JOINING, PARTICIPATING IN AND WITHDRAWING FROM A SOCIAL NETWORKING SITE

By

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Declaration

This thesis and the accompanying publications have not previously been submitted by the candidate for a degree in this or any other university.

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Abstract

This thesis contributes to our understanding of the user behaviour on social networking sites by studying the users' life cycle. More specifically, it examines the motivations for the three key stages of this cycle - namely joining, participating and withdrawing. Previous literature on the topic puts strong emphasis on the participation stage, typically focusing on general purpose SNS, such as Facebook and Myspace. As a result, there is a dearth of research on the other two stages of the life cycle. Also, there are only a few studies on specific purpose or niche networks. Attending to these gaps, this study's research questions explore the main motivations that drive a person to join, participate and close their account in an SNS. The work on both the first two stages, i.e. the study of joining and participating in niche SNS, is based on the Decomposed Theory of Planned Behaviour, and the Uses and Gratifications Theory respectively, using Structural Equation Modelling in both cases. In order to gain more detailed insight into user withdrawal, a different strategy was adopted that was based on a qualitative data collection that was analysed quantitatively using Social Network Analysis. The theoretical framework was informed by Social Identity Theory, using the disidentification concept to explain user withdrawal. The data collected for the research comes from primary sources, having SNS users as a sample frame for the first two stages and former SNS users for the last one. Consistent with the methodology proposed, the data was collected using online questionnaires for the research on joining and participation and laddered interviews for withdrawal.

The findings show that for a user to join an SNS it is important to perceive the SNS as easy to use, yet novel enough to make it look different from existing networks. Regarding participation in niche SNS, the research identified the importance of networking gratification, as well as the social support that users can receive through these networks. Likewise, people participate in niche SNS to search for information related to the purpose of the network, which is linked to the learning gratification sought by the users. Lastly, users withdraw from a social network due to issues relating to impression management, as well as looking to regain control of the image they want to project online.

Keywords: e-business, social networking sites, social networks, structural equation modelling, means-end chain, social network analysis

To God, for being my strength and to my family for
their continuous support and their prayers

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Table of contents

List of tables

List of figures

Chapter 1. Introduction

1.1 Social networking sites

Backstrom et al. (2006) suggest that people's tendency to create groups is a built-in characteristic of society. It is not surprising that social group creation, development and evolution are topics of great interest for social science research. With the advent of online technologies, social network sites (SNS[1]) like Facebook, Twitter or LinkedIn have made it possible to bring users together in virtual spaces in a similar way to how they would have created groups offline. The level of acceptance of these networks as meeting points can be noticed by the number of users registered and participating on different SNS. Taking the UK as an example, the Oxford Internet Institute found that almost half of the UK population have a profile created on an SNS, with an increasing trend for the future (Dutton and Blank, 2011). Likewise, the expansion of SNS is reflected in the creation of new networks that are offering different services like images and video (e.g. Instagram and Vine) as well as networks orientated to specific groups.

Aware of the popularity of the SNS and the number of people who can be reached through these networks, many companies are paying more attention to social networks as a place to promote their products. Many of the marketing efforts are centred on Facebook and Twitter, but these are not the only SNS available in the market, as there is a wide variety of networks that can be used for online marketing. Considering SNS as a business, these networks represent a business opportunity for corporate and independent developers who are creating their own social networks.

The SNS market is highly dynamic, having undergone big changes in short periods of time, as can be seen in Figure 1. This figure shows how in 2009 there was a wide variety of networks which by 2013 had been replaced by Facebook. Even Facebook has seen its position compromised by competitors such as Diaspora and more recently, Ello. These new contenders are trying to gain their place in the market by promoting specific features, such as, privacy management by Diaspora or the promise of no advertising and not selling users' data by Ello.

[1] SNS refers to both singular and plural sites depending on the context throughout the thesis

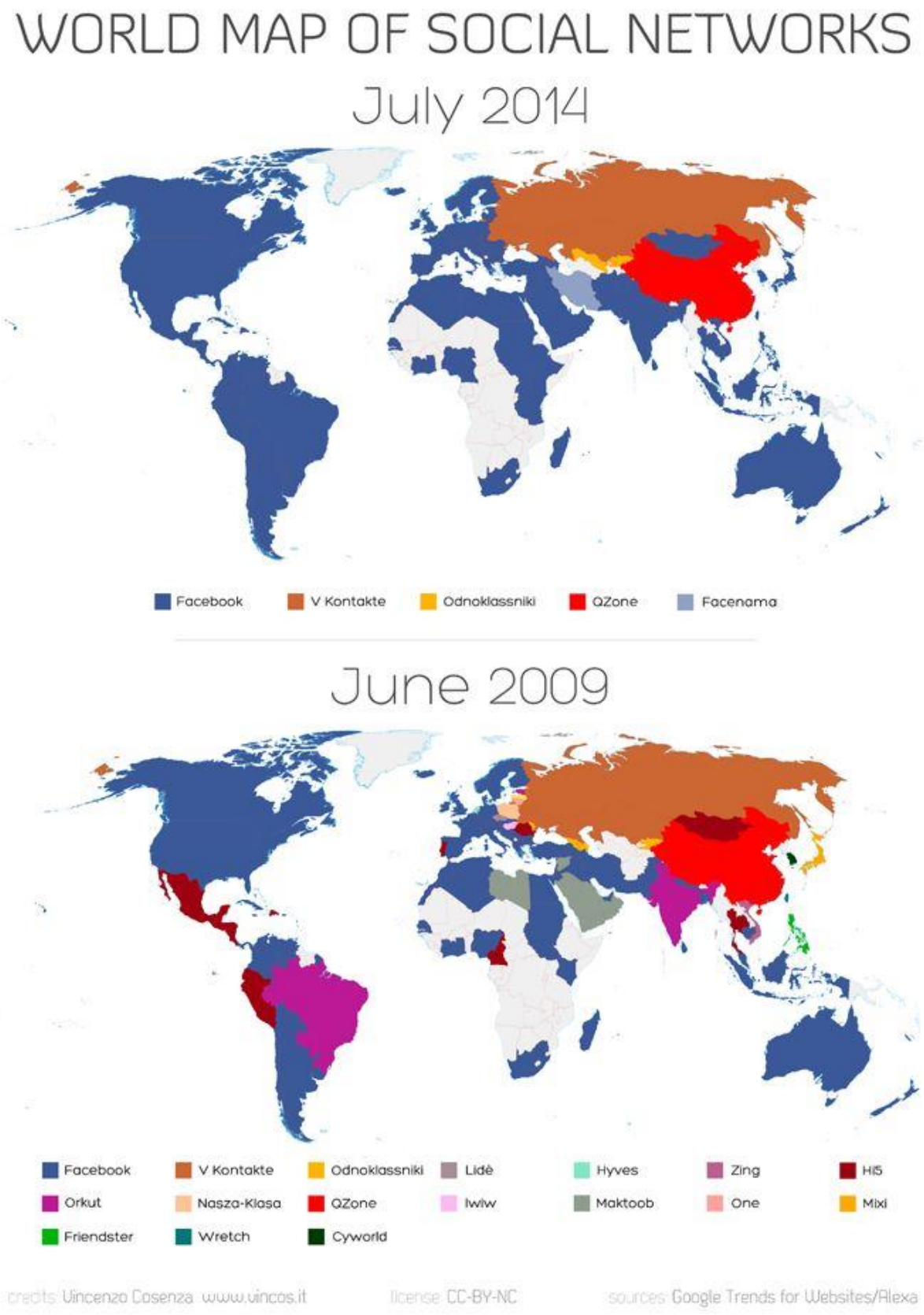


Figure 1: World map of social networks 2009-2013 (Cosenza, 2014)

The growing popularity of the SNS has drawn the attention of researchers and practitioners in this field, that is, those who are in a constant search for the next big network.

They have followed and studied how new networks have appeared in the market, some of them being more successful than others, but also have experienced how a few previously popular networks have come to only have a fraction of the users they used to have. The Internet is in constant evolution, having changes on how the user interacts with the Web as well as the interaction with other users. Dutton and Jeffreys (2008) relate the evolution of the Web with the changes in the role that the users have in the network. Thus, in Web 1.0 the user was a consumer of information and the interaction was in one direction. In Web 2.0, the focus changed towards connecting people over connecting devices, changing the role of the users from information consumers to creators as well. However, this new role of the user as a contributor creates a user-dependency upon Web 2.0 regarding the active participation of users. Using social networking sites as an exemplar case of Web 2.0, a network with declining numbers of active users is a network destined to fail. Consequently, being aware of the importance of the SNS users' participation on the continuity of the network, researchers and practitioners have focused their efforts on finding new and better ways to encourage user participation (Krasnova et al., 2008; Al-Debei et al., 2013). The literature on SNS user behaviour provides useful insights into how to keep users contributing to the network. However, the current body of publications does not provide enough explanation as to why a person would join a network or why a user would close their account. In fact, research on participation assumes that users are already there, and if the users participate actively they will stay in the network.

As user-generated content sites, the SNS depend on the contribution of their members. It is therefore necessary to understand user participation more holistically and comprehensively. Research on user participation starts from the assumption that the network already has registered users, but does not explain how the user got there or what the reasons were that made them create a profile on that network. Similarly, the strong focus on participation has not yet fully explained the reasons why a user would chose to leave the network. The lack of research on joining and withdrawing makes it necessary to extend our knowledge about user behaviour beyond participation. In order to fill these gaps, this thesis proposes the extension of the scope of SNS user behaviour by exploring the SNS user life cycle based on three stages, namely joining, participating in and withdrawing from the SNS.

Each stage represents a different phase on the SNS user life, and similarly to Blattberg's customer life cycle in which customers have different needs on each stage, therefore different behaviours (Blattberg et al., 2001). Consequentially, SNS users present different needs and behaviours during their life cycle on the SNS. The lack of research about a SNS user life

cycle in general, and SNS joining and withdrawing in particular, made necessary to consider the use of different theories and methodological approaches to study each stage. As the aim if the thesis is orientated to understand the main factors influencing SNS user behaviour, the search for a theoretical framework or a model that could explain this life cycle resulted in the implementation of different theories and methodological approaches to study the cycle's stages, as it was not found a theory or a model that could explain these three stages thoroughly. Based on the literature review, the combination of the Decomposed Theory of Planned Behaviour, Uses and Gratifications Theory and Social Identity Theory will support the understanding of joining, participating and withdrawing from a social network respectively. The next section explains the structure of the thesis, in which the three stages of the life cycle become the three pillars of the thesis.

1.2 Thesis structure

Figure 2 illustrates the structure of this research regarding the SNS user life cycle. The first Chapter contextualises the SNS and the relevance of the user for these networks. This context makes it possible to introduce the aim of the research about extending the scope of SNS user behaviour, which is currently centred on user participation. The extension proposes a life cycle framework to study joining, participating and withdrawal from the SNS, setting up the main structure of the thesis based on these three stages. This structure will be developed in the subsequent sections of the thesis.

The second Chapter provides an overview of the relevant literature related to SNS and user behaviour in these networks. The Chapter is divided into two main parts, with the first part focused on providing the main concepts of the SNS, including a short review of the evolution of these networks, followed by the main components of the SNS. The second part presents the research done on each one of the stages of the user life cycle, identifying relevant theories and the main concepts used to study user behaviour in each step. As a result of the literature review, a research model is proposed to study each stage of the life cycle.

The first part of Chapter Three explains the overall research design and rationale of the thesis, whilst the second part contains the methodology and data analysis for each stage. The methodology explains the key elements of the research design for each stage (i.e. sample design, data collection, construct operationalisation, method etc.) followed by its execution in the data analysis.

Chapter four discusses the results obtained in the data analysis, identifying the main factors influencing each stage and using these factors to create the integrated framework of the life cycle. The final Chapter takes the findings of the data analysis and the discussion to

present the conclusions of the thesis, along with the contribution to the literature and the implications of the findings for researchers and practitioners. Finally, the thesis concludes with the limitations inherent in the research and by proposing potential avenues for future research.

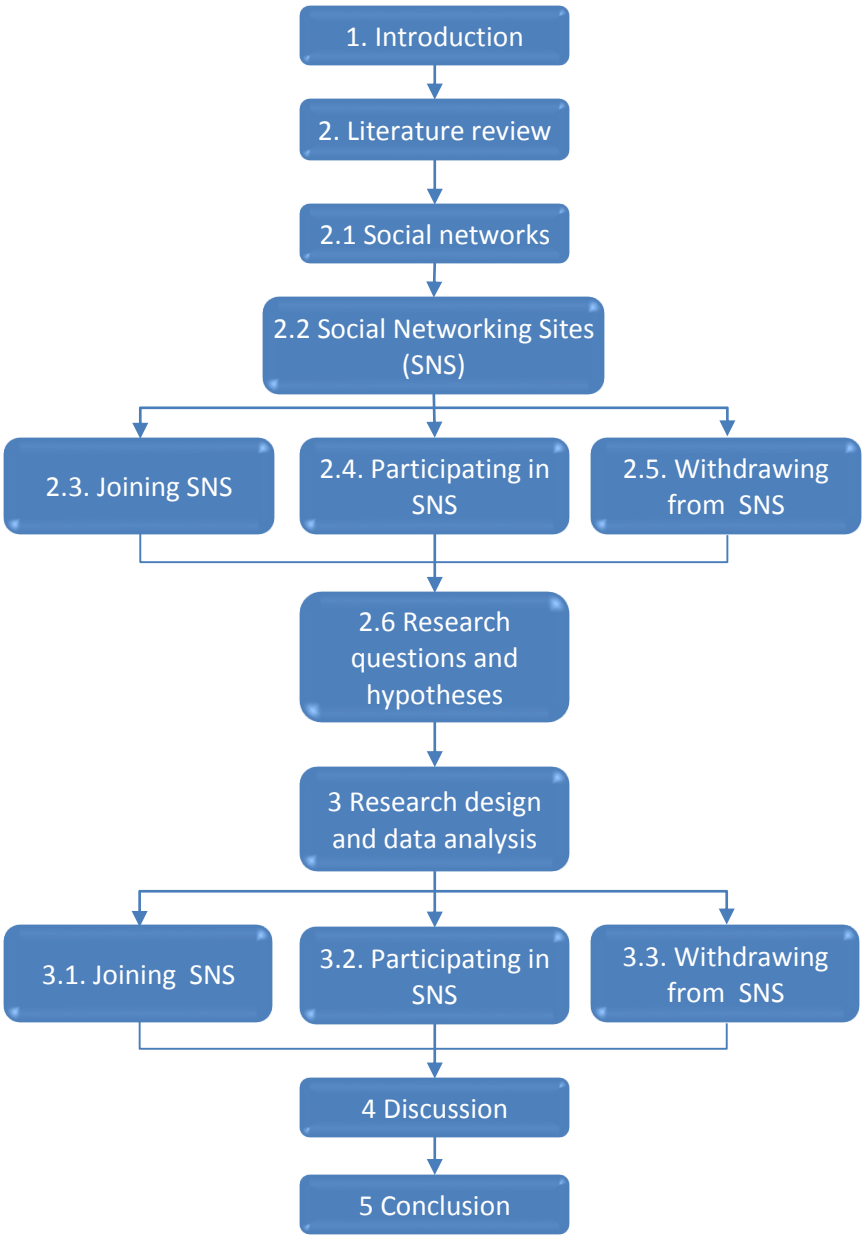


Figure 2: Thesis structure

Chapter 2. Literature review

The popularity of the SNS can be seen in the increasing number of publications on this topic from different disciplines. In order to lay the contextual foundations for the thesis, this Chapter covers both the relevant theory and offers a review of the research undertaken with regard to the SNS user life cycle. More specifically, the first part contextualises the SNS, providing an overview of the main components and properties of social networks. This social network foundation is followed by a review of social networks on the Internet or Social Networking Sites. The second section of the Chapter narrows down the research done in the SNS field towards a review of the research related to the stages of the user's life cycle, namely joining, participating in and withdrawal from the SNS.

2.1 Social roots of the Social networks

Social Networks have a long research tradition in social science, mainly in sociology, anthropology and psychology (Valente, 2010). Traditionally, social network researchers have been interested in the study of relations and patterns created among network members (Emirbayer, 1997; Wellman, 1983). A simple definition of a Social Network is a set of nodes or actors connected through a series of ties, generating patterns (Wellman, 2003). In Network Theory, an actor is a social entity, which represents a person, a corporation or a collective of persons. Other labels include vertices, nodes, agents and players (Hansen et al., 2010; Jackson, 2010). The actors present in the network can have multiple characteristics, which can be studied from different approaches. Thus, if the researcher is interested in analysing one characteristic of the actor, the network is labelled as a one-mode network. If the network includes two levels or sets of characteristics, it is called a two-mode network, and so on (Wasserman and Faust, 1995). For instance, the network of the employees of a retail shop would be a one mode network, but if the analysis discriminates by job position, it would be a two-mode network.

The actors are related one to the other through relational ties or edges (Wasserman and Faust, 1995; Hansen et al., 2010; Zhang, 2010), which is the focus of the network theory. This focus on the relational ties is the main difference between Network Theory and individualist sociological approaches. The ties can be direct or indirect, depending on whether there is an explicit origin and destination of the relation or not. In the direct or asymmetric ties, both elements are explicit as sender and receiver. In the indirect or symmetric ties there is no clarity concerning origin and destination, such as in a marriage or the co-authorship of an academic paper (Zhang, 2010, Hansen et al., 2010, Wasserman and Faust, 1995). Related to

the directionality, is the reciprocity of the ties, which is implicit in symmetric relations and can also be present in asymmetric ones. To illustrate the directionality, Figure 3 shows a Sociogram, which is one of the basic representations of a network. In this example, taken from Wasserman and Faust (1995), it can be seen how Drew and Sarah have a reciprocal relationship, whereas Ross and Sarah do not. According to Granovetter, the strength of a tie depends on the "*combination of the amount of time, the emotional intensity, the intimacy (mutual confiding), and the reciprocal services which characterise the tie*" (Granovetter, 1973, p. 1361), thus distinguishing between strong and weak ties.

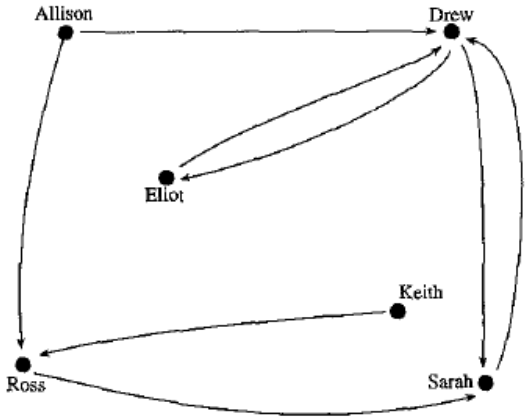


Figure 3: Sociogram (Wasserman and Faust, 1995)

In this sociogram one can notice the basic structures of a social network. The first one is the dyad, which consists of two actors and their respective tie, e.g. Keith and Ross, which is the minimal unit of analysis in the network analysis. When an additional actor is aggregated to the dyad, this new node can create (or not) a new tie between the existing nodes, originating a new structure called a triad (Faust, 2010) (i.e. Keith, Ross and Sarah). The importance of the triad lies in the fact that there are social arrangements which can be possible only with three nodes and which are not possible with one or two actors. Examples include mediation processes, the case when two actors are in conflict and the third one derives benefits from this situation (Tertius gaudens), or the strategy of divide and conquer. Triads are vital for brokerage, hierarchy, exchange processes and structural holes (Faust, 2010). An important property of triads is the transitivity or triadic closure, explained as: if actor A is related to actor B, and B with C, then it is likely that A and C are related. The likelihood of this happening is known as 'the triadic closure'. A related property is the homophily which is defined as the event when the nodes have one or more common attributes, like the same social class, or same school, which increases the odds of creating ties (Kadushin, 2004). These

properties have been used by social network analysis to understand social networks' growth and decline, as well as grouping processes based on the similar characteristics of their members (Barabási, 2002).

2.1.1 Online vs. Offline

A frequent question when people talk about SNS is to what extent social networks online differ to offline ones. This section adopts the research done by Smith (1992) about online interaction, which still applies to the case of SNS. Smith argues that virtual interactions have six characteristics that make them different from offline communications: aspatial, asynchronous, acorporal, bandwidth restricted, astigmatic and anonymous. The first one, aspatial, is how the physical location becomes less important in conducting the interaction in online communities, given that the Internet is now the meeting place. The second one, asynchronous, is related with the speed of reply. On SNS the interactions are initiated with a post or a message, but the reply or the feedback is not necessarily received immediately. As Smith acknowledges, not all virtual interactions are asynchronous, which can be noticed with the chat services offered by some networks; however, the SNS concept follows the asynchronous pattern. The acorporality is related to the multimedia nature of the interactions, in which the corporal presence of the participants is replaced by a profile, an avatar or a nickname. This property is closely related to available bandwidth and how the speed of the internet connection makes it possible for users to interact. Consequently, the first SNS were mainly text based with some images, whereas now, thanks to the speed of the internet connection and the advances in hardware and software, there are more alternatives to emulate corporal presence, including virtual reality. Another property connected to acorporality is that virtual interaction can be considered relatively astigmatic. Here the stigma is understood as a mark or a behaviour that can help to categorise or label an individual in a specific group (cf. Goffman, 1959). With no corporal presence, the stigmas like race, gender, physical condition, etc., are not an influential factor for the interaction among members. Finally, the combination of the previous characteristics can lead the suggestion that the virtual interactions can be anonymous to a certain extent. This last property of the virtual interactions is something quite frequent, as in many networks users do not have to disclose their real identity or personal information.

2.2 Social Networking Sites

The Oxford Internet Institute has conducted a series of studies about the Internet in the UK. Part of the finding of this research showed how Internet users believe that this technology makes it possible to strengthen the communications with their relatives and

friends, as well as give them a way to meet new people (Dutton et al., 2009). This finding shows how the adoption of web technologies has worked as an enabler for social activity, making the transition of social networks from offline to the online environment easier. The next section presents the evolution of SNS, showing how these networks developed alongside the users, moving from some few networks and small groups of users to the massive phenomena they are nowadays.

