusion were continuous methods (Miles and Huberman, 1994).

Although it is an iterative process, the research has been guided by its focal point and literature background. This study focuses on actors' assessment of people's trustworthiness within social networking sites. This interpretative aspect of the concept of 'trustworthiness' is related to its hypothetical nature. It indicates a way of thinking: an interpretation of the visible reality. This construction is represented in chapter two by the theoretical visualization. The study's internal validity estimates if the relations within the conceptual model are true. Hypotheses about reality cannot be confirmed completely, but only be made more credible (Hutjes and van Buuren, 1996). To increase the study's internal validity, pattern recognition was applied. With this method, theoretical expected patterns were compared to patterns that resulted from the interviews. Besides pattern recognition, the reliability of the results in the eyes of the participants in the social situation studied was evaluated through member checks[5].

The data analysis is aimed at data reduction, with some influences of a holistic principle. The first rough analysis was made through a uniform framework, as suggested by Yin (2003, p. 134). This framework was developed through three processes. First, during the development of the initial research proposal and the subsequent data collection phase, broad themes were used to structure the theoretical foundation and to guide the interviews. Second, a rough analysis of the notes that were made during the interviews also revealed some emerged themes. Third, themes were inductively

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[5] Member checks were executed to increase the results' credibility according to the research subjects. The transcripts were sent to the participants to correct eventual errors and missing parts in the data.

derived after continuous reading of the interview transcripts. These three processes formed the uniform framework draft. Subsequently, the interview transcripts were read and linked with the framework, which displayed the first emerged and preliminary broad themes. These themes were analyzed once more, reviewed by others and revised.

Next, the obtained information (together with the emerged themes) was interpreted in the context of the theoretical foundation and relationships and the comparison of the three social networking sites. For this review and analysis, and to check whether the interviews supported the theoretical framework, the qualitative research software QSR NVivo 8 was used. The theoretical presumptions from chapter two were used as guiding principles of the analysis, together with the inductively discovered themes. This provisional start list (Miles and Huberman, 1994) provided the codes' operational definitions. Text fragments were labelled with codes that corresponded with the content and meaning of the fragments. During these coding activities, some codes were revised, clustered, and/or put in order.

For the analysis of cues that were used for the trustworthiness dimensions, counting matrices were produced with a cut-off rate of 50%. This means that at least 50% of the research subject mentioned the effect of a cue on the relevant trustworthiness dimension evaluation. The rationality for the 50% cut-off rate is done to improve the reliability. Since the drawn sample is relative low, only the cues that were mentioned by at least the half of the sample were considered as reliable. The analysis of control variable differences was based on key dimensions of at least 50%, with a difference between the variables of at least 25% to increase reliability.

The external validity of a study assesses to which degree the results of the study can be generalized to a more general population. The generalization and universality of a qualitative study will be reduced due to its interpretative character (Hatch en Yanow, 2005). Additionally, the goal of this research was to gain a better understanding of actors' assessment of people's trustworthiness within social networking sites. This study thus has an exploratory character which is not aimed at complete generalization. Yet, the external validity is improved by comparing the results with other literature (Eisenhardt, 1989, p. 544). Besides this comparison, multiple interviews were held to repeat the research and as such, enhance the possible generalization of it.

3.5 A CONTINUOUS RESEARCH PROCESS

The exploratory study on actors' assessment of people's trustworthiness within social networking sites can be characterized, as explained in the former paragraphs, as an iterative and continuous process. Within this period, different stages overlapped and this led to new steps and/or revisions. This paragraph gives a rough overview of the process' different stages.

Stage 1 The first proposal

Stage 2 Active presence on social networking sites

Stage 3 Literature study on trust(worthiness), HCI and CMC

Stage 4 Developing first versions of literature background and conceptual model

Stage 5 Literature study on qualitative research and interviewing

Stage 6 Executing the interviews

Stage 7 Developing transcripts

Stage 8 Literature study on qualitative research and coding

Stage 9 Developing the uniform framework and exploring themes for data analysis

Stage 10 Writing chapter 4 (Emerging Themes)

Stage 11 Writing first version chapter 3 (Methodology and Data Collection)

Stage 12 Writing chapter 2 (Literature Background)

Stage 13 Literature study on the usage of QSR NVivo 8 and coding

Stage 14 Data analysis via QSR NVivo 8 and the uniform framework

Stage 15 Writing chapter 5 (Findings and Analysis)

Stage 16 Writing chapter 3 (Methodology and Data Collection)

Stage 17 Writing chapters 1 (Introduction and Research Question), 6 (Discussion) and And 7 (Conclusion)

Stage 18 Writing first version thesis

Stage 19 First review and revision

Stage 20 Writing second version thesis

Stage 21 Second review and revision

Stage 22 Finishing final thesis

4. EMERGING THEMES

INTRODUCTION

"Why are you doing things the way you do? (…) What is my behaviour on Hyves?"
- Hyves user Pieter

This chapter explores the main themes that emerged from the studies of users of LinkedIn, Beehive and Hyves. The chapter has not been divided into separate descriptions per social networking site user, since the themes mainly developed during cross-case analysis (Yin, 2003). The themes were sensed during the execution of interviews, writing of notes, brainstorm sessions and data analysis. They represent the main themes which occur during trustworthiness assessments. The actual assessments and their dimensions are described in chapter five. The reason to include the emerging themes is to give an overview of the study as comprehensive and open as possible, and to sketch the context of the theoretical comparison. In addition, it also gives direction to the comparison with the theoretical background, which will be presented in the next chapter.

To get a better insight into the themes and to make the alteration to the theoretical comparison more straightforward, the themes are divided into classes. They will be described shortly and illustrated by quotes and where possible with data matrices (see appendix three for an illustration of the different themes, concepts and analysis argumentations). The sequence of these themes is structured around the process a member experiences with a social networking site; from the first notification, to establishing a membership, familiarizing with the site, using it daily and interweaving it with real life, until a general feeling of trustworthiness. The first paragraph introduces the reasons for setting up a membership. The next paragraph will introduce the perception of the specific sites and their effect on trustworthiness feelings by their users. After that, the sincerity and honesty of the information on social networking sites will be introduced. Then the link with real life via triangulation will be explored. Subsequently, the orchestrated feeling of trustworthiness will be described. The final section concludes this chapter.

4.1 DRIVERS: FRIENDS AND CONNECTIONS

"If you just get sufficiently requests to join, you'll think 'maybe I should become a member'"
- Hyves user Pieter

As can be seen from the literature background in chapter two, from the next paragraphs in this chapter and from the analysis of the results in chapter five, the specific system and its characteristics play a

significant role in the general assessment of people's trustworthiness. Before dealing with the features and trustworthiness of the social networking sites, this paragraph will give an overview of reasons for membership and the process of establishing a membership. It became apparent that notifications of and establishing memberships with the social networking site are influenced by social connections. Important aspects within this area are the quantity and type of connections.

4.1.1 Social grounds for membership

Impressions of the system's trustworthiness are, among other things, developed during the first notification and first visit of the social networking site. As can be seen from tables 3.6 – 3.8, there existed differences between the first notifications of Hyves and LinkedIn, and between Beehive. Table 4.1 shows the variety of reasons for users to become members of the different social networking sites.

Table 4.1   Memberships reasons for social networking sites

	Total		Hyves		LinkedIn		Beehive	
	%	N = 12	%	N = 4	%	N = 4	%	N = 4
Introduction by special type of connection	25 %	3	0%	0	0%	0	75%	3
A number of close people present within the social networking site	50 %	6	100%	4	50%	2	0%	0
Other reason	25 %	3	0%	0	50%	2	25%	1

As can be seen from table 4.1, users of Hyves and LinkedIn mainly entered the social networking site because some people close to them were already present there. From this, it seems that there has to be a particular number of close people present to trigger people to join an external social networking site (not within an internal site as Beehive). Some citations can illustrate this:

- "You get a certain amount of requests of friends that are a member of something called Hyves. (…) [I start looking at networking sites] when three or four friends are saying that I should become a member" (Hyves user Pieter)
- "On one moment I got a lot of requests that stated 'do you want to join Hyves, because a couple of friends subscribed your name and you don't have a profile yet'. (…) then I thought that it must have something attractive if she [a friend] is a member." (Hyves user Maud)
- "I think I got a couple of invitations and then I thought how it could be of value for me (…)" (LinkedIn user Aziz)

Beehive's situation is slightly different, since it is an internal research project of IBM. This results in a smaller number of users and as such, other reasons to become a member. In this case, not the number of connections that requested to join Beehive was the reason for becoming a member, but a special type of connection. As Gladwell (2000, p. 166) argues, people are being influenced by special kinds of people – tipping people. This also holds for the Beehive case, where users became members because they were introduced to the system via people they had a special connection with. This can be reflected by some quotes:

- "I signed up for beehive, because I probably read about it in a TAP-newsletter or something that was TAP-related. I have got a strong network of people who are interested in the latest applications to play around with. So I hear about stuff." (Beehive user Kathy. TAP stands for IBM's 'Technology Adoption Program')
- "(…) one of the people I got to know very well from different interactions in social software space was able to invite me." (Beehive user Lucio).
- "I became a member because I was on a conference in New York. The lady that was responsible for IBM research introduced us into social networking tools and how Beehive was different from the others and she showed it and I really liked it." (Beehive user Murat)

4.1.2 The disregarding of the terms of use

The previously mentioned social grounds for becoming a member also boosted the initial trust in the social networking site: the studies of members of Hyves, LinkedIn and Beehive showed that most people do not read the terms of use when setting up a membership. The interviews revealed two specific factors that played a role in accepting the terms of use without reading them. Table 4.2 shows these reasons for users to disregard the terms of use.

Table 4.2   **Reasons to disregard the terms of use within the social networking site**

	Total reasons		Hyves		LinkedIn		Beehive	
	%	N = 12	%	N = 4	%	N = 4	%	N = 4
Reading terms of use not necessarily due to normal online behaviour	16,7 %	2	25 %	1	0 %	0	25 %	1
Never reading of the terms of use	66,7 %	8	75 %	3	100 %	4	25 %	1
No disregarding of the terms of use	16,7 %	2	0 %	0	0 %	0	50 %	2

The first revealed reason why users did not read the terms of use and did not want to know the underlying company, was the fact that users, in their opinion, acted in a normal way and expressed normal behavior within online environments:

- "My behaviour wasn't that extravagant as some other users. There wasn't any necessity to read the terms of use." (Hyves user Lisa)
- The terms of use of Beehive are double-layered since there are also IBM's guidelines in place: "(…) the reason I ignore them [the terms of use] is that, for a number of years I've learned that the best way to use social software is using your common sense. There are things that you can do and there are things that you can't do. Like everywhere else. (…) Apart of the common sense in using social software applications, there's also the situation that you know you're working within IBM and you're working within an internal application and you know that above everything else there are rules of engagement of the business guidelines." (Beehive user Lucio)

Other users did not look at the terms of use, because they indicated that they never look at the terms of social media applications:

- "I did not read it and was not aware what the underlying company was. Actually, I always have the idea that if a lot of people use it, it will be ok, so I clicked it." (LinkedIn user Maikel)
- "I never look at user agreements actually." (Hyves user Pieter)
- "I never check general terms of use." (LinkedIn user Erik)
- "I was aware that there were terms of use, but as with most online applications I clicked it and did not read it." (Beehive user Kathy)

A compelling result was the fact that although all users of Hyves and LinkedIn disregarded the terms of use, some Beehive members mentioned that they had read the terms of use. They indicated that these terms affect their daily usage. This is probably because there is a delegation of trust in place: their job security is dependent, among other things, on their behaviour within the IBM organization, and as such within Beehive:

- "There are things I have shared outside IBM to my own personal e-mail things that I won't post in the Beehive thing. Because they are questionable things or, well you know what I mean. They could potentially be viewed as offensive. And vice-versa, there are things that I share within Beehive that I share within my network, that I would not share with my external network. Because it is not necessarily IBM confidential, but it is close enough to be save for it." (Beehive user Deacon)

- "But still I use some precautious. When I am writing there, I stay professional. I do not use ambiguous words or say things that offend. So I do not make any irrational or political jokes. I always stick to the business conduct guidelines of IBM, that is very important." (Beehive user Murat)

4.2 PERCEPTION OF THE SYSTEM AND THE FEELING OF TRUSTWORTHINESS

"You've got a group of bees or individuals that share knowledge or building up knowledge, or making connections. And that is what bees do, they tell each other where the best flowers are. I quite liked that and the analogy of trying to put together a social network inside. That was fascinating."
- Beehive user Lucio

After users establish a membership and experience the social networking site as valuable, their usage of the site will increase and they will eventually deal with the question if the self-posted information on social networking sites is an honest reflection of reality (see paragraph 4.3). Before the evaluation of this sincerity, users' perception of the safety and trustworthiness of these systems comes into play. As was already illustrated by the theoretical background, the assessment of someone's trustworthiness is influenced by trust in the used system and its users (see paragraph 2.4.3.2). This aspect will be described within this paragraph. The interviews revealed that users accepted the Internet as a given factor in today's life, while having no interest in the underlying technologies. Affective trust seemed to be influenced by trust in the used social networking site, where a sense of control increased this trust in the site.

4.2.1 The Internet: relying on the unknown

A noteworthy finding was the fact that during the interviews, most subjects did not mention trust in the Internet as a whole, but mainly looked at trusting the specific social networking site. Users did not question the underlying – mostly unknown - technology and software, probably because they trust the Internet itself; it provides no more than an infrastructure for them.

As LinkedIn user Maikel comments about the Internet and his behaviour: "I think of the Internet in general as a safe place. (…) You just have to keep focused from the moment you're on the Internet and you have to know that information can pursue you. (…) I also have the feeling of 'that would not happen to me'. I also will not do any stupid or crazy things. I have sent some confidential things, and of course I hope that they will not leak out, but I don't bother at all."

This trust in the Internet is also influenced by persons' previous experiences on the Internet, as illustrated by Hyves user Guido: "Yes, I've got a feeling of trust. But that is the same as with online banking; sometimes I hear that it goes wrong, but is never does for me, nor in my near environment. Yes, I am a level-headed person in this case."

4.2.2 Purpose and public nature of the social networking site

A compelling result was the fact that affective based trust was influenced by trust in the used social networking site (system trust). The variety in levels of system trust can be traced back to the main purpose and public nature of the social networking site: Hyves is mainly a personal network, LinkedIn is focused on a network of professionals and Beehive is a business social networking site within the firewall of IBM. These nuances can be made very clear by the following citations.

Hyves user Pieter, who is also a LinkedIn member, stated: "Hyves is more about fun and goofing around, less serious. When I see something on Hyves, I take that less serious than LinkedIn. It is more valuable for me if I see on LinkedIn that someone has a new job, an event occurs, or people connect with each other, than when I see that on Hyves." LinkedIn user Aziz, who is also a Hyves member in contradiction state: "I've got a feeling that they [people in general] don't take Hyves that serious."

The fact that Beehive is an internal site within the IBM domain influences the initial trust substantially, following for instance Beehive user Deacon: "Because it is an IBM site, I have tended to trust the people in there. For example, when I am outside in an external network such as Facebook, I start of not trusting anyone except those that I am certain of that I know. (…) Within Beehive I trust it, since IBM employees are working for the same goal. That is, the benefit of IBM as a whole. (…) In order to use Beehive fully, one has to make an a priori assumption that you can trust people out there [within Beehive]."

This a priori assumption is also reflected in the idea of self correction, because Beehive users see each other as IBM professionals. The IBM organization creates job security and as such, self correction can be established in a professional manner: "Within this company and other companies, we suffer from this policing of interactions of different people. (…) I try to work and think that I work with a group of professionals. And I don't want to report them, because I think it's up to their own judgment to decide whether what they have done is right or wrong. And in most cases, they self correct their own mistake." (Beehive user Lucio)

This last quote is one illustration of the fact that these three social networking sites try to connect people that already have a certain bond with one another in real life – a personal, professional or business link. This link (e.g. a shared connection, background, job, employer or community) also establishes a particular initial degree of trust, as can be seen from an example of Hyves user Lisa: "Hyves is not a site were strangers look each other up. So a certain degree of trust is already available. That makes it different from a dating site. There you question more if you can trust that person."

4.2.3 Sense of information control

Hyves is the only social networking site of the three studied sites that offers the functionality of hiding information for different groups of people. By classifying groups of 'Internet users', 'Hyves users',

'friends of friends' and 'friends', users have some control over their own information distribution. This information control is regarded as important, as can be illustrated by the following quote:

- "There was a woman who posted a large story about a person in a testimonial, that they have had lots of ups and downs and arguments about this and this. I thought 'you're not putting that on the Internet, that's private'. I control what I want to send via the Internet." (Hyves user Lisa)

It is important to recognize that although users have a sense of control, the actual control is questionable as Hyves is externally operated. Yet, this feeling of control seemed to be a key factor for the trustworthiness of the social networking site Hyves. The actual usage of this hiding feature is unknown, since server data from Hyves are not public available.

- "Yes, I think of Hyves as safe and trustworthy because you can control which information you display or not (…)." (Hyves user Maud)
- "What I experience is that if I keep things private on Hyves, that's definitely possible (…) you've got the options to do it. So it is definitely possible and it always went correct for me (…) Yes, I definitely have a feeling of trust." (Hyves user Guido)

4.3 A REAL LIFE EXPERIENCE AND TRIANGULATION

"Someone didn't want pictures were taken of him and be placed on the Internet, because he had read in a journal that someone had stolen a motorbike and posted this information on his Hyves-profile. A recruiter saw that profile and did not hire him (…)."
- LinkedIn user Martijn

"(…) if you look at their Beehive profile, it is like looking in the neighborhood and walking to somebody's house and ring the doorbell and say 'hey, you got a minute?'"
- Beehive user Deacon

This paragraph focuses on the real life experiences using social networking sites. First, the honesty estimation of the information posted on profiles of social networking sites will be brought up. Although areas of human being and technology are becoming more intertwined nowadays, the interviewees still distinguished between a real life identity and an online identity. Different sort of separations emerged, which can be linked with the different social networking sites. This interwovenness of online and real life reappears in users' triangulation methods. Triangulation (within this area) deals with the process of utilizing multiple sources to form an assessment of someone's trustworthiness. This paragraph will later describe which triangulation methods are derived from the

studies and how they are related to real life. The study revealed that within the process of triangulation, the expression of social connections, expectations and impressions from real life and quick scanning and profiling are notable aspects.

4.3.1 Sense of sincerity of self-posted information

Table 4.3 shows the overwhelming feeling of the interviewees about the sincerity of the information that is available and self-posted on the various social networking sites. This is truly a significant finding, since the general belief is pointed to a total disbelief of sincerity. As such, social networking sites seem to possess certain characteristics that provide users with a sincere and authentic judgment of information. All three evaluations of social networking sites' sincerity will be explained within this paragraph.

Table 4.3   **Sincerity evaluation of self-posted information on social networking sites**

	Total		Hyves		LinkedIn		Beehive	
	%	N = 12	%	N = 4	%	N = 4	%	N = 4
Information on SNS perceived as sincere	100 %	12	100 %	4	100 %	4	100 %	4
Information on SNS perceived as not sincere	0 %	0	0 %	0	0 %	0	0 %	0

Note: the abbreviation 'SNS' stands for 'social networking site'.

Within Hyves, the more personal social networking site, users stated that you could get a good idea of someone's identity. The only mentioned difference between a real life identity and an online identity, is that the latter is a little bit embellished through the person's profile:

- "Of course it's not objective, because everyone presents themselves nicer. But let's assume that everyone does that, then I still think that you can get a lot of information about someone." (Hyves user Lisa)
- "(…) you can protect yourself moderately, you can simply present yourself the way you want to." (Hyves user Maud)
- "If you read my information now, you'll know a lot about my life (of course not one hundred percent)." (Hyves user Pieter)

An excellent example of how a Hyves user evaluates the truthfulness of the information on a profile can be illustrated by a part of the interview with Hyves user Guido:

"(…) I think the page [profile] more reflects one pose than a general representation of real life. (...) the moment your girlfriend breaks up with you, I'm not saying you will change your whole page, but…
But you do have an other attitude at that moment?
Yes, your comments will be less cheerful.
But then you are who you are at that moment right? Those things are close to you?
Yes, you can see a lot of characteristics I think. If someone is open, spontaneous, socially skillful. I think you can get an impression out of it of how someone is in real life.
(…)
I think it is more a general image. It really is a first impression. I mean, if you meet someone and he happens to be talkative that day, he will look social skillfully.
Yes, but if that person is not social skillfully at all, then it was probably not possible that he would be talkative that day?
Yes, I think it's a very good impression you get of someone if you're looking at the profile.
That's interesting, since your first indication was that it was not.
Yes, I'm thinking about myself right now, the information that is posted on my profile reflects exactly who I am. There are my friends and my pictures. On one moment you like this movie, and the other moment you like that movie, that changes of course.
(…)
I think, from that information, you can conclude exactly that such a profile justly reflects the kind of person."

Users of LinkedIn, the professional networking site, also made this distinction of online and in real life. However, the responses primarily resulted in the impression that LinkedIn users see it more as a reference network, where information posted on the profile is sometimes even more reliable due to its verification by the other users:

- "For external people the content looks more reliable than a normal CV (…) because it is online and other people can say if it's true or not. (…) just because the information is public, you create a transparent layer on top of it. Lying is therefore difficult" (LinkedIn user Martijn)
- "Maybe I'm wrong, but you can easily estimate if it's the real deal or if it is someone that shouts from a bunch of rooftops without much content." (LinkedIn user Maikel)
- "It does not correspond for the extremes, but in general it does. It is close to how that person is." (LinkedIn user Erik)
- "I think you can approach reality real close most of the time. In general you're in the right direction." (LinkedIn user Aziz)

Within Beehive, the internal social networking site, users identified the identity as an honest one:

- "I do not see a lot of people acting in a way that makes me believe that they are developing an inconsistent profile. Most of the interaction on Beehive feels quite genuine. It really does, it feels quite genuine to me. Authentic is the right word for most of the conversations that happen." (Beehive user Kathy)
- "In general it will be honest. The reason it will be honest, is one of the known rules from the web is that if you are lying, people will find out eventually. And when they find out, it will not be a pretty picture. So people learned that they maybe can lie, but that they have to be very good at lying." (Beehive user Lucio)
- "For me, my profile tells a lot about me so that when people look me up they will know that I am well trusted." (Beehive user Deacon)

These former citations exemplify that active members use the posted information to build up an online identity, which gives an impression of the real life identity from their viewpoint. What is important is the fact that those profiles are complete and that users have paid attention to build it and keep it up to date. Users of Beehive that were active in the knowledge management and collaboration area indicated that incomplete profiles are also valuable factors within their trustworthiness assessment:

- "If someone is in there [Beehive] that means that person is in social networking, collaboration, sharing and my trust increases. If they are not on Beehive, they are behind. If someone is in the collaboration and sharing area and that person is not in Beehive, I think something is wrong. It is the only tool within IBM. If someone is not there, they are missing a lot." (Beehive user Murat)
- "Unfortunately, I'm that kind of person that, if you don't have anything online that is searchable by someone else, I tend to think that you've got something that you want to hide. And that means that I don't want a trusting relationship with you." (Beehive user Lucio)

Other Beehive users did not use this factor in this approach:
- "(…) I think that people who put a spars profile are doing it primarily because they don't think Beehive is important. (…) I don't look at a spars profile and say 'this guy isn't worth very much, because he has not anything interesting out here'. Different people are using different ways and that's it." (Beehive user Deacon)

4.3.2 Expression of connections: you are who you know[a]

The previous paragraph showed that all social networking site users assume that the online profiling of a person approaches the real identity fairly. Nevertheless, there seems to be one main advantageous feature of social networking sites that stimulates someone's trustworthiness greatly, and which can be analyzed more straightforward online than in real life. The interviews made clear that social references are important in the assessment of someone's trustworthiness: you are who you know. There are two valuable insights derived from this triangulation method: 1) knowing in which social circles a person operates gives an idea of who that person is; and 2) shared connections are even more valuable since they can act as references for that person. The following quotes underline these findings from a general perspective:

- "(…) on a sudden moment you are looking at relations. Most of the time, it's even important on first acquaintance. (…) I think I've got an unaware circle of people I trust, privately and businesslike. A person is almost ok straight away if those people will introduce that person. Your check will be bigger if a person is a third or fourth degree in your network. " (Hyves user Pieter)

- "(…) I think [I get a feeling of trust] from my social network, if people have some experiences with that person (…) I look at certain networks or people that I value, and then I will trust people earlier." (LinkedIn user Maikel)

- "I also have situations that I meet people out of the blue and those people don't know people I know. I find it hard to continue with that person in those cases. (…) then I will get insecure." (LinkedIn user Aziz)

- "One other element that I use in trusting someone, is that my network knows that person or not. (…) That tells me that that person has got something worthwhile for me to investigate further, because my connections find it valuable to establish that connection." (Beehive user Lucio)

Social networking sites make the online expression of users' social connections and recommendations more explicit, so users focus on that when making assumptions about someone. It is noticeable that while users of Beehive and LinkedIn used the site to look at the social connections, users of Hyves did not, although this last group revealed that social connections were important for assessing someone's trust in general. Probably, the display of social connections on Hyves is not valuable for them. Users of LinkedIn and Beehive, on the other hand, used it regularly:

- "Sometimes I see a too small number of recommendations. In that case I will ignore them. One or two recommendations say nothing. (…) There have to be at least five or six [recommendations]. The person has to be a well networked one." (LinkedIn user Aziz)

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[a] Title inspired by Dr. Leenes' presentation 'Privacy and identity within social networks' at the Royal Netherlands Academy of Art and Sciences symposium 'Identity in Virtual Worlds' on September 18th 2008.

- "How does someone fit in my [LinkedIn] network, is he a first-, second- or third-degree." (LinkedIn user Martijn)
- "Sometimes people's connections can give you an idea what they are there for." (Beehive user Kathy)
- "I always do some triangulation by using shared connections." (Beehive user Murat)

4.3.3 Mental images: communications of culture

Someone's trustworthiness is based on impressions and assumptions actors possess and/or create during a user's profile visit. Expectations come into play here, since they direct those impressions and assumptions. Expectations are structured by, for instance, someone's frame of reference, former experiences, background and context; they are real life cultural products. By analyzing all interviews, it was clear that someone's trustworthiness assessment is derived from these expectations and assumptions.

- "If you see that that person visits 'het feest van Joop' ([a local bar-dancing], you know that that person differs from someone who visits 'de Flexbar' [a local club]." (Hyves user Lisa)
- "(...) if the presence matches with how he appeared earlier. Naturally, it coheres with expectations. If someone's online appearance differs from how he behaved offline, he will burn his fingers of course." (LinkedIn user Martijn)
- "[You can] profile the person. As with people in real life, you develop an impression of that person and unless you engage in a conversation with [them], all you have are assumptions. But, I think it is probably, this is how people work. It might not be fair, to sum each other up, but that is really how we work." (Beehive user Kathy)
- "Through their profile it gives me the opportunity to build a mental image about what that person is, what they do, how they share their work and whether I can go ahead and trust them or not [when engaging a business relation]." (Beehive user Lucio)
- "(…) if they do not put pictures, I do not feel very comfortable. Then I think the person is probably hiding himself for something." (Beehive user Murat)

4.4 THE DELIBERATE ARRANGEMENT OF TRUSTWORTHINESS ON SOCIAL NETWORKING SITES

"It still is a feeling, but I do scan someone's complete LinkedIn profile from the top until the bottom. Just reading blocks."
- LinkedIn user Aziz

When end users become familiar with the social networking site and use it on a daily basis, they can become more experienced in assessing someone's trustworthiness within these environments. It

became clear that trustworthiness is a hard to formulate feeling, which consists of some general aspects.

4.4.1 Trustworthiness as a well-organized and unaware feeling

To assess if someone is trustworthy or not, users establish an orchestrated feeling, based on multiple unaware factors (e.g. intrinsic trust, system trust and interpersonal trust). The goal of this study is to make this concept of trust within social networking sites explicit, but it is important to recognize upfront that trustworthiness judgments within online environments are established via the same processes as in real life:

- "I am not aware of it, but I use a sort of scan to see if a person is trustworthy or not. That deals with clothes, attitude, the way of talking and the way of looking (…). It is a combination of the sum. A feeling comes into being after a while. I greatly rely on my feeling." (Hyves user Pieter, explaining an analogy of meeting a person in real life when talking about a feeling of trust within Hyves)
- "It is hard to put into words; trust is more of a feeling. It is not really measurable. (…) Again, there has to be some disposition to trust, so I have to assume that they are honest, unless it is obvious that they are not. (…) So I start trusting them and then I watch their behaviour. However, if their behaviour unfolds over a period of time, then I adjust my feelings of whether I trust them or not accordingly." (Beehive user Deacon)
- "(…) trust is an important issue and it is in line with risk taking." (Beehive user Murat) LinkedIn user Maikel added: "You've got (…) a feeling about someone and your actions are often based on that. It results in the fact that sometimes, you make a wrong assessment and then you get screwed (…)".

4.4.2 Building or breaking trust

So, interpersonal trust is subjective and is formed by multiple factors. Although trustworthiness is a broad and general concept, the study revealed that users had multiple overlaps in their description of general trustworthiness dimensions (online and offline). An in-depth analysis of these dimensions will be executed in the next chapter, but the quotes below outline the concept of trustworthiness in a broad sense. Broad emerged themes within this area are knowledge, background of jobs (skills), connections, honesty and authenticity. These aspects guided a primarily deliberate evaluation:

- "There has to be some sincerity. (…) There are people that have profiles with a lot of information on it. That person has got less to hide, because you are aware of it on the moment you post a lot of information." (Hyves user Maud)
- "If someone approaches me on a different spot than I would expect, I won't trust that person easily. (…) Following, I will look at the background of that person." (Hyves user Lisa)

- "[I will look at] his history. [Seen] from my social network, if people have experiences with that person, in that sense history. (…) [I want to know] if he's honest, if he sticks to his word, if it is a nice guy. And then I would look to things he's connected with." (LinkedIn user Maikel)

- "If the story someone has is correct and seems sincere." (LinkedIn user Erik)

- "I think it would be someone who would be gentle to another person. (…) when I interact with them, I sort of putting myself in their hand. I put my feelings in their hands and I want them to be careful and respectful with that, on the side of caution. (Beehive user Kathy)

- "(…) I need to know from that person what that person is been doing. I need to have a kind of resource or information that would allow me to get details from that person. (…) If I can work with that social capital of the actual individual that has been shared on Beehive, that would tell me that I can trust that person or not." (Beehive user Lucio)

- "There are many factors. But my key factor is a quick conversation and looking if the person is logical. I ask a few questions. If it sounds right, I trust that person." (Beehive user Murat)

4.4.3 Distrust within social networking sites

Distrust can be seen as not trusting someone, or having doubts about someone's trustworthiness. The previous paragraphs gave valuable insights in the process trustworthiness assessments by users of social networking sites and which themes came up as important for these evaluations. After analyzing the reciprocal effect of trust (distrust), a couple of interesting aspects were derived. The informants revealed that within Beehive, distrusting someone has more to do with the action of that person on the site, rather than with the content. The opposite was true for LinkedIn, where the content created a negative evaluation of that person. Users of Hyves had little situations of distrust.

- "Yes, not necessarily because someone has contributed to his or her profile, but the activity, the sort of tracks a person leaves around. (…) Sometimes I am in the middle of a conversation and someone drops something that is terribly blunt. Not necessarily rude, but not as careful as it probably should have been phrased. And I tend to remember those people as people to be cautious about, not to draw their fire or attention." (Beehive user Kathy)

- "Yes, there have been different situations where people have been commenting or have been misbehaving on Beehive. And I would have rephrased 'misbehaviour' not by saying the wrong things, but basically doing the wrong things," (Beehive user Lucio)

- "There was a mister I came into contact with, who was telling a very good story via his website and e-mails. When I was looking at his background and CV on LinkedIn and saw his website, I thought that it was not as big as he made out." (LinkedIn user Maikel)

- "(…) I think that an untrustworthy person will in general be the kind of person who is aware of such social networking sites and won't give many details." (Hyves user Maud)

- "No, things I see on Hyves are most of the time a confirmation of what I suspected on forehand." (Hyves user Pieter)

4.5 CONCLUSION

This chapter showed the first exploration of the data; emerged themes that are important in the assessment process of someone's trustworthiness in the mediated environments of social networking sites. Following the sequence that active users of social networking sites experience, valuable main themes were explored that give direction to the analysis and can function as guides for future research.

Nowadays, online environments are more and more interwoven with real life. This desegregation has major consequences for the online assessment of someone's trustworthiness, since real life processes and products such as triangulation, culture, assumptions, expectations, backgrounds and frame of references influence the trustworthiness assessment. People trustworthiness assessments are, among other things, affected by information about a person. Sincerity and authentic acting are important in this process within social networking sites, since this is an environment where information is self-posted. In all three social networking sites, information was seen as honest and reliable; all users assume that the online profiling of a person portrays the real identity fairly, which boosts the trustworthiness perception. Real life triangulation processes seem to flourish within social networking sites, since they are valuable for trustworthiness assessments and can be analyzed more straightforwardly online than in real life. This is because social networking sites make the expression of users' social connections and some recommendations more explicit. Other noteworthy links with real life are the assumptions and expectations that influence users' trustworthiness judgment. Via these cultural real life products, (unconscious) mental images are built and utilized as triangulation sources during the evaluation.

These mental images are developed through profiling of users, shaped by various information sources that can function as cues for trustworthiness. Concepts of trust and trustworthiness are general (and unconscious) feelings of end users. Yet, users do have an implicit and deliberate arrangement of indicators that shape the trustworthiness assessment. This was especially clear in situations of distrust. Within Beehive, distrusting someone has more to do with the action of that person on the site, rather than with the content. The opposite was true for LinkedIn, where the content created a negative evaluation of that person. Users of Hyves had little situations of distrust, since it was seen as less serious and most of the time the profile information was a confirmation of what users already assumed.

It became clear that the main drivers for using the social networking sites lay in its social grounds. The social links can be divided into two factors; the quantity of connections already present within the social networking site and the introduction of it by a special type of connection. For public social networking sites such as Hyves and LinkedIn, it seems that there has to be a particular number of close relations present to trigger people to join an external social networking site. This is different for an internal small business site as Beehive, where people establish memberships due to introduction or notification by special types of social connections, not the number of connections who notify them.

The interviews highlighted that users do not place emphasis on the technology they use. Instead, the overall perception they have and how they sense the interaction within the social networking sites are key drivers. All three studied social networking sites connect people that already have a certain bond with one another in real life, but they differ in their created perception of trustworthiness due to their main purpose and public nature. The public social networking site Hyves is taken less seriously than LinkedIn, since the former is aimed at friends, and the latter at professional connections. The non-public social networking site Beehive has the highest trust, since every member works within the IBM corporation. These outcomes were also linked to real life attitudes such as self-correction, since users' behaviour and assumptions seemed to be dependent on the type of social networking site. The effects of these different contexts will be considered in the next chapter, by analyzing the explored arrangement of trustworthiness in a more structured way with theoretical comparisons.

5. FINDINGS AND ANALYSIS

INTRODUCTION

This chapter provides an overview and analysis of the data and findings. The previous chapter explained various themes that emerged during the research and were considered as important since they influence users' trustworthiness assessment process. This chapter will expand on the findings, by ways of a more thorough analysis, directed by the theory synthesis as outlined in chapter two. This chapter first analyzes the value of the different forms of trust (respectively affective based, institution based and cognitive based trust). After this, the trustworthiness dimensions in relation to the trust cues within social networking sites are analyzed. This analysis chapter focuses primarily on differences between the users of the various social networking sites. The linkages with the control variables gender and age are clarified in the last paragraph. The representation of this analysis has been done by making use of quotes and matrices and each concept is briefly discussed (the overall discussion is presented in chapter six). See appendix three for an illustration of the different themes, concepts and analysis evidence.