2.2.1 SNS evolution

The history of SNS is related to the history of the Internet, which has been presented in different versions; from short summaries like Dutton and Jeffreys (2010) to detailed timelines like Bhuiyan et al. (2010). The common starting point of the Internet evolution is the ARPANET in 1969, which started as a military project and was later opened to academics, creating networks like the NSFNET in the US and GEANT in Europe. Some important milestones in the development of the Internet include the creation of the email in 1971 by Ray Tomlinson, USENET groups in 1979 and the development of the World Wide Web by Tim Berners-Lee in 1989. The importance of these milestones is due to the popularisation of the Internet, taking them out from closed groups like military and research circles and opening them to other users and uses. Zooming out on the Internet timelines, it can be noticed how the network concept and the idea of connecting people have been present since the creation of the Internet, which is the main component of a social network.

Looking at the timeline of the social networking sites, it starts with the creation of social networks orientated to the general public. SNS like Six degrees and LiveJournal are considered as the forefather of SNS, as illustrated in Figure 4. This figure presents the creation of some of the most popular networks like Friendster in 2002, Myspace and LinkedIn in 2003, Facebook, Flickr and Orkut in 2004, YouTube and Bebo in 2005 and Twitter in 2006 and Instagram in 2010. A brief look at the timeline in Figure 4 shows how the number of SNS have grown over time. In the SNS list different types of networks can be found, going from the general purpose networks like Facebook and Twitter to networks focused on specific topics, also called niche SNS. The niche SNS can be about any special topic, including country/region networks like Cyworld (Korea), Mixi (Japan) and Hyves (Netherlands), and networks based on identity and cultural characteristics like AsianAvenue, Blackplanet and MiGente. There are networks for specific purposes like professional profiles (e.g. LinkedIn and Xing), networks based on specific formats (e.g. Flickr, YouTube and more recently Instagram and Vine) and networks about specific interest (e.g. dogster, catster). The variety of niche networks shows the appropriation of the SNS as a platform to find people who share the

same interests, as well as the versatility of the networks being adapted to any topic or situation.

Some people consider the evolution of the internet based on a sequence of iterations (Web 1.0, 2.0, and so on), based in the change of the paradigm of the network. Dutton (2008) summarises Web 1.0 as a documental stage based on the exchange of "*hypertext documents, data and other digital objects"*. (p. 215) Web 2.0 or the social web is characterised by the development of tools aimed to support collaboration between members, with the user-generated content as a key factor. Web 3.0, known also as the semantic web, uses collaborative applications to enhance co-creation and cooperative work, although this third generation is still under development.

The continuous advancement of technology and particularly the hardware improvements of smartphones and the availability of high speed connections on mobile devices are two fundamental factors that have helped to develop SNS. These two elements opened new opportunities to SNS, allowing them to take advantage of different services like location (e.g. Foursquare), cameras (e.g. Instagram and YouTube), among others, to develop new networks. The technological progress is still not enough to guarantee the success of an SNS, as demonstrated by cases of networks such as that of Google + and Socl, developed by Google and Microsoft respectively, which are competing against Facebook, but still with low levels of popularity.

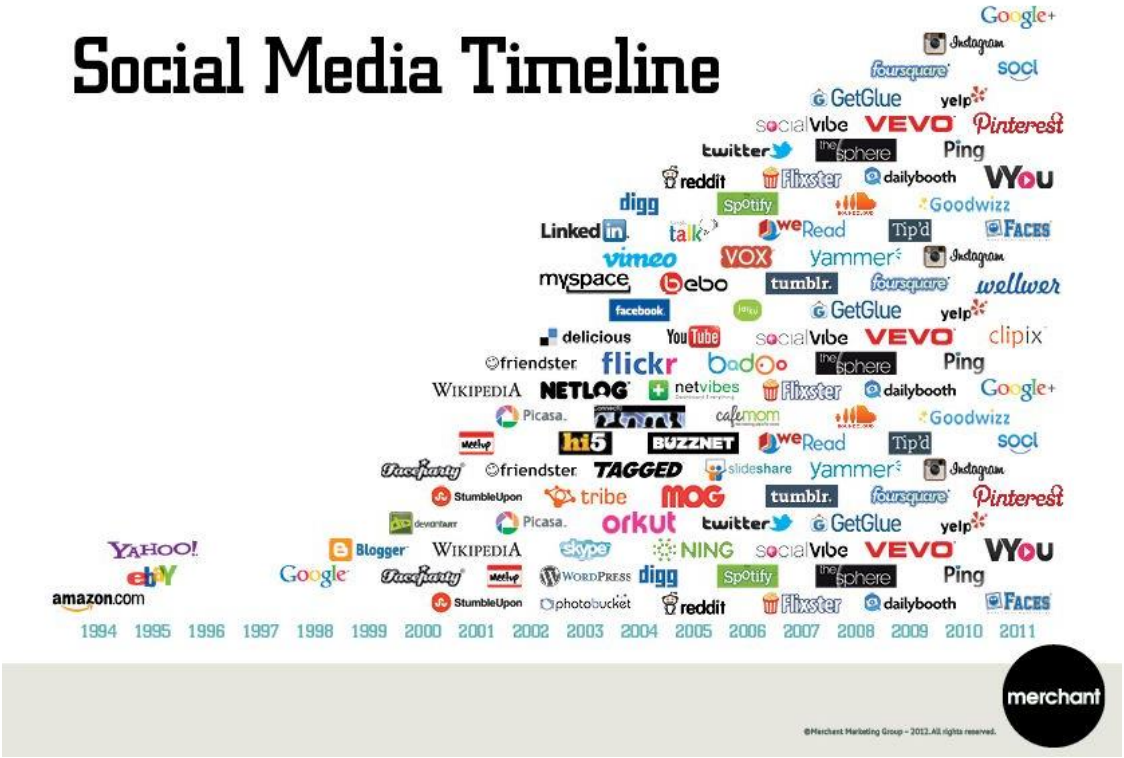


Figure 4: Social media Timeline (Merchant, 2012)

2.2.2 SNS Definition

Social Networking Sites became the flagship of Web 2.0, but Web 2.0 consists of other types of sites like wikis, multiplayer online games and virtual worlds (Hansen et al., 2010). In order to have a clear idea about the SNS this section presents the definition and main components of the SNS.

Boyd and Ellison (2008) proposed the most widely accepted definition of an SNS in their seminal paper "*Social Network Sites: Definition, History, and Scholarship*". These authors defined an SNS 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, 2008, p. 2) This definition, which is also adopted in the context of this work, makes the web orientation and the modular nature of the networks explicit, working as a collection of different web-services.

In the SNS, the identification process is based on the network profile, which is shared with the rest of the network members. With this profile, the user can project an identity and connect with other users based on the information available in their profiles. Likewise, the

connection established with other users makes it possible to integrate the contacts available on other users' contact lists. The importance of having others' contacts available relies on the fact that it facilitates the possibility of finding/connecting with other people through your contact, which is one of the main attractions of joining an SNS. The connections can be made either by looking in the contact list of other users, or with the suggestions offered by the platform itself.

2.2.2.1 Social network sites components

Quan (2009) argues that SNS are built on two components: the networking services and the website that integrates the services offered. Quan's argument is aligned with the SNS definition of Boyd and Ellison (2008). That is, Social Network Services deliver all the functions of the social network, whereas the Social Network Platform hosts the Social Network Services. Figure 5 illustrates the building blocks of an SNS, in which the infrastructural services are related with the network platform, whereas social presence and social activity services are related with the networking services.

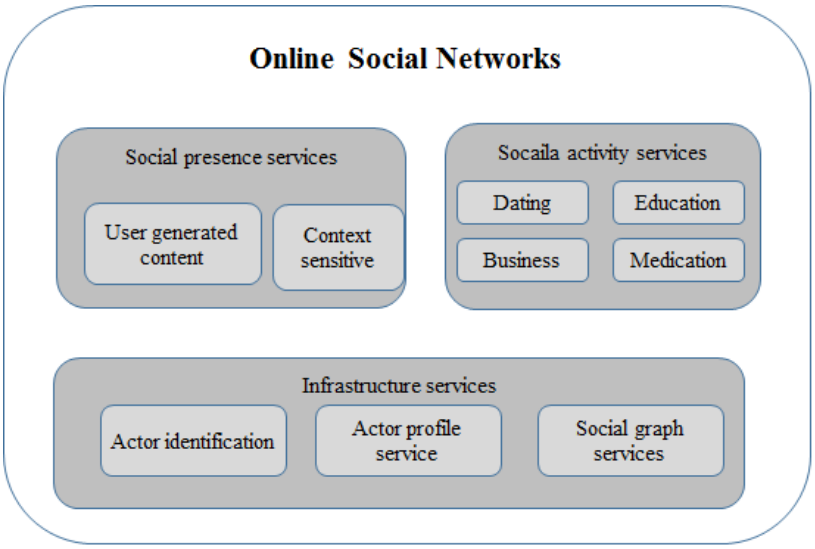


Figure 5: Social Network Services (Quan, 2009)

The social network platform provides the basic information about network members, supporting three main services: identification, profile and graph. The identification service supports access to the SNS by providing information about the user. An example of this service is the feature of logging into different websites using the Facebook log in service. The Actor profile service provides the personal information of the user, like gender or city. Finally, the social graph provides the map of the network, based on the relationships of the members, and therefore illustrates how they are related.

The networking service level is divided into two groups: the Social Presence Services and the Social Activity Services. Social Presence is defined as "*the awareness of the other person in a communication interaction*". (Quan, 2009, p. 3) This group is orientated to enabling media for online communications among the members, such as comments or instant messages, where the content is generated either by the user (user-generated) or by the surrounding conditions where/when the user is located. An example can be seen in the FourSquare features of posting the location of the user on Facebook. The second group, Social Activity Services, is related to the purpose of the network, sharing information about the particular topic that the SNS is focused on, such as dating, business, education or health. The Infrastructure and Social Presence Services are common to all networks, whereas the social activity is an optional group of applications that can be found in one network but not in others. The application availability depends on how open the platform is accepting third party developments, the size of the developer community and the use of the apps by the network members. Examples of these apps can be found on Facebook, LinkedIn and Ning, who provide an 'app centre' in which the user can select apps to install in his/her profile.

With regard to the Social Network Platform, Quan (2009) divides the platforms into general purpose and niche communities, following the Boyd and Ellison (2008) categories, in which the former relates to networks without a specific topic/public, being used for different purposes, and the latter is orientated to "*narrowed audiences*". (Quan, 2009) These categories are two extremes of a spectrum, rather than a dichotomous property. In fact, SNS can change from one side to the other, like the case of Facebook, which started as an SNS for Harvard students only, and was very niche, and which is now one of the main examples of general purpose networks.

This section has presented the main elements of the SNS and the influence of the Internet as a new medium for interaction, making it possible to move offline networks to online environments.

2.2.3 The SNS user life cycle

The relationship between the user and the SNS is a continuously evolving process. Authors like Sillaber et al. (2013) have proposed a series of stages in this relationship based on the level of activity of the user. These stages consider '*active members*' and '*developers'* as an initial group, passing through '*passive members'* and '*guests*', and finishing with '*non-members'*. In addition to these stages, Sillaber's team proposed a series of transitions between these stages in order to explore the changes on the user – SNS relationship. The idea of an evolving relationship over time between the user and SNS fits with the '*customer life cycle*'

concept proposed by Blattberg et al. (2001) in the context of customer equity management. These authors start by acknowledging that the relationship between the customer and the firm evolves throughout time. Based on this evolution, they proposed that customers would have different needs depending on the stage that they are at. Consequently, their expectations will change over the time, as well as their behaviour. The stages proposed by Blattberg team are: *Prospects, first-time buyers, early repeat buyers, core customers, and defectors*. These stages propose a process in which the prospects are understood a people who are not customers yet, passing through the different types of customers, using purchase frequency as criteria to differentiate the stages. The life cycle ends with the defectors, the customers who reduce their purchase frequency. This purchase decrease can range from partial to total.

Comparing Sillaber's user stages with Blattberg's customer life cycle stages shows similar elements. One similarity is defining the stages by the frequency of the behaviour, in which the SNS usage is equivalent to the purchase of the service. Likewise, the process ends when the user (or customer) decides to stop the behaviour. However, the main difference is that the life cycle considers a starting point with the *prospects*, which is not present on Sillaber's model. Thus, the customer life cycle provides a framework that can be adapted to the aims of this thesis. The relationship between the user and the SNS is considered as a continuum process between the customer and the firm, creating in this way a SNS user life cycle. This SNS user life cycle shares the interest in customer behaviour, considering three stages for the analysis. These stages are: Joining, which is related to the *prospect* users; participating for the *current* users; and withdrawing for the *defectors*.

2.2.4 SNS user life cycle theories

Based on the literature review, the study of the SNS user life cycle is still a concept to develop, as researchers are very focused on the participation stage, leaving the other two stages in need for research. The emphasis on participation is useful in terms of the elements provided to understand the motivations to play a part in these networks. However, the participation approach, fails to answer questions about the factors driving people to join new networks, as the enrolment of the users is the main step towards having a successful network. Likewise, with the increasing number of networks in the market, the networks have higher chances of losing members, making it necessary to study the reasons that make a user withdraw from the network.

One of the main aims of the literature review was to find a suitable theory or set of theories that could explain the SNS user life cycle, starting with a general theory or a model that could explain the life cycle as a whole. Current theory related to life cycle is associated to

products such, being the SNS an example. One of the most used approaches to studying the SNS lifecycle is based on a structural approach, focused on explaining and predicting the interaction between members based on the patterns found in the ties created in the network (Oinas-Kukkonen et al., 2010). This structural approach has been underpinned by Social Network Analysis (SNA), with this becoming the main method used for research on this topic, with Dynamic SNA being the most recent approach developed. The main aim of SNA is the study of the network using concepts related to the strength of ties and the replication of specific behaviours (domino effect) based on properties like homophily (Leskovec et al., 2008, Goggins et al., 2011, Memic, 2009). A notable characteristic of this research approach is the high proportion of studies using general-purpose SNS, such as Facebook (Leskovec et al., 2008, Memic, 2009, Mislove et al., 2007, Goggins et al., 2011, Foregger, 2008) due to the large data available and the public nature of the information. The SNA has developed highly sophisticated models to explain the behaviour of the network, but due to the focus on the structure, the reasons behind these behaviours are out of the scope of SNA. In order to fill this gap, researchers have adopted theories and practices from other fields like sociology, psychology and marketing to research the networks from another point of view more focused on the user as a person rather than a node in the network.

From the SNS participation approach there are two theories commonly used to study this topic. The Theory of Planned Behaviour (Ajzen, 1985; Ajzen, 1991) and the Technology Acceptance Model (TAM). (Davis, 1989; Davis et al., 1989) These theories have been extensively used on SNS literature (Krasnova et al., 2008, Pelling and White, 2009, Kwon and Wen, 2010, Lorenzo-Romero and Del Chiappa, 2013, Sillaber et al., 2013, Al-Debei et al., 2013) being both an evolution of the Theory of Reasoned Action (TRA) (Ajzen, 1975). These theories are aimed to explain a particular human behaviour based on the intention, which in turn is influenced by attitudinal beliefs and social norms (Horng et al., 2011). On the one hand, the limitations of the TRA about the control that people perceive they have over the behaviour studied, motivate Ajzen to include the '*perceived behavioural control*' as third factor to explain intention, and hence behaviour, proposing the TPB. On the other hand, TAM adapted the TRA to the domain of IS, replacing the attitudinal beliefs by '*perceived ease of use*' and '*perceived usefulness*'. (Igbaria et al., 1995)

One of the main criticisms of the TPB is the unidimensionality of the factors involved in the standard TPB model for explaining belief formation. (Hsu et al., 2006, Taylor and Todd, 1995) Similarly, Bagozzi present the parsimony of TAM as one of the main shortcomings as "it is unreasonable to expect that one model, and one so simple, would explain decisions and

behaviour fully across a wide range of technologies, adoption situations, and differences in decision making and decision makers". (Bagozzi, 2007, p. 244) Addressing these criticisms, Taylor and Todd developed the Decomposed Theory of Planned Behaviour (DTPB) as an alternative to produce a stronger model to predict intention and behaviour by combining elements of TPB and TAM, adding one more level of variables to the main structure of the TPB. (Taylor and Todd, 1995, Gironda and Korgaonkar, 2014) This model stands a good candidate to study SNS user participation due to the extensive literature of this topic, which gives more elements for the analysis as well as allow to compare with previous research. However, considering the situation of SNS user joining and withdrawal, DTPB results very rigid for the exploratory approach required to study these two stages. For this reason DTPB is adopted for user participation only.

An additional theory considered as an alternative for the thesis was the Expectation Disconfirmation Theory (McKinney et al., 2002, Bhattacherjee and Premkumar, 2004) which has been used widely to study user satisfaction and user loyalty on IS context. This theory revolves around two components. Firstly, the confirmation or disconfirmation of expectations, both positive and negative expectations. Secondly, the satisfaction obtained as a result of the experience. (Bhattacherjee and Premkumar, 2004). The current expectations are influenced by prior expectations related to experience that the person is going have, for example word of mouth, advertising or previous similar experiences. These prior expectations have an impact, both direct and indirect on the perceptions of the experience they are having now, by comparing what they expected with what they are receiving. (Morgeson, 2013)

Based on previous research, EDT can be useful to study user participation, as Shi et al. (2010), as well as for studying user withdrawal if the application is extended from continuation of use to discontinuation. However, EDT shares the same constrains of the aforementioned theories by restricting phenomena with few research done so far, such as SNS joining and specially SNS withdrawal to a specific set of constructs. In addition, EDT, as well as TPB and TAM are mainly interested on adoption and continuance of use which can introduce a bias on the constructs and analysis to be included on the joining and withdrawing stages. As a result, it was decided that each stage will have separate theoretical frameworks and methodologies in order to have a deep understanding of the life cycle phases. The following sections will show the theories selected for each stage. The following sections present a review of the research related to the three stages of the SNS user life cycle.

2.3 Joining an SNS

The research about joining a SNS has produced few publications related to this first stage of the cycle, with (Casaló et al., 2010) representing one of the few researchers who have worked on the joining stage as such. In their research they studied participation in an online community. In their research they combined the Theory of Planned Behaviour (TPB) and Social Identity Theory (SIT), studying intention as a dependent variable rather than the behaviour. Casaló's team justified this decision based on the difficulty of measuring the real behaviour, which led them to focus on the intention. This decision relied on the theoretical framework used (TPB), for which intention has been proved to work as a valid predictor of behaviour. Casaló's research found that all the elements of the TPB are influential. Regarding the SIT, the cognitive and affective identification with the online community were found to be influential in the intention to join.

Another stream of research about joining is based on the Uses and Gratifications theory, finding that socialising, entertainment, self-status seeking, and information are the biggest drivers to join Facebook groups (Park et al, 2009). Ridings and Gefen (2004) applied this theory to online communities, finding that friendship, exchange of information, and support are the main motivators to join these communities.

Other researchers have approached joining an SNS tangentially as part of their studies about participation. For instance, authors like (Hargittai, 2007; Coursaris et al., 2010; Coursaris et al., 2013) have studied the differences between users and non-users, focusing on demographic variables of the sample, based on students. They approached the joining case by pointing out the factors that will encourage people to participate in the network. In the case of (Coursaris et al., 2013) they combined the theory of Uses and Gratifications with the Diffusion of Innovation Theory to explain the level of usage, finding that user related motivations and perceived characteristics are the most influential groups of variables.

Due to the lack of research regarding joining processes, the search of the literature was expanded to a wider scope by including research about participation, which, although less related to the subject, is still close in terms of the interests of the research and the theoretical framework used. Thus, studies about continuance of use, such as (Bhattacherjee, 2001; Cheung and Lee, 2009; Hsu, 2009; Al-Debei et al., 2013), are focused on the intention to continue using an SNS, using behavioural models (Theory of Planned Behaviour - TPB and Technology Acceptance Model - TAM). An important finding from research using these theories is how behavioural models provide a solid framework for cases in which the behaviour is difficult to measure, using intention to conduct their research instead.

Considering the feasibility of measuring the real behaviour of joining an SNS, it was found to be quite difficult to measure joining behaviour due to the popularity of the networks, as most of the users are already members of SNS they are interested in being a part of. This situation inclined the balance in favour of using a behavioural model, as this provides an established framework to understand behaviour, based on intention. The Theory of Planned Behaviour (TPB) (Ajzen, 1985; Ajzen, 1991) and the Technology Acceptance Model (TAM) (Davis, 1989; Davis et al., 1989) have featured extensively in the literature. They have been successfully applied in previous research on SNS. Both theories are rooted in the Theory of the Reasoned Action (Fishbein and Ajzen, 1975), in which TAM focuses on the attitudinal factors, whereas TPB considers attitude, social norms and perceived behavioural control to explain intention, which in turn explains behaviour. A common practice found in the literature was the combination of both theories in order to increase the predictive power and to compensate for the weaknesses of one model with the strengths of the other. In this search the Decomposed Theory of Planned Behaviour (DTPB) was found, which combines both models in a structured manner. DTPB has been used in a number of Internet-related research projects. Although DTPB is more similar to the TPB than to the TAM, DTPB extends both models by including the antecedents of the constructs, resulting in the increase in the predictive power for intention and behaviour.