5.1 AFFECTIVE BASED TRUST

5.1.1 Affective based trust and its artifacts

Affective based trust can be seen as the general (intrinsic) attitude to trust. It is formed by attributes of the trustor such as culture, previous experiences, psychological state and emotions. Although this study does not count as a deep psychological analysis of subjects' intrinsic trust, it is meaningful to have a look at some artifacts of this affective propensity to trust. This propensity to trust can be short-circuited by custom and habit (Fukuyama, 1995), which are on their turn heavily influenced by its cultural artifacts expectations and assumptions. Expectations and assumptions are the result of a general trust in people and do have an effect on trustworthiness assessments, since people build mental images of others (see paragraph 4.3.3):

- "It depends on the setting. For instance, when I look someone up who operates in the fashion industry and he/she has a boring Hyves profile, the expectation differs from what I come across. Then there is a misfit, I will be more on the qui vive, and I will try to discover what the reason of that mismatch is." (Hyves user Pieter)
- "One of the features that I really like from Beehive itself, is how you can build up a mental image of people's passion by looking at the pictures." (Beehive user Lucio)
- "If someone mentions a book from 2001 in his recommendations, and it's completely outdated, it influences. That's one of the blocks that give a negative coloured impression for instance." (Hyves user Pieter)

- "I also often look at education. That's a little odd sometimes, because some people who received an art history education and then I think ooh, this is a very autonomous person." (LinkedIn user Aziz)

While "trust in a specific person is more relevant in terms of predicting outcomes than is the global attitude of trust in generalized others" (Butler, 1991, p. 647), it is noteworthy that all users mentioned a high disposition to trust and/or a high disposition to the statement that people care about others and are benevolent:

- "(…) I do have that feeling yes; I think you're pretty negative, if you don't have that feeling." (Hyves user Maud)
- "Yes, I trust nearly everyone, 99% of the people. There are exceptions." (Beehive user Murat)
- "Within IBM I like to think so. The world in general I would say most people are reasonable trustworthy." (Beehive user Deacon)

This last quote underlines the existence of various levels of affective trust. As already can be read from paragraph 4.2.2, actors' disposition to trust is influenced, among other things, by the purpose and public nature of the social networking site:

- "In order to use Beehive fully, one has to make an a priori assumption that you can trust people out there [within Beehive]." (Beehive user Deacon)

5.1.2 Discussion – expectations, assumptions and variety in dispositions

An actor's affected based trust results in different expectations and assumptions of other's trustworthiness. Although it does not explain much of the variance in trust between actors, it seems to have an influence on the overall trustworthiness assessments. This is especially valid in situations where only initial trust exists, since expectations and assumptions do play a significant role as shortcut in those situations.

An additional interesting finding is the fact that people's disposition to trust seems to vary across different institutions: trust in people in general, trust in people within social networking sites, trust in people within companies, etc. As such, the institutions where a trustee acts are important for this affective based trust. Moreover, the trust in the institutions itself (social networking sites and their underlying organizations) play a significant role in assessing actors' trustworthiness. This institution based trust will be described and analyzed in the next paragraph.

5.2 INSTITUTION BASED TRUST

With regard to the focus of this study (trustworthiness assessments within social networking sites), the intentions of the sites' software were not explored and analyzed. Social networking sites' integrity are not studied either (e.g. social rules, sanctions, connection stimulating applications), since the study purely focuses on the user (trustworthiness) experiences. Paragraph 4.2 highlighted the value of the perception of the system (the social networking site) and feelings of its trustworthiness in relation to trustworthiness assessments. This paragraph verifies this value by analyzing this institution trust in relation to its structural assurances, situational normality and media schemata.

5.2.1 Structural assurance

Paragraph 4.2.1 already stressed the prominent feeling of structural assurance in relation to the Internet: the research subjects did not mention trust in the Internet as a whole, but mainly looked at trusting the specific social networking site. Users did not question the underlying – mostly unknown - technology and software, because they trust the Internet itself since it is regarded as a commodity. When analyzing the structural assurances of the social networking sites and their technologies and applications, no unfavorable conditions that could influence people's trustworthiness assessments where mentioned among users of all social networking sites:

- "Yes, I do trust it very much. I take the view that as long as you passwords... There are so little people who can discover things without knowing passwords. The whole idea of hacking… People often e-mail us 'I've been hacked', but then they just told their password to their ex-boyfriend. That is something different." (Hyves user Lisa)
- "Yes, they have a commercial approach. (…) But I trust it, especially if it is a large network (…) From the moment they will commercially abuse the system, so doing things users will not be satisfied with and will not agree with, they will hurt themselves, because they will lose income (…) [because] you will lose so much users with that." (LinkedIn user Martijn)

The linkage between Beehive and the job dependency strengthened Beehive users' feeling of the presence of structural assurances. The placement of Beehive as an internal IBM site was seen as an important structural assurance, since IBM's general guidelines are in place:

- *"Do you think of Beehive as a safe and robust place for your conversations?*
  Yes it is.
  Because it is an IBM tool?
  Not so much that it is an IBM tool per se, but the fact that it is limited to IBM personal use. In other words, if they brought in an external product and used that instead, I don't think it would matter. What matters to me it that it is internal to IBM only." (Beehive user Deacon)

- "Apart of the common sense in using social software applications, there's also the situation that you know you're working within IBM and you're working within an internal application and you know that above everything else there are rules of engagement of the business guidelines. So like I said before, there are things you can do and things you can't do. And that applies to every IBM tool." (Beehive user Lucio)

5.2.2 Situational normality and media schemata

Following the reasoning of McKnight, Choudhury and Kacmar (2002, p. 339), actors' trustworthiness assessments are influenced by a situational normality evaluation – in this study social networking sites. Users of social networking sites who perceive a high situational normality believe the digital environment is appropriate, well ordered and favorable for acting on these sites. This paragraph combines situational normality with media schemata, since the latter influence the former. Media schemata are cognitive knowledge that help people "to operate and understand the machines, help them to accept the mediated presence of other people and help them to distinguish the one 'agreed' reality from the other" (Nevejan, 2007, p. 13). This situational normality and these media schemata are constructed by culture (see paragraph 2.6.1) and as such, differ across actors. This leads to a variety of trustworthiness assessments, as can be illustrated by the following quotes.

- "But there are few people that do not understand social computing. One example, I met a speaker on a conference in New York and he was on Beehive and I said hi and I had some sort of connection with him. I invited him to LinkedIn. And he said he does not know me. Then I found out that he did the same thing to others and I did not understand the motive and I lost my trust in that person. I do not write him anymore." (Beehive user Murat)
- "If I would look for a developer, I would definitely try that via LinkedIn. You can easily place a vacancy. And why not? LinkedIn is a trusted environment and Monsterboard [a Dutch online job board] is completely new." (LinkedIn user Erik)
- "It also depends on the shifting of people. Some business contacts are using it very active, but other business contacts that I trust greatly and are tremendously social connected have a Hyves profile which isn't a reflection at all of who they are." (Hyves user Pieter)
- "There was a group of people in the US. I was very successful in Beehive. They said 'How come, in one month one person became a superbee'. I said because I am contacting people. I am reaching out and they said that I was doing spamming. And they started attacking me. I welcome people and ask about some stuff. And then they said 'if you keep writing this to everyone, it is spamming'. I said no it was not. So we clashed. And one of them continued and sent me an e-mail and I explained what I felt and do and he changed. We became good friends after that. I asked him why he was attacking me and what the motive was. Jealousy? He said because they had been on Beehive for seven months before I arrived and they could not achieve a certain number. I explained to him and the group that it was not a competition. (…) All I am trying is reaching out as many people as possible and enhancing my

network. He understood that genuine intention and trusted and now we are good friends." (Beehive user Murat)

5.2.3 Discussion – commodities, underlying organizations and mediated limitations

It seems that the underlying technology of the social networking site does not count for the variety in trustworthiness assessments. Because the usage of these sites is becoming further intertwined in people's daily life, the institution's underlying technologies are becoming commodities and provide structural assurances for trustworthiness assessments. While technology provides neutral assurances, the underlying organization of the institution delivers great assurances in the case of IBM's Beehive. Since Beehive is linked with the organization that provides job security and salary, it creates high initial structural assurances.

The analysis of situational normality and media schemata reveals that people's approach to the system itself influences trustworthiness assessments. Due to different media schemata and actors' situational normality feelings, potential misfits can develop online, which can be avoided in real life. This is one of the limitations of mediated communications via social networking sites compared to some other media and face-to-face meetings, where some cultural differences can be overcome by richer conversations (e.g. voice, body language, synchronous interactions).

5.3 COGNITIVE BASED TRUST

5.3.1 Cognitive based trust and profiling

Cognitive based trust is the main focus of this study, since it greatly influences trustworthiness assessments within social networking sites (see paragraph 2.4.3.3 for an explanation of its value). These assessments result in trusting beliefs. Cognitive trust greatly relies on trust cues, which can be illustrated by profiling activities of users of social networking sites. In real life, people scan others and this (together with various assumptions) results in the act of profiling a person; putting a label on the individual to simplify the placement of him/her in someone's frame of reference.

Quick scanning not only happens in physical meetings, but also in mediated environments such as social networking sites. This can be done by scanning ones profile. The interviewees indicated that they are influenced by various information sources that can function as cues for trustworthiness. A more thorough analysis of the effects of those various sources and its underlying reasoning is covered in paragraph 5.4 and in the next chapter. However, some interesting wide categories arose when the research subjects revealed how they profile people during a first quick scan, and which information shapes these profiling activities. Table 5.1 displays these trustworthiness cues effects.

Table 5.1　　　　Used cues during first quick scans on social networking sites

	Average	Total	Hyves		LinkedIn		Beehive	
	%	N = 12	%	N = 4	%	N = 4	%	N = 4
Profile information	41,7 %	5	75,0 %	3	25,0 %	1	25,0 %	1
Profile layout	8,3 %	1	25,0 %	1	0,0 %	0	0,0 %	0
Profile photo	0,0 %	0	0,0 %	0	0,0 %	0	0,0 %	0
Photos [1]	37,5 %	3	50,0 %	2	-	- [1]	25,0 %	1
Status message	0,0 %	0	0,0 %	0	0,0 %	0	0,0 %	0
Blogs / Forums	25,0 %	3	0,0 %	0	0,0 %	0	75,0 %	3
Links	8,3 %	1	25,0 %	1	0,0 %	0	0,0 %	0
Multimedia content [2]	12,5 %	1	25,0 %	1	-	- [2]	0,0 %	0
Social connections	33,3 %	4	25,0 %	1	75,0 %	3	0,0 %	0
Communities	16,7 %	2	25,0 %	1	0 %	0	25,0 %	1
Comments of others	25,0 %	3	25,0 %	1	25,0 %	1	25,0 %	1
Comments on others	33,3 %	4	50,0 %	2	0,0 %	0	50,0 %	2
Content interactions	16,7 %	2	25,0 %	1	0,0 %	0	25,0 %	1

[1]: LinkedIn does not include functions of placing photos. As such, sample for dimension 'photos' is 8.
[2]: LinkedIn does not include functions of placing multimedia content. As such, sample for dimension 'multimedia content' is 8.

Interviewees' first impulses to profiling questions resulted in a broad classification of influencing cues during first quick scans within the three social networking sites. In general, a scattered distribution of cues is visible during first quick scans, which includes profile information (41,7%), photos (37,5 %), social connections (33,3%), comments on others (33,3%), blogs/forums (25,0%) and comments of others (25,0%). The effect of other cues is marginal. Table 5.1 also shows a more systematic arrangement per social networking site. Where Hyves users revealed a scattered distribution with a little focus on profile information (75,0%), photos (50,0%) and comments on others (50,0%), LinkedIn users only emphasized social connections (75,0%) and Beehive users underlined posted content via forums (75,0%) and comments on others (50,0%). Some of these profiling aspects can already be identified from quotes from the previous chapter. Others are illustrated by the following quotes.

- "(…) [it is a] first impression, because you can see if the page is taken care of and if there are any crazy things on it. (…) I think you can collect some information were he studied or to which school he went.

You also can see a lot from the people he has contact with, what kind of friends he has and what kind of messages he sent " (Hyves user Guido)

- "First I look at which public hyves [communities] people are members of. (…) Then I will always look at education. (…) Then some profile information and spots [e.g. favorite restaurants, bars and clubs]." (Hyves user Lisa)
- "I look at what someone has done, what his passions are, what his hobbies are, if he travels, which education he has, if he has done some extra things (…)" (Hyves user Maud)
- "I use photos, eventually other widgets that are placed on their profile and I also read comments." (Hyves user Pieter)
- "I solely look at work experience. Maybe a little at who he/she knows." (LinkedIn user Erik)
- "Anyhow, first I will look if I know people he knows. (…) Next, I find recommendations and things someone has done in the past important. I also look at education most of the time. (…) I do scan someone's complete LinkedIn profile (…) Just reading blocks." (LinkedIn user Aziz)
- "First I will look at where that person is coming from, is he working at a great company (…) Has he done some exciting things in the past, does he have an exciting job (…). An authority in a certain area (…) [you can asses expertness if] you look at his connections." (LinkedIn user Maikel)
- "Within LinkedIn my checkpoints are: (…) where do I know that person of and how does he relate to my network." (LinkedIn user Martijn)
- "(…) a lot is conversational. Someone puts something out there and other people may respond and you could get to see this kind of person. (….) By reading the profile, this gives some background about how that person's life is like. And their hive5s and the events they feature and the sort conversations they get in, in terms of goof around, events, hive5s, you can kind of see where the person is coming from." (Beehive user Kathy)
- "Since I am an IBM'er, I will check the Bluepages [an IBM employee directory]. That is my first trust. The other trust is people putting up their pictures." (Beehive user Murat)
- "(…) Beehive is great, because it tells me all the bits and pieces of information about that individual (…)." (Beehive user Lucio)
- "I would probably look them up on Bluepages first. Within Beehive I would take a look at their comments related to other people and their Hive5s to kind of get a feel for what they are interested in, and what their general overall personality is like." (Beehive user Deacon)

5.3.2 Discussion – context and information infuences; some analogies

The previous paragraph explained the relevance of various information sources within social networking sites as potential trustworthiness cues. It also illustrated the role of the social networking site's context and goal in determining actors' cognitive based trust and the information that influences profiling of users within that context. Some real life analogies can be produced from these findings.

Profiling activities within friends-focused social networking sites (such as Hyves) are aimed at cues that are also present within a café where various information sources are used to attain a moderate

complete trustworthy picture of someone. The focus is a short conversation where someone tells about himself/herself (profile information), looking multiple times at that person to get a more complete image (photos) and talking/gossiping with others about that person (comments of others).

Profiling activities within professional social networking sites (such as LinkedIn) are directed towards cues that are available within exhibitions, where various information sources are used to build a trustworthy picture of someone's business-related activities. The main goal of exhibitions is networking (social connections), someone telling about himself/herself (profile information) and looking at what customers/partners say about that person (comments of others).

Profiling activities within internal/organizational social networking sites (such as Beehive) focuses at cues that can be inferred within an organization's canteen, where employees already established some images of others. Within this context, information exchange with respect to content (blogs/forums) and conversations about colleagues (comments on others) are the main activities.

5.4 TRUSTWORTHINESS DIMENSIONS AND THEIR CUES

5.4.1 Relevance of trustworthiness dimensions

The focus of this study is the concept of trustworthiness as a belief that someone is worthy to trust. Its four dimensions (ability, integrity, benevolence and social) are well documented in academic literature (see paragraph 2.5) and as such, only an exploration was undertaken to test the value and relevance of these dimensions within the context of social networking sites. This exploration led to a confirmation all four dimensions' significance, and this result in turn led to a further analysis of the linkages between trustworthiness dimensions and cues (see paragraph 5.4.2 – 5.4.7). The following citations illustrate the four dimensions; more illustrations are displayed in the following paragraphs and in appendix 3.

- "Things like social skills, if someone behaves really polite, how he associates with others, attitude, things that are all unconscious, if you trust someone or not." (Hyves user Guido)
- "What others say about him. Generally, I do have a good conversation with him, and then it clicks. Trust does not matter for me if it doesn't click." (LinkedIn user Aziz)
- "I think it would be someone who would be gentle to another person. (...) My definition of trustworthy has less to whether someone is going to go take information for me and repeat it. It has more to do with, when I interact with them, I sort of putting myself in their hands. I put my feelings in their hands and I want them to be careful and respectful with that, on the side of caution." (Beehive user Kathy)

5.4.2 General relevance of trustworthiness cues

Cognitive trust(worthiness) relies on cues which form a belief about actors' trustworthiness and often act as irrational, affective, and subconscious factors. Table 5.2 shows the general results of the studied linkages between the trustworthiness dimensions and information cues available on social networking

sites. Thirteen different information sources are explored to study their value as potential trustworthiness cues. Each trustworthiness dimension seems to have certain influencing key cues.

Seen from table 5.2, the dimension 'ability' is shaped by a variety of cues. Following the reasoning of the twelve interviewees, a trustworthy judgment of someone's ability is influenced by looking at profile information (91,7 %), comments of others (83,3%), blogs/forums (75,0%), social connections (66,7%), comments of others (58,3%) and the content of interactions (50,0%). The influential presence of these cues is straightforward, seen from a real life perspective. Namely, in real life, ability can be inferred most easily through information a person gives about him-/herself, information they give in reaction to others, the way they react and act within conversations, which connections he/she has and what those connections say about that person. The large amount of ability cues also seems logical, since ability can be perceived as a hard and less ambiguous dimension rather than integrity and benevolence, which are more 'fuzzy' and softer concepts, and are more difficult to assess during first scans.

The integrity of users was primarily evaluated by profile information (75,0%) and comments on others (50,0%). Integrity consists of a set of principles, which were assessed by a combination of self-posted personal information (profile information) and interaction information (comments on others). As such, users of social networking sites seemed to make a balanced judgment between self-expressed principles and principles that can be assessed by the unique contributions on other's profile.

The belief of trustworthiness of actors' benevolence was mainly influenced by looking at community memberships (50,0%) and comments on others (50,0%). As such, benevolence was assessed by information that reveals how people act within social interactions. This is in harmony with real life situations; in situations where a personal face-to-face meeting is impossible, kindness and altruism is most easily estimated by looking at the communities where people are active and how they act within those networks, together with how people talk about others to a third person. Someone's benevolence is in real life often evaluated by comments of others, but this dimension was not significantly mentioned within the social networking sites. This is probably because users often react to others, instead of having conversations with a third person about another person. This is probably because this is more linked with gossip and this gossip will be done less within public sites.

The social trustworthiness dimension can sometimes be evaluated more easily within social networking sites than in real life, since one of the main features of these sites is the articulation and visibility of social networks. This comes back in the social dimension assessment, which was primarily affected by the social connections (100,0%) and comments of others (which display the connections that comment on the user's profile) (50,0%). A worthwhile finding is the fact that although communities are based on social connections, communities were not significantly seen as an influencing cue for the social trustworthiness dimension. Compared to real life, communities within social networking sites are more open and public. As such, users can establish multiple community

memberships and the communities themselves can easily grow to huge amounts. Users seem to take this into account in their valuation of this cue.

A more thorough analysis of the four trustworthiness dimensions in relation to trust cues will be covered in the following paragraphs. These paragraphs will analyze differences between the social networking sites, gender and age.

Table 5.2   Linkages trustworthiness dimensions with cues

	Ability		Integrity		Benevolence		Social	
	%	N = 12	%	N = 12	%	N = 12	%	N = 12
Profile information	91,7%*	11*	75,0%*	9*	25,0%	3	25,0%	3
Profile layout	25,0%	3	8,3%	1	0,0%	0	8,3%	1
Profile photo	8,3%	1	16,7%	2	0,0%	0	0,0%	0
Photos [1]	25,0%	2	25%	2	0,0%	0	25,0%	2
Status message	0,0%	0	8,3%	1	0,0%	0	0,0%	0
Blogs / Forums	75,0%*	9*	33,3%	4	25,0%	3	8,3%	1
Links	8,3%	1	8,3%	1	8,3%	1	0,0%	0
Multimedia content [2]	12,5%	1	25,0%	2	12,5%	1	0,0%	0
Social connections	66,7%*	8*	25,0%	3	16,7%	2	100,0%*	12*
Communities	41,7%	5	25,0%	3	50,0%*	6*	33,3%	4
Comments of others	83,3%*	10*	33,3%	4	33,3%	4	50,0%*	6*
Comments on others	58,3%*	7*	50,0%*	6*	50,0%*	6*	33,3%	4
Content interactions	50,0%*	6*	25,0%	3	33,3%	4	0,0%	0

*: key cues for trustworthiness dimension. Cut-off rate is 50%.
[1]: LinkedIn does not include functions of placing photos. As such, sample for dimension 'photos' is 8.
[2]: LinkedIn does not include functions of placing multimedia content. As such, sample for dimension 'multimedia content' is 8.

5.4.3 Ability dimension cues

The concept ability includes a combination of knowledge, skills, attitude and competences. The interviewees acknowledged that ability is a critical item for trustworthy relationships, and one that could be affected by various trust cues:

- "The context is very relevant for me. An example if you're talking about skills is making a website. Someone can for instance design a website really good. Then you'll look at the skills, but a person

doesn't have to possess some knowledge for that. It could be the most stupid guy of the world, but if he can design very well – which is more a skill than some knowledge – then it's fine.

(…)

For instance the books they mention [on their profile], if someone pimped his Hyves page, the amount of communications via krabbels and wiewatwaar, until picture that were taken." (Hyves user Pieter)

- "Yes, if someone does something and is ambitious and achieved a lot, then I'll trust people more compared to people who don't do anything.

(…)

I would rely on work experience and look at which functions he's had. If they match with the idea I've got about those skills. I assume someone know a lot, if someone has been a consultant specialist for six years." (LinkedIn user Erik)

- "I always observe people's skills and competences and they match in some trust issue. If someone is very skilful and capable and they can share that with me, for example during a conversation or work, it increases my trust in that person.

(…)

Yes, I look at the profiles. Some profiles are really well written. Writing skills tell me a lot. The way they use their words. Also, references they put. Beehive is also related to Fringe and Bluepages. I look at these. I also use cross-referencing, I always do some triangulation by using shared connections." (Beehive user Murat)

Table 5.3 gives an overview of the cues that had an effect on a trustworthy ability assessment, specified for the three different social networking sites. The key trustworthiness cues for ability are profile information (91,7 %), comments of others (83,3%), blogs/forums (75,0%), social connections (66,7%), comments on others (58,3%) and the content of interactions (50,0%) (see paragraph 5.4.2 for the functioning of these cues in relation with this dimension). Overall, most information cues for ability do not differ across the various social networking sites. The few differences that exist are:

- Hyves users, in addition to the key cues, mentioned communities (75,0%) and the layout of the profile (50,0%). These are logical cues within Hyves from a design perspective, since there are many well-developed communities within the site and the profile design is an extensive feature of Hyves.
- LinkedIn members acknowledged the effect of all key cues, with exception of the comments on others (0%). Although comments of others were stated as important for ability reputation evaluations within the LinkedIn system, comments on others by users obviously did not have this function. Hence, LinkedIn users do not assess someone's ability by, for instance, writing skills in comments or the social connections' ability of the users people comment on.
- Beehive users only referred to all key cues as influential for an ability assessment.

Table 5.3   Linkages trustworthiness dimension ability with cues

	Average	Total	Hyves		LinkedIn		Beehive	
	%	N = 12	%	N = 4	%	N = 4	%	N = 4
Profile information	91,7%*	11*	100,0%*	4*	100,0%*	4*	75,0%*	3*
Profile layout	25,0%	3	50,0%*	2*	0,0%	0	25,0%	1
Profile photo	8,3%	1	25,0%	1	0,0%	0	0,0%	0
Photos [1]	25,0%	2	25,0%	1	-	- [1]	25,0%	1
Status message	0,0%	0	0,0%	0	0,0%	0	0,0%	0
Blogs / Forums	75,0%*	9*	75,0%*	3*	50,0%*	2*	100,0%*	4*
Links	8,3%	1	0,0%	0	25,0%	1	0,0%	0
Multimedia content [2]	12,5%	1	0,0%	0	-	- [2]	25,0%	1
Social connections	66,7%*	8*	50,0%*	2*	100,0%*	4*	50,0%*	2*
Communities	41,7%	5	75,0%*	3*	25,0%	1	25,0%	1
Comments of others	83,3%*	10*	75,0%*	3*	100,0%*	4*	75,0%*	3*
Comments on others	58,3%*	7*	100,0%*	4*	0,0%	0	75,0%*	3*
Content interactions	50,0%*	6*	50,0%*	2*	50,0%*	2*	50,0%*	2*

*: key cues for trustworthiness dimension. Cut-off rate is 50%.
[1]: LinkedIn does not include functions of placing photos. As such, sample for dimension 'photos' is 8.
[2]: LinkedIn does not include functions of placing multimedia content. As such, sample for dimension 'multimedia content' is 8.

5.4.4 Integrity dimension cues

The concept of integrity seemed to be important as well for trustworthy relations. Although the interviewees did not always mention the concept directly, they indirectly referred to its value:

- "Yes, I do find it very important that people have certain principles, because I'm very fundamental in certain areas. And I do want my friends to be that too. I often also notice that that belief is not shared 100%.
  (…)
  they [Hyves users] are often vague acquaintances so you can make a couple of jokes or sent crazy messages or whatever. I think it's easier to cross a line because you're behind a computer." (Hyves user Guido)
- "For instance, there is someone who is an illustrator. She's designing logo's, very well-known in the industry, but she doesn't keep her promises. She delivers really excellent work, but she doesn't keep

her appointments." (LinkedIn user Aziz)

- "(…) integrity is a given. If integrity is not there, I would not establish a relationship.

  (…)

  I always check what people are saying in Beehive. Some people say different things on their profile and have discussions in different forms. The way they deal with other people and the way they express themselves gives me clues if the person has got integrity or not." (Beehive user Murat)

Table 5.4 gives an overview of the cues that had an effect on a trustworthy integrity assessment, specified for the three different social networking sites. The key trustworthiness cues for integrity are profile information (75,0%) and comments on others (50,0%) (see paragraph 5.4.2 for the functioning of these cues in relation with this dimension). There are some differences in valuation of information cues for integrity across the various social networking sites:

- Hyves users, in addition to the key cues of comments on others (75,0%) and profile information (50,0%), referred to the social connections (50,0%) and the comments of others (50,0%). Both features display users' connections; social connections have a prominent place on the profile and a person's photo and name is displayed when he/she leaves a comment. Hyves users often link diverse connections from primarily private, but sometimes also a professional background. This diverse set of connections probably boosts integrity assessments: as users are connected with a diverse set of connections, their ethical and honesty properties will be positively evaluated.

- LinkedIn users where affected by the key cue of profile information (100,0%) and in addition, the profile photo (50,0%). The profile photo on LinkedIn is the only visualization of a user within this environment and as such, does affect integrity judgments via assumptions and expectations. Where comments on others do play a role in integrity assessments within Hyves and Beehive, they do less within LinkedIn (25,0%). This seems to be related with the primarily formal and positive character of the recommendations on LinkedIn (users can easily decline negative comments on their profiles). Consequently, users did not seem to value these roughly prescribed comments on LinkedIn. Comments on Hyves and Beehive are less formal since they are less restricted and have a conversational nature.

- Beehive users mentioned all key cues as influential for an integrity assessment, as well as the content of the interactions (75,0%), blogs/forums (50,0%), communities (50,0%) and comments of others (50,0%). This presence of multiple dominant cues is a significant finding that could be linked with the organizational context of Beehive. Since Beehive acts within the professional IBM environment and as such creates dependency, it suggests that integrity is more important within this context and users establish a (sometimes affective) very extensive integrity scan within Beehive. These results also suggest that the integrity cues are seen as highly valuable by its members.

Table 5.4   **Linkages trustworthiness dimension integrity with cues**

	Average	Total	Hyves		LinkedIn		Beehive	
	%	N = 12	%	N = 4	%	N = 4	%	N = 4
Profile information	75,0%*	9*	50,0%*	2*	100,0%*	4*	75,0%*	3*
Profile layout	8,3%	1	25,0%	1	0,0%	0	0,0%	0
Profile photo	16,7%	2	0,0%	0	50,0%*	2*	0,0%	0
Photos [1]	25,0%	2	25,0%	1	-	- [1]	25,0%	1
Status message	8,3%	1	25,0%	1	0,0%	0	0,0%	0
Blogs / Forums	33,3%	4	25,0%	1	25,0%	1	50,0%*	2*
Links	8,3%	1	0,0%	0	0,0%	0	25,0%	1
Multimedia content [2]	25,0%	2	25,0%	1	-	- [2]	25,0%	1
Social connections	25,0%	3	50,0%*	2*	25,0%	1	0,0%	0
Communities	25,0%	3	25,0%	1	0,0%	0	50,0%*	2*
Comments of others	33,3%	4	50,0%*	2*	0,0%	0	50,0%*	2*
Comments on others	50,0%*	6*	75,0%*	3*	25,0%	1	50,0%*	2*
Content interactions	25,0%	3	0,0%	0	0,0%	0	75,0%*	3*

*: key cues for trustworthiness dimension. Cut-off rate is 50%.

[1]: LinkedIn does not include functions of placing photos. As such, sample for dimension 'photos' is 8.

[2]: LinkedIn does not include functions of placing multimedia content. As such, sample for dimension 'multimedia content' is 8.

5.4.5 Benevolence dimension cues

Benevolence, someone's willingness and openness, is important within virtual communities since those communities would not exist without it; users have to be willing to engage in an online conversation and have to be open to share information. Benevolence can be defined, together with integrity, as the human side of trust. The interviewees pointed out that trustees' benevolence was judged as well during trustworthiness assessments within social networking sites.

- "If I talk about the benevolence of others, that comes back regularly in krabbels [comments] of people. Just looking if someone is attentive, 'is your car already sold?', 'how are you doing?' and 'get well soon', that kind of things" (Hyves user Maud)
- "(…) it plays a big role. If people are open and want to cooperate for little things such as 'I will sent you that', I think that's very positive. I value it if people come across as integer and links actions with that.

Could you link (…) benevolence with a LinkedIn context?

Yes, I can see if someone commits himself if I see that he answers a lot of questions. I know that he puts in a lot of effort in it, if he recommends a lot of people." (LinkedIn user Erik)

- "I am from the liberal art side of things and communication. But I cover technology and innovation for W3. So I am an expert in nothing, but I can cover a lot. I am really dependent on finding people who not only know their stuff, but are patient and more important, kind enough to take the time to explain these things and come to help me understand them. That is asking a lot of a person of IBM. Any expert within IBM on any subject can find other good numbers of experts to wrap with, like-minded people with the same depth of understanding about a topic.

  I am not one of those people. But I do use Beehive to find people to come to understand things. If I have got the sense that I am dealing with a person that is very impatient and really wants to deal with only other experts, you can see that often. In tracking how they participate in conversations and the kind of conversations they participate in, and the kind of messages they leave on people's profiles. Opposes to a tool like Fringe, were all you are doing is relying on tags to figure out who knows what, this also gives you a picture of whether this person is worth your time and is approachable." (Beehive user Kathy)

Table 5.5 gives an overview of the cues that had an effect on a trustworthy benevolence assessment, specified for the three different social networking sites. The key trustworthiness cues for benevolence are communities (50,0%) and comments on others (50,0%) (see paragraph 5.4.2 for the functioning of these cues in relation with this dimension). There are some differences of valuation of information cues for benevolence across the various social networking sites:

- Hyves users only mentioned all key cues of communities (75,0%) and the comments on others (50,0%) to evaluate benevolence.

- LinkedIn users referred to the key cues of communities (50,0%), comments on others (50,0%), profile information (50,0%) and blogs/forums (50,0%). Profile information was primarily linked with benevolence by looking at the organizations actors worked for. Certain organizations, such as start-ups and NGO's, seemed to represent benevolent characteristics. In addition, LinkedIn has an active forum ('Questions & Answers') and active usage on this forum (e.g. willing to answers others' questions) increased actors' perceived benevolence.

- Beehive users acknowledged the influence of the key cue of comments on others (50,0%), together with the content of the interactions (75,0%) and the comments of others (50,0%). Beehive users seemed intensively influenced by the content of the interactions. The way people act within conversations, together with reactions of others, sketches a picture of a person's approachableness. They did not primarily mention communities (25,0%). This suggests that due to a more dependent perspective, members value community membership less than intensive interactions.

Table 5.5   Linkages trustworthiness dimension benevolence with cues

	Average	Total	Hyves		LinkedIn		Beehive	
	%	N = 12	%	N = 4	%	N = 4	%	N = 4
Profile information	25,0%	3	25,0%	1	50,0%*	2*	0,0%	0
Profile layout	0,0%	0	0,0%	0	0,0%	0	0,0%	0
Profile photo	0,0%	0	0,0%	0	0,0%	0	0,0%	0
Photos [1]	0,0%	0	0,0%	0	-	- [1]	0,0%	0
Status message	0,0%	0	0,0%	0	0,0%	0	0,0%	0
Blogs / Forums	25,0%	3	0,0%	0	50,0%*	2*	25,0%	1
Links	8,3%	1	0,0%	0	0,0%	0	25,0%	1
Multimedia content [2]	12,5%	1	25,0%	1	-	- [2]	0,0%	0
Social connections	16,7%	2	25,0%	1	25,0%	1	0,0%	0
Communities	50,0%*	6*	75,0%*	3*	50,0%*	2*	25,0%	1
Comments of others	33,3%	4	25,0%	1	25,0%	1	50,0%*	2*
Comments on others	50,0%*	6*	50,0%*	2*	50,0%*	2*	50,0%*	2*
Content interactions	33,3%	4	0,0%	0	25,0%	1	75,0%*	3*

*: key cues for trustworthiness dimension. Cut-off rate is 50%.

[1]: LinkedIn does not include functions of placing photos. As such, sample for dimension 'photos' is 8.

[2]: LinkedIn does not include functions of placing multimedia content. As such, sample for dimension 'multimedia content' is 8.

5.4.6 External / Social dimension cues

One of the main features of social networking sites is the display of users' connections. As such, the external/social dimension within social networking sites can be expected to be of significant value for building trustworthy relations and impressions. This was already highlighted in paragraph 4.3.2, and was also acknowledged by the studied subjects:

- "Hyves is all about friends, popularity. And it gives some clues about someone's pleasance if he/she has got five hundred friends." (Hyves user Guido)
- "It does sketch a picture of course when I see that someone is connected with a group I find it's interesting. That can create trust in certain circumstances. (...) it shows something about you, because you're being accepted for a group in fact." (LinkedIn user Maikel)
- "Sometimes people's connections can give you an idea what they are there for. There a couple of people who seem to be on Beehive to collect the prettiest IBM'er out there. Who can blame them?

They are trying to use it as a LinkedIn space. They are trying to get something out of people there. As opposed to contribute and find people to collaborate with. They use it at as a, literally as a networking space. To climb a latter that I just not do. Those are people that I tend to.. Again, I am observing a prejudice when I do this. I see that and I sort of think that is someone I do not really want to follow." (Beehive user Kathy)

Table 5.6 gives an overview of the cues that had an effect on a trustworthy social assessment, specified for the three different social networking sites. The key trustworthiness cues for the social dimension are social connections (100,0%) and comments of others (50,0%) (see paragraph 5.4.2 for the functioning of these cues in relation with this dimension). There are some differences of valuation of information cues for the social dimension across the various social networking sites:

- Hyves users mentioned all the key cues of social connections (100,0%) and the comments of others (75,0%), next to the comments on others (75,0%) as influential. This suggests that the comments system on Hyves makes tracing back comments appealing for assessing the social trustworthy dimension. This is also triggered by the design of the site, since members will be redirected to the other his/her profile if they comment on that person's comment from their own profile. Although communities are well developed within Hyves, it did not come out as a significant cue for the social trustworthiness dimension.

- LinkedIn users acknowledged the effect of all the key cues of social connections (100,0%) and the comments of others (50,0%). A significant finding was the fact that users did not make use of communities (25,0%) for assessing the social trustworthy dimension, although there is a big variety of communities present within LinkedIn. Its value however, is probably low because these communities were little developed: they only contained a label that a user was a community member. At this moment, LinkedIn extended the community functionality with forums and conversations. Hence, this cue for assessing the social trustworthy dimension can become valued more by LinkedIn users in the future.

- Beehive users referred to the key cue of social connections (100,0%), while also to communities (50,0%). A worthwhile finding is the fact that the interviewees did not mention the comments of others to assess the social trustworthy dimension within Beehive. This could be because comments of others are included in 'the buzz', where all actions and activities of the actor are stated (e.g. messages about new photos, comments on others, changes of the status message). This buzz is located in another part of the Beehive profile and in the weekly digital Beehive newsletter per e-mail. As such, comments of others can be overlooked more easily.