2.3.1 Decomposed Theory of planned behaviour (DTPB)

The DTPB finds its origins in the social psychology field, with the theory of reasoned action (TRA) developed by Fishbein and Ajzen (1975). This theory aims to understand human-specific behaviour based on behavioural intentions, which at the same time are explained by attitudinal beliefs and social norms (Horng et al., 2011). Due to the "*model's [TRA] limitations in dealing with behaviours over which people have incomplete volitional control*" (Ajzen, 1991, p. 181), TRA was extended to the Theory of Planned Behaviour (TPB) (Ajzen, 1985, Ajzen, 1991) by including perceived behavioural control as the third factor to predict intention and behaviour, in order to control for the volitional conditions (Hung and Chang, 2005; Ajzen, 1991). According to TPB, attitudinal belief is orientated towards the favourability that the user has towards performing certain behaviour. Subjective norm is related to the social pressure to perform the behaviour, and perceived behavioural control (PBC) is related to the resources and opportunities available that may influence the behaviour (Ajzen, 1991).

TPB has been used in different studies related to the information systems (IS) field. Hsu and Chiu (2004) present a compilation of prior research related to Internet applications using TPB, highlighting the suitability of this theory for IS research. However, despite the wide and successful use of TPB there are some criticisms of this theory. One of the main criticisms is the unidimensionality of the factors involved in the standard TPB model for explaining belief formation (Hsu et al., 2006, Taylor and Todd, 1995). This issue is reflected in the limited predictive ability, as Al-Debei et al. (2013) points out, based on the meta-analysis performed by Armitage and Conner (2001). This meta-analysis reviewed 185 articles published until 1997, finding that TPB explained 27% and 39% of the variation in behaviour and intention constructs respectively (Armitage and Conner, 2001), encouraging researchers to extend TPB in order to improve this issue. Thus, the pursuit of a more accurate version of the TPB has led researchers towards different combinations, which are generally subsumed under the 'extended TPB' umbrella (Conner and Armitage, 1998). However, there is no consensus about the components of extended TPB, making it a sort of customised versions of TPB regarding the phenomena studied.

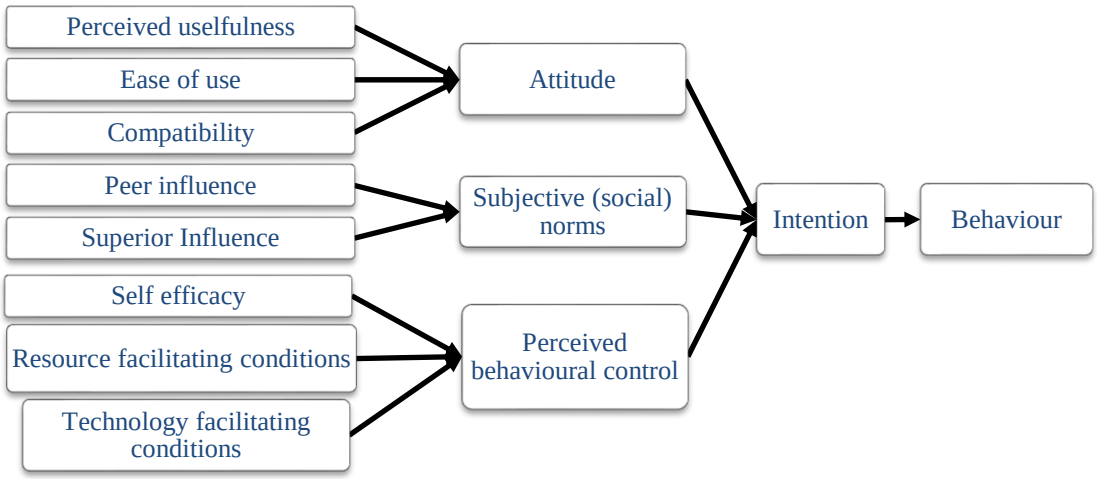


Figure 6: Decomposed theory of planned behaviour. Adapted from Taylor and Tood (1995)

A parallel development of the TPB is the Decomposed Theory of Planned Behaviour (DTPB), proposed by Taylor and Todd (1995). This alternative aims to improve the results obtained by TPB through the extension of the model to the antecedents of the constructs, borrowing concepts from innovation diffusion and Technology Adoption Models (Taylor and Todd, 1995). As a result, these authors proposed a second order model, deconstructing attitude, subjective norms and perceived behavioural control (See Figure 6). This model

embraces the advantages of TAM regarding the identification of salient beliefs related to the intention of use while keeping TPB factors which have been accurate in understanding intention and behaviour (Taylor and Todd, 1995). Based on previous research comparing DTPB with other behavioural models, DTPB provides a better explanation of an individual intentions and behaviour (Taylor and Todd, 1995, Hung and Chang, 2005, Huh et al., 2009, Lee et al., 2010b).

Author	Context	Second order variables [First order variables]	Endogenous variables (R^2 - if available)
(Taylor and Todd, 1995)	Comparing theories regarding IT usage	**Attitude** [perceived usefulness, ease of use, compatibility] **Subjective norms** [peer influence, superior influence] **Perceived behavioural control** [self-efficacy, resource facilitating condition, technology facilitating condition]	Usage behaviour (R^2=0.36) Behavioural intention (R^2=0.60)
(Hsu and Chiu, 2004)	E-service continuance of use	**Attitude towards e-service usage** [perceived usefulness, perceived risk, perceived playfulness] **Subjective norms** [Interpersonal influence, external influence] **Perceived behavioural control** [Internet self-efficacy, perceived controllability]	E-service satisfaction (R^2=0.69) E-service continuance intention (R^2=0.75)
(Shih and Fang, 2004)	Comparing theories for internet banking adoption	**Attitude** [Relative advantage, compatibility, complexity] **Subjective norms** [Normative influence] **Perceived behavioural control** [Efficacy, facilitating conditions]	Actual usage (R^2=0.23) Behavioural intention (R^2=0.66)
(Hung and Chang, 2005)	WAP services acceptance	**Attitude** [connection speed, service cost, user satisfaction, personal innovativeness, usefulness, ease of use] **Subjective norms** [peer influence, external influence] **Perceived behavioural control** [self-efficacy, facilitating condition]	Usage behaviour (R^2=0.12) Behavioural intention (R^2=0.38)
(Pedersen, 2005)	Adoption of mobile commerce	**Attitude towards use** [perceived user friendliness, perceived usefulness] **Subjective norms** [Interpersonal influence, external influence, self-control] **Perceived behavioural control** [self-efficacy, facilitating condition,]	Use (R^2=0.16) Intention to use(R^2=0.49)
(Bock et al., 2006)	Systems usage	Collaborative norms, future obligation, perceived usefulness, seeker knowledge growth, self-efficacy resource facilitating conditions	Usage of EKR for knowledge seeking (R^2=0.67)
by (Lin, 2006)	Participation in virtual communities	**Attitude** [perceived usefulness, perceived ease of use] **Subjective norms** **Perceived behavioural control** [internet self-efficacy, facilitating conditions]	Behavioural intention
(Choudrie and Dwivedi, 2006)	Broadband adoption	Relative advantage, Hedonic outcomes, utility outcomes, cost, skill, knowledge	None (used ANOVA)
(Hong et al., 2008)	Mobile services continuance of use	**Attitude** [Perceived usefulness, perceived ease of use, perceived enjoyment] **Subjective norms [**Social influence, Media influence] **Perceived behavioural control** [Perceived mobility] **Perceived monetary value**	Intention to Continue Usage of Mobile Data Services (R^2=from .56 to 0.72)
(Nor and Pearson, 2008)	Adoption of internet banking services	**Attitude** [Perceived relative advantage, perceived compatibility, perceived ease of use, trialability, perceived image] **Subjective norms [**friends, family, colleagues/peers**]** **Perceived behavioural control** [Self-efficacy, resource facilitating conditions] **Trust** [Disposition to trust, perceived structural assurance, perceived competency, perceived benevolence, perceived integrity]	Intention to use internet banking services

(To et al., 2008)	Instant messaging usage in organisations	**Attitude** [Perceived usefulness, perceived ease of use, compatibility, critical mass, security, perceived presence awareness] **Subjective norms [**business relation's influence, peer influence, superior influence**]** **Perceived behavioural control** [Self-efficacy, facilitating conditions]	Behavioural intention (R^2=0.561)
(Ajjan and Hartshorne, 2008)	Web 2.0 technology adoption	**Attitude** [Perceived usefulness, perceived ease of use, compatibility] **Subjective norms [**student influence, peer influence, superior influence**]** **Perceived behavioural control** [Self-efficacy, facilitating condition resources, facilitating condition technology]	Behaviour (R^2=0.442) Behavioural intention (R^2=0.760)
(Zhang and Gutierrez, 2007)	IT usage in social services sector	**Attitude toward using it** [Perceived personal usefulness, perceived organisational usefulness, perceived customer usefulness] **Subjective norms [**Top manager influence, peer influence, superior influence**]** **Perceived behavioural control** [Self-efficacy, perceived resources]	IT usage (R^2=0.68) User intention to use IT (R^2=0.41)
(Huang and Chuang, 2007)	IS usage after companies merge	**Attitude** [Perceived usefulness, perceived ease of use, complexity] **Subjective norms [**peer influence, superior influence**]** **Perceived behavioural control** [Self-efficacy, resources, technical support] **Risk** [Pressure, experience, information security]	Behaviour (R^2=0.442)
(Hsu et al., 2006)	Mobile coupons usage	**Usage attitude** [compatibility, perceived innovativeness, perceived usefulness, perceived ease of use, complexity] **Subjective norms [**primary group, secondary group**]** **Perceived behavioural control** [Self-efficacy, facilitating condition]	Behavioural intention in using m-coupons
(Lin, 2008)	Intentions to shop online	**Attitude** [Perceived usefulness, perceived ease of use, compatibility,] **Subjective norms [**interpersonal, family, colleagues/peers**]** **Perceived behavioural control** [Self-efficacy, facilitating conditions]	Actual usage behaviour (R^2=0.33) Behavioural intention (R^2=0.57)
(Hsieh et al., 2008)	Digital inequality	**Attitude** [utilitarian outcomes, hedonic outcomes] **Subjective norms** [Family friends, relatives' & peers' influence, governmental influence] **Perceived behavioural control** [self-efficacy, perceived ease of use, availability]	Continued use intention (R^2=0.58/0.40)
(Herath and Rao, 2009)	Adoption of information security practices	**Security Breach Concern level** [Perceived Severity of Security Breach, Perceived Probability of Security Breach **Security Policy Attitude** [Security Breach Concern level, response cost] Response efficacy, organisational commitment, resource availability, punishment severity, detection certainty, subjective norm, descriptive norm	Security Policy compliance intention (R^2=0.47)
(Hartshorne and Ajjan, 2009)	Students' adoption of web 2.0 technologies	**Attitude** [Perceived usefulness, perceived ease of use, compatibility] **Subjective norms** [peer influence, superior influence] **Perceived behavioural control** [self-efficacy, facilitating condition- resources, facilitating condition- technology]	Behaviour (R^2=0.27) Behavioural intention (R^2=0.633)
(Merikivi and Mantymaki, 2009)	Virtual worlds' continuance of use	**Attitude** [utilitarian outcomes, hedonic outcomes, social outcomes, trust] **Subjective norms** [referents' influence, secondary info] **Perceived behavioural control** [Self-efficacy, perceived ease of use, availability] **Critical mass**	Continuance intention

		Quality of competitors	
(Lee et al., 2010b)	Mobile media usage	**Attitude** [perceived usefulness, perceived ease of use, compatibility] **Subjective norms [**peer influence] **Perceived behavioural control** [self-efficacy, government, operator]	Behavioural intention
(Mantymaki and Merikivi, 2010)	Virtual worlds' continuance of use	**Attitude** [utilitarian outcomes, hedonic outcomes, status, connectedness] **Subjective norms** [referents, media] **Perceived behavioural control** [self-efficacy, perceived ease of use, availability]	Behavioural intention (R^2=0.245)
(Al-Majali and Nik Mat, 2010)	Internet banking services usage	**Attitude** [perceived usefulness, perceived ease of use, compatibility,] **Subjective norms** [family influence, mass media influence] **Perceived behavioural control** [self-efficacy, government support, technology support]	Behavioural intention (R^2=0.55)
(Horng et al., 2011)	Intention to become paying members of virtual communities	**Attitude** (decomposed in Web Site reputation, Website SQ, perceived benefits, Web site satisfaction and Web site loyalty) **Subjective norms** **Perceived behavioural control**	Intention of becoming paid member
(Sadaf et al., 2012)	Future Web 2.0 usage by teachers	**Attitude** [perceived usefulness, perceived ease of use, compatibility,] **Subjective norms** [student influence, peer influence, superior influence] **Perceived behavioural control** [self-efficacy, resource facilitating conditions – technology, facilitative conditions - resources]	Actual behaviour (R^2=0.707) Behavioural intention (R^2=0.718)
(Tsai et al., 2012)	Usage of internet filter software for banned content	**Attitude** [perceived usefulness, perceived ease of use, compatibility,] **Subjective norms** [superior influence] **Perceived behavioural control** [self-efficacy, facilitating conditions]	Behavioural intention
(Lee et al., 2013)	Library website usage	**Behavioural attitude** [perceived usefulness, perceived ease of use, compatibility] **Subjective norms** [peer influence, superior influence] **Perceived behavioural control** [self-efficacy, resource facilitating conditions, technology facilitation conditions]	Actual behaviour Behavioural intention

Table 1: Previous research using DTPB

Table 1 list a number of relevant publications undertaken using DTPB as the main framework to predict intentions or behaviour. As far as the predictive ability is concerned, on average DTPB explains the variation of intentions in 55.36% and behaviour in 39.80% of cases, improving the results obtained by Armitage and Conner (2001) by 16 and 12% respectively. Each study customises the components of attitude, social norms and perceived behavioural control according to the phenomenon they studied. Analysing these modifications, it was found that there was a trend to link the three main factors with the components listed next which were selected as the constructs of the model to explore the SNS joining stage.

- Attention: Perceived usefulness, perceived ease of use and compatibility.
- Social norms: the main components are peers, superior influence and media/external influence
- Perceived behavioural control is usually made up of self-efficacy, and facilitating conditions.

The variables considered in this list change slightly from the original TPB, including the media/external influence regarding the social norms, as well as merging the resources and technical issues in one component, thus, facilitating conditions.

2.3.2 Selected constructs

Based on the trend found in the DTPB literature regarding the variables to be included in the research model, Table 2 presents the constructs to be used in the model which was used to research the joining of an SNS. The model follows Taylor and Todd (1995) closely in the constructs and, in as much as they are the creators of the Theory, the model is moderately new.

Construct	Definition	Reference
Intention	How hard people are willing to try, or how much of an effort they are planning to exert, in order to perform the behaviour	(Ajzen, 1991)
Attitude	The degree to which a person has a favourable or unfavourable evaluation or appraisal of the behaviour in question	(Ajzen, 1991)
Perceived usefulness	The degree to which a person believes that using a particular system would enhance his or her job performance	(Davis, 1989), (Taylor and Todd,1995)
Perceived ease of use	The degree to which a person believes that using a particular system would be free of effort	(Davis, 1989), (Taylor and Todd,1995)
Compatibility	The degree to which an innovation is perceived as being consistent with existing values, needs	(Taylor and Todd, 1995)
Subjective Norms	The perceived social pressure to perform the behaviour or not	(Ajzen, 1991)
Peer influence	Perceived expectation from peers for an individual to perform the behaviour of interest	(Hsieh et al., 2008), (Taylor and Todd, 1995)
Superior influence	Perceived expectation from peers for an individual to perform the behaviour of interest	(Taylor and Todd,1995)
External Influence	Influence from external sources (e.g. mass media)	(Bhattacherjee, 2000)
Perceived Behavioural Control	The perceived ease or difficulty of performing the behaviour	(Ajzen, 1991)
Self-Efficacy	The belief in one's capabilities to organise and to execute the course of action required to attain a goal	(Hsieh et al., 2008), (Taylor and Todd,1995)
Facilitating conditions	Resource factors such as time and money and others relating to technology compatibility issues that may constrain usage.	(Taylor and Todd,1995)

Table 2: Constructs included for the research

2.3.3 Extending the DTPB

As per Table 2, the DTPB model can vary according to the purpose of the research. Two constructs that have been identified as influential factors in SNS/IS usage are trust and privacy. Trust has been widely studied in different contexts, but as Bart et al. (2005) state, there are differences between offline and online trust, in which the trust subject in the online case is the website, or for the case of this research it is the new SNS. In this sense, online trust follows the definitions of Dinev and Hart "*the confidence that personal information submitted to Internet websites will be handled competently, reliably, and safely*" (Dinev et al., 2006, p. 64) and Wu et al., "*the depth and assurance of feelings based on inconclusive evidence*". (Wu et al., 2010, p. 1026) As these definitions show, trust is based on no evidence, expecting that the counterpart, the new SNS in this case, manage the information in a responsible way. Regarding TPB, trust has been included in different research, as Pavlou and Fygenson (2006) illustrate in their article, finding that trust has a valuable contribution for predicting intentions and behaviour in online environments. Closely related to trust, is privacy (Dinev et al., 2006; Wu et al., 2010; Pavlou and Fygenson, 2006), which is usually related to the concerns about what will happen to the information submitted. In this case, privacy is understood as "*concerns about opportunistic behaviour related to the personal information submitted over the Internet by the respondent in particular*". (Dinev et al., 2006, p. 64) A few researchers have included these constructs in DTPB (Nor and Pearson, 2008; Merikivi and Mantymaki, 2009), finding the constructs to be an important influence on the intention of use, showing the compatibility of the model with these variables. Being aware of the influence of these factors on the SNS usage, I decided to explore whether trust and privacy also play a relevant role in the joining stage. The resulting model for the purpose of studying the SNS joining process is similar to the one presented in Figure 6, plus trust and privacy as additional factors.

2.4 Participating in an SNS

Getting people registered onto an SNS is a fundamental step in making a network attractive. However, achieving users' participation is what makes the SNS successful and guarantees its survival over time. For this reason, practitioners and researchers on SNS have focused their attention on users' participation. One characteristic of the research concerning participation is the focus on large SNS which are mostly general purpose SNS, such as Facebook and Twitter (Leskovec et al., 2008; Memic, 2009; Mislove et al., 2007; Goggins et al., 2011; Foregger, 2008). However, general purpose networks are only one part of the SNS world which is complemented with the niche SNS (Boyd and Ellison, 2008). General purpose networks are created with no particular aim other than socialising and gathering as many

people as possible. Facebook, Google+ and Hi 5, are well-known examples of such networks. In contrast, niche SNS seek explicitly to narrow audiences through the focus on characteristics of the population, activities, identity and/or affiliations. Examples of niche SNS include Beautifulpeople.com which is a network orientated to good looking people, Cafemom, which is orientated to women who are or who are going to be mothers and Mychurch, which is orientated to Christian people.

Going through the publications related to participation on SNS, a substantial body of literature about general purpose SNS was found, revealing a gap on niche networks. Boyd and Ellison explained that the reasons for the shortage of research on niche SNS is due to the difficulty in accessing the networks and following up the information (Boyd and Ellison, 2008). Table 3 shows some of the most relevant studies on SNS participation. From this table it can be noticed that most of the research is positioned within behavioural and psychological frameworks, focusing on the factors perceived as influential at the time of deciding whether to participate in the network. From the theories identified in the literature emerges a common background rooted in the Hierarchy of Needs as proposed by Maslow (1943) which has been adapted to discover the needs that SNS users are trying to satisfy. (Kim et al., 2010; Foregger, 2008; Krasnova et al., 2008)

Author	Field	Theories	Constructs	Findings
(Ellison et al., 2006)	Online communities	• Social capital	Facebook usage, psychological measures like self-esteem and satisfaction, social capital measures including bridging social capital, bonding social capital, high school social capital.	People use Facebook for social purposes. It was found that people use the SNS to intensify and solidify relationships that started offline rather than meeting people online.
(Krasnova et al., 2008)	SNS	• Maslow theory of needs • Theory of planned behaviour • Innovation diffusion theory	SNS participation, peer pressure and the needs of belongingness, self-esteem, self-presentation, cognitive, self-actualisation and altruistic	Satisfaction of belongingness, self-presentation and peer pressure were found to be influential for user participation, whilst self-esteem was found not to be influential
(Raacke and Bonds-Raacke, 2008)	MySpace and Facebook	• Uses and Gratifications theory	Demographic variables used as control variables. The other Constructs used were not detailed in the paper.	Socialising and information sharing gratifications were found to be the most influential needs.
(Joinson, 2008)	Facebook	• Uses and Gratifications theory	Frequency of visit, social connection, shared identities, photographs, content, social investigation, social network surfing, status updates,	Facebook is used to keep in touch with the 'friends', and has a surveillance function, as it makes it possible to check the profile of old contacts and friends, looking at what they are doing now and their physical appearance.
(Foregger, 2008)	Facebook	• Uses and Gratifications theory	Pleasurable way to spend time, Utilities and upkeep, channel use, maintain/establish old ties, interconnectedness, social comparison, market place, social information, sexual attraction.	The gratifications related to passing time, sexual attraction, utilities and upkeep, establish/maintain old ties, Social Comparison and channel use are the more influential f gratifications or participating in Facebook, with *Passing Time* being the most influential gratification (33%)
(Park et al., 2009)	Facebook groups	• Uses and Gratifications theory	Socialising, entertainment, self-status seeking, information seeking	People participate in the SNS mostly to satisfy the socialising needs

(Shi et al., 2010)	SNS continuance	• Uses and Gratifications theory • Expectation Disconfirmation Theory	Maintaining offline contacts, meeting new people, information seeking, entertainment, user satisfaction, continuance intention	Maintaining offline contacts, information seeking and entertainment were found to be highly influential for continuity of use, whereas meeting new people was not important for SNS users.
(Kwon and Wen, 2010)	SNS	• Technology acceptance model	Social identity, altruism, telepresence, perceived ease of use, perceived usefulness, perceived encouragement, actual use	The content provided by the SNS is important as it allows the user to have a high level of telepresence, which impacts on the SNS usage. Additionally, in order to increase the SNS usage, the content manager should provide enough encouragement to the users, especially those with high levels of altruism and social identity.
(Kim et al., 2011)	Facebook	• Uses and Gratifications Theory	Seeking friends, seeking convenience, seeking social support, seeking information, seeking entertainment.	It was found that information, social support and entertainment were the main motivations for SNS usage.
(Foster et al., 2010)	Facebook	• Uses and gratifications theory • Motivation theories	Community membership, information value, participation concerns, friendship connections, participation confidence	The study was exploratory, studying the applicability of the constructs proposed to study users' participation.
(Cheung et al., 2011)	SNS	• Social influence theory • Uses and Gratifications • Social presence theory	Subjective norms, group norms, social identity, purposive value, self-discovery, maintaining interpersonal interconnectivity, social enhancement, entertainment value, social presence, we-intention.	Social presence is the construct with the highest influence on we-intention, followed by social norms. Social identity was not related to we-intentions, being explained by the inverse relationship between the number of contacts and the creation of an identity Social identity does not have any significant relationships with We-Intention.