Table 5.6   **Linkages trustworthiness social dimension with cues**

	Average	Total	Hyves		LinkedIn		Beehive	
	%	N = 12	%	N = 4	%	N = 4	%	N = 4
Profile information	25,0%	3	25,0%	1	25,0%	1	25,0%	1
Profile layout	8,3%	1	25,0%	1	0,0%	0	0,0%	0
Profile photo	0,0%	0	0,0%	0	0,0%	0	0,0%	0
Photos [1]	25,0%	2	25,0%	1	-	- [1]	25,0%	1
Status message	0,0%	0	0,0%	0	0,0%	0	0,0%	0
Blogs / Forums	8,3%	1	0,0%	0	0,0%	0	25,0%	1
Links	0,0%	0	0,0%	0	0,0%	0	0,0%	0
Multimedia content [2]	0,0%	0	0,0%	0	-	- [2]	0,0%	0
Social connections	100,0%*	12*	100,0%*	4*	100,0%*	4*	100,0%*	4*
Communities	33,3%	4	25,0%	1	25,0%	1	50,0%*	2*
Comments of others	50,0%*	6*	75,0%*	3*	50,0%*	2*	25,0%	1
Comments on others	33,3%	4	75,0%*	3*	0,0%	0	25,0%	1
Content interactions	0,0%	0	0,0%	0	0,0%	0	0,0%	0

*: key cues for trustworthiness dimension. Cut-off rate is 50%.
[1]: LinkedIn does not include functions of placing photos. As such, sample for dimension 'photos' is 8.
[2]: LinkedIn does not include functions of placing multimedia content. As such, sample for dimension 'multimedia content' is 8.

5.4.7 Linkages with control variables

The previous analysis focused on trustworthiness assessments and their differences across the three studied sites. Tables 5.7 and 5.8 show the relation between trustworthiness assessments and the other two control variables 'gender' and 'age user / public nature site'. Key cues for trustworthiness have been labeled with an *. Variable differences have been defined as 25% difference and are highlighted in green. Since the samples of control variables are not equally distributed, this paragraph only explores and displays the results. Future extensive research can extend this analysis.

Table 5.7, which gives an overview of trustworthiness assessment differences between genders, overall shows similarities between male and female, except for some assessments. It can be The findings can possibly be generalized, but it should be stated that only 25% of the sample was female.

- The effect of trustworthiness cues on the assessment of actors' ability outlines multiple differences between male and female subjects. Males place significantly more emphasis on the display of the

social connections (88,9% - 0,0%) and slightly more on the user profile (100,0% - 66,7%), as opposed to female. Female, on the other hand, mention comments on others (100,0% - 44,4%), blogs/forums (100,0% - 66,7%) and communities (66,7% - 33,3%) more as trustworthy indicators of actors' ability, in contrast with the male subjects. Seen from an abstract perspective, females assess actors' ability more through conversations (blogs/forums, communities and comments on others) and males more through 'hard' information (profile information and social connections).

- The effect of trustworthiness cues to determine actors' integrity does not differ between male and female, except for the cue 'communities', which is significantly more influential for female users of social networking sites (66,7% - 11,1%).
- The referred influence of key cues for the trustworthiness dimensions 'benevolence' and 'social' do not differ between male and female.

Table 5.7   Linkages trustworthiness cues with gender (male / female)

	Ability		Integrity		Benevolence		Social	
	Gender		**Gender**		**Gender**		**Gender**	
	Male N = 9	Female N = 3	Male N = 9	Female N = 3	Male N = 9	Female N = 3	Male N = 9	Female N = 3
Profile information	100,0%*	66,7%*	77,8%*	66,7%*	22,2%	33,3%	33,3%	0,0%
Profile layout	22,2%	33,3%	0,0%	33,3%	0,0%	0,0%	11,1%	0,0%
Profile photo	11,1%	0,0%	22,2%	0,0%	0,0%	0,0%	0,0%	0,0%
Photos [1]	40,0%	0,0%	40,0%	0,0%	0,0%	0,0%	40%	0,0%
Status message	0,0%	0,0%	11,1%	0,0%	0,0%	0,0%	0,0%	0,0%
Blogs / Forums	66,7%*	100,0%*	33,3%	33,3%	33,3%	0,0%	11,1%	0,0%
Links	11,1%	0,0%	11,1%	0,0%	11,1%	0,0%	0,0%	0,0%
Multimedia content [2]	20,0%	0,0%	40,0%	0,0%	20,0%	0,0%	0,0%	0,0%
Social connections	88,9%*	0,0%	22,2%	33,3%	22,2%	0,0%	100,0%*	100,0%*
Communities	33,3%	66,7%*	11,1%	66,7%*	55,6%*	33,3%	33,3%	33,3%
Comments of others	88,9%*	66,7%*	33,3%	33,3%	44,4%	0,0%	55,6%*	33,3%
Comments on others	44,4%	100,0%*	55,6%*	33,3%	55,6%*	33,3%	33,3%	33,3%
Content interactions	44,4%	66,7%*	22,2%	33,3%	33,3%	33,3%	0,0%	0,0%

*: key cues for trustworthiness dimension. Cut-off rate is 50%. The difference between genders is at least 25%.
[1]: LinkedIn does not include functions of placing photos. As such, sample for variable 'photos and male' is 5 and sample for variable 'photos and female' is 3.
[2]: LinkedIn does not include functions of placing multimedia content. As such, sample for variable 'multimedia content and male' is 5 and sample for variable 'multimedia content and female' is 3.

The research subjects can be, with regard to the variable age, divided into two groups: '≤ 30 years' and '> 30 years'. However, all subjects marked as '> 30 years' operate within the internal social networking site Beehive. Hence, analyzing age differences are biased since the variable '> 30 years' only consists of Beehive users. As such, table 5.9 gives an overview of trustworthiness assessment differences between '> 30 years AND member of internal SNS' and '≤ 30 years AND external SNS' (where 'SNS' stands for 'social networking site'). Analysis of the data leads to the following results:

- For assessing trustworthy ability characteristics, users ≤ 30 years and using an external SNS are more focused on the profile information (100,0% - 75,0%), social connections (75,0% - 50,0%) and communities (75,0% - 50,0%), as opposed to users > 30 years using an internal SNSs. This last group, compared to users ≤ 30 years and using an external SNS, differs in the effect on ability cues by blogs/forums (100,0% - 62,5%) and the comments of others (75,0% - 50,0%).

- The weight of integrity cues is more evenly distributed, although users > 30 years and using an internal SNS (opposed to users ≤ 30 years and using an external SNS) mention the content of interactions (75,0% - 0,0%), communities (50,0% - 12,5%), blogs/forums (50,0% - 25,0%) and comments of others (50,0% - 25,0%) more.

- Benevolence cues differ more across the two groups. Here, users ≤ 30 years and using an external SNS more commonly use communities (62,5% - 25,0%), while users > 30 years and using an internal SNS mainly refer to the content of interactions (75,0% - 12,5%) and comments of others (50,0% - 25,0%).

- While all users mention the effect of the display of social connections on a trustworthy social assessment, users ≤ 30 years and using an external SNS refer to the influential presence of comments of others significantly more (62,5% - 25,0%). Contrary, users > 30 years and using an internal SNS referred more to communities (50,0% - 25,0%).

Table 5.8   **Linkages trustworthiness cues with age and public character**

(≤ 30 years and external SNS / > 30 years and internal SNS)

	Ability		Integrity		Benevolence		Social	
	≤ 30 and external N = 8	> 30 and internal N = 4	≤ 30 and external N = 8	> 30 and internal N = 4	≤ 30 and external N = 8	> 30 and internal N = 4	≤ 30 and external N = 8	> 30 and internal N = 4
Profile information	100,0%*	75,0%*	75,0%*	75,0%*	37,5%	0,0%	25,0%	25,0%
Profile layout	25,0%	25,0%	12,5%	0,0%	0,0%	0,0%	12,5%	0,0%
Profile photo	12,5%	0,0%	25,0%	0,0%	0,0%	0,0%	0,0%	0,0%
Photos ¹	25,0%	25,0%	25,0%	25,0%	0,0%	0,0%	25,0%	25,0%
Status message	0,0%	0,0%	12,5%	0,0%	0,0%	0,0%	0,0%	0,0%
Blogs / Forums	62,5%*	100,0%*	25,0%	50,0%*	25,0%	25,0%	0,0%	25,0%
Links	12,5%	0,0%	0,0%	25,0%	0,0%	25,0%	0,0%	0,0%
Multimedia content ²	0,0%	25,0%	25,0%	25,0%	25,0%	0,0%	0,0%	0,0%
Social connections	75,0%*	50,0%*	37,5%	0,0%	25,0%	0,0%	100,0%*	100,0%*
Communities	50,0%*	25,0%	12,5%	50,0%*	62,5%*	25,0%	25,0%	50,0%*
Comments of others	87,5%*	75,0%*	25,0%	50,0%*	25,0%	50,0%*	62,5%*	25,0%
Comments on others	50,0%*	75,0%*	50,0%*	50,0%*	50,0%*	50,0%*	37,5%	25,0%
Content interactions	50,0%*	50,0%*	0,0%	75,0%*	12,5%	75,0%*	0,0%	0,0%

*: key cues for trustworthiness dimension. Cut-off rate is 50%. The difference between age/SNS is at least 25%.

¹: LinkedIn does not include functions of placing photos. As such, sample for variable 'photos and ≤ 30 years'is 4 and sample for variable 'photos and > 30' is 4.

²: LinkedIn does not include functions of placing multimedia content. As such, sample for variable 'multimedia content and male' is 4 and sample for variable 'multimedia content and > 30 years' is 4.

Note: the abbreviation 'SNS' stands for 'social networking site'.

6. DISCUSSION

This study examined trustworthiness assessments within social networking sites and the processes that are in place during those evaluations. By undertaking an exploratory qualitative study, trustworthiness assessments were analyzed and the effects of trustworthiness cues were explained. The study enhances theory about trust within computer mediated communications, sketches surrounding themes that influence trustworthiness assessments and gives an overview of the value of trust cues within social networking sites. As such, this study adds to current literature and research in an exploratory way.

Chapters four and five presented the study's results. These results were analyzed and a start was made discussing the results. This chapter continues the analysis and gives meaning to the results by a broader context discussion. It will do this by discussing the value of social networking sites for trustworthiness assessments, by analyzing which factors influence these trustworthiness perceptions, by examining which information sources act as cues for trustworthiness dimensions and what how they influence trustworthiness evaluations, and by explaining the influence of social networking sites' design, features and functionality on trustworthiness assessments. This chapter concludes with the value of these implications for further research challenges and some research limitations.

6.1 MERGING IDENTITIES

Within the new virtual environments of computer mediated communications, social networking sites play a significant role since most Internet users are members of social networking sites and use them actively. Consequently, social networking sites are (becoming) intertwined with actors' offline and online interactions and lives. Social networking sites allow users to express information about themselves, their social connections and the way they behave on the web. This valuable information creates a large potential for assessing an actor's trustworthiness. Trustworthiness is a significant concept within online interactions, since it is one of the critical components that have to be present to develop valuable connections and relationships from interactions.

This study revealed that social networking sites are used for and regarded as valuable sources of trustworthiness assessments of other people since they offer an easy access to diverse information about a person. This diverse information is primarily based on self-posted online information. Self-posted information is subjective and often lead to disbeliefs about its sincerity. Yet, the study revealed that online self-posted information on social networking sites was seen as sincere and authentic. Members are influenced by the posted information to build up an online identity of someone, which gives a decent impression of others' real life identity in their perspective. This significant finding suggests that the separation between offline and online identities created by online users is decreasing.

This declining separation can be traced back to specific characteristics of social networking sites, which provide users with a sincere and authentic judgment of information. Since the usage of

social networking sites is becoming intertwined with actors' offline and online interactions, users regularly express information without thinking of online and offline identities; their online and offline expressions unify into one identity. The combination of offline and online identities is also augmented because of social networking sites' public character. This increases information verification by others and gives valuable details about interactions. In addition, social networking sites' expression of connections feature is one that stimulates someone's trustworthiness greatly: you are who you know.

Within computer mediated communications and online environments, trust and trustworthiness are often perceived and researched as ratings, testimonials and/or recommendations. This study reveals that merely using and researching these features for trustworthiness assessments is too simplistic, especially since the boundaries between offline and online connections are blurring. Instead, various aspects construct and influence trustworthiness assessments. Users are influenced by, for instance, a variety of information that acts as trustworthiness cues (not only testimonials) and these trustworthiness assessments are in their turn affected by someone's assumptions and expectations. Consequently, an integrative trustworthiness framework was explored to reveal processes and themes that occur during trustworthiness assessment within social networking sites. They can be categorized as personal characteristics, context characteristics, trustworthiness cues effects and system implications. These are discussed in the next paragraphs.

6.2 BIASED MENTAL IMAGES

Online interpersonal trustworthiness assessments are based on a person's attributes that can be communicated through websites. It can be explained as the belief of the trustor that someone (the trustee) is worthy to trust – a character that the trustee posses. This belief formation is formed on an individual basis; they differ among users. As such, individual traits, attributes and characteristics of the trustor affect the trustworthiness assessments within social networking sites. Nowadays, online environments are becoming further interwoven with real life. This study suggests that this desegregation has major consequences for the online assessment of someone's trustworthiness. This is because individual real life processes and products such as culture, assumptions, expectations, media schemata and frame of references influence the set-up of the mental images which are created during a user's profile visit. This underlines the fact that trustworthiness assessments cannot be simplified as ratings or recommendations, but are instead intertwined with real life. Through these real life products, mental images are built and utilized as triangulation sources during the trustworthiness evaluation.

The results point out that online judgments within social networking sites are heavily influenced by the perception of the site by its users. Users experience different beliefs of situational normality (the belief that the digital environment is appropriate, well ordered and favorable for acting on these sites) and media schemata (related to a person's previous experience with media). This leads to a variety of trustworthiness assessments and different kinds of online misfits, which could be avoided in real life. This is one of the limitations of mediated communications via social networking

sites compared to other media and face-to-face meetings. Within these interactions, some cultural differences and misperceptions can be overcome by richer conversations and cues (e.g. voice, body language, synchronous interactions).

Although this study does not count as a thorough psychological analysis of users' trust values, the fact that people's general attitude towards trust (affective based trust) accounted for variances in trustworthiness assessments between different social networking sites was a significant result. All three studied social networking sites connect people who are linked with one another in real life. However, these sites differ in their created perception of trustworthiness due to their main purpose and public nature. As such, it can be suggested that affective based trust is influenced by the relevant context in which the social networking sites is located. These context effects will be discussed in the next paragraph.

6.3 CONTEXT DEPENDENCIES

The results of the study made clear that the context of the social networking sites also influences trustworthiness assessments and acting within these sites. This finding was first verified by the membership reasons. It became clear that the main drivers for using social networking sites lay in their social grounds, which can be divided into two factors; the quantity of connections already present within the social networking sites and the introduction of the site by a special type of connection. For public social networking sites such as Hyves and LinkedIn, it seems that there has to be a number of close relations present to trigger people to join an external social networking site. This is different for an internal small business site as Beehive, where people establish memberships due to introduction or notification by special types of social connections, not the number of connections.

Disregarding the terms of use seemed to be based on the social networking sites context´s dependency. Where Hyves and LinkedIn offer less job dependency and as such, create lower incentives to read the terms of use, Beehive is part of the IBM organization. This creates a tremendous dependency on job security and salary provision and therefore a higher percentage of users read the terms of use.

Users' trustworthiness experiences within social networking sites are further influenced by the institution based trust (the perception of the site), underlying technologies and organizations, and mediated limitations. As already highlighted before, the three studied social networking sites differ in their created perception of trustworthiness, due to their main purpose and public nature. Social networking sites primarily aimed at friends (Hyves) are taken less seriously than social networking sites aimed at professional connections (LinkedIn). Internal social networking sites (Beehive) create the highest initial trust in members, since every member works within the same organization. These outcomes were also linked with real life attitudes such as self-correction: users' behaviour and assumptions seemed to be dependent on the context.

The results further indicate that the underlying technologies of the social networking sites do not affect trustworthiness assessments. Because the usage of these sites is becoming further intertwined in people's daily life, their underlying technologies are becoming commodities. Therefore, users experience no unfavorable technology conditions that could influence their trustworthiness assessments. Hence, social networking sites provide structural assurances for trustworthiness assessments.

Although the technologies of social networking sites provide these neutral assurances and do not account for the variety in trustworthiness assessments, the underlying organization of social networking sites seems to do. IBM delivers great assurances in the case of Beehive for instance. Since Beehive is linked with the organization that provides job security and salary, it creates high initial structural assurances since IBM´s general guidelines are in place and they, in their turn, support trustworthiness assessments.

6.4 DELIBERATIVE SETUP OF TRUSTWORTHINESS CUES AND SOCIAL NETWORKING SITES DIFFERENCES

The exploratory study reveals that the concept of trustworthiness and its dimensions (ability, integrity, benevolence and social) are valid for social networking site users in their overall life and when acting within a social networking site. Concepts of trust and trustworthiness are general (often unconscious) feelings of users. Yet, users do have an implicit and deliberate arrangement of indicators that shape the trustworthiness assessment. These indicators are, next to personal and context characteristics, primarily based upon the aspect of cognitive based trust. This belief is constructed by the various information sources that can function as trustworthiness cues. As such, the witnessed presences of actors within social networking sites are cues for their trustworthiness attributes and can act as factors that have an effect on trustworthiness. The influential presences and effects of specific cues on the assessments of trustworthiness dimensions are primarily influenced by two factors: 1) real life experiences and reflections and 2) the context and goal of the social networking site.

Thirteen different information sources were examined to study their value as potential trustworthiness cue. The results reveal that each trustworthiness dimension has several key cues, which are based on real life experiences and in general, act as equivalents for real life cues. This can be best illustrated through the next examples. The concept ability includes a combination of knowledge, skills, attitude and competences. In real life, people's ability dimension can be inferred most easily by information they express about themselves, how they act and react within conversations, which connections he/she has as references and what those references say about that person. This was exactly reflected within online trustworthiness assessments. Here, users revealed that a trustworthy judgment of someone's ability is influenced by profile information, comments of others, blogs/forums, social connections,

comments on others and the content of interactions. As such, a diverse set of cues had an effect on the ability judgment. This is because ability can be perceived as a hard and less ambiguous dimension rather than integrity and benevolence, which are more 'fuzzy' and softer concepts. They are more difficult to assess during first scans therefore.

The concept of integrity describes how ethical, honest and moral an actor is and/or behaves. These aspects are incorporated in a set of principles that a person holds. Integrity is hard to assess in real life and is best estimated not only by self-expressed information (this can be biased), but also by looking at how a person interacts with others. Social networking sites offer an advantage for this last aspect, since online interactions within these sites are 'hard information' and will always be present on the Web. Hence, users of social networking sites were influenced by a balanced presence of self-expressed principles (profile information) and principles that can be assessed by the unique contributions on others' profile (comments on others).

Benevolence includes someone's willingness and openness. The set of benevolence cues was also linked with real life aspects. In real life situations where a personal face-to-face meeting is impossible, kindness and altruism is most easily estimated by looking at the communities where people are active and how they act within those networks, together with how connected people talk about them. Accordingly, benevolence assessments within social networking sites were affected by information that reveals how people act within social interactions by focusing on community memberships and comments on others.

The social trustworthiness dimension can sometimes be evaluated more easily within social networking sites than in real life, since one of the main features of social networking sites is the articulation and visibility of social networks. This returns in the social dimension assessment within social networking sites, which was primarily shaped by the social connections and comments of others (which display the connections that comment on the user's profile).

Next to linkages with real life experiences, the effect of certain cues within social networking sites also suggest that the context and goal of the social networking site influence the significance presence of trustworthiness cues as well. Examples of integrity assessments and situations of distrust can illustrate this. Where Beehive is strictly aimed at business colleagues and LinkedIn at professionals, Hyves users establish a more diverse set of connections. These connections have an effect on integrity assessments, while within Beehive and LinkedIn they are not. Users' comments on others' profiles are, in general, mentioned in relation with integrity assessments, since they are not often restricted and have a conversational nature. They do not have that important integrity function within LinkedIn, since that site is aimed at connecting and recommending professionals in a positive restricted and formal way to establish a professional business representation (users can easily decline negative comments on their profiles). Beehive is linked with the IBM organization, which boosts the dependency character of Beehive members. This dependency context results in more extensive

assessments (mentioning of more cues) compared to Hyves and LinkedIn, with one of the main foci on following interactions and their content.

Cues influence differences arising from different underlying goals of social networking sites also became clear during situations of distrust. Beehive's goal is to connect IBM'ers within a more personal and interactive site than other intranet applications. This is reflected by the fact that within Beehive, distrusting someone has more to do with the action of that person on the site, rather than with the content. The opposite was true for LinkedIn, where the content created a negative evaluation of that person. This is completely in line with LinkedIn's initial target to set up a database of professionals resumes. Users of Hyves had little situations of distrust, since it was seen as less serious and additionally, the profile information was most of the time a confirmation of what users already assumed.

6.5 INTENTIONS OF DESIGN, FEATURES AND FUNCTIONALITY

Not only the goal, focus and context of a social networking site influence the effect of trustworthiness cues. An analysis of the results, together with the lay-outs and functions of the social networking sites, suggests that its design, features and functionality also have a significant impact on trustworthiness assessments and cues influences. This can be exemplified through some examples.

The initial goal of social networking sites was to enable users to articulate and make their social networks visible. Since its design is focused on displaying the social connections, the real life triangulation processes seems to flourish within social networking sites. This is because social networking sites are valuable for trustworthiness assessments, since social connections can be analyzed more straightforward online than in real life.

Social networking site's frequently used features were also sooner related to trustworthiness assessments. Hyves, for instance, is the only site of the three studied social networking sites that offers the possibility to personalize the layout of the profile (called 'pimp my profile'). This feature was often related with cues for an ability assessment. LinkedIn has an active forum (called Questions and Answers), and users' answers are mentioned shortly (though prominent) on their profile. This forum was linked with a benevolence assessment, and was mentioned more within LinkedIn than within Hyves and Beehive.

The prominent placing of cues also affects the effects of them. Recommendations are an important feature of LinkedIn (and have a good visibility on a user's profile) and for trustworthiness assessments within LinkedIn. Hyves has got an equivalent feature called 'testimonials' and it's placed on the bottom of the profile's second page. The less significant placing of this feature result in the fact that this information source was never mentioned as a trustworthiness cue and is barely used in general.

The last system implication is the fact that the functionality of social networking sites also influences the effects of trustworthiness cues. This can be illustrated by the following three examples. First, it seems that the comments system on Hyves makes the back tracing of comments appealing for

assessing the social trustworthy dimension. This is triggered by the functioning of the site, since members are redirected to someone's profile if they comment on that person from their own profile. Second, since the functioning of the LinkedIn recommendation system is arranged in a way that recommendations first have to be approved by the user before they are displayed on his/her profile, only positive recommendations are present within LinkedIn. Hence, the recommendations on others are not valued and are not taken into consideration as trustworthiness cues. Third, as a result of little developed functionality of LinkedIn's communities, they are not considered as a valuable trustworthiness cue. Extended functionality of this feature can release its potential as a trustworthiness cue for the social dimension.

6.6 LIMITATIONS AND RESEARCH AGENDA

Although a lot of attention was paid to the study's design and methodology, some limitations and constraints should be acknowledged. These limitations were considered in the original research design and can be seen as challenges for further research. Since this study has an exploratory and interpretative character, the generalization and universality of it are reduced. However, the goal of this research is to gain a better understanding of actors' assessment of people's trustworthiness within social networking sites. This is defined as an exploratory character, which is not aimed at complete generalization. Due to this exploratory nature and complexity, this study's reliability is moderate. Hence, future research can lead to a more comprehensive picture of the effects of trustworthiness cues and the reasoning behind this influence.

Due to the small amount of research objects (three social networking sites), more research needs to be carried out to draw a general picture of the various social networking sites that are present on the web. A relatively small number of research subjects (twelve interviewees) were interviewed, and the sample was not equally distributed among control variables. To improve the study's demarcation, expert users were chosen as research sample. To improve external validity, future research has to focus on larger and more evenly distributed samples of various social networking sites.

In addition, the study only reflects a random indication, since it was undertaken at a given moment in time. Future research can aim for a longitudinal study, which can give more valuable information about the dynamics of trustworthiness assessments. A longitudinal study is also interesting from the development perspective of social networking sites, because these sites have only become common since 2002 and they are still developing and adapting.

A last constraint is the nature of the study. The exploratory nature of this study is reflected in its qualitative research design. This prevents the study from processing statistical verifications, which are often related with trust studies. Future research can expand on this research design with a more in-depth psychology study that offers statistical results.

7. CONCLUSION

Social networking sites play a significant role within the new virtual environments of computer mediated communications, because most Internet users are members of social networking sites and use it actively. Consequently, social networking sites are (becoming) intertwined with actors' offline and online interactions and lives. They are used for trustworthiness assessments of other people since they offer an easy access to diverse information about a person. The separation between offline and online identities created by online users is decreasing, since the online self-posted information on these sites is perceived as real/sincere and authentic. This significant finding increases the value of social networking sites for trustworthiness assessments.

By undertaking an exploratory qualitative study focused on Hyves, LinkedIn and IBM's Beehive, trustworthiness assessments were analyzed and the effect of trustworthiness cues were expounded. By exploring an integrative trustworthiness framework, it became clear that trustworthiness assessments within the online environments of social networking sites have little to do with the simplistic view of merely using ratings, testimonials and/or recommendations. This is especially true since the boundaries between offline and online connections are blurring. As such, the trustworthiness dimensions within social networking sites do not differ from dimensions in real life contexts. Users of social networking sites do have an implicit and deliberate arrangement of trustworthiness assessments, based on indications of ability, integrity, benevolence and social dimensions.

Since trustworthiness is a multidimensional construct, trustworthiness assessments within social networking sites are influenced by various factors. They can be categorized as personal characteristics, context characteristics, trustworthiness cues effects and system implications. Because online environments are becoming further interwoven with real life, individual real life processes and cultural products such as assumptions, expectations, media schemata and frame of references influence the set-up of the mental images which are created during a user's profile visit. Users' general attitude to trust (affective based trust) does not account for the variance in trustworthiness assessments in a social networking site, but it does for variances between different sites. The study's results indicate that these differences in created perceptions of trustworthiness exist due to context influences.

These context effects influence the variance in trustworthiness assessments and are founded on the aspect of institution based trust. This aspect includes users' perception of the social networking site, its underlying technologies and organizations, and its mediated limitations. The three studied social networking sites differ in their created perception of trustworthiness, due to their main purpose and public nature. The different target groups of social networking sites create various initial trusts in its members for instance. The results further indicate that the underlying technologies of the sites do

not affect trustworthiness assessments; they only offer structural assurances for these judgments instead. This is because the usage of these sites is becoming further intertwined in people's daily life and their underlying technologies are becoming commodities. However, the underlying organizations of social networking sites do account for the variety in trustworthiness assessments. This result becomes especially valid when focusing on the dependency on the context. Since IBM's Beehive is linked with the organization that provides job security and salary, it creates high initial structural assurances for trustworthiness assessments for instance.

The most significant variance in trustworthiness within social networking sites is based on the cognitive aspect of trust. It relies on information indicators that shape the trustworthiness assessments. As such, the 'witnessed presences' of actors (Nevejan, 2007) within social networking sites are cues for their trustworthiness attributes (ability, integrity, benevolence and social). Social networking sites are an ideal environment for these reflections, due to their variety of features and information sources. The influential presences and effects of these cues on the assessments of trustworthiness dimensions are linked with real life experiences and reflections. Hence, trustworthiness cues that affect these evaluations within social networking sites are in general equivalents for cues in real life, as exemplified by the next overview.

      In general, users revealed that a trustworthy judgment of someone's ability was influenced by the profile information, comments of others, blogs/forums, social connections, comments of others and the content of interactions. The users of social networking sites were influenced by a balanced presence of self-expressed principles (profile information) and principles that can be assessed by the unique contributions on others' profile (comments on others). Benevolence was primarily shaped by information that reveals how people act within social interactions by focusing on community memberships and comments on others. The social assessment was primarily affected by the social connections and comments of others (which display the connections that comment on the user's profile).

The effects of cues within social networking sites also suggest that the context and goal of the social networking site influence the importance of trustworthiness cues. Within internal social networking sites (which creates a dependency context) for instance, trustworthiness assessments are exploited in a more extensive manner where more cues have a substantial influence.

      Further, social networking sites' design, features and functionality have a significant impact on trustworthiness assessments and the influential presence of cues as well. Social networking sites offer a tremendous advantage for triangulation processes, since the social connections can be analyzed more straightforward within social networking sites than in real life. Social networking sites' frequently used features are more often related to trustworthiness assessments as well. Next, the prominent placing of cues affects the influence of them in a positive way. Additionally, the

functionality of these sites influence the effect of trustworthiness cues, since they sometimes guide/redirect users or restrict them with information expressions.

The design, features and functionality, on the other hand, also create some disadvantages for trustworthiness assessments. First, users of social networking sites experience different beliefs of situational normality (the belief that the digital environment is appropriate, well ordered and favorable for acting on these sites) and media schemata (related to a person's previous experience with media). This leads to a variety of trustworthiness assessments and different kinds of potential online misfits, which can be avoided in real life. Moreover, the public nature of social networking sites also restricts the supply of some information. This can lead to a decline in valuable trustworthiness cues. Furthermore, the trustworthiness' softer dimensions (integrity and benevolence) are better assessed during intensive interactions, and those are not always mediated via social networking sites but take place via other media and/or in real life.

It can be concluded that social networking sites offer valuable possibilities for trustworthiness assessments. The study also made clear that understanding these assessments is more than looking at online ratings, testimonials and/or recommendations. This is because these processes are influenced by various factors, through which online and offline aspects are intertwined. The findings are both interesting from an academic and social system design viewpoint. Since this study adds to current literature and research in an exploratory way, further research can apply similar studies on a large scale to deepen and generalize its findings.

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APPENDIX 1   INTERVIEW GUIDE

1. Introduction and usage

- Why did you become a member of [SNS]?
- For which purposes are you using [SNS] at the moment?
- How much do you use [SNS]?
- Were you aware of the terms of use [SNS]?
  If so, does it affect your usage?

2. Trustworthiness - general

- What do you see as a trustworthy person in general?
  When do you have confidence in one other?
- Which dimensions do trustworthy persons possess in your opinion?
  Which dimensions are the most important?
- Have you ever had a situation that you doubted a person's trustworthiness due to his/her profile on Hyves?
  If so, can you describe that situation?
  What made you doubt his/her trustworthiness?
- Suppose you´ll get an interesting offer for your personal life or career and you look him/her up on [SNS]. Which elements will you use within [SNS] to assess his/her trustworthiness?
- Why these elements?
- Can you connect those signals with trustworthiness dimensions?
  If so, how?

3. Affected based trust – Disposition to trust

- Do you believe that most professional people do a very good job at their work?
- In general, do you think people really do care about the well-being of others?
- Can you respond on this statement:
  The typical person is sincerely concerned about the problems of others.
- Do most people keep their promises in general in your opinion?

4. Institution based trust

- Do you feel good about how things go when you do activities on the Internet?
- In which degree are you comfortable having an online presence, to be active online?
- On [SNS], do you feel that most users would act in other users´ best interest?
- Does [SNS] makes you comfortable using it to transact online interactions?
- Do you think that, the Internet in general and [SNS] specific, is now a robust and safe environment in which to transact interactions?.
- Do you think that, in general, most posted information on [SNS] is honest?

5. Cognitive based trust

5.1 Trust – ability (*knowledge, skills and competences*)

- What do you think of perceived ability as an antecedent of trustworthiness?
- How can you translate this to the [SNS] setting?
- How do you see on which topic an user has knowledge of / is an expert?
- Is it possible to assess confidence about user's knowledge?
  If so, how?
- How do you assess on [SNS] if someone is competent in his/her current activities?
- What do you think of considering someone's skills by using information on [SNS]?
- Is it possible for you to see if a person is capable of performing future tasks?
  Which information would you use to assess if a person is well qualified for a job or task?

5.2 Trust – benevolence and integrity (*willing to do good*) (*ethical, honest and moral*)

- What do you think of benevolence and integrity as antecedents of trustworthiness?
- What does benevolence and integrity mean to you in the context of [SNS]?
- Do you think [SNS] users really care about the well-being of others?
- Is it possible for you to assess if someone supports and encourages others?
  Which information on [SNS] do you use for this assessment?
- Did you ever test someone's honesty on [SNS]? If so, why and could you describe how you did this?
- Suppose you want to rate someone's honesty in the future, how would you use [SNS] for this?
- Can you also do this for someone's reliability – if someone is behaving consistent within his/her life?
- Is it possible for you to tell which values and norms someone has by using a [SNS] profile?
  If so, how?

5.3 Trust – External / Social

- For which reasons do you look at the social connections of a [SNS] user?
- Which information do you use to assess someone's social connections?
- Which are the most the important and why?
- At which levels to you trace back these connections?
- Do you research online conversations / comments?
- For which reasons?
- How are you doing this?
- Do these social signals affect someone's trustworthiness in your opinion?
  If so, how?

6. Reputation

- What do you think about online reputations, especially in the context of [SNS]?
- Do you think that, in general, most users are aware of their online presence and reputation?

7. Improvements

- Can you think of other aspects on [SNS] that you can use to asses someone's trustworthiness?
- How do you [SNS] developing for the next two years?
- Do you think that there can be improvements in the design of [SNS] to enhance trust in someone?
  If so, which improvements and why?

APPENDIX 2A HYVES PROFILE PRINT-OUT

APPENDIX 2B LINKEDIN PROFILE PRINT-OUT

APPENDIX 3   THEMES AND CONCEPTS ILLUSTRATIONS

Theme and definition	Illustration
Social drivers *People become members of SNS because of social grounds.*	• "If you just get sufficiently requests to join, you'll think 'maybe I should become a member'" (Hyves user Pieter) • "You get a certain amount of requests of friends that are a member of something called Hyves. (…) [I start looking at networking sites] when three or four friends say that I should become a member" (Hyves user Pieter) • "[A friend of my] said that she discovered something hysterical where she could see where all her old school friends had ended up. (…) Then I found some friends indeed (…)" (Hyves user Lisa) • "On one moment I got a lot of requests that stated 'do you want to join Hyves, because a couple of friends subscribed your name and you don't have a profile yet'. (…) then I thought that it must have something attractive if she [a friend] is a member." (Hyves user Maud) • "I think I got a couple of invitations and then I thought how it could be of value for me (…)" (LinkedIn user Aziz) • "I signed up for beehive, because I probably read about it in a TAP-newsletter or something that was TAP-related. I have got a strong network of people who are interested in the latest applications to play around with. So I hear about stuff." (Beehive user Kathy. TAP stands for IBM's 'Technology Adoption Program') • "I became a member because I was on a conference in New York. The lady that was responsible for IBM research introduced us into social networking tools and how Beehive was different from the others and she showed it and I really liked it." (Beehive user Murat) • "(…) one of the people I got to know very well from different interactions in social software space was able to invite me." (Beehive user Lucio).
Disregarding of the terms of use *SNS users disregard terms of use because of a) they consider themselves normal actors or b) terms of use are often neglected. No disregarding can be present where SNS are related to professional dependency (e.g. job security and salary)*	• "I did not read it and was not aware what the underlying company was. Actually, I always have the idea that if a lot of people use it, it will be ok, so I clicked it." (LinkedIn user Maikel) • "Yes, they have a commercial approach. (…) But I trust it, especially if it is a large network (…) From the moment they will commercially abuse the system, so doing things users will not be satisfied with and will not agree with, they will hurt themselves, because they will lose income (…) [because] you will lose so much users with that." (LinkedIn user Martijn) • "My behaviour wasn't that extravagant as some other users. There wasn't any necessity to read the terms of use." (Hyves user Lisa) • The terms of use of Beehive are double-layered since there are also IBM's guidelines in place: "(…) the reason I ignore them [the terms of use] is that, for a number of years I've learned that the best way to use social software is using your common sense. There are things that you can do and there are things that you can't do. Like everywhere else. (…) Apart of the common sense in using social software applications, there's also the situation that you know you're working within IBM

	and you're working within an internal application and you know that above everything else, there are rules of engagement of the business guidelines." (Beehive user Lucio)
	• "I never look at user agreements or privacy things or that sort of things." (Hyves user Guido)
	• "I never look at user agreements actually." (Hyves user Pieter)
	• "I never check general terms of use." (LinkedIn user Erik)
	• "(…) it's standard to click on 'accept'" (LinkedIn user Martijn)
	• "I was aware that there were terms of use, but as with most online applications I clicked it and did not read it." (Beehive user Kathy)
	• "There are things I have shared outside IBM to my own personal e-mail things that I won't post in the Beehive thing. Because they are questionable things or, well you know what I mean. They could potentially be viewed as offensive. And vice-versa, there are things that I share within Beehive that I share within my network, that I would not share with my external network. Because it is not necessarily IBM confidential, but it is close enough to be save for it." (Beehive user Deacon)
	• "But still I use some precautious. When I am writing there, I stay professional. I do not use ambiguous words or say things that offend. So I do not make any irrational or political jokes. I always stick to the business conduct guidelines of IBM, that is very important." (Beehive user Murat)
Perception of the Internet *SNS users do not question the underlying technology of the Internet and accept it as a given.*	• "Yes, I've got a feeling of trust. But that is the same as with online banking; sometimes I hear that it goes wrong, but is never does for me, nor in my near environment. Yes, I am a level-headed person in this case. Everything can be resolved right?" (Hyves user Guido)
	• "It's a given. Because maybe something negative about me will be on the Internet, I can't start a crusade against the Internet. Anyway, I haven't got the interest and skills to do something about it." (Hyves user Lisa)
	• "I think of the Internet in general as a safe place. I'm totally not skeptic about the Internet. You just have to keep focused from the moment you're on the Internet and you have to know that information can pursue you. (…) I also have the feeling of 'that would not happen to me'. I also will not do any stupid or crazy things. I have sent some confidential things, and of course I hope that they will not leak out, but I don't bother at all. That ´s simply the trust I have in the Internet" (LinkedIn user Maikel)
Perception of SNS *SNS users´ perception of the SNS depends on the purpose and public nature of it.*	• "Hyves is more about fun and goofing around, less serious. When I see something on Hyves, I take that less serious than LinkedIn. It is more valuable for me if I see on LinkedIn that someone has a new job, an event occurs, or people connect with each other, than when I see that on Hyves." (Hyves user Pieter)
	• "Hyves is not a site were strangers look each other up. So a certain degree of trust is already available. That makes it different from a dating site. There you question more if you can trust that person." (Hyves user Lisa)
	• "I've got a feeling that they [people in general] don't take Hyves that serious." (LinkedIn user Aziz)
	• "I thought it was sterile and I do think that's still the case, but LinkedIn also

develops itself and there are more and more additional amusing things emerging. But I thought it was very sterile. Of course it was white and it's wasn't very exciting to see (…)." (LinkedIn user Maikel)