Table 3: Research on why to participate in SNS

Table 3 highlights that the Uses and Gratifications Theory (Katz et al., 1974) stood as one of the most used theories to research participation, not only on SNS, but also on IS related fields. (Lee et al, 2009) Uses and Gratifications (U&G) theory, which is based on Maslow's hierarchy of needs, aims to "*explain the reasons that people choose a specific medium over alternative communication media and to elucidate the psychological needs that motivate people to use a particular medium*". (Cheung et al., 2009, p.281) This theory has been widely adopted for answering questions about user adoption and user participation in different media streams like newspapers, radio, television and internet. (Ruggiero, 2000, p. 3) From Table 3, it can be seen how socialisation, information sharing and entertainment are common factors influencing users' participation. These findings are based on general purpose networks. Still, contrasting with general purpose networks, niche SNS are created with a specific purpose and narrowed target of population in mind (Boyd and Ellison, 2008), which generates different dynamics within the networks. Based on the growing market of niche networks, which contrasts with a lack of literature about this topic, the research question for this part of the thesis is aimed at exploring the main factors that motivate users' participation in niche SNS. The research will be framed in the Uses and Gratifications theory, which has been accepted as a stable framework in similar cases and is explained in more detail as follows.

2.4.1 Uses and Gratifications (U&G) theory

The Theory of Uses and Gratifications was postulated by Katz et al., (1973), based on sociological and psychological foundations. When this Theory was developed, it was focused on the relationship between media and people, and throughout continuous developments the focus of U&G has shifted to what people do with the media (Rubin, 2002). This theory has been used to explain the reasons for choosing a particular medium over another, suggesting that "*people's needs influence their media selections; by seeking out and using specific media, people can meet these individual needs*". (Foregger, 2008, p. 2)

2.4.1.1 Uses and Gratifications assumptions

The initial aims of U&G theory were "*a) to explain how people use media to gratify their needs, b) to understand motives for media behaviour, and c) to identify functions or consequences that follow*". (Rubin, 2002, p. 166) The original foundations of the U&G model were proposed by Katz in five elements.

> *"a) the audience is active, b) media choice depends on the audience's link between media and need gratification, c) media compete with other sources, both interpersonal and*

other media, for need satisfaction, d) audience members can self-report their needs, and e) value judgments of mass media content should be suspended until motives and gratifications are understood."

(Kats, 1974, cited by Foregger, 2008, p. 15)

These assumptions were revised by Rubin, who proposed an updated version of the assumptions, based on the evolution of the media. The new assumptions are:

"*a) Communication behaviour is goal-directed, purposive, and motivated, b) people select media, c) many factors guide our media selection, d) media compete with other channels for messages, and e) people are typically more influential than media"*

(Rubin, 1994, cited by Foregger, 2008, p. 15).

The updated version of the assumptions considers the role of the user as a more active element, influenced mainly by needs, social and psychological factors, and interpersonal interactions (Rubin, 2002), along with the influence of the messages in the selection of the media. This revision of the assumptions provides elements that fit better in the analysis of SNS platforms.

2.4.1.2 SNS Gratifications

The gratifications identified in the literature can be categorised in four major groups: a) socialisation and networking, b) information exchange, c) entertainment and d) convenience gratifications. The first group includes gratifications related to socialising and networking needs. These needs are related to building and maintaining a network of contacts, as well as the benefits obtained from the contacts in the network. The creation and maintenance of contacts in the social network looks to build the network of contacts whether with relationships previously created (offline) or new relationships created online. (Cha, 2010; Foregger, 2008, Kim et al., 2010; Kim et al., 2011; Papacharissi and Rubin, 2000; Park et al., 2009, Sangwan, 2005) Examples of the gratifications in this group are interconnectedness, socialising, seeking friends and maintaining/establishing old ties. Regarding the benefits obtained from a network, the gratifications of this type are related to what can be achieved (and/or offered) through the interaction with the members of that network. These benefits can vary from social support, from and to other members of the network, to support with job/career related activities. (Foregger, 2008; Cha, 2010; Kim et al., 2011) Social support is quite common in networks related with health issues like Ihadcancer.com, in which the members support each other by providing pastoral care as well as sharing treatments and

medicines that have helped them to feel better. Examples of gratifications are seeking social support and interpersonal gratification. The networking group includes the gratifications related with the group identification, in which the user feels part of the group by participating in it. (Cha, 2010; Dimmick et al., 2000; Dimmick et al., 2007; Kim et al., 2011; Nyland, 2007; Papacharissi and Rubin, 2000; Park et al., 2009; Ramirez Jr et al., 2008)

The second group is related to the information available on the SNS. This information could be about the user (i.e. personal information like photos, list of contacts, etc.) or information about specific interests or purposes. (Like photography, astronomy, etc.) The gratifications in this group are related to the second type of information, considering the SNS as a repository of information about specific topics. Personal information gratifications are the topic of the first group. For the information exchange group, the user comes to the network either looking for personal information and opinions of the members of the networks, or by looking forward to acquiring deeper knowledge of the topics discussed in the network. (Cha, 2010; Foregger, 2008; Huang, 2008; Kim et al., 2011; Papacharissi and Rubin, 2000) This exchange of information results in a new alternative for web search known as "*social search*" (Lampe et al., 2006) based on the opinions of the network members about specific topics. Attached to the information seeking gratifications are the learning and knowledge gratifications, whereby it is expected that people will access better or specialised resources that usually are not shared in the general SNS groups. (Cha, 2010; Huang, 2008; Kim et al., 2011; Papacharissi and Rubin, 2000; Park et al., 2009) Innovation is a popular gratification in SNS (Huang, 2008; Sangwan, 2005), and is located in this group due to the relationship found in the literature between innovation gratifications and information and learning gratifications. (Cha, 2010)

The third group is orientated towards the entertainment offered by niche SNS, which is a common gratification across the articles reviewed. In this group two approaches to entertainment based on the active or passive role of the user, as mentioned in the assumptions proposed for the Uses and Gratifications theory, are considered. (Rubin, 2002) The first approach is related to the willingness to use the SNS, because it is fun or an enjoyable experience to spend time there, consequently involving an active role in the use of the SNS. (Cha, 2010; Foregger, 2008; Huang, 2008; Kim et al., 2011; Papacharissi and Rubin, 2000; Park et al., 2009; Sangwan, 2005) Examples of gratification in this approach are seeking entertainment and a pleasurable way to spend time. The second approach is related to a passive role, in which the user logs in on the SNS because there is nothing better to do at that

moment, making it the best option to spend the time and assuming a passive user role. (Cha, 2010; Dimmick et al., 2007; Foregger, 2008; Kim et al., 2011; Papacharissi and Rubin, 2000; Ramirez Jr et al., 2008) Examples of this approach are boredom relief and escape.

The fourth group is related to the convenience of the SNS as a tool to conduct specific activities. A representative example is the use of the SNS as a communication tool, making it possible to be in touch with other members of the network at a reduced cost (in many cases free), and simplifying the coordination of group activities through the use of the SNS. (Cha, 2010; Dimmick et al., 2000; Dimmick et al., 2007; Foregger, 2008; Huang, 2008; Kim et al., 2011; Nyland, 2007; Papacharissi and Rubin, 2000; Ramirez Jr et al., 2008; Sangwan, 2005) Likewise, SNS have become a powerful marketing tool, which, combined with the information available on the network, enables the user to make a more informed decision at the time of purchasing a product or service. This situation is exemplified in the market gratification proposed by Huang (2008) and Foregger (2008).

Privacy and security gratifications are concerned with the risks related to the personal information available on the network. These risks can go from identity impersonation to stealing banking details. (Huang, 2008; Cha, 2010) Although this gratification is connected with the identity and socialisation gratifications, it was decided to leave it apart as a group. The intensity of use (Ellison et al., 2006) is adopted as the measure of participation in the network, as it has been widely used as a dependant variable by other researchers on SNS participation. (Krasnova et al., 2008; Raacke and Bonds-Raacke, 2008)

2.5 Withdrawal

The last stage of the SNS user life cycle is user withdrawal, which is as important a stage as the previous two, as an SNS without users is as SNS doomed to disappear. As noted above, there is a very limited body of research addressing the reasons why a user decides to cease using an SNS. One of the few studies on this subject was developed by Sillaber et al., (2013), proposing a theoretical model for usage decline based on the Technology Acceptance Model (TAM). Sillaber's model adopted the concept of *user withdrawal* as the inactivity of the user in the SNS, in which inactivity can vary from temporal inactivity to the definitive closing of the SNS profile. However, there are several types of SNS usage decline and every SNS has a group of users who are not active, for different reasons, and they stay inactive for different periods of time. This situation creates confusion on the classification as the boundaries between temporary and permanent inactivity status are not clear. The only case that is definite

is when the SNS user closes his/her profile because in this case, the decision is final and there is no way to come back.

The literature review regarding SNS withdrawal shows how researchers have focused their efforts on network usage and user retention (Ellison et al., 2007; Hargittai, 2007; Joinson, 2008; Nadkarni and Hofmann, 2012; Robards, 2012; Shi et al., 2010; Valenzuela et al., 2009; Al-Debei et al., 2013), leaving SNS withdrawal as the complementary outcome when the usage is not continued. Some authors have adopted a mathematical modelling approach using techniques such as epidemiologic models and Social Network Analysis (static and dynamic) to study SNS decline as an approximation to SNS withdrawal. One of the concepts studied in this approach is network churn, which is defined as "*the loss of a user in an Online Social Network*" (Blaise et al., 2012, p. 1) and is based on the influence of central nodes on closing the account, influencing cascade behaviours. Network churn has been adapted from previous studies on customer retention in different sectors, such as telecommunications, the mobile industry, online games and banks, among others. (Kim et al., 2014; Phadke et al., 2013; Xie et al., 2009; Kawale et al., 2009) Another related concept is 'Network Resilience', which is defined as "*the ability of a community to withstand changes*". (Garcia et al., 2013, p. 39) Research on network resilience uses mathematical modelling to analyse the reaction and resistance of the network to different types of attacks to end the network. (Garcia et al., 2013; Newman, 2003; Ko and Pu, 2011; Latif et al., 2013) In general terms, the findings of the mathematical modelling approach are helpful to understand the properties of the network (i.e. homophily, clustering, power law) and how a behaviour can be adopted by members in the network. As a result, mathematical modelling has made significant contributions to the methodological approaches, but the understanding of the reasons for closing the account still need further research. This point reflects Vandenberghe's (2002) criticism about the simplification of the SNA, transforming the person into a node with certain attributes, but still missing the human condition.

Reviewing the literature available about SNS withdrawal, Sillaber et al. (2013) identified different types of status on SNS (Others or non-members, Guests, Passive Members, Active Members and Developers, as shown in Figure 7) based on previous research about SNS usage. The transition between statuses, denoted by '$\sim C_{a,b,c}$', includes three processes: the first one is the *temporary inactivity*, defined as user inactivity for an unspecified period of time, but still reachable through the SNS platform. The second state is *permanent inactivity*, which is when a user stops using the SNS for good but without deleting the profile and leaving the

information that the user posted in the profile available. The third stage is the *purge*, defined as closing the SNS profile, deleting the content and cutting all the ties created in the network.

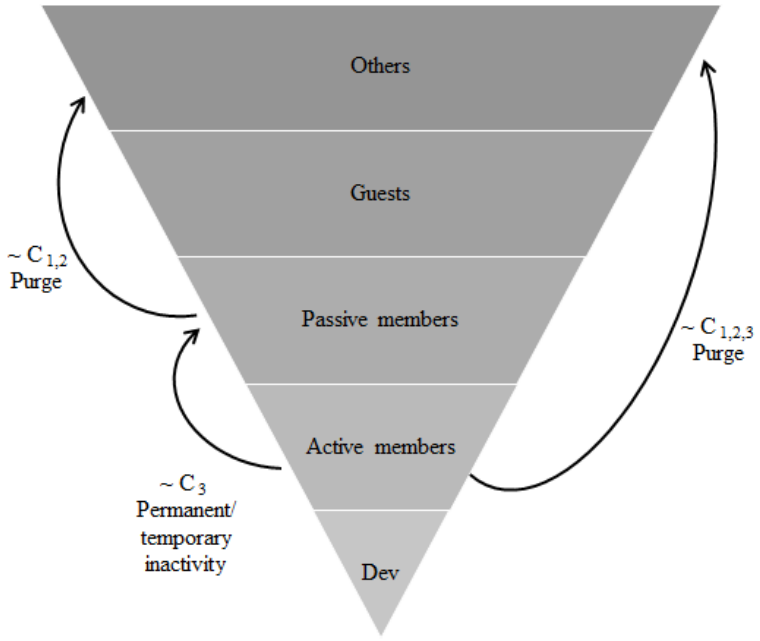


Figure 7: User withdrawals from social network services. (Sillaber et al. 2013)

Sillaber's contribution is based on the different statuses that a user can have in an SNS and how the transition from one status to another represents usage decline. However, his work does not explain the reasons for changing the status and even though it proposes a clear distinction between temporary and permanent inactivity definitions, there is a lack of clarity concerning cases like users with a long inactivity time, e.g. people who visit their profile every year or people who visit their profile after receiving a reminder to visit the network. These long periods of inactivity generate confusion as to wheter to assign users into a certain category or not. For the sake of clarity, the definition coined in this research for SNS withdrawal adopts the *purge* transition definition proposed by Sillaber et al. (2013). This definition is selected because it makes it possible to identify who is a user and who is not, in a clearer way. In addition, the fact that a person took the time and effort to close their account implies a stronger conviction about this decision, hence stronger reasons to do it. This strong conviction makes it possible to assume that the salient characteristics and motivations to take this decision are easier to identify. It is worth clarifying as well that SNS withdrawal is understood as closing the profile in a specific SNS, not closing all the profiles and discontinuing the use of SNS altogether.

2.5.1 From SNS participation to withdrawal

As mentioned in the previous stage, participation in SNS has been extensively researched in recent years, and some of the findings from this research can be applied to SNS withdrawal. Thus, researchers on participation have found a common factor to be that there is a need to belong which is connected to a socialisation need based on self-presentation. (Krasnova et al., 2008; Seidman, 2013; Nadkarni and Hofmann, 2012) Nadkarni and Hofmann (2012) define belongingness as the need to create social relationships and be socially accepted, whereas self-presentation is considered to be a continued process of impression management. (Nadkarni and Hofmann, 2012) These motivations revolve around the need to be part of a group, so they will be explored in more depth in order to find whether they provide elements, as well to explain why the user would like to stop being part of the group.

2.5.1.1 Belongingness

Belongingness is related to the need to feel part of the group and can be traced from Maslow's Hierarchy of needs of Maslow (1943). Baumeister and Leary (1995) proposed a hypothesis about the importance of belongingness for human motivation, allowing us to understand the importance of belongingness in SNS.

> *"...human beings have a pervasive drive to form and maintain at least a minimum quantity of lasting, positive, and significant interpersonal relationships. Satisfying this drive involves two criteria: First, there is a need for frequent, affectively pleasant interactions with a few other people, and, second, these interactions must take place in the context of a temporally stable and enduring framework of affective concern for each other's welfare".*
>
> (Baumeister and Leary, 1995, p. 497)

The first part of the definition posits the need to keep "*lasting, positive and significant interpersonal relationships*", which are analysed in light of the SNS context. The Internet as a communication medium has impacted on the properties of the communication process, and these changes are reflected in virtual interactions. (Smith, 1992) For example, Smith proposes that virtual relationships are anonymous (to some extent) as people in many cases do not reveal their true identity, a concept which is very rare in offline relationships. Likewise, when the relationships are dependent on the platform, the continuance of the relationship is compromised by the duration of the SNS. In fact, one of the reasons that explains user churn

is the mobility of the friends to other networks based on cascade behaviour. (Verbeke et al., 2014; Zhang et al., 2012) Hence, in order to have lasting relationships, it is necessary to move to the networks where your contacts are. Nevertheless, with mobility being a reason to change SNS, it is not a sufficient one for closing an SNS profile.

The need for positive relationships is something desirable, but relative in the SNS context. Many of the contacts in the SNS are people who publish negative posts, either to draw others' attention (i.e. attention seekers and internet trolls (cf. Shachaf and Hara, 2010)) or who are looking for social support through their contacts. (Raacke and Bonds-Raacke, 2008; Park et al., 2009; Cha, 2010; Kim et al., 2010; Kim et al., 2011; Sangwan, 2005) Currently most of the SNS provide tools to report and block posts and users posting abusive content. However, in many cases people still keep these "*negative*" contacts in their social network which goes against the need for positive relationships. Analysing belongingness from this perspective, raises the question as to whether unwanted posts and invitations are reason enough to close the SNS profile.

The need for significant relationships is something that can be satisfied through SNS. However, the increasing size of personal networks brings as a consequence, the fact that not all of the members of your network will be significant to you. An average Facebook user has around 300 people in their contacts' list, which is way beyond the 150 contacts that Dunbar (1992) proposed as the limit of meaningful relationships for a person. This number was calculated for offline relationships and later tested and confirmed for SNS by Gonçalves et al. (2011). Since this limit is proven to work similarly in online and offline environments, it makes one wonder how meaningful the relationships created in the network are. In addition, acknowledging that in the personal network there is a mix of strong and weak ties, how influential is the presence/absence of significant contacts in a contact list Will the absence of significant contacts make someone close their profile?

Baumeister and Leary (1995) argue that interactions should happen in a framework based on considering others' welfare. SNS, as a platform, is proving to be a stable place to interact with others, in which, regardless of the SNS trends most currently used, people have adopted SNS as an extension of the world they interact with. However, SNS present exceptional conditions for narcissistic behaviour (Mehdizadeh, 2010), which is focused on the presentation of the self rather than on the wellbeing of others which takes us to the next section about self-presentation.

2.5.1.2 *Self-presentation and impression management*

Self-presentation is an implicit part of the communication process, being related to the efforts that a person makes in order to portray the image of him/herself in a certain way. Based on Goffman's Self-Presentation Theory (Goffman, 1959), when an individual is in a group, this person is interested in conveying an impression to the others. Usually, due to this interest, the person will shape his/her activities accordingly to achieve what he/she wants to convey. (Goffman, 1959) Complementing this point, the self-presentation process is the result of constant efforts to leave an impression on the others, or as Nadkarni and Hofmann (2012) state a continued process of impression management.

A frequent question in online impression management is to what extent an SNS profile is an accurate representation of the owner. Authors like Back et al. (2010) and Gosling et al. (2007) have analysed Facebook users, finding that online profiles are a rather accurate presentation of the person. In contrast, Zhao et al. (2008) argue that Facebook profiles are related to a on the desirable identity, which is associated to what people are aspiring to have in their offline life. Also, Zhao's group found that the Facebook profile as a non-anonymous (or *nonymous*) profile differs from the profiles that users provided in anonymous environments. These findings are aligned with the characteristics of online interactions proposed by Smith (1992). This author argues that online interactions are astigmatic (no stigmas) and anonymous. Stigmas are taken as behaviours or characteristics that associate the person with a certain category (cf. Goffman, 1959) and anonymous, meaning that you do not need to reveal your identity. The astigmatic and anonymity characteristics are represented in Steiner's (1993) popular cartoon "*On the Internet, Nobody Knows you're a Dog*", which has become a common phrase among anonymity and privacy researchers. (Christopherson, 2007) These findings confirm the seminal article by Ellison et al. (2006a) about online self-presentation regarding how people change their profile when their identity is disclosed. In relation to online environments, Papacharissi (2002) studied self-presentation in personal homepages and obtained similar results to Goffman about the control that the owner has on the material they want to present. The findings of Papacharissi on online pages were extended afterwards to SNS environments. (Buffardi and Campbell, 2008; Mehdizadeh, 2010)

Self-presentation has been widely researched in the SNS context. Boyd and Ellison (2008) found that narcissism and self-esteem are considered the most common influencers related to self-presentation in SNS. (Mehdizadeh, 2010) Mehdizadeh argues that narcissists use SNS relationships to project an image of being successful and popular to others. Part of

the motivations that narcissists have to use SNS is the opportunity that these networks provide for gathering large numbers of superficial relationships characterised by emotionally detached communications, for example simple birthday wishes on the wall. (Buffardi and Campbell, 2008; Mehdizadeh, 2010) In addition, as Buffardi and Campbell (2008) state, SNS provide a highly controllable environment in which users have the power over self-presentation. And it is precisely the power to control the information posted in their profiles which lets SNS users avoid offline constraints in order to hide or change some of their characteristics or stigmas, for example gender, age, appearance, lifestyle, and/or shyness among others, enabling them to enact different identities online. Aware of the importance of being able to control impressions, Leary and Kowalski (1990) proposed the following definition of impression management. "*The process by which people control the impressions others form of them, [sic] plays an important role in interpersonal behaviour*". (Leary and Kowalski, 1990, p. 34)

Every person has, or can create, an/or several identity/ies. Likewise, groups have their own identities as well. The link attaching self-concept and membership of a group is known as social identity (Elsbach and Bhattacharya, 2001) as well as social identification. (Ashforth and Mael, 1989; Kreiner and Ashforth, 2004; Anand et al., 2013) The last one is a more accurate term for this phenomena following the Sluss and Ashforth (2007) guideline. They point out that it is common practice among academics to use identity and identification as synonyms. However, identity deals with the nature of the relationship, whereas identification deals with the extent to which the person internalises group identity as part of the self-concept. (Sluss and Ashforth, 2007)

The definition of social identification adopted for this thesis comes from the seminal paper by Kreiner and Ashforth (2004), who defined it as "*self-descriptions based on a perceived overlap of individual and group identities*". This definition suggests that an interaction occurred between individual and group in order to define their identities, which is present as well in the definition by Sluss and Ashfort (2007, p. 11) "*the extent to which one defines oneself in terms of a given role-relationship*" . This dynamic process of identification between the self and the group is the central idea of Social Identity Theory (Tajfel and Turner, 1986), which is presented next.

2.5.2 Social Identity Theory (SIT)

Baker and White introduce Social Identity Theory (SIT)'s main idea by identifying the importance of memberships of social groups in the definition of the self-concept (Baker and

White, 2010, p. 5), which is based on the work of Tajfel and Turner (1986) and Hogg and Abrams (1988). In more detail Kreiner et al. (2006) explain SIT as follows:

> *"At the foundation of SIT are two sociocognitive processes. The first is categorisation, in which, to reduce the uncertainty inherent in social relations, individuals cognitively sort themselves and others into groups (e.g.(Hogg and Terry, 2000)). The second process involves seeking positive group distinctiveness as a vehicle for individual self-enhancement (e.g.(Sedikides and Strube, 1997))"*
>
> *(Kreiner et al., 2006, p. 620).*

Based on the interest of this stage of the user life cycle, uncertainty reduction and self-enhancement arise as important concepts to understand this phenomenon. Uncertainty reduction is related to the efforts made by the individual to decrease the uncertainty/insecurity about "*one's perceptions, attitudes, feelings, and behaviours and, ultimately, one's self-concept and place within the social world*". (Hogg and Terry, 2000, p. 124) Self-enhancement is related to the motivation to develop and sustain the identity(ies), either individual or social, which ultimately will support his/her self-esteem. (Kreiner et al., 2006) In self-enhancement, distinctiveness helps to create and keep the uniqueness of the group that the user participates in, compared to the groups he does not, which in turn reinforces his/her identity. (Ashforth and Mael, 1989) In the words of Griepentrog et al. (2012, p. 733) "*people are motivated to positively differentiate their group from others in order to maintain and enhance their group's identity and consequently their identity*."

SIT considers three possible cognitive states: identification, disidentification and ambivalent identification (Ashforth and Mael, 1989; Kreiner et al., 2006; Anand et al., 2013), which are defined by Kreiner et al. as follows:

> *"Identification refers to the definition of self-vis-à-vis some group, such as an occupation or organisation (Ashforth and Mael, 1989), whereas disidentification involves defining one- self as being not the same as the group [citing] (Elsbach and Bhattacharya, 2001). Ambivalent identification (also called schizo-identification) is said to occur when one simultaneously identifies and disidentifies with the group or various facets of the group [citing] (Pratt, 2000)"*
>
> *(Kreiner et al., 2006, p. 620).*

These cognitive states proposed by Kreiner show the how the (dis)identification is based on the overlap between the identity of the individual and the identity of the group. This overlap suggest the identification as a process with different stages going from a full overlap (identification) passing by a partial overlap (ambivalent identification) and ending with no overlap (disidentification). The stages of this identification process are similar to SNS usage decline model proposed by Sillaber et al. (2013), in which SNS users may feel completely identified with the SNS, identified with some aspects of the network and disentified with others at the same time (e.g. identified with the people in their network, but not with some practices such as sponsored posts), or completely disidentified with the SNS. The case of disidentification is similar to the purge in Sillaber's model, in which if there is nothing in common or no satisfying of any need, the user feels disidentified with the network. These three states are illustrated in Figure 8, showing how identification/disidentification processes help to understand SNS permanence and withdrawal.

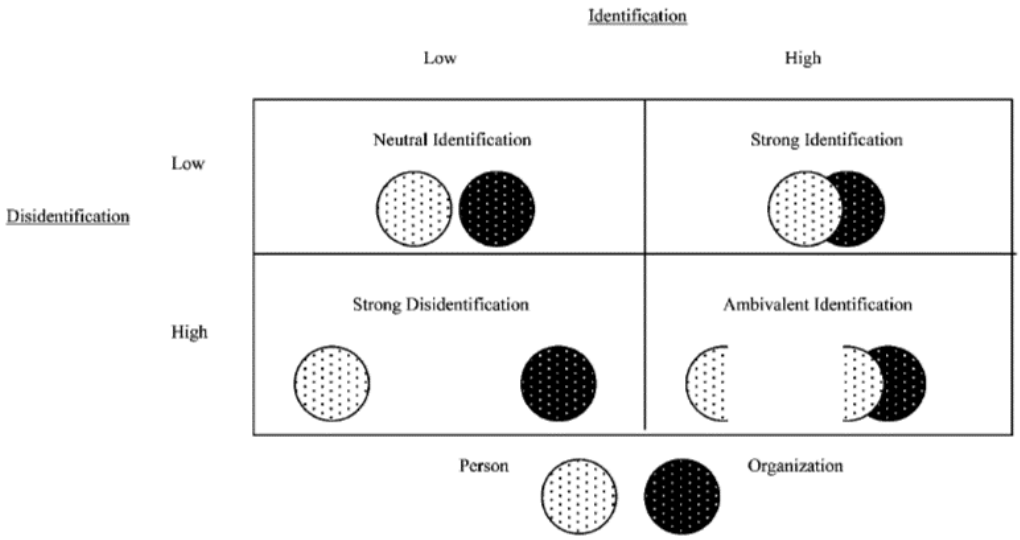


Figure 8: Expanded model of identification (Kreiner and Ashforth, 2004)

2.5.2.1 Disidentification as foundation of SNS withdrawal

Given the similarities between disidentification and SNS withdrawal, the definitions and explanations for disidentification can be applied to SNS withdrawal as well. Steele (1997, p. 614) defines disidentification as "*a re-conceptualisation of the self and of one's values so as to remove the domain as a self-identity, as a basis of self-evaluation. Disidentification offers the retreat of not caring about the domain in relation to the self*". This definition highlights a continuous self-evaluation process regarding the overlap between self-identity and social or

group identity, which is used by Woodcock et al. (2012) in their research about stereotypes. This continuous self-assessment makes it possible to understand that, as people grow and change interests, groups can have changes as well as part of their evolution. As a consequence, disidentification may happen, causing the person to stop caring about the group, which is labelled as domain disidentification by Woodcock et al. (2012). These authors define domain disidentification as "*when a formerly valued social identity is significantly reduced or abandoned*" (Woodcock et al., 2012), which is in alignment with Sillaber's definition about withdrawal.

Disidentification has been studied from diverse fields, such as ethnic identification for first and second generations (Chen and Kenrick, 2002; Eidelman and Biernat, 2003; Leary and Kowalski, 1990; Steele, 1997; Zou et al., 2008; Verkuyten and Yildiz, 2007), ethnocentrism (Chen and Kenrick, 2002; Josiassen, 2011) and gender and sexuality. (Scharff, 2010) Research within the literature regarding disidentification in SNS, produced few results which was a motivation for this thesis to contribute to the theory by extending the application of the disidentification process to the SNS context. Based on SIT literature, this theory has paid more attention to identification than to disidentification, making it necessary to develop different scales for its operationalisation. An interesting case identified in the literature is the research done by Woodcock et al. (2012) who used inverse identity scales, working negative associations between the stereotype and the identity as an indicator of disidentification which can be used for researching withdrawal behaviour. This inverse approach has been used by other researchers (Anand et al., 2013; Elsbach and Bhattacharya, 2001), based on the idea that people can find it difficult to know who they are, but they can identify more easily who they are not. Elsbach and Bhattacharya (2001, p. 395) argue that "*individuals may understand who they are, in part, by defining who they're not*". Anand et al. (2013) take this argument to introduce the disidentification process as a way to preserve the identity of the company. These researchers found that disentification processes are more frequent in singular identity firms who need to preserve the basis of the firm, contrary to the case of multiple identity firms who need to be connected with people and organisations at different levels.

2.6 Research questions

This section aims to summarise the Chapter by following up on the findings and the gaps identified in the literature review of each stage of the SNS user life cycle. Based on these gaps and the theoretical framework suitable to each stage, this section presents the research questions, models and hypotheses used in this thesis to explore the SNS user life cycle.

One of the findings common to all three stages is the use of behavioural and psychological theories to study SNS user behaviour. In turn, research on user behaviour is heavily influenced by Maslow's Hierarchy of Needs which has been used to identify the main motivations for the user to carry out certain actions (e.g. joining or participating, sharing information, among others). Maslow's model has been used, as well as adapted to newer theories concerned with finding the needs that the user is looking to satisfy by performing (or not) certain actions. Thus, for the case of this thesis, the starting question is what the main factors influencing the SNS user life cycle are. The literature on SNS user behaviour presents a greater emphasis on the second stage of the cycle, but still it is not clear why a user would join a new SNS and why some users would close their profile on existing networks. As a result, the overarching research question is split into three questions, one for each stage of the cycle.

- Question 1: What are the main factors that motivate a user to join a new SNS?
- Question 2: What are the main factors that motivate a user to participate in an SNS?
- Question 3: What are the main factors that motivate a user to withdraw from an SNS?

Going into more detail on each stage, the first research question aims to explore the reasons why a user would like to join a new SNS. The literature showed how behavioural theories have produced good results for the introduction and adoption of new technologies. For this thesis, the Decomposed Theory of Planned Behaviour (DTPB) is selected as a theoretical framework, as it combines different constructs from TAM, diffusion of innovation and TPB (Taylor and Todd, 1995) which have been extensively used in research about the introduction and adoption of different technologies. Research on SNS has found that trust and privacy are relevant factors for the user, so these factors are included in the model to test whether they are important as well at the time of joining. Due to the difficulty of measuring behaviour, the proposed model follows a common practice among TPB researchers about measuring intention as a dependent variable. (Lin, 2006; Hong et al., 2008; Merikivi and Mantymaki, 2009)

The final model is presented in Figure 9.

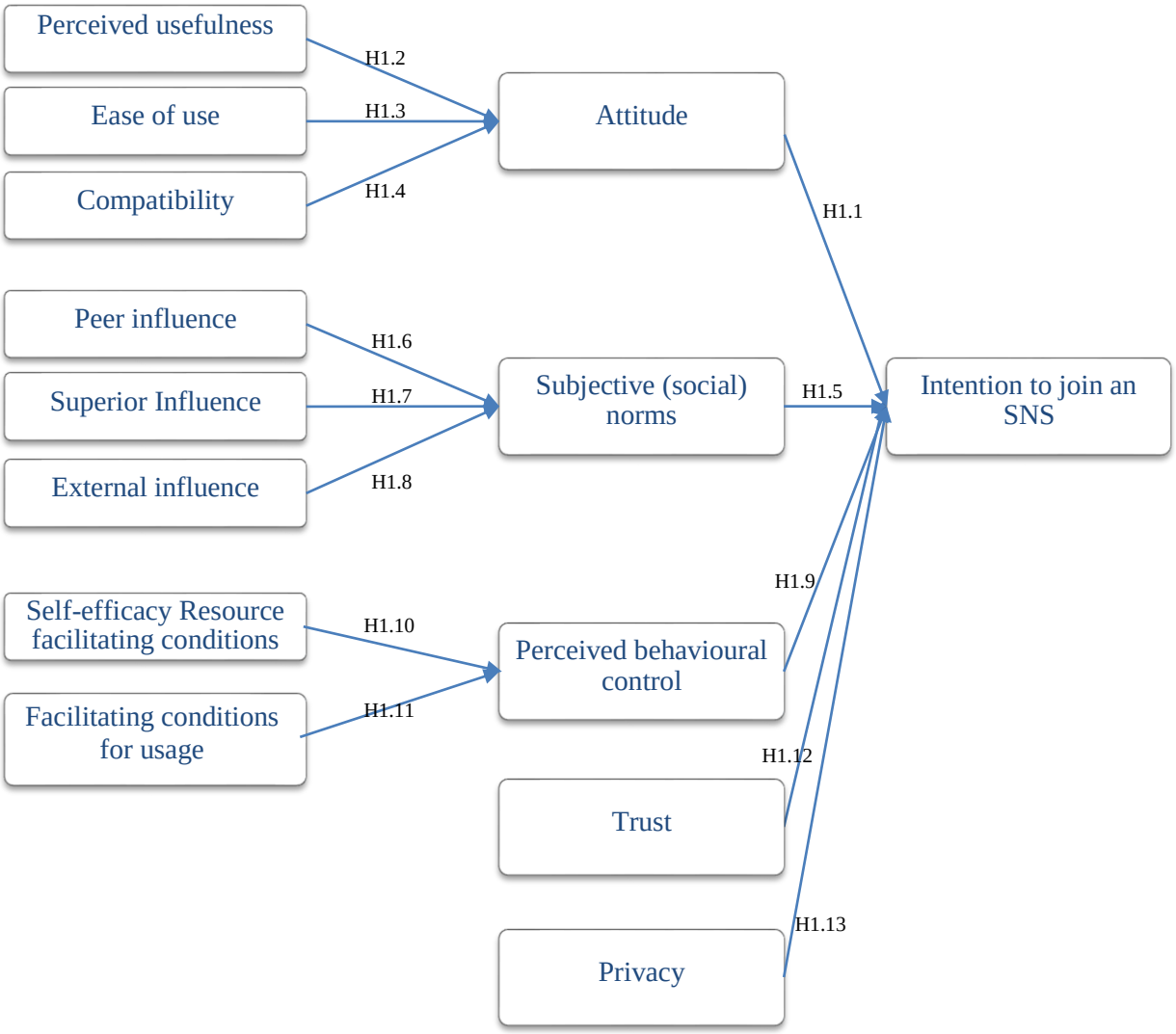


Figure 9: Research model for Joining an SNS

The hypotheses for this model are the following:

H1.1: Attitude towards new SNS has a positive and significant effect on the intention to join a new SNS.

H1.2: The Perceived Usefulness of new SNS has a positive and significant effect on the attitude towards joining it.

H1.3: The perceived Ease of use of the SNS has a positive and significant effect on the attitude towards joining it.

H1.4: The perceived compatibility of new social networks with the existing SNS has a positive and significant effect on the attitude towards joining them.

H1.5: Social norms positively influence the intentions to join new SNS.

H1.6: Peer influence about joining new SNS has a positive and significant effect on the social norms toward joining these sites.

H1.7: Superior influence about joining new SNS has a positive and significant effect on the social norms toward joining these sites.

H1.8: External influence about joining new SNS has a positive and significant effect on the social norms toward joining these sites.

H1.9: Perceived behavioural control positively influences the intentions to join new SNS.

H1.10: Self-efficacy has a positive and significant effect on the perceived behavioural control towards joining new SNS.

H1.11: Facilitating condition has a positive and significant effect on the perceived behavioural control towards joining new SNS.

H1.12: Trust towards new SNS has a positive and significant effect on the intention to join these sites.

H1.13: Privacy concern towards new SNS has a negative and significant effect on the attitude toward joining these sites.

Regarding the second stage of the life cycle, the research question aims to study the reasons why a user would like to participate in an SNS. This stage of the cycle has received most of the attention from SNS researchers. However, the research has been focused on general purpose networks due to the ease of access to information there, since most of the cases involve public information, along with the large number of users registered with these networks. However, following (Boyd and Ellison, 2008) networks classification, general purpose networks are different from niche SNS as the latter are concentrated on a specific topic or interest. This difference leads us to question whether the reasons for participating in a

general purpose network are similar to the reasons for participating in a niche SNS. For this reason, the research on this second stage will be focused on the reasons for participating in niche SNS.

IS researchers have very frequently used the Uses and Gratifications (U&G) Theory to explore the motivations to use different communication means and Internet technologies. In the specific case of the SNS, researchers have applied this theory using gratifications that can be classified into four groups, as illustrated in Figure 10.

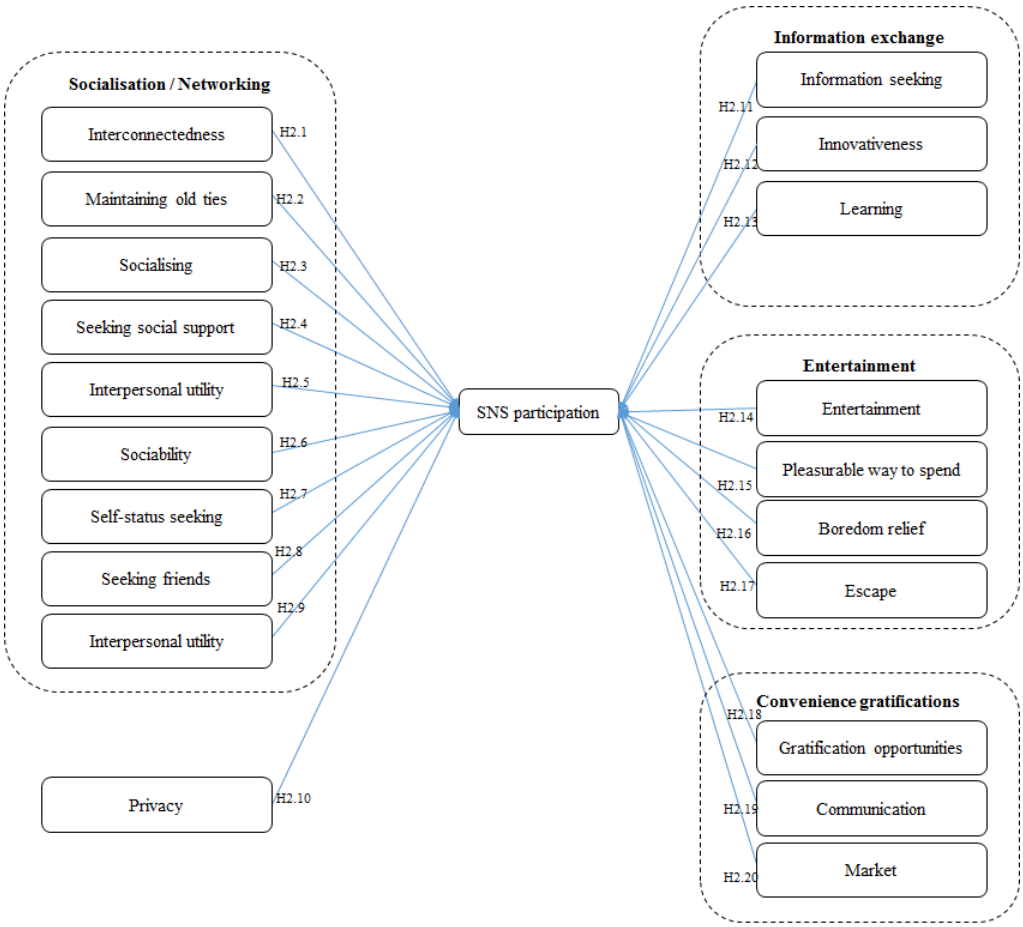


Figure 10: Research model for Participating in a niche SNS

The hypotheses formulated for this stage are formulated for each group:

Socialisation/ networking

H2.1: Interconnectedness gratification has a positive and significant effect on the participation in niche SNS.

H2.2: Maintaining old ties gratification has a positive and significant effect on the participation in niche SNS.

H2.3: Socialising gratification has a positive and significant effect on the participation in niche SNS.

H2.4: Seeking social support gratification has a positive and significant effect on the participation in niche SNS.

H2.5: Interpersonal utility gratification has a positive and significant effect on the participation in niche SNS.

H2.6: Sociability gratification has a positive and significant effect on the participation in niche SNS.

H2.7: Self status seeking gratification has a positive and significant effect on the participation in niche SNS.

H2.8: Seeking friends gratification has a positive and significant effect on the participation in niche SNS.

H2.9: Interpersonal utility gratification has a positive and significant effect on the participation in niche SNS.

Privacy

H2.10: Privacy gratification has a positive and significant effect on the participation in niche SNS.

Information exchange

H2.11: Information seeking gratification has a positive and significant effect on the participation in niche SNS.

H2.12: Innovativeness has a positive and significant effect on the participation in niche SNS.

H2.13: Learning gratification has a positive and significant effect on the participation in niche SNS.

Entertainment

H2.14: Entertainment gratification has a positive and significant effect on the participation in niche SNS.

H2.15: Pleasurable way to spend time gratification has a positive and significant effect on the participation in niche SNS.

H2.16: Boredom relief has a positive and significant effect on the participation in niche SNS.

H2.17: Escape gratification has a positive and significant effect on the participation in niche SNS.

Convenience gratifications

H2.18: Gratification opportunities have a positive and significant effect on the participation in niche SNS.

H2.19: Communication gratification has a positive and significant effect on the participation in niche SNS.

H2.20: Market gratification has a positive and significant effect on the participation in niche SNS.

Regarding the third stage of the life cycle, SNS user withdrawal is the topic with the least prior research available out of the three stages. Social Identity Theory (SIT) provides a good framework to understand withdrawal based on the similarities between this phenomenon and the disidentification concept proposed in the theory. However, SIT researchers have focused their attention on identification studies, leaving disidentification with some basic theoretical foundations, but without a model to conduct research following the structure of the previous two stages of the user life cycle. Thus, the strategy for this stage of the cycle follows an exploratory approach in order to find the main reasons motivating a user to close his or her profile in the SNS. This decision is based on Sekaran and Bougie, who argue that "*exploratory studies are undertaken to better comprehend the nature of the problem since very few studies might have been conducted in that area*". (Sekaran and Bougie, 2010, p. 104) Consequently, this research about SNS user withdrawal is intended to collect the elements required for a better understanding of this phenomenon. These elements are expected to be extracted from the narratives of former SNS users, as they already have experience of this stage of the cycle. For this reason, it was considered that formulating a model or hypothesis could constrain the possible outcomes from the data collected.

The next Chapter will explain the research design of the thesis, providing a detailed explanation of the methodology adopted for the research on each stage of the cycle, followed by its corresponding data analysis.