- "Because it is an IBM site, I have tended to trust the people in there. For example, when I am outside in an external network such as Facebook, I start of not trusting anyone except those that I am certain of that I know. All the people I do not trust and do not have a contact with, except for a little tick here or there. Within Beehive I trust it, since IBM employees are working for the same goal, that is, the benefit of IBM as a whole." (Beehive user Deacon)

- "Within this company and other companies, we suffer from this policing of interactions of different people. If someone goes well beyond the point of interactions by saying something they should not do, almost immediately you have got someone's attention and reporting that individual to the manager 'this person has misbehaved'. I try to work and think that I work with a group of professionals. And I don't want to report them, because I think it's up to their own judgment to decide whether what they have done is right or wrong. And in most cases, they self correct their own mistake." (Beehive user Lucio)

- "Because it is IBM, I sort of assume that a) it is a research project and they can do whatever they want and b) because it is IBM, conduct yourself like you are being in an office. That being said, I am a pretty open person. It does not stop me, my impulses are not that outrageous, but I do not let them inhibit me [the terms of use]." (Beehive user Kathy)

- "In order to use Beehive fully, one has to make an a priori assumption that you can trust people out there." (Beehive user Deacon)

Sense of information control *SNS users highly value a sense of information control, although real control does not have to be fully present.*	- "There was a woman who posted a large story about a person in a testimonial, that they have had lots of ups and downs and arguments about this and that. I thought 'you're not putting that on the Internet, that's private'. I control what I want to sent via the Internet." (Hyves user Lisa) - "Yes, I think of Hyves as safe and trustworthy because you can control which information you display or not. I think that's very pleasant and I feel safe with that, absolutely." (Hyves user Maud) - "What I experience is that if I keep things private on Hyves, that's definitely possible, I mean, you've got the options to do it. So it is definitely possible and it always went correct for me; if I sent private things, they stay private. (…) Yes, I definitely have a feeling of trust." (Hyves user Guido) - "Naturally, you've got a hand in what will be displayed." (Hyves user Lisa)
Sincerity of information *SNS users experience the self posted information on SNS in general as sincere and authentic and use this within their trustworthiness assessments.*	- "Of course it's not objective, because everyone presents themselves nicer. But let's assume that everyone does that, then I still think that you can get a lot of information about someone." (Hyves user Lisa) - "(…) you can protect yourself moderately, you can simply present yourself the way you want to." (Hyves user Maud) - "If you read my information now, you'll know a lot about my life (of course not one hundred percent)." (Hyves user Pieter) - "I think, from that information, you can conclude exactly that such a profile justly

reflects the kind of person." (Hyves user Guido)

- "For external people the content looks more reliable than a normal CV (…) because it is online and other people can say if it's true or not. (…) just because the information is public, you create a transparent layer on top of it. Lying is therefore difficult" (LinkedIn user Martijn)
- "Maybe I'm wrong, but you can easily estimate if it's the real deal or if it is someone that shouts from a bunch of rooftops without much content." (LinkedIn user Maikel)
- "It does not correspond for the extremes, but in general it does. It is close to how that person is." (LinkedIn user Erik)
- "I think you can approach reality real close most of the time. In general you're in the right direction." (LinkedIn user Aziz)
- "I do not see a lot of people acting in a way that makes me believe that they are developing an inconsistent profile. Most of the interaction on Beehive feels quite genuine. It really does, it feels quite genuine to me. Authentic is the right word for most of the conversations that happen." (Beehive user Kathy)
- "In general it will be honest. The reason it will be honest, is one of the known rules from the web is that if you are lying, people will find out eventually. And when they find out, it will not be a pretty picture. So people learned that they maybe can lie, but that they have to be very good at lying." (Beehive user Lucio)
- "For me, my profile tells a lot about me so that when people look me up they will know that I am well trusted." (Beehive user Deacon)

Expression of connections *Social references within SNS are important sources for trustworthiness assessments.*	"(…) on a sudden moment you are looking at relations. Most of the time, it's even important on first acquaintance. (…) I think I've got an unaware circle of people I trust, privately and businesslike. A person is almost ok straight away if those people will introduce that person. Your check will be bigger if a person is a third or fourth degree in your network. " (Hyves user Pieter) "(…) I think [I get a feeling of trust] from my social network, if people have some experiences with that person (…) I look at certain networks or people that I value, and then I will trust people earlier." (LinkedIn user Maikel) "I also have situations that I meet people out of the blue and those people don't know people I know. I find it hard to continue with that person in those cases. (…) then I will get insecure." (LinkedIn user Aziz) "One other element that I use in trusting someone, is that my network knows that person or not. (…) That tells me that that person has got something worthwhile for me to investigate further, because my connections find it valuable to establish that connection." (Beehive user Lucio) "Sometimes I see a too small number of recommendations. In that case I will ignore them. One or two recommendations say nothing. (…) There have to be at least five or six [recommendations]. The person has to be a well networked one." (LinkedIn user Aziz) "How does someone fit in my [LinkedIn] network, is he a first-, second- or third-degree." (LinkedIn user Martijn) "Sometimes people's connections can give you an idea what they are there for." (Beehive user Kathy)

	• "I always do some triangulation by using shared connections." (Beehive user Murat)
Mental images and assumptions *Due to cultural expectations and assumptions, SNS users build mental images of others and use that in their trustworthiness assessments.*	• "If someone is in there [Beehive] that means that person is in social networking, collaboration, sharing and my trust increases. If they are not on Beehive, they are behind. If someone is in the collaboration and sharing area and that person is not in Beehive, I think something is wrong. It is the only tool within IBM. If someone is not there, they are missing a lot." (Beehive user Murat) • "Unfortunately, I'm that kind of person that, if you don't have anything online that is searchable by someone else, I tend to think that you've got something that you want to hide. And that means that I don't want a trusting relationship with you." (Beehive user Lucio) • "(…) I think that people who put a spars profile are doing it primarily because they don't think Beehive is important. (…) I don't look at a spars profile and say 'this guy isn't worth very much, because he has not anything interesting out here'. Different people are using different ways and that's it." (Beehive user Deacon) • "If you see that that person visits 'het feest van Joop' ([a local bar-dancing], you know that that person differs from someone who visits 'de Flexbar' [a local club]." (Hyves user Lisa) • "(...) if the presence matches with how he appeared earlier. Naturally, it coheres with expectations. If someone's online appearance differs from how he behaved offline, he will burn his fingers of course." (LinkedIn user Martijn) • "[You can] profile the person. As with people in real life, you develop an impression of that person and unless you engage in a conversation with [them], all you have are assumptions. But, I think it is probably, this is how people work. It might not be fair, to sum each other up, but that is really how we work." (Beehive user Kathy) • "Through their profile it gives me the opportunity to build a mental image about what that person is, what they do, how they share their work and whether I can go ahead and trust them or not [when engaging a business relation]." (Beehive user Lucio) • "(…) if they do not put pictures, I do not feel very comfortable. Then I think the person is probably hiding himself for something." (Beehive user Murat) • "One thing I can say how I use photo's to tell people, is that if an individual posts a lot of pictures of themselves or their own pets, or people post a lot of family pictures, then I know that for that individual pets and family are very important." (Beehive user Deacon) • "And what they did, was that they made automatic macro's and robots and plenty of copy and paste. That showed me that that person was not to take value of this social network, but just trying to stay ahead of everyone else. Just showing how good they were, while in reality they went to be the opposite because that was identified as negative behaviour (…)." (Beehive user Lucio) • "To give you an example. If someone shares a picture and it's a cartoon, it tells me several things. It tells me first that person does not think serious of having a profile with a professional look. Secondly they don't want to unveil their online identity. And third, they prefer to value more the conversations then the appearance. That is for instance an example if someone shares a cartoon." (Beehive user Lucio)

	• "I invited him to go on Beehive, but he would not come. So, he would not establish any relationship. Obviously, the person is not collaborative and I lost my confidence in him and I will never approach him." (Beehive user Murat) • "You can see from the tone why a message is written." (Hyves user Guido) • "(…) things I see on Hyves are most of the time a confirmation of what I suspected on forehand. (…) you meet someone and you've got the feeling that someone is a braggart and it happens to be a player when you look on his Hyves profile: wrong dance parties and playing wrong darlings. That strengths you're feeling. You already had that feeling and it seems true on Hyves, so that will be real." (Hyves user Pieter) • I run across some pictures of which I made an estimation and the real person happened to be completely different. It was a very frigid and ugly picture, while it was a very nice and spontaneous guy. I thought that he'd be a rigid guy, when he looked very still and frigid on that picture." (LinkedIn user Maikel)
Establishment of trust *SNS users establish a general and orchestrated feeling of trust(worthiness) after trustworthiness assessments.*	• "I am not aware of it, but I use a sort of scan to see if a person is trustworthy or not. That deals with clothes, attitude, the way of talking and the way of looking (…). It is a combination of the sum. A feeling comes into being after a while. I greatly rely on my feeling." (Hyves user Pieter) • "It is hard to put into words; trust is more of a feeling. It is not really measurable. (…) Again, there has to be some disposition to trust, so I have to assume that they are honest, unless it is obvious that they are not. (…) So I start trusting them and then I watch their behaviour. However, if their behaviour unfolds over a period of time, then I adjust my feelings of whether I trust them or not accordingly." (Beehive user Deacon) • "(…) trust is an important issue and it is in line with risk taking." (Beehive user Murat) • "You've got (…) a feeling about someone and your actions are often based on that. It results in the fact that sometimes, you make a wrong assessment and then you get screwed (…)". (LinkedIn user Maikel) • "I am very much intuitive. My intuition tells me if that person is right or wrong." (Beehive user Murat) • "Of course it´s always a matter of feeling." (LinkedIn user Martijn)
Building or breaking trust *The building or breaking of trust(worthiness) is arranged by a mixture of broad themes.*	• "There has to be some sincerity. (…) There are people that have profiles with a lot of information on it. That person has got less to hide, because you are aware of it on the moment you post a lot of information." (Hyves user Maud) • "If someone approaches me on a different spot than I would expect, I won't trust that person easily. (…) Following, I will look at the background of that person." (Hyves user Lisa) • "[I will look at] his history. [Seen] from my social network, if people have experiences with that person, in that sense history. (…) [I want to know] if he's honest, if he sticks to his word, if it is a nice guy. And then I would look to things he's connected with." (LinkedIn user Maikel) • "If the story someone has is correct and seems sincere." (LinkedIn user Erik) • "I think it would be someone who would be gentle to another person. (…) when I interact with them, I sort of putting myself in their hand. I put my feelings in their

	hands and I want them to be careful and respectful with that, on the side of caution. (Beehive user Kathy)
	• "(…) I need to know from that person what that person is been doing. I need to have a kind of resource or information that would allow me to get details from that person. (…) If I can work with that social capital of the actual individual that has been shared on Beehive, that would tell me that I can trust that person or not." (Beehive user Lucio)
	• "There are many factors. But my key factor is a quick conversation and looking if the person is logical. I ask a few questions. If it sounds right, I trust that person." (Beehive user Murat)
Distrust *Causes of distrust within SNS are broad dispersed.*	• "Yes, not necessarily because someone has contributed to his or her profile, but the activity, the sort of tracks a person leaves around. (…) Sometimes I am in the middle of a conversation and someone drops something that is terribly blunt. Not necessarily rude, but not as careful as it probably should have been phrased. And I tend to remember those people as people to be cautious about, not to draw their fire or attention." (Beehive user Kathy)
	• "Yes, there have been different situations where people have been commenting or have been misbehaving on Beehive. And I would have rephrased 'misbehavior' not by saying the wrong things, but basically doing the wrong things," (Beehive user Lucio)
	• "(…) so I looked him up. Only his name and his company were mentioned there [his LinkedIn profile]. (…) It [the profile page] has to show that someone put some effort in it. LinkedIn doesn't have any value otherwise (…) I got a negative feeling about him." (LinkedIn user Erik)
	• "There was a mister I came into contact with, who was telling a very good story via his website and e-mails. When I was looking at his background and CV on LinkedIn and saw his website, I thought that it was not as big as he made out." (LinkedIn user Maikel)
	• "(…) I think that an untrustworthy person will in general be the kind of person who is aware of such social networking sites and won't give many details." (Hyves user Maud)
	• "No, things I see on Hyves are most of the time a confirmation of what I suspected on forehand." (Hyves user Pieter)
	• "And even in the case of a nasty comment left on my page, he did have some kind of a point, but he stopped the conversation with me. I had a point too. He disagreed with it, and I can see why. But he somehow misunderstood me and there was a conversation that we could have had, that after his comment on my profile I was unwilling to have. I did not see any potential for the conversation to go anywhere. He did the equivalent to give me the finger and I did the equivalent to give him the finger back. That was the end of that." (Beehive user Kathy)
Affective based trust *SNS users possess general dispositions to trust (based on attributes of the trustor), which*	• "Some people are more forward socially than others and I am one of those people that tend to lean back a little bit before I get to know people." (Beehive user Deacon)
	• "(…) I do have that feeling yes, I think you're pretty negative, if you don't have that feeling." (Hyves user Maud)

influences their trustworthiness assessment of others.	• "Yes, I trust nearly everyone, 99% of the people. There are exceptions." (Beehive user Murat) • "Within IBM I like to think so. The world in general I would say most people are reasonable trustworthy." (Beehive user Deacon) • "In order to use Beehive fully, one has to make an a priori assumption that you can trust people out there [within Beehive]." (Beehive user Deacon) • "I think I won't trust unknown people quickly. I will have my considerable reserves. Especially if it is at an unexpected spot." (Hyves user Lisa) • "It depends on the setting. For instance, when I look someone up who operates in the fashion industry and he/she has a boring Hyves profile, the expectation differs from what I come across. Then there is a misfit, I will be more on the qui vive, and I will try to discover what the reason of that mismatch is." (Hyves user Pieter) • "One of the features that I really like from Beehive itself, is how you can build up a mental image of people's passion by looking at the pictures." (Beehive user Lucio) • "If someone mentions a book from 2001 in his recommendations, and it's completely outdated, it influences. That's one of the blocks that give a negative coloured impression for instance." (Hyves user Pieter) • "I also often look at education. A little odd, because some people received an art history education and then I think ooh, this is a very autonomous person." (LinkedIn user Aziz)
Institution based trust – Structural assurance *SNS users´ belief that favourable conditions are in place within SNS to establish successful networks influence their trustworthiness assessment of other users of that SNS.*	• "Yes, I do trust it very much. I take the view that as long as you passwords... There are so little people who can discover things without knowing passwords. The whole idea of hacking… People often e-mail us 'I've been hacked', but then they just told their password to their ex-boyfriend. That is something different." (Hyves user Lisa) • "Yes, they have a commercial approach. (…) But I trust it, especially if it is a large network (…) From the moment they will commercially abuse the system, so doing things users will not be satisfied with and will not agree with, they will hurt themselves, because they will lose income (…) [because] you will lose so much users with that." (LinkedIn user Martijn) • "Yes, it is internal and I have no concerns." (Beehive user Murat) • Not so much that it is an IBM tool per se, but the fact that it is limited to IBM personal use. In other words, if they brought in an external product and used that instead, I don't think it would matter. What matters to me it that it is internal to IBM only." (Beehive user Deacon) • "Apart of the common sense in using social software applications, there's also the situation that you know you're working within IBM and you're working within an internal application and you know that above everything else there are rules of engagement of the business guidelines. So like I said before, there are things you can do and things you can't do. And that applies to every IBM tool." (Beehive user Lucio)
Institution based trust – Situational normality *SNS users´ belief of the situational normality of SNS*	• "One point I would like to make along these lines, is that actually Beehive is better for some people regarding making connections within IBM and anything else would be. In Beehive you can put yourself in your profile and then let people come to you as opposed to go around and hunt for people yourself. If an individual is very