Chapter 3. Research strategy and data analysis

This Chapter presents the research design and methodology employed in this study about the SNS user life cycle combined with the data analysis. Following the aim of the thesis, the research questions are focused on finding the main reasons influencing each stage of the life cycle, with each stage becoming a research project in itself. In order to provide a framework connecting the macro view of the thesis with the micro view detailing each stage, this Chapter is divided into two parts. The first one presents the research design of the thesis as a whole, introducing the methodological considerations and philosophical underpinnings that guided the research process, which is related with the methodological approach taken for each case. The second part details the methodology and the data analysis applied to each stage of the life cycle.

3.1 Research design and ontological and epistemological assumptions

SNS as a subject field offers a wide variety of elements and scenarios for research, from structural analysis, based on the patterns created by the interaction between nodes, to the use of SNS by multinational companies or for political purposes. The diversity of the research on this topic entails a wide variety of research settings that can be adopted. Saunders et al. (2009) highlight the importance of the philosophical commitments that business and management researchers acquire by the selection of the research strategy, as it defines not only the way in which we understand the phenomena studied, but also how we are going to proceed in the investigation process. For this reason, it is crucial to choose the appropriate research paradigm, as the research process is a chain whose components are connected, following the guidelines of the research paradigm. (Crotty, 1998)

Authors like Crotty (1998) propose a research process as a sequence consisting of ontology, epistemology, theoretical perspective, methodology and method, whereas authors like Bryman (2012) include the orientation of the research, distinguishing between deductive and inductive approaches at the beginning of the process. Table 4 tabulates two examples of the research process regarding the research strategy differentiating between quantitative and qualitative methodologies, showing how the selection of one component of the process informs the selection of the next component. However, the research process is not a rigid structure, allowing different combinations of the components depending on the aim of the research and the nature of the phenomena studied. For instance, a study can combine a

realistic ontology with a constructivist epistemology (Crotty, 1998) or, in the case of mixed methodologies, combine qualitative and quantitative strategies. (Bryman, 2012)

Research Strategy / Research process	Quantitative	Qualitative
Principal orientation to the role of theory in relation to research	Deductive; testing of theory	Inductive; generation of theory
Epistemological orientation	Natural science model, in particular positivism	Interpretivism
Ontological orientation	Objectivism	Constructionism

Table 4: Differences between quantitative and qualitative research strategies (Bryman, 2012)

This thesis proposes the SNS user life cycle as a framework to understand user behaviour in SNS. The literature review showed that there is a well-stablished body of knowledge in this field which is based on user participation, and user affiliation to a lesser extent. The literature was used to identify relevant theories helping to understand the three stages and in turn leading towards a deductive approach. In this approach, the theory provides "*what is known about in a particular domain*" (Bryman, 2012, p. 24), allowing the formulation of hypotheses based on the phenomena studied and the knowledge available. These hypotheses are tested using a particular methodology, providing results that will be contrasted against existing theory. This approach fits perfectly for the first two stages of the research. However, considering the lack of knowledge about user withdrawal, the deductive approach needs some adaptations. The review of the SIT made it possible to associate disidentification with user withdrawal, providing a framework to understand this phenomenon. Most of the research on disidentification is based on qualitative strategies going from the observations to the theory. As mentioned before, the choices of the research strategy are not a confined to either qualitative or quantitative, making it possible to combine elements from different approaches when necessary. (Crotty, 1998) Thus, the deductive research strategy followed in this thesis includes some elements of the inductive approach in order to strength on the parts in which the deductive approach cannot provide the support required.

The next step is the ontology, which is related with the "*nature of the reality*". (Saunders et al., 2009, p. 110) In line with the deductive approach, this thesis follows objectivism as its ontological position. Objectivism claims that the phenomena exist or happen independently of the social actors. (Bryman, 2012) In this case, the stages of joining, participating and

withdrawal are considered as an objective reality happening in the SNS. This reality makes it possible to study the phenomena using a "*scientific*" method, formulating hypotheses based on the theory and testing them on the subjects of the study. (Crotty, 1998) The used of these kinds of methods are associated with a positivist epistemology. Positivists are associated with the use of natural science methods to study social reality. As Saunders et al. (2009) argue, the positivist approach prefers the use of structured methodologies to facilitate replication, favouring quantitative observations that will be analysed using quantitative methods.

3.2 Methodology for joining the SNS

Based on the literature reviewed, the model proposed for this part of the research is based on the DTPB (see Figure 9) and will be tested following the guidelines proposed for this theory. (Taylor and Todd, 1995) Using the individual as the unit of analysis, DTPB recommends the use of questionnaires as an instrument for primary data collection, which afterwards will be analysed using a structural equation model. (Taylor and Todd, 1995; Hsieh et al., 2008)

3.2.1 Questionnaire design

Based on previous studies applying DTPB, previous researchers have used questionnaires as instruments to collect data from primary sources. These questionnaires adopted the items related to the constructs according to the subject of study as well as adapting the model by merging or including new constructs involved in the research. In the case of this thesis, the model used to research the first stage of the user life cycle merged two constructs of the original DTPB, the resource facilitating condition and the technological facilitation conditions. In the case of the SNS, the resources required are associated with technology, so, in order to keep the model as simple as possible, it was decided to follow the example of authors such as (Hung and Chang, 2005; Lin, 2006; Hong et al., 2008; Tsai et al., 2012), who use facilitating conditions as one construct only. Likewise, trust and privacy were included in the model to test their relevance at the decision of joining a new SNS.

The questionnaire was created using items adapted from previous research into SNS user behaviour using DPTB. The items follow the way that original authors proposed it (see Table 5), including the original scales in which they were formulated. The questions used a Likert scale from one to five in most of the cases (1=completely disagree to 5=completely agree), and only three cases (External influence, Self-efficacy and Facilitating conditions for usage questions) used a seven point scale (1=completely disagree to 7=completely agree). Previous

studies have combined different scales producing satisfactory results. (Dholakia et al., 2004; Kreiner and Ashforth, 2004)

Factor	Source	Scale Range
Intention	(Ajzen, 2002), (Lin, 2006)	1 to 5
Attitude	(Peslak et al., 2011)	1 to 5
Usefulness	(Lin, 2006, Davis, 1989)	1 to 5
Ease of use	(Davis, 1989), (Lorenzo-Romero and Del Chiappa, 2013)	1 to 5
Compatibility	(Taylor and Todd, 1995)	1 to 5
Social norm	(Lin, 2006, Taylor and Todd, 1995)	1 to 5
Peer influence	(Taylor and Todd, 1995)	1 to 5
Superior influence	(Taylor and Todd, 1995)	1 to 5
External influence	(Hsu and Chiu, 2004)	1 to 7
Perceived behavioural control	(Lin, 2006, Taylor and Todd, 1995)	1 to 5
Self-efficacy	(Lin, 2006)	1 to 7
Facilitating conditions for usage	(Lin, 2006)	1 to 7
Trust	(Dinev et al., 2006)	1 to 5
Privacy	(Dinev et al., 2006)	1 to 5

Table 5: DTPB constructs selected for the research

The questionnaire was divided into two main sections. The first part requested information about demographic variables (age, gender, occupation, country of origin) as well as current use of SNS such as, in which SNS the participant is registered, the frequency of use and the number of friends in the network. These questions were included in order to have a better understanding about the respondents' SNS profile which could help to explain the findings obtained. The second part of the questionnaire is focused on the items related to DTPB, as presented in Table 5. These items were tested in a pilot study distributed to academics to identify any problem with the way in which the questions were worded, sequence, grammatical accuracy and the length of the questionnaire.

The final questionnaire was adapted to a web survey form and uploaded to an online platform to collect the responses. The web survey format was considered as the best option to deliver the questionnaire as it makes it possible to reach a broad range of population at a fraction of the time and cost of other methods such as mail. (Dillman et al., 2014) On the technical side, the web survey makes it possible to create filters and be programmed to redirect the respondent to specific sections of the questionnaire based on the answers provided. (Bryman, 2012) An additional element inclining the balance towards web surveys is

the fact that the data collected can be downloaded directly as an MS Excel or plain text file, saving time and reducing typing errors. Some of the factors working against web surveys are the restricted access to the internet in some regions of the world, along with low levels of Internet literacy for part of the population. As will be explained in the sample section, the sample framework consists of current SNS users which suggests that potential respondents had access to the Internet and knew how to use it, minimising the impact of such issues as those listed above.

Construct	**Questions/statements**	**Source**
Intention	I plan to join new SNS in the next three months.	(Ajzen, 2002), (Lin, 2006)
	I intend to join new SNS in the next three months.	
	I expect to join new SNS in the next three months.	
Attitude	Participating in a new SNS would be…	(Peslak et al., 2011)
	Good	
	Useful	
	Worthwhile	
	helpful	
	valuable	
Perceived Usefulness	The functions of new SNS will be useful for me.	(Davis, 1989), (Lin, 2006)
	Joining new SNS will make it possible to interact with other people	
	Joining new SNS will enable me to access a lot of information	
	Overall, joining new SNS will be useful	
Perceived ease of use	Learning to work with the new SNS is easy for me	(Davis, 1989), (Lorenzo-Romero and Del Chiappa, 2013)
	I find it easy to get a SNS to do what I want it to do	
	It is easy to remember how to use SNS	
	My interaction with SNS is clear and understandable	
	It is easy for me to become skilful at using SNS	
	Overall, I think that SNS are easy to use	
compatibility	Using the CRC will fit well with the way I work.	(Taylor and Todd, 1995)
	Using the CRC will fit into my work style.	
	The setup of the CRC will be compatible with the way I work.	
Trust	New SNS are safe environments in which to exchange information with others.	(Dinev et al., 2006)
	New SNS are reliable environments in which to conduct business transactions.	
	New SNS handle personal information submitted by users in a competent fashion.	
Privacy	I am concerned that the information I submit on new SNS could be misused.	(Dinev et al., 2006)
	I am concerned that a person can find private information about me on New SNS.	
	I am concerned about submitting information on New SNS, because of what others might do with it.	
	I am concerned about submitting information on New SNS, because it could be used in a way I did not foresee.	

Social/ Subjective norm	People who influence my behaviour would encourage me to participate in a new SNS.	(Taylor and Todd, 1995; Lin, 2006)
	People who are important to me would encourage me to participate in a new SNS.	
Peer influence	My friends would think that I should join the new SNS	(Taylor and Todd, 1995)
	My colleagues would think that I should join new SNS	
Superior influence	My superiors (e.g. boss/professors) think that I should join new SNS	(Taylor and Todd, 1995)
	I will have to join new SNS if my superiors (e.g. boss/professors) require it	
External influence	I read/saw news reports that using the SNS service was a good way of filing tax.	(Hsu and Chiu, 2004)
	The popular press depicted a positive sentiment for using the e-file service.	
	Mass media reports convinced me to reuse the e-file service.	
	Expert opinions depicted a positive sentiment for using the e-file service	
Perceived behavioural control	I am able to join new SNS	(Taylor and Todd, 1995; Lin, 2006)
	I am in control regarding joining a new SNS.	
	I have the resources and the knowledge and the ability to join a new SNS.	
Self-efficacy	If I was to join a new SNS, I would feel confident to find information through participation in the SNS	(Lin, 2006)
	If I was to join a new SNS, I would feel confident to exchange information with other members of the SNS	
	If I was to join a new SNS, I would feel confident to chat on the SNS	
	If I was to join a new SNS, I would feel confident to download files from the SNS	
	If I was to join a new SNS, I would feel confident to upload files/ post comments to the new SNS	
facilitation condition for usage	I have the Internet equipment (modems, routers broadband, etc.) required to use the new SNS.	(Lin, 2006)
	I have convenient access to use the new SNS resources.	
	I am an important member of the group mentioned above	

Table 6: DTPB items included in the questionnaire

3.2.2 Data analysis strategy

The literature consulted on DTPB showed unanimous consensus on the use of Structural Equation Modelling (SEM) to analyse collected data. SEM is a popular method in management and marketing. (Hair et al., 2011) This method is considered to be one of the most advanced and useful multivariate techniques by combining elements of factor analysis with regression analysis. This combination makes it possible to examine, simultaneously, the relationship between observed and latent variables and the relationship among latent variables. (Hair et al., 2013) There are two main approaches to SEM, covariance-based (CB-SEM) and variance-based (PLS-SEM). Hair et al. (2011) present the rules of thumb for selecting one approach over the other. On the one hand, CB-SEM is the most popular approach, being widely used to confirm (or reject) a theory using a large sample and assuming

the multivariate normality distribution of the data. Software programs like LISREL and AMOS are the most used in this type of research. On the other hand, the PLS-SEM is gaining popularity for exploratory research, as this approach does not require multivariate normal distribution of the data and produces good results with small samples.

Considering the characteristics of the model proposed for this first stage of the life cycle, a CB-SEM approach would be the most appropriate to conduct the data analysis, as the study is based on a stabilised model aiming to test the theory. However, considering the characteristics of the second stage model which is more exploratory and without a previous proposed model, the best approach is the PLS-SEM. Hair et al.(2011) recall some studies comparing both CB and PLS methods, finding minimal differences between the estimators calculated with each method. In addition, PLS-SEM has been increasingly applied for theory testing purposes. (Navarro et al., 2010; Brettel et al., 2011; Hair et al., 2011; O'Cass et al., 2012) Assessing the pros and cons of the SEM approaches, it was decided to adopt PLS-SEM as the method for both stages, as this approach has been proven to perform well for theory testing as well as for theory development, in addition to the robust estimation in small samples, flexibility on the assumptions of the data and the simpler process for analysis.

Authors like Wetzels et al.(2009), Hair et al.(2011) and Hair et al.(2013) argue that assessment of a PLS-SEM model should involve two steps. The first step consists of the assessment of the measurement model, also called the outer model which captures the relationship of the latent variables with the observed variables. The second step is the assessment of the structural or inner model showing the relationship between the latent variables. Wetzels et al. (2009) highlight the importance of a previous screening of the data in order to find and treat missing data and outliers that could affect the estimators of the model. The analysis of the outer model assesses the psychometric properties of the variables by analysing the Average Variance Expected (AVE), Composite reliability (CR) and Cronbach's alpha and the correlations of the variable's loadings. Once the outer model reaches acceptable levels, the inner model is assessed based on the loadings and the t-value to determine whether the variable has a significant relationship with the dependent variable.

3.2.3 Sample

Based on the research question for this stage, an initial framework would include anyone with Internet access, as this is the main requirement to join an SNS. In order to narrow down the population, it was decided to concentrate the research on UK residents as this is the place where the author is doing the thesis. A third constraint for the population was to consider only

people who are already social media users. Since a large proportion of people has been (or is) already a member of an SNS (Dutton and Blank, 2011), their experience helps them to have a more informed opinion about the reasons for joining a new network. Regarding the minimum size of the sample, the recommendation is to have a sample "*equal to the larger of the following: (1) ten times the largest number of formative indicators used to measure one construct or (2) ten times the largest number of structural paths directed at a particular latent construct in the structural model*". (Hair et al., 2011) The model proposed contains 14 latent variables, making the sample equal to 140. However, some authors argue that the sample should be at least 150 elements to procure more consistent results. (Hulland et al., 2010; Hair et al., 2013)

3.2.4 Data collection method

Bryman (2012) argues that one of the difficulties related to the use of web surveys is the lack of sampling frames as they are either confidential (e.g. Facebook is not going to provide their list of users) or because they are controlled by Internet service providers. As a consequence, the use of probability sampling techniques is quite difficult to implement. Hence, a non-probability method becomes useful. Hewson and Laurent (2012) recommend posting invitations on relevant websites, mailing lists and newsgroups to complete the questionnaire which makes it possible to create a volunteer opportunity sample. This type of sample is similar to self-selected, unrestricted surveys with the difference that the participants decide to take the survey based on the invitation posted online. (Fricker, 2008)

The sample framework for this part of the research follows the characteristics discussed by Bryman, for which reason the volunteer opportunity sample was adopted to gather data. The questionnaire was uploaded to Surveymonkey.com. The invitation to participate in the research was posted on different channels of social media (Facebook, Twitter, LinkedIn, etc.), using as a starting point the network of contacts of the author and communication channels of the Business School. These starting points induce bias towards the composition of the sample, but it was the option available at the time. As a result, 310 responses were completed from 494 people who started the questionnaire which is above the minimum sample required.

3.3 Data analysis about why people join a new SNS

Before starting the analysis, the data was screened following the recommendation of Wetzels et al. (2009). From the 310 questionnaires obtained, 16 questionnaires were discarded due to missing values from people who abandoned the questionnaire before completion and 2

questionnaires were discarded due to response patterns (a high proportion of answers were the same). As the final result, 292 questionnaires were used for the data analysis.

3.3.1 Profile of the sample

From the 292 respondents, 43% are female and 57% male, showing a balanced sample in terms of gender. The average age for women is 29 years old with a standard deviation of 7.69 years, whereas for men the average age is 31 years old with a standard deviation of 9.34 years. 51.37% of the sample are students and 31% full-time employees; almost 70% live in urban areas and 22.2% in suburban areas. The sample shows that the participants can be considered adults based on the age, ranging from 20 to 40 years old, living in urban areas, which makes it possible to deduce a better quality of the connections to the Internet. Based on the age, one can conclude that the students are in the final stage of their undergraduate studies or are postgraduate students. More information about demographic variables is presented next.

Characteristic	Frequency	%	Characteristic	Frequency	%
Gender			**Age**		
Female	126	43.2%	18-27	127	43.5%
Male	166	56.8%	28-37	111	38.0%
Total	292	100.0%	38-47	36	12.3%
Employment Status			> 47	18	6.2%
Full-time employment	93	31.8%	Total	292	100.0%
Part-time employment	19	6.5%	**Educational attainment**		
Self-employment	20	6.8%	Primary School	1	0.34%
Voluntary work	2	0.7%	High School	23	7.88%
Unemployed	8	2.7%	Technical Education	7	2.40%
Student	150	51.4%	Undergraduate degree	79	27.05%
Total	292	100.0%	Postgraduate degree	146	50.00%
Area of residence			Doctorate degree	36	12.33%
Urban area	203	69.5%	Total	292	100.0%
Suburban area	65	22.3%			
Rural area	24	8.2%			
Total	292	100.0%			

Table 7: Sample demographics

Table 8 presents the descriptive statistics for the questions based on DTPB. Most of the data is within one standard deviation and skewedness close to zero, meaning that the data collected satisfy the normality assumption with the exception of the items related to Perceived Behavioural Control (PBC). One of the advantages of PLS-SEM is the non-parametric orientation, meaning that the data does not need to follow the normal distribution, so the results of PBC do not affect the results estimation of the model. The concentration of the PBC items on the top values of the scale shows the respondents feel confident about the use of new SNS. Privacy presents high scores as well, showing the awareness that current SNS users have about this issue in the SNS which led to the belief that privacy could be an influential factor for joining a new SNS.

The external influence is another construct whose items rate high on the scale. The results obtained using descriptive statistics are good when it comes to providing a context about the distribution of the data, but it is not possible to reach conclusions based on them, which is the function of the PLS-SEM presented next.

Construct	Variable	Mean	SD	Skewedness	Kurtosis
Behavioural intention	BI1	2.34	0.97	0.30	-0.31
	BI2	2.34	1.00	0.42	-0.11
	BI3	2.42	1.00	0.19	-0.43
Attitude	AT1	2.95	0.92	-0.28	0.12
	AT2	3.11	0.93	-0.45	0.15
	AT3	2.94	0.89	-0.22	0.46
	AT4	3.01	0.93	-0.30	0.11
	AT5	2.93	0.94	-0.21	0.09
Perceived usefulness	PU1	3.10	0.93	-0.28	0.09
	PU2	3.37	0.98	-0.57	-0.02
	PU3	3.34	0.97	-0.37	0.15
	PU4	3.18	0.98	-0.39	0.03
Ease of use	EU1	3.70	0.91	-0.55	-0.07
	EU2	3.32	0.90	-0.24	-0.21
	EU3	3.59	0.87	-0.49	0.07
	EU4	3.82	0.82	-0.57	0.59
	EU5	3.58	0.93	-0.36	-0.18
	EU6	3.64	0.90	-0.61	0.34
Compatibility	CO1	2.97	1.05	-0.04	-0.30
	CO2	3.57	1.07	-0.32	-0.33
	CO3	3.15	1.01	-0.06	0.00
Trust	TR1	2.92	1.00	0.03	-0.31
	TR2	2.73	1.00	0.03	-0.36
	TR3	2.89	1.03	-0.11	-0.32
Privacy	PR1	3.84	0.96	-0.72	0.32
	PR2	3.86	0.97	-0.77	0.48
	PR3	3.79	1.00	-0.62	-0.03
	PR4	3.89	0.98	-0.74	0.29
Social norm	SN1	3.17	1.06	-0.39	-0.41
	SN2	3.28	1.05	-0.41	-0.39
Peer influence	PI1	3.15	0.99	-0.26	-0.51
	PI2	3.09	0.97	-0.13	-0.39
Superior influence	SI1	2.72	1.03	0.14	-0.31
	SI2	3.21	1.17	-0.33	-0.68
External influence	EI1	4.14	1.55	-0.24	-0.28
	EI2	4.00	1.40	-0.24	-0.16
	EI3	3.83	1.51	-0.16	-0.43
	EI4	4.04	1.43	-0.31	-0.06
Perceived Behaviour Control	PBC1	3.96	0.84	-1.16	2.54
	PBC2	3.92	0.89	-1.15	2.02
	PBC3	4.00	0.86	-1.09	2.04
Self-efficacy	SE1	5.14	1.21	-0.49	0.65
	SE2	5.09	1.27	-0.67	0.81
	SE3	5.10	1.28	-0.65	0.89
	SE4	4.79	1.32	-0.41	0.07
	SE5	4.97	1.30	-0.54	0.46

Facilitating conditions for usage	FA1	6.10	1.17	-1.20	0.89
	FA2	6.10	1.14	-1.11	0.66

Table 8: Descriptive statistics for joining a new SNS

3.3.2 PLS-SEM analysis

The model was implemented in SMART-PLS 3 (Ringle et al., 2014), which has become one of the most popular programs to apply PLS_SEM. The analysis of the outer or measurement model depends on the nature of the variables and the relationships between the observed and latent variables. (Hair et al., 2011; Ringle et al., 2012; Hair et al., 2013) Based on these elements, Ringle et al. (2012) identified four types of hierarchical models by combining formative and reflective variables. Figure 11 illustrates the initial model implemented in smartPLS which follows the reflective –formative type, having the second order variables as reflective and the first order formative. In a reflective model, the relationship goes from the construct to the indicator. This model assumes that the construct causes the measurement of the indicator, whereas in a formative model the indicator causes the measurement of the construct (the relationship goes from the indicator variables to the construct). (Diamantopoulos and Winklhofer, 2001; Hair et al., 2013) Once the model is specified in smartPLS, the program calculates the values of different indicators to assess the model. (Becker et al., 2012; Esposito Vinzi et al., 2010; Hair et al., 2013; Henseler et al., 2009; Ringle et al., 2012)

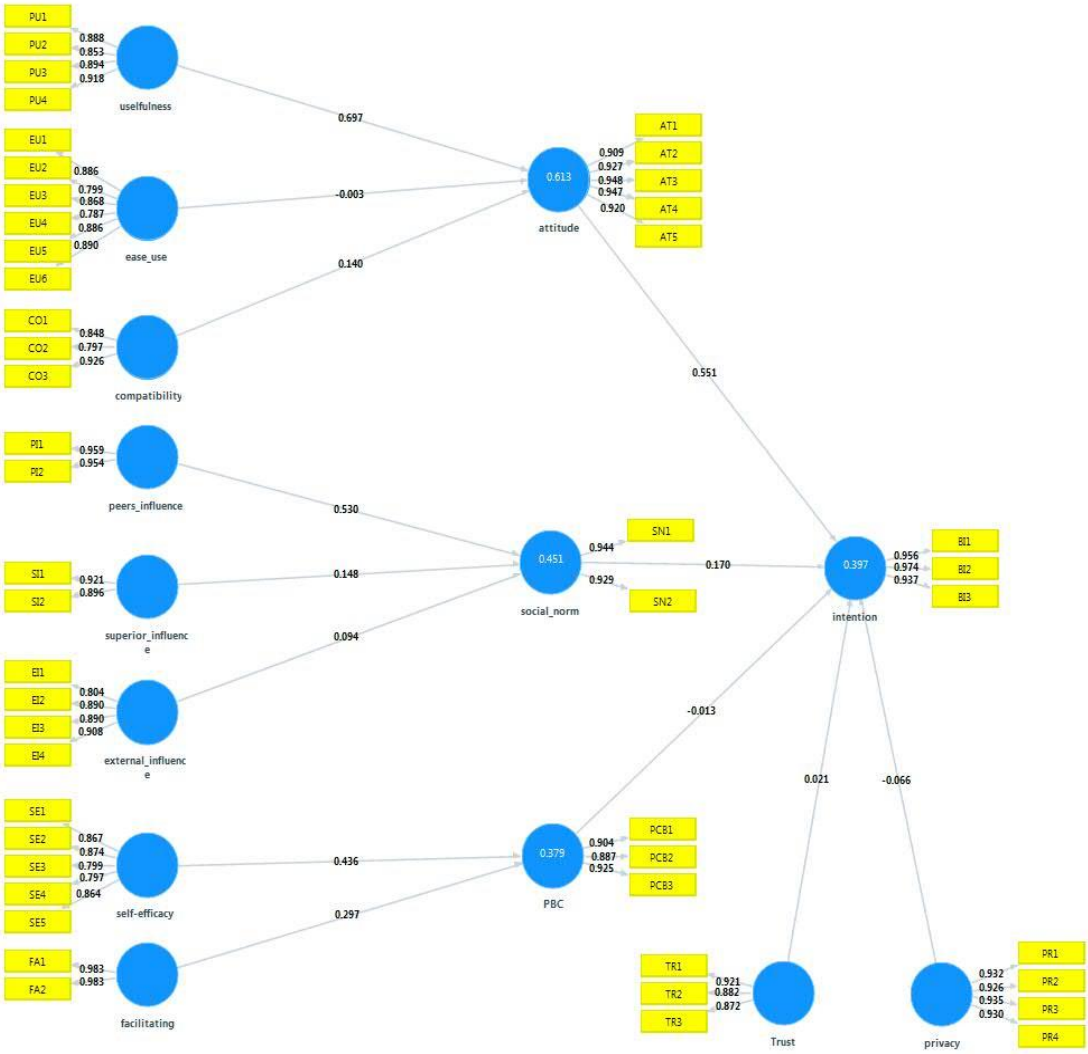


Figure 11: Original model proposed for joining a new SNS

3.3.3 Measurement (outer) model

This section examines the measurement model in order to guarantee the reliability of the measures before moving to the structural model. The main criteria to analyse the outer model are based on Hair et al. (2011) as follows:

- Internal consistency reliability: Composite reliability should be above 0.70.
- Indicator reliability: The loadings should be higher than 0.70.
- Convergent validity: The average variance extracted (AVE) should be higher than 0.50.
- Discriminant validity: The AVE of each construct should be greater than the square correlation of the construct with the other latent variables (known as the Fornell-Larcker criterion)
- The loadings of the indicator should be higher than its cross-loadings with other indicators.
- Significance of the indicator: Using the t-value as decision criteria, a t-value above 1.65 is equivalent to a 10% significant level, 1.96 corresponds to 5% and 2.58 corresponds to 1%.

Table 9 presents the values to assess the reliability of the constructs used in the model. All the constructs are greater than the cut-off value. The item with the smallest AVE is self-efficacy, with 70%, which is still very good. The composite reliability ranges between 89% and 97% and all Cronbach's alphas are above 70%. The loadings of the outer model are in a range from 78.7% to 98.3% and t-values are significant at the 1% level, ranging from 11.82 to 238.4. The loadings and t-values for each item are presented in Table 26. So far, the outer model presents high reliability and consistency of the scales based on a first look at the indicators.

	Abbreviation	AVE	Composite Reliability	Cronbach's Alpha
		(>0.5)	**(>0.7)**	**(>0.7)**
Intention	BI	0.913	0.969	0.952
Attitude	AT	0.866	0.970	0.961
Perceived usefulness	PU	0.789	0.937	0.911
Ease of use	EU	0.729	0.941	0.925
Compatibility	CO	0.737	0.893	0.821
Social norms	SN	0.877	0.935	0.861
Peer influence	PI	0.915	0.956	0.907
Superior influence	SI	0.826	0.905	0.790
External influence	EI	0.764	0.928	0.897
Perceived behavioural control	PBC	0.820	0.932	0.890
Self-efficacy	SE	0.707	0.923	0.897
Facilitating conditions for usage	FA	0.967	0.983	0.966
Privacy	PR	0.795	0.921	0.872
Trust	TR	0.866	0.963	0.948

Table 9: Quality criteria for measurement model Stage 1

The scores to assess discriminant validity are displayed in Table 10. The diagonal of this table contains the square root of the AVE which should be greater than the rest of the correlations for that construct. All the elements on the diagonal satisfied this criteria. As the results in the table usefulness is highly correlated with attitude, compatibility and intention it has been necessary to explore collinearity. The Variance Inflation Factor (VIF) is the recommended measure to examine this issue. (Hair et al., 2013) For this model, the VIF ranged between 1.039 and 1.626. These values are far below 5 which is the threshold for multicollinearity, discarding in this way any related problems.

	PBC	TR	AT	CO	EU	EI	FA	BI	PI	PR	SE	SN	SI	PU
PBC	0.905													
TR	0.054	0.892												
AT	0.163	0.401	0.930											
CO	0.290	0.320	0.530	0.859										
EU	0.446	0.262	0.347	0.471	0.854									
EI	0.089	0.425	0.496	0.361	0.235	0.874								
FA	0.468	-0.101	-0.011	0.110	0.199	-0.036	0.983							
BI	0.073	0.288	0.604	0.390	0.202	0.472	-0.059	0.956						
PI	-0.026	0.240	0.270	0.232	0.037	0.441	-0.018	0.296	0.957					
PR	0.094	-0.112	-0.083	-0.014	-0.004	-0.008	0.215	-0.104	0.117	0.930				
SE	0.552	0.279	0.182	0.287	0.430	0.246	0.391	0.155	0.109	0.034	0.841			
SN	0.005	0.227	0.242	0.283	0.049	0.397	0.040	0.304	0.649	0.066	0.084	0.937		
SI	-0.061	0.267	0.287	0.277	0.112	0.465	-0.008	0.296	0.523	0.137	0.019	0.469	0.909	
PU	0.199	0.347	0.774	0.561	0.408	0.527	0.041	0.552	0.285	-0.057	0.213	0.240	0.308	0.888

Table 10: Discriminant validity for stage 1 initial model

The second criterion used to assess discriminant validity is the analysis of the cross loadings, in which the outer loading of the construct should be greater than its loadings on other constructs. (Hair et al., 2013) Table 11 shows how the cross loadings of the indicator are related to the construct.

	BI	AT	PU	EU	CO	SN	PI	SI	EI	PBC	SE	FA	TR	PR
BI1	**0.956**	0.572	0.51	0.185	0.37	0.282	0.257	0.254	0.429	0.07	0.124	-0.059	0.272	-0.092
BI2	**0.974**	0.572	0.513	0.176	0.343	0.287	0.281	0.259	0.451	0.044	0.146	-0.053	0.268	-0.116
BI3	**0.937**	0.588	0.56	0.217	0.403	0.302	0.309	0.334	0.471	0.094	0.174	-0.056	0.283	-0.09
AT1	0.61	**0.909**	0.693	0.287	0.515	0.236	0.289	0.263	0.479	0.139	0.169	-0.005	0.387	-0.075
AT2	0.533	**0.927**	0.754	0.317	0.481	0.207	0.229	0.272	0.468	0.181	0.133	0.011	0.332	-0.048
AT3	0.556	**0.948**	0.73	0.378	0.501	0.198	0.228	0.274	0.465	0.158	0.185	-0.018	0.387	-0.079
AT4	0.558	**0.947**	0.727	0.301	0.47	0.215	0.235	0.246	0.436	0.143	0.174	-0.017	0.388	-0.094
AT5	0.553	**0.92**	0.698	0.333	0.496	0.271	0.275	0.281	0.46	0.138	0.186	-0.022	0.372	-0.089
PU1	0.522	0.707	**0.888**	0.37	0.515	0.232	0.265	0.315	0.493	0.167	0.198	0.062	0.336	-0.087
PU2	0.414	0.595	**0.853**	0.36	0.471	0.181	0.228	0.233	0.387	0.158	0.184	0.004	0.279	0.006
PU3	0.454	0.662	**0.894**	0.398	0.506	0.223	0.243	0.225	0.465	0.245	0.235	0.1	0.315	-0.011
PU4	0.556	0.769	**0.918**	0.329	0.502	0.212	0.272	0.311	0.512	0.142	0.147	-0.016	0.3	-0.096
EU1	0.19	0.314	0.369	**0.886**	0.416	0.042	0.029	0.067	0.194	0.403	0.364	0.141	0.241	0.006
EU2	0.229	0.309	0.386	**0.799**	0.334	0.058	0.098	0.137	0.261	0.248	0.294	0.072	0.246	-0.058
EU3	0.184	0.289	0.343	**0.868**	0.426	0.018	0.023	0.097	0.206	0.42	0.375	0.214	0.206	0.007
EU4	0.152	0.29	0.321	**0.787**	0.434	0.068	0.014	0.102	0.16	0.416	0.357	0.223	0.171	0.077
EU5	0.135	0.272	0.321	**0.886**	0.406	0.036	0.016	0.08	0.168	0.407	0.421	0.217	0.226	-0.004
EU6	0.133	0.296	0.341	**0.89**	0.394	0.027	0.004	0.089	0.209	0.397	0.396	0.162	0.245	-0.044
CO1	0.346	0.427	0.469	0.408	**0.848**	0.195	0.209	0.258	0.323	0.203	0.213	0.022	0.249	-0.012
CO2	0.228	0.394	0.391	0.395	**0.797**	0.237	0.13	0.15	0.226	0.304	0.281	0.178	0.204	0.02
CO3	0.411	0.529	0.567	0.414	**0.926**	0.289	0.245	0.29	0.367	0.248	0.252	0.092	0.351	-0.037
SN1	0.332	0.212	0.209	0.013	0.262	**0.944**	0.63	0.439	0.388	0.009	0.084	-0.004	0.187	0.058
SN2	0.233	0.243	0.242	0.083	0.268	**0.929**	0.584	0.44	0.354	0.000	0.072	0.084	0.242	0.067
PI1	0.273	0.244	0.257	0.028	0.193	0.64	**0.959**	0.473	0.406	-0.062	0.092	-0.047	0.208	0.13
PI2	0.293	0.274	0.289	0.043	0.252	0.601	**0.954**	0.529	0.439	0.015	0.118	0.014	0.251	0.092
SI1	0.292	0.268	0.318	0.109	0.259	0.452	0.559	**0.921**	0.46	-0.123	-0.001	-0.057	0.29	0.124
SI2	0.244	0.253	0.237	0.095	0.244	0.397	0.38	**0.896**	0.381	0.023	0.039	0.049	0.19	0.125
EI1	0.396	0.39	0.409	0.184	0.321	0.28	0.291	0.344	**0.804**	0.116	0.199	-0.006	0.333	0.077
EI2	0.39	0.438	0.462	0.19	0.277	0.306	0.402	0.409	**0.89**	0.072	0.222	-0.021	0.365	-0.036
EI3	0.404	0.427	0.455	0.176	0.286	0.398	0.438	0.408	**0.89**	0.058	0.219	-0.091	0.369	-0.032
EI4	0.456	0.476	0.509	0.269	0.378	0.381	0.392	0.455	**0.908**	0.076	0.22	0.002	0.414	-0.02
PBC1	0.052	0.121	0.157	0.426	0.271	-0.021	-0.033	-0.092	0.079	**0.904**	0.534	0.419	0.063	0.047
PBC2	0.066	0.157	0.194	0.357	0.248	-0.024	-0.052	-0.043	0.082	**0.887**	0.449	0.356	0.065	0.049

PBC3	0.08	0.167	0.191	0.423	0.266	0.052	0.009	-0.03	0.082	**0.925**	0.51	0.485	0.024	0.152
SE1	0.14	0.136	0.194	0.418	0.264	0.084	0.063	-0.004	0.192	0.566	**0.867**	0.41	0.226	0.049
SE2	0.159	0.161	0.186	0.366	0.264	0.07	0.078	0.033	0.235	0.465	**0.874**	0.315	0.295	-0.026
SE3	0.11	0.143	0.149	0.339	0.258	0.08	0.115	-0.006	0.168	0.396	**0.799**	0.345	0.173	0.026
SE4	0.066	0.159	0.164	0.296	0.174	0.046	0.074	0.004	0.215	0.381	**0.797**	0.228	0.287	0.081
SE5	0.162	0.172	0.196	0.368	0.239	0.068	0.138	0.052	0.228	0.474	**0.864**	0.32	0.201	0.017
FA1	-0.072	-0.031	0.03	0.187	0.094	0.039	-0.029	-0.009	-0.039	0.459	0.38	**0.983**	-0.112	0.214
FA2	-0.043	0.01	0.051	0.205	0.122	0.04	-0.007	-0.007	-0.032	0.46	0.389	**0.983**	-0.087	0.209
TR1	0.294	0.358	0.316	0.261	0.336	0.203	0.187	0.212	0.38	0.12	0.294	-0.033	**0.921**	-0.101
TR2	0.248	0.403	0.331	0.218	0.246	0.189	0.241	0.272	0.389	-0.002	0.205	-0.16	**0.882**	-0.074
TR3	0.219	0.311	0.276	0.216	0.263	0.219	0.221	0.236	0.371	0.011	0.241	-0.089	**0.872**	-0.129
PR1	-0.1	-0.063	-0.074	0.008	0.004	0.062	0.115	0.145	-0.018	0.102	0.05	0.214	-0.076	**0.932**
PR2	-0.104	-0.096	-0.071	-0.027	0.002	0.085	0.128	0.131	-0.013	0.057	0.002	0.184	-0.068	**0.926**
PR3	-0.087	-0.092	-0.049	-0.007	-0.041	0.046	0.102	0.126	-0.01	0.049	0.02	0.183	-0.133	**0.935**
PR4	-0.095	-0.057	-0.015	0.013	-0.022	0.05	0.088	0.105	0.012	0.14	0.055	0.219	-0.146	**0.93**

Table 11: Cross loadings stage 1 initial model

3.3.4 Structural (inner) model

Having passed the initial assessment of the outer model, the assessment of the inner model follows. One of the differences between CB-SEM and PLS-SEM is the fact that PLS-SEM fits the model to the data to calculate the estimators, whereas the CB-SEM estimates the parameters to minimise the differences between the sample covariance and the theoretical model. Thus, goodness of fit indicators like χ^2 are not applicable in PLS-SEM. The goodness of fit in PLS-SEM is based on a heuristic approach using the significance of the coefficients and prediction power (R^2, f^2) to evaluate the inner model. Thus, the assessment of the inner model takes the path coefficients and their correspondent t-values to reach the conclusions.

	Path Coefficient	t-value
Attitude → Intention	0.551 ***	11.339
Usefulness → Attitude	0.697 ***	15.836
Ease of use → Attitude	-0.003	0.087
Compatibility → Attitude	0.140 ***	2.832
Social norm → Intention	0.170 ***	3.226
Peer influence → Social norm	0.530 ***	8.988
Superior influence → Social norm	0.148 ***	2.546
External influence → Social norm	0.094 *	1.678
PBC → Intention	-0.013	0.251
Self-efficacy → PBC	0.436 ***	5.658
Facilitating conditions for usage→ PBC	0.297 ***	4.050
Trust → Intention	0.021	0.350
Privacy →Intention	-0.066	1.292

****** p<0.01, **p<0.05, * p<0.1***

Table 12: Path coefficients Stage 1, original model

From the coefficients in Table 12 it can be noticed that attitude accounts for a higher contribution to explain the variance of Intention with 55.1% (t-value= 11.339), followed by Social Norm with 17% (t-value=3.226) and Perceived behavioural control with -0.13%, (not significant). The values of the coefficients are within the range of previous research using DTPB. (Taylor and Todd, 1995; Zhang and Gutierrez, 2007; Ajjan and Hartshorne, 2008; Lin, 2008) Regarding the negative value and lack of significance of PBC, Gironda and Korgaonkar (2014) obtained a similar finding in their study regarding the factors for joining a business SNS. These results about the PBC were explained based on the user's previous experience with other SNS. The inverse relationship between PBC and intention could be caused by the user being tired of the same characteristics of the networks, so another network offering more of the same may generate a negative reaction. Regarding the lack of significance, Gironda and Korgaonkar (2014) argue that the familiarity with previous SNS can result in an over-confidence of the user about using any future SNS, in this way diminishing the importance of the TPB. As far as trust and privacy are concerned, the results show that these variables are not significant for joining a new SNS. These results about trust were expected to follow previous research.(Bart et al., 2005; Nor and Pearson, 2008; Wu et al., 2010; Lorenzo-Romero and Del Chiappa, 2013)

Analysing the coefficients related with attitude, it was found that perceived usefulness has a large coefficient compared with the other two constructs, one of which is not significant. In the measurement model, it was found that perceived usefulness is highly correlated with attitude (77%) which leads one to consider modifying the model by replacing attitude with perceived usefulness as this last variable could be shadowing ease of use and compatibility.

The R^2 for the intention is 39.7% which is in line with the research on DTPB. (Armitage and Conner, 2001) The R^2 for attitude, social norms and PBC are 61.3%, 45.1% and 37.9%. These values, although different from the original DTPB of Taylor and Todd (1995), are in accordance with previous research using this theory.

Based on the coefficients of the constructs related to attitude and perceived usefulness, a second model was tested eliminating perceived usefulness from the model. Examining the measurement model, all the items are above the cut-off points. The AVE for all items is above 0.5, ranging from 0.70 to 0.96; the composite reliability is above 0.7, ranging from 0.893 to 0.983; the Cronbach's alphas range from 0.79 to 0.966. The detail of all the indicators can be found in appendix 2. The inner model presents very interesting changes, which are illustrated in Figure 12. In this model, the perceived ease of use has changed from being a not significant factor with a path coefficient=-0.003 to a higher path coefficient= 0.187, significant at the 1% level (t-value= 3.332). R^2 was not affected much by this change. The initial model had R^2= 39.7% and now it is 39.8%. The f^2 of this modified version shows how attitude, compatibility and peer pressure have the biggest impact on the intention.