	introvert as some IT architects are, it is rather difficult to mentally go to Bluepages, look up somebody who is an IT architect and call that person, introduce yourself and say 'hey I would like to know about the IT architecture profession'. A profile with a comment about you right up front that says 'I would like to know more about IT architects', people contact you and you don't have to make the first move." (Beehive user Deacon)
influence their trustworthiness assessment of others.	• "If I would look for a developer, I would definitely try that via LinkedIn. You can easily place an vacancy. And why not? LinkedIn is a trusted environment and Monsterboard [a Dutch online job board] is completely new." (LinkedIn user Erik)
	• "It also depends on the sifting of people. Some business contacts are using it very active, but other business contacts that I trust greatly and are tremendously social connected have a Hyves profile which isn't a reflection at all of who they are." (Hyves user Pieter)
Institution based trust – Media Schemata *The cognitive aspect of media schemata influences SNS users′ trustworthiness assessments.*	• "Because I am an IBM'er, there are times I am overwhelmed and there are times I have some time to play. I tend to follow links, sign up for the service, take a look to see if it is immediately obvious where I use it for, or do bookmark it and look at it later. And Beehive is one of those things that I signed up for immediately, looked at it and said, it is even yellow not even blue, this will take a lot of effort on my part. It is not obvious how it fits in W3 and stuff I used to see around in IBM, so I tabled it a later time. So I did not become active until a couple of months later." (Beehive user Kathy)
	• "But there are few people that do not understand social computing. One example, I met a speaker on a conference in New York and he was on Beehive and I said hi and I had some sort of connection with him. I invited him to LinkedIn. And he said he does not know me. Then I found out that he did the same thing to others and I did not understand the motive and I lost my trust in that person. I do not write him anymore." (Beehive user Murat)
	• "Right now for instance, I have made a shift on using Beehive. I used to share lots of stuff related to my own persona. Building a persona profile, showing people who I was, things I am interested in, places that I have visited, introduction myself into different ways of collaborating with other people. That was initially my way of interacting with Beehive. And then I started this quest away from e-mail, and from that moment on I made the switch to Beehive more as a business tool, instead of a personal tool. I still share pictures or stuff related to me, but in most cases I use it as a business tool: participating on events, showing comments on Hive5es etcetera. That's a bit a transition I've made from a personal tool to a business tool. And now I consider it for the offline interactions perhaps the number one tool that I use." (Beehive user Lucio)
	• "I have had one incident once that disturbed me to share. I put a picture – a few years ago, my son became four years old and we made a picture where he is showing his muscles, very innocent. Then I putted it on Beehive and someone got an offence. They complained and the Beehive team approached me and said that photo is ok, but the thumbnail has got some associations. Then I looked at the picture and said 'Ok, I

respect' and explained them and I said I like to keep this photo because everyone likes it. It is a scientific one, it's in a children's museum. And if children can see it, it should be ok for adults.

The next day, the person from the US called my HR partner in this country and saying that I am uploading irrational materials. My HR partner approached me and said 'What the hell are you doing? I don't expect this from you.' Then I explained to my HR partner that that was not the case. So the guy that was leading the team sent an e-mail saying I did everything right. However, I really lost my confidence, trust, for a while in those sort of people that create trouble. I removed the whole picture, no problem. What upsets me is people passing me without coming to me and directly go to HR. That hurts me." (Beehive user Murat)

- "Some people do not know what social networking is. Sometimes, we make jokes and things like that and they do not see the value of it. Then they just close it or do not continue." (Beehive user Murat)

- "There was a group of people in the US. I was very successful in Beehive. They said 'How come, in one month one person became a superbee'. I said because I am contacting people. I am reaching out and they said that I was doing spamming. And they started attacking me. I welcome people and ask about some stuff. And then they said, if you keep writing this to everyone, it is spamming. I said no it was not. So we clashed. And one of them continued and sent me an e-mail and I explained what I felt and do and he changed. We became good friends after that. I asked him why he was attacking me and what the motive was. Jealousy? He said because they had been on Beehive for seven months before I arrived and they could not achieve a certain number. I explained to him and the group that it was not a competition. (…) All I am trying is reaching out as many people as possible and enhancing my network. He understood that genuine intention and trusted and now we are good friends." (Beehive user Murat)

| **Cognitive based trust**

SNS users´ cognitive based trust relies on cues and influences their profiling activities and trustworthiness assessments. | - "(…) [it is a] first impression, because you can see if the page is taken care of and if there are any crazy things on it. (…) I think you can collect some information were he studied or to which school he went. You also can see a lot from the people he has contact with, what kind of friends he has and what kind of messages he sent " (Hyves user Guido)

- "First I look at which public hyves [communities] people are members of. (…) Then I will always look at education. (…) Then some profile information and spots [e.g. favorite restaurants, bars and clubs]." (Hyves user Lisa)

- "I look at what someone has done, what his passions are, what his hobbies are, if he travels, which education he has, if he has done some extra things (…)" (Hyves user Maud)

- "I use photos, eventually other widgets that are placed on their profile and I also read comments." (Hyves user Pieter)

- "I solely look at work experience. Maybe a little at who he/she knows." (LinkedIn user Erik)

- "Anyhow, first I will look if I know people he knows. (…) Next, I find recommendations and things someone has done in the past important. I also look at |

education most of the time. (…) I do scan someone's complete LinkedIn profile (…) Just reading blocks." (LinkedIn user Aziz)

- "First I will look at where that person is coming from, is he working at a great company (…) Has he done some exciting things in the past, does he have an exciting job (…). An authority in a certain area (…) [you can asses expertness if] you look at his connections." (LinkedIn user Maikel)

- "Within LinkedIn my checkpoints are: (…) where do I know that person from and how does he relate to my network." (LinkedIn user Martijn)

- "(…) a lot is conversational. Someone puts something out there and other people may respond and you could get to see this kind of person. (….) By reading the profile, this gives some background about how that person's life is like. And their hive5s and the events they feature and the sort conversations they get in, in terms of goof around, events, hive5s, you can kind of see where the person is coming from." (Beehive user Kathy)

- "Since I am an IBM'er, I will check the Bluepages [an employee directory]. That is my first trust. The other trust is people putting up their pictures." (Beehive user Murat)

- "(…) Beehive is great, because it tells me all the bits and pieces of information about that individual (…)." (Beehive user Lucio)

- "I would probably look them up on Bluepages first. Within Beehive I would take a look at their comments related to other people and their Hive5s to kind of get a feel for what they are interested in, and what their general overall personality is like." (Beehive user Deacon)

| **Trustworthiness** *Trustworthiness is a belief that someone is worthy to trust – a character that the trustee posses.* | "Things like social skills, if someone behaves really polite, how he associates with others, attitude, things that are all unconscious, if you trust someone or not." (Hyves user Guido) "An unconscious feeling if someone is right up in your street. In your normal environment. Then you will trust someone sooner. People who are close to me, people look like my friends. People within my youth/student culture, parents of them." (Hyves user Lisa) "There has to be some sincerity anyhow and that sincerity shows itself often within body language. (…) Someone can possess a confident certainty, that is pleasant, because someone has often thought about it very well, but it can also be over the top, by which some nervousness can exist. That's because someone didn't prepare himself very well (…) So I pay much attention to that, because it influences the basis for trust. Additional spontaneity. I think I will trust someone more rapidly if he comes across spontaneously, then someone who is very quiet, has trouble with communicating, because you become very suspicious I think." (Hyves user Maud) "I think I'll look at looks. Thus, how someone positions himself in relation to others. (…) Then the moment you speak with the person. Then it's really a combination of words and certain 'common ground'. At a given moment you notice which aspects a person has in common. Perhaps it are small doubts which are the decisive factors." (Hyves user Pieter) "What others say about him. Generally, I do have a good conversation with him, |

	and then it clicks. Trust does not matter for me if it doesn't click." (LinkedIn user Aziz)
	• "If the story someone has is correct and sounds sincere. I´m always a little suspicious if people are excessive enthusiastic. When it´s not sincere, but it´s more about being enthusiastic. You often notice if it is sincere or not." (LinkedIn user Erik)
	• "[I want to know] if he's honest, if he sticks to his word, if it is a nice guy. And then I would look to things he's connected with. For instance a company and what I think about that company. You can see from a certain network of persons that I value, then I will trust that person sooner." (LinkedIn user Maikel)
	• "Basically what I am looking for in trustworthiness, is that if I tell somebody to keep it between themselves they do, if I ask to pass it along to somebody, they do. In other words, we can pretty much understand that one of us makes some sort of request and the other one will follow through on that request. And the second aspect of it, is that we know that the other one is honest in their opinions. (…) Again, there has to be some disposition to trust, so I have to assume that they are honest, unless it is obvious that they are not." (Beehive user Deacon)
	• "I think it would be someone who would be gentle to another person. (...) My definition of trustworthy has less to whether someone is going to go take information for me and repeat it. It has more to do with, when I interact with them, I sort of putting myself in their hands. I put my feelings in their hands and I want them to be careful and respectful with that, on the side of caution." (Beehive user Kathy)
Trustworthiness – Ability *SNS users´ belief of people's ability influences the trustworthiness assessment.*	• "The context is very relevant for me. An example if you're talking about skills is making a website. Someone can for instance design a website really good. Then you'll look at the skills, but a person doesn't have to possess some knowledge for that. It could be the most stupid guy of the world, but if he can design very well – which is more a skill than some knowledge – then it's fine. (…) For instance the books they mention [on their profile], if someone pimped his Hyves page, the amount of communications via krabbels and wiewatwaar, until picture that were taken." (Hyves user Pieter)
	• "Work history. What someone has done online, software applicated is easy, then you just have to look at the portfolio. Economy/business related is very hard to assess. (…) Technical people are also moderate easy, that's just checking one on one. (…) Yes, you can see a lot here. I also look at specialities, what people say, what they don't say." (LinkedIn user Aziz)
	• "Yes, if someone does something and is ambitious and achieved a lot, then I'll trust people more compared to people who don't do anything. (…) I would rely on work experience and look at which functions he's had. If they match with the idea I've got about those skills. I assume someone knows a lot, if that person has been a consultant specialist for six years." (LinkedIn user Erik)

- "It depends on the situation. If we are talking about a technical issue, yes their knowledge of the subject would be extremely important. Talking about something like 'how's the weather there?', it really does not matter.

 (…)

 The half of the reason I use Beehive is to communicate with people whose jobs or positions are interesting. Because of that, it adds to the trustworthiness if they be doing it for a long time or have an expertise in it. I hope it does, because I am depending one. My position as a new IBM'er since two years, I am hoping to understand that I do have some expertise and have some value, even I am new to IBM. So I am sort of hoping it works both ways." (Beehive user Deacon)

- "I think that trustworthiness probably trumps ability, as in the case of the guy I was talking about, where the conversation ended. What you are able to do is irrelevant if you can't have a conversation with people, I believe. So, if you prove yourself to be questionable in the trustworthiness department what you are able to do it does not really matter, because you are run into people that do not want to work with you.

 (...)

 Yes I think so, because a lot is conversational. Someone puts something out there and other people may respond and you could get to see this kind of person, is this the person who… You can see people that put out an idea and do not stray from it, they are totally immune of conversation and examination of that thing they put forward. So people challenge it, try to give different viewpoints and they stick to their guns. I tend to that someone is not going to be a terrible capable person, because they are not be able to be objective and reflective. Then there are other people who put something out there and really got into a discussion where they can explore 'maybe you're right, maybe what I said first was not actually not the right thing or here are some additional resources to back up my original assertion, thank you for the resources giving me, that reminds of another article. You kind of see how well they think through a concept and how familiar they around or just be in a conversation that they are no business in. You are be able to bring those things to life in Beehive I think." (Beehive user Kathy)

- "That is one of the critical items for successful trustworthy relationships, because in most cases you want to know what someone is up to; whether they have the right knowledge and attitude. The fact that people are able to use applications online, or social software applications online, to spark that initial bond is very crucial.

 (…)

 One of the things Beehive is good at from an ability perspective, is how easy it the sharing of information and knowledge makes. It goes back from the perspective that you have to need a level of privacy. Some people share far too much stuff, and there are people that share a little bit of stuff. That's fine, that is no problem. The interesting is that they share, to put something out there. And Beehive does make that very help, very powerful. I have got connections on Beehive that show their connections and the events they participated on. They don't have photo's and they don't have bars turned on, but they decided to go that way and I respect that. At least they share their connections and on what they participate on. They give me some

	ground that I can help build up if I trust that person or not. Someone who does not have anything out there, has a tough time for me with that person." (Beehive user Lucio)
	• "I always observe people's skills and competences and they match in some trust issue. If someone is very skilful and capable and they can share that with me, for example during a conversation or work, it increases my trust in that person. (…) Yes, I look at the profiles. Some profiles are really well written. Writing skills tell me a lot. The way they use their words. Also, references they put. Beehive is also related to Fringe and Bluepages. I look at these. I also use cross-referencing, I always do some triangulation by using shared connections." (Beehive user Murat)
Trustworthiness – Integrity *SNS users´ belief of people's integrity influences the trustworthiness assessment.*	• "If I talk about the benevolence of others, that comes back regularly in krabbels [comments] of people. Just looking if someone is attentive, 'is your car already sold?', 'how are you doing?' and 'get well soon , that kind of things is pretty integer." (Hyves user Maud)
	• "Yes, I do find it very important that people have certain principles, because I'm very fundamental in certain areas. And I do want my friends to be that too. I often also notice that that belief is not shared 100%. (…) they [Hyves users] are often vague acquaintances so you can make a couple of jokes or sent crazy messages or whatever. I think it's easier to cross a line because you're behind a computer." (Hyves user Guido)
	• "For instance, there is someone who is an illustrator. She's designing logo's, very well-known in the industry, but she doesn't keep her promises. She delivers really excellent work, but she doesn't keep her appointments." (LinkedIn user Aziz)
	• "(…) integrity is a given. If integrity is not there, I would not establish a relationship. (…) I always check what people are saying in Beehive. Some people say different things on their profile and have discussions in different forms. The way they deal with other people and the way they express themselves gives me clues if the person has got integrity or not." (Beehive user Murat)
Trustworthiness – Benevolence *SNS users´ belief of people's benevolence influences the trustworthiness assessment.*	• "A friend of my is in the dance scene and when he's got a cool new video, he posts it. He knows I truly value that (…) That's with a lot of other people too. I try to post some funny videos and hope that people value that too. And I will always share thing if there are communities where I can share." (Hyves user Pieter)
	• *"Is it possible for you to assess on LinkedIn if someone supports and encourages others?* Yes, I look at his current company for instance. If they work for a start-up company. I also look at groups. (…) Groups don't say much, but it's interesting to see who is making the associations." (LinkedIn user Aziz)
	• "(…) it plays a big role. If people are open and want to cooperate for little things such as 'I will sent you that', I think that's very positive. I value it if people come across as integer and links actions with that. *Could you link (…) benevolence with a LinkedIn context?*

	Yes, I can see if someone commits himself if I see that he answers a lot of questions. I know that he puts in a lot of effort in it, if he recommends a lot of people." (LinkedIn user Erik)
	• "My method of proving my self's trustworthiness to others is do what I say that I am going to do, to be upfront with people, and if I can't help hopefully I know someone that can. Trusting me is about going to me for answers, and if I don't have answers, I can at least points them in the right direction. (…) So I start trusting them and then I watch their behaviour. However, if their behaviour unfolds over a period of time, then I adjust my feelings of whether I trust them or not accordingly." (Beehive user Deacon)
	• "I am from the liberal art side of things and communication. But I cover technology and innovation for W3. So I am an expert in nothing, but I can cover a lot. I am really dependent on finding people who not only know their stuff, but are patient and more important kind enough to take the time to explain these things and come to help me understand them. That is asking a lot of a person of IBM. Any expert within IBM on any subject can find other good numbers of experts to wrap with, like-minded people with the same depth of understanding about a topic. I am not one of those people. But I do use Beehive to find people to come to understand things. If I have got the sense that I am dealing with a person that is very impatient and really wants to deal with only other experts, you can see that often. In tracking how they participate in conversations and the kind of conversations they participate in, and the kind of messages they leave on people's profiles. Opposes to a tool like fringe, were all you are doing is relying on tags to figure out who knows what, this also gives you a picture of whether this person is worth your time and is approachable." (Beehive user Kathy)
Trustworthiness – Social / External *SNS users´ belief of people's social dimension influences the trustworthiness assessment.*	• "Hyves is all about friends, popularity. And it gives some clues about someone's pleasance if he/she has got five hundred friends." (Hyves user Guido) • "I mainly search for that person, and not that much on the links. Only on direct links. Does he know someone I know. That´s important for me. And with whom he is networking. It does happen sometimes that someone is connected with someone else (…) if I have spoken with him and he said he knows the other barely, his value on such a social network will drop. Someone does not act serious on LinkedIn in that way." (LinkedIn user Aziz) • "(…) the authority of someone. And I will admire that person more if he/she knows five people I admire. *At which things do you look then?* How much I value that person really. Someone's authority will be determined, among other things, by the authority of his connections. (LinkedIn user Erik) • "It does sketch a picture of course when I see that someone is connected with a group I find interesting. That can create trust in certain circumstances. (...) it shows something about you, because you're being accepted for a group in fact." (LinkedIn user Maikel) • "I really do let my connections do the walking for me on Beehive, I do not go and

cruise Beehive the way I used to see what is going on. I really never do that. I rely almost exclusively on my connections and their activities to turn things up for me." (Beehive user Kathy)

- "I sometimes check what sort of contacts people have. That gives me an idea. *On which aspects do you look then?* Like what people they are talking with. For instance, I am after an IT architect. If that IT architect only goes on with other IT architects or also other people?" (Beehive user Murat)

- "Sometimes people's connections can give you an idea what they are there for. There are a couple of people who seem to be on Beehive to collect the prettiest IBM'er out there. Who can blame them? They are trying to use it as a LinkedIn space. They are trying to get something out of people there. As opposed to contribute and find people to collaborate with. They use it at as a, literally as a networking space. To climb a latter that I just not do. Those are people that I tend to.. Again, I am observing a prejudice when I do this. I see that and I sort of think that is someone I do not really want to follow." (Beehive user Kathy)