	AVE	**Composite Reliability**	**Cronbach Alpha**	f^2
Intention	0.913	0.969	0.952	0.000
Attitude	0.865	0.970	0.961	0.400
Ease of use	0.729	0.941	0.925	0.017
Compatibility	0.737	0.893	0.821	0.245
Social norm	0.877	0.935	0.861	0.044
Peer influence	0.915	0.956	0.907	0.347
Superior influence	0.826	0.905	0.790	0.026
External influence	0.764	0.928	0.897	0.012
PBC	0.820	0.932	0.890	0.000
Self-efficacy	0.707	0.923	0.897	0.259
Facilitating conditions for usage	0.967	0.983	0.966	0.121
Trust	0.795	0.921	0.872	0.001
Privacy	0.866	0.963	0.948	0.007

Table 13: Measurement model results assessment for DTPB modified

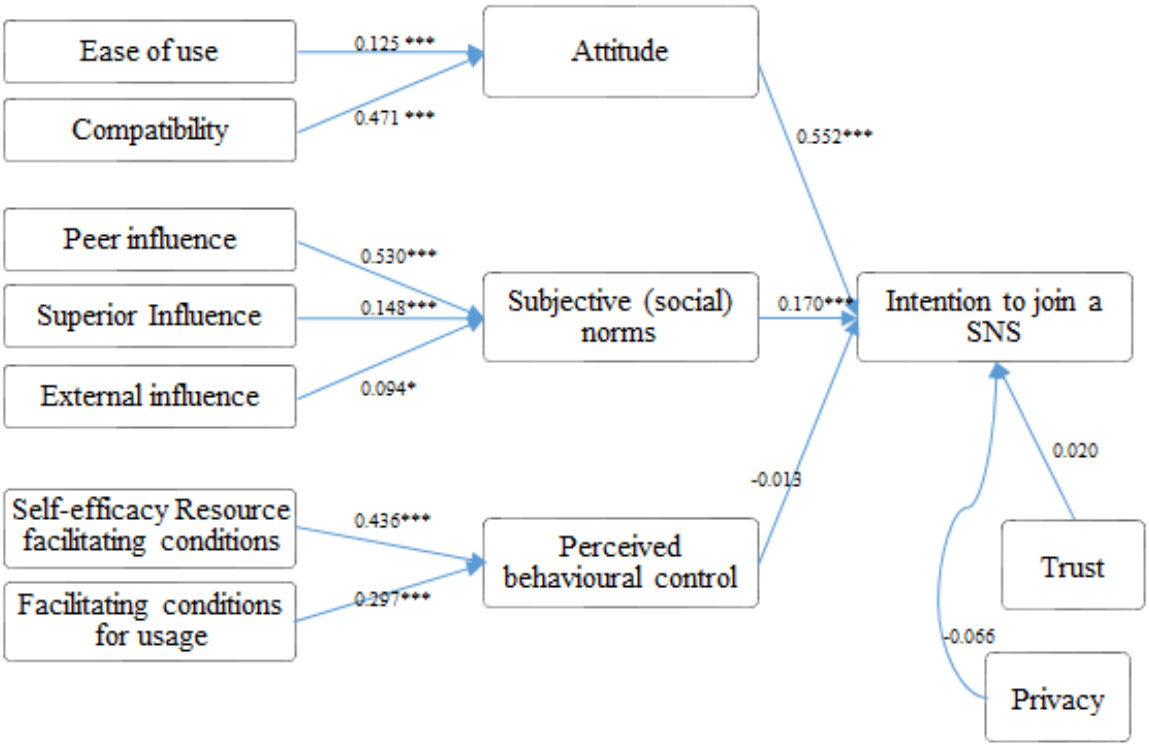


Figure 12: DTPB modified

The model suggested that perceived behavioural control is not significant, similar to the result obtained by Gironda and Korgaonkar (2014). They explained the lack of significance due to the familiarity of the users with the SNS which makes them feel that there is nothing new. So PBC is not important for them. The model also suggested that trust and privacy are not significant for joining a new SNS. Table 14 summarises the results of the hypotheses which will be discussed in the next Chapter.

Hypothesis	Supported
H1.1: Attitude towards new SNS has a positive and significant effect on the intention to join new SNS.	Yes
H1.2: The perceived usefulness of new SNS has a positive and significant effect on the attitude towards joining the new SNS.	No
H1.3: The perceived ease of use of the SNS has a positive and significant effect on the attitude towards joining the new SNS.	Yes
H1.4: The perceived compatibility of new social networks with the existing SNS has a positive and significant effect on the attitude towards joining the new SNS.	Yes
H1.5: Social norms positively influence the intentions to join new SNS	Yes
H1.6: Peer influence about joining new SNS has a positive and significant effect on the social norms toward joining these sites.	Yes
H1.7: Superior influence about joining new SNS has a positive and significant effect on the social norms toward joining these sites.	Yes
H1.8: External influence about joining new SNS has a positive and significant effect on the social norms toward joining these sites.	Yes
H9 Perceived behavioural control positively influences the intentions to join new SNS.	No
H1.10: Self-efficacy has a positive and significant effect on the perceived behavioural control towards joining new SNS.	Yes
H1.11: Facilitating condition has a positive and significant effect on the perceived behavioural control towards joining new SNS.	Yes
H1.12: Trust towards new SNS has a positive and significant effect on the intention to join these sites.	No
H1.13: Privacy concern towards new SNS has a negative and significant effect on the attitude toward joining these sites	No

Table 14: Hypotheses for Joining a new SNS

3.4 Methodology for participating in niche SNS

The literature review about SNS participation showed a gap in the research about niche SNS. Boyd and Ellison (2008) argue that the difficulty of accessing these networks explains the lack of research on niche SNS. This argument is based on the few niche SNS available at that time, but, as shown in Figure 4 (Chapter 2), the number of SNS has been growing. More niche networks are now available, hence more people use these networks. This growth in numbers offers the opportunity to undertake research on niche SNS. The theory adopted for this second stage of the SNS user life cycle was the Uses and Gratifications theory (U&G). This theory was proposed by Katz et al. (1973), and was developed as a theory for communication studies, but due to its strength at identifying influential factors for media usage, researchers in the IS field have used this theory in their studies. In fact, U&G has been applied to multiple scenarios to explore the factors influencing the adoption and participation of technologies and media. (Foregger, 2008) This theory is quantitative in essence, in accordance with the ontological and epistemological stance of the thesis.

Due to the lack of research on SNS, there is no previous model to use as a guideline, only the Uses and Gratifications found as relevant for general purpose networks. For this reason,

the research on this second stage of the life cycle takes an exploratory approach, adapting the constructs identified as influential in general purpose networks to develop the instrument to collect data from primary sources. Following the exploratory approach, PLS-SEM was used to test whether the gratifications included in the questionnaire are influential for niche SNS. The details of each step of the methodology are explained next.

3.4.1 Questionnaire design

U&G has been established as one of the most used theories in the IS field (Lee et al., 2009) having been applied in the IS context for cases like continuance of use (Papacharissi and Rubin, 2000; Lin and Lu, 2011; Chung et al., 2012), habits of use (Kim et al., 2010; Ryan and Xenos, 2011) and predicting levels of participation and attachment. (Dholakia et al., 2004; Lampe et al., 2010; Vasalou et al., 2010; Cheung et al., 2011) All of these studies have used questionnaires based on Likert scales to collect data from primary sources, showing their application for the current research. Thus, following the example of previous research, questionnaires were adopted as the instrument for data collection.

The questionnaire to explore participation on niche SNS includes items about the gratifications identified in the literature review in Chapter 2. Due to the number of gratifications considered for the questionnaire, it is proposed to create four groups to sort the constructs used for the research. These groups are proposed for practical reasons in order to display the items in a more organised manner. The model implemented will test the relationship of each item with the user's participation on SNS.

Gratification	Source	Scale
Group 1: socialisation/networking		
Interconnectedness	(Foregger, 2008)	1 to 5
Maintaining old ties	(Foregger, 2008)	1 to 5
Socialising	(Park et al., 2009)	1 to 5
Seeking social support	(Kim et al., 2011)	1 to 5
Interpersonal utility	Cha (2010), (Papacharissi and Rubin, 2000)	1 to 5
Sociability gratifications	(Dimmick et al., 2007), (Ramirez Jr et al., 2008)	1 to 5
Self-status seeking	(Park et al., 2009)	1 to 5
Seeking friends	(Kim et al., 2011)	1 to 5
Group 2: Information exchange		
Information seeking	(Papacharissi and Rubin, 2000), (Park et al., 2009), (Kim et al., 2011)	1 to 5
Innovativeness	Cha (2010)	1 to 5
Learning	Cha (2010)	1 to 5
Group 3: Entertainment gratifications		
Entertainment	(Kim et al., 2011)	1 to 5
Pleasurable way to spend the time	(Foregger, 2008)	1 to 5
Seeking entertainment	(Y. Kim et al., 2011)	1 to 5
Boredom relief	(Cha, 2010)	1 to 5
Escape	(Cha, 2010)	1 to 5
Group 4: Convenience gratifications		1 to 5
Gratification opportunities	(Dimmick et al., 2007), (Ramirez Jr et al., 2008)	1 to 5
Communication convenience	(Cha, 2010)	1 to 5
Market	(Huang, 2008)	1 to 5
Privacy	(Cha, 2010)	1 to 5
Intensity of use	(Ellison et al., 2006)	1 to 5

Table 15: Niche SNS participation construct sources

The items included in the questionnaire were adapted from the sources presented in Table 15. Due to the large number of items, the items used a five point Likert scale in order to provide a more uniform layout to the respondent. The questions can be found in Appendix 3. The questionnaire was tested in a pilot study and feedback was received about the length of the questionnaire (112 items in total) and items with similar wording, giving the impression of being repeated. Further analysis of the questions showed how the adaptation of Sociability Gratifications contained shared items with interconnectedness and social support. Likewise, the interpersonal utility presented a similar issue with social support and information seeking. For this reason it was decided to exclude these items from the final questionnaire.

The format used to collect the responses was the web survey, the same as the format for joining new SNS. The reasons for using this format are similar to the reasons explained for the research of the first stage of the life cycle (i.e. low cost, ease of distributing / sharing the link, it can reach more people in less time and technical advantages). The platform used to upload the questionnaire was again Surveymonkey.com.

3.4.2 Data analysis strategy

A widely adopted practice among U&G researchers is the use of an exploratory factor analysis to identify the main drivers of the subject of study. (Dimmick et al., 2007; Foregger, 2008) The application of the factor analysis has two reasons. The first one is to validate the scales used and the second is to reduce scales to the most relevant in order to make the model more manageable. A second step is the use of a multivariate method to test the relevance of the factors obtained from the first step. The alternatives most used are structural equation modelling (SEM) (Foregger, 2008; Shi et al., 2010; Cheung et al., 2011; Kim et al., 2011; Xu et al., 2012), hierarchical regression (Park et al., 2009) and Manova. (Joinson, 2008; Raacke and Bonds-Raacke, 2008) Due to the exploratory approach taken to research participation in niche SNS, it was considered that adopting an SEM approach would provide a robust framework to analyse the data. As explained above, the PLS-SEM approach is recommended for exploratory research, as well as for models with many constructs. (Hair et al., 2011; Hair et al., 2013) For this reason, in addition to the tolerance to non-normal data and to small samples, PLS-SEM was selected as the method to analyse the data collected. The procedure of analysing the data follows the same steps and criteria explained in section 3.2.2 for the data analysis of the previous stage.

3.4.3 Sample

Based on the gap and the research question for this second stage of the life cycle, the initial population framework is all the users of niche SNS. Following the definition of Boyd and Ellison (2008), a niche SNS is a network with a specific purpose and/or orientated to a specific target of the population. Thus niche SNS can be from networks like LinkedIn, which is orientated to professional purposes, to networks like Little Monsters, orientated to the fans of Lady Gaga. However, the same niche nature of these networks makes it difficult to map the population, as many of them are only known among the group of people who share the same interest. Looking for information to define a population framework, it was found that there is a lack of documentation about how many networks there are or how many users are registered in these networks. There are some private initiatives trying to generate network directories,

but they are not reliable enough to create a full map the population. In addition, the sample was narrowed down to UK residents to ensure a minimum of experiential consistency.

Regarding sample size, this followed the ten times rule proposed by Hair et al. (2011) for PLS-SEM, in which the sample size should be at least ten times the number of formative indicators used to measure a construct or ten times the largest number of structural paths of a latent construct. Given that the final questionnaire includes 19 variables, the minimum size required is 190 responses. However, as Hulland et al. (2010) and Hair et al. (2013) stated, having at least 150 can produce consistent results.

3.4.4 Data collection method

The private character of some niche networks restricts access to such SNS, and it is necessary to apply to the network in order to get access to the members. Taking into account the lack of information to create a population framework, along with the restrictions on access to some networks, it was necessary to use a non-probabilistic sampling method. Since the sampling framework is unknown, the volunteer opportunity sampling is the most suitable alternative to reach niche networks users. The invitations to participate in this research project were posted to different social media accounts (Hewson and Laurent, 2012), starting with the accounts of the author and the Business School.

In addition, a second strategy to collect data was based on identifying the main niche SNS platforms. From this search, Ning, SocialGo and Elgg were found to be popular options in the market. The first group approached was the developers' community on these platforms, as they are usually the administrators of their own networks. The invitation to complete the questionnaire, including the link, was posted on these forums. In addition, using the niche SNS directories, the network administrators were contacted via email, requesting permission to post the invitation on their networks. In total 533 people started the questionnaire, but only 154 completed it, giving a 28.8% response rate. The strategy that worked better was the first one, posting the invitation on an open forum; the second strategy performed poorly as the administrators were reluctant to promote the questionnaire in their networks.

The response level was lower than what was expected from the online strategy, which motivated the researcher to find alternatives to complete the minimum sample size. As a result, a second wave of data collection was implemented using a printed version of the questionnaires. This alternative follows the Bryman (2012) statistics, showing a good completion rate. The sample framework targeted was the students of Newcastle University

who are users of a niche SNS. As a result 50 questionnaires were completed, achieving the minimum sample required. Due to the low number of responses, the missing values were treated using the imputation function provided in SPSS v.22 for this task.

3.5 Data analysis about why people participate in niche SNS

3.5.1 Profile of the sample

Of the 203 respondents, 45.32% are women and 54.68% are men, so there is a balanced composition of the sample regarding gender. The age of the women is on average 27.21 years old (Standard deviation=9.55 Y.O.), compared with 28.83 years old (Standard deviation=11.05 Y.O.) for men, showing a similar age band. The occupation: 57.14% are students (24.14% of them are postgraduate students), 22.17 full time employees, followed by 9.85% part-time employees and 7.88% self- employed. The 2.96% left are unemployed. The niche SNS were very different, with LinkedIn being the most frequent with 6.4%, QQ (from China) with 6.4%, academia with 5.42%. Regional networks such as QQ, Hyves, VK, Cyworld,, Mixi, etc, account for 15.27%, showing how these networks are among the most popular type of niche SNS. More detail about demographic variables is presented next.

Characteristic	Frequency	%	Characteristic	Frequency	%
Gender			**Age**		
Male	111	54.7%	Blank	3	1.5%
Female	92	45.3%	< 19	13	6.4%
Total	203	100.0%	20-29	122	60.1%
Employment Status			30-39	46	22.7%
Paid full-time employment	45	22.2%	40-49	5	2.5%
Paid part-time employment	20	9.9%	> 50	14	6.9%
Self-employment	16	7.9%	**Total**	203	100.0%
Unemployed	6	3.0%	Educational attainment		
Student	116	57.1%	Primary School	2	0.99%
Total	203	100.0%	High School	20	9.85%
Annual household income			Technical Education	6	2.96%
Less than £10,000	70	34.5%	Undergraduate degree	70	34.48%
£10,000 to £19,999	30	14.8%	Postgraduate degree	91	44.83%
£20,000 to £29,999	20	9.9%	Doctorate degree	14	6.90%
£30,000 to £39,999	25	12.3%	**Total**	203	100.0%
£40,000 to £49,999	15	0.073892			
£50,000 to £59,999	12	5.9%			
£60,000 or more	30	14.8%			
Blank	1	0.5%			
Total	203	100.0%			

Table 16: Sample demographics

presents the descriptive statistics for each item considered for the data analysis. On average the items included are close to mid-scale values, going from 2.12 to 3.86. The standard deviation shows a symmetric distribution ranging from 0.98 to a 1.32. The average and standard deviation give insights about the normality of the data that are confirmed by the skewedness and kurtosis. The former range from -1.12 to 0.67 and the latter varies from -1.23 to 1.25. Given the descriptive statistics presented below, the data can be assumed to be normal, which is beneficial for the data analysis.

	Abbreviation	Mean	Std deviation	Skewedness	Kurtosis
Group 1: Socialisation / interconnectedness					
Interconnectedness	ic1	3.81	1.04	-0.75	-0.07
	ic2	2.79	1.20	0.13	-0.89
	ic3	2.50	1.23	0.39	-0.87
	ic4	2.83	1.15	-0.03	-0.96
	ic5	2.77	1.12	0.08	-0.90
	ic6	2.88	1.15	-0.07	-1.05
	ic7	2.66	1.12	0.24	-0.74
Maintaining old ties	mat1	2.86	1.29	0.17	-1.05
	mat2	2.91	1.25	0.11	-1.00
	mat3	2.63	1.30	0.35	-1.02
	mat4	2.99	1.24	-0.11	-1.11
	mat5	2.87	1.26	0.12	-1.05
Socialising	soc1	3.26	1.20	-0.43	-0.73
	soc2	3.58	1.21	-0.51	-0.80
	soc3	3.65	1.15	-0.74	-0.20
	soc4	3.33	1.20	-0.43	-0.68
Seeking social support	sup1	2.52	1.31	0.43	-1.00
	sup2	2.69	1.26	0.17	-1.07
	sup3	2.54	1.23	0.33	-0.95
Self-status seeking	sta1	3.78	1.12	-0.95	0.23
	sta2	3.54	1.18	-0.58	-0.56
	sta3	2.95	1.09	0.04	-0.68
Seeking friends	sfrie1	3.69	1.02	-0.70	0.09
	sfrie2	3.37	1.24	-0.46	-0.83
Interpersonal utility (Cha,2010)	ipu1	3.30	1.14	-0.42	-0.62
	ipu2	3.78	1.08	-0.88	0.29
	ipu3	3.62	1.14	-0.59	-0.48
	ipu4	3.24	1.09	-0.23	-0.61
	ipu5	3.61	1.10	-0.71	-0.16
	ipu6	3.26	1.16	-0.44	-0.56
	ipu7	3.52	1.08	-0.60	-0.32
	ipu8	3.64	1.07	-0.64	-0.09
Group 2: information exchange					
Information seeking 1	ifseek1	3.68	1.14	-0.76	-0.14
	ifseek2	2.37	1.11	0.34	-0.68
	ifseek3	3.10	1.31	-0.14	-1.11
Information seeking 2	insk1	2.12	1.08	0.66	-0.54
	insk2	3.08	1.16	-0.15	-0.89
	insk3	3.79	1.10	-0.80	-0.05
	insk4	3.51	1.02	-0.56	-0.09
	insk5	3.24	1.15	-0.38	-0.68

Information Seeking 3	skinf1	3.06	1.17	-0.20	-0.90
	skinf2	3.18	1.18	-0.40	-0.69
	skinf3	3.14	1.10	-0.37	-0.59
Innovation	innov1	3.22	1.11	-0.40	-0.73
	innov2	3.16	1.09	-0.33	-0.68
	innov3	3.10	1.19	-0.25	-0.95
	innov4	3.24	1.16	-0.34	-0.79
Learning	learn1	2.55	1.00	-0.06	-0.67
	learn2	2.59	1.08	0.03	-0.74
	learn3	2.61	1.09	0.16	-0.52
	learn4	2.58	1.10	0.20	-0.73
Group 3: Entertainment					
Entertainment	ent1	3.49	1.19	-0.53	-0.64
	ent2	3.59	1.11	-0.72	-0.13
	ent3	3.30	1.13	-0.29	-0.67
Pleasurable way to spend time	pls1	2.53	1.18	0.42	-0.73
	pls2	2.72	1.25	0.18	-1.06
	pls3	3.86	0.99	-1.12	1.25
	pls4	3.34	1.18	-0.45	-0.70
	pls5	3.09	1.32	-0.10	-1.18
	pls6	3.02	1.21	-0.08	-0.94
	pls7	2.94	1.21	-0.11	-1.04
Seeking entertainment	skent1	2.86	1.27	0.01	-1.10
	skent2	3.28	1.18	-0.45	-0.71
	skent3	3.21	1.17	-0.32	-0.80
Boredom relief	bor1	3.06	1.27	-0.26	-1.09
	bor2	2.96	1.25	-0.18	-1.07
	bor3	2.92	1.28	-0.04	-1.11
Escape	esc1	2.45	1.19	0.33	-0.98
	esc2	2.43	1.24	0.40	-0.98
Group 4: convenience gratifications					
Sociability gratification	sogr1	2.22	1.14	0.67	-0.40
	sogr2	2.83	1.31	0.01	-1.23
	sogr3	3.36	1.13	-0.48	-0.51
	sogr4	3.49	1.07	-0.51	-0.30
	sogr5	3.48	1.13	-0.47	-0.37
	sogr6	3.53	1.08	-0.57	-0.31
	sogr7	3.13	1.10	-0.33	-0.58
	sogr8	3.08	1.05	-0.29	-0.47
	sogr9	3.45	1.12	-0.48	-0.49
	sogr10	3.25	1.15	-0.32	-0.63
	sogr11	3.23	1.15	-0.46	-0.63
Perceived usefulness-communication	pu1	3.19	1.05	-0.52	-0.26
	pu2	3.12	1.09	-0.31	-0.58
	pu3	3.23	1.06	-0.45	-0.28

	pu4	3.41	1.00	-0.75	0.37
Market	mkt1	2.52	1.15	0.19	-0.80
	mkt2	2.68	1.10	-0.11	-0.92
	mkt3	2.65	1.13	-0.03	-0.91
	mkt4	2.69	1.14	-0.01	-0.84
	mkt5	2.77	1.12	-0.07	-0.75
	mkt6	2.71	1.14	0.02	-0.82
Privacy	priv1	3.76	1.07	-0.85	0.28
	priv2	3.35	1.15	-0.41	-0.58
	priv3	3.34	1.14	-0.50	-0.43
	priv4	3.12	1.14	-0.24	-0.65
Intensity of use	Int_use1	3.24	1.26	-0.07	-1.22
	Int_use2	3.67	0.98	-0.45	0.02
	Int_use3	2.90	1.17	0.13	-0.87
	Int_use4	3.41	1.11	-0.30	-0.75
	Int_use5	3.73	1.18	-0.68	-0.54

Table 17: Descriptive statistics for niche SNS participation

3.5.2 Measurement (outer) model

The initial evaluation of the criteria for the PLS-SEM reveals some problems about the items included. The AVE for 'Pleasurable way to spend time' is 4.82 (cut-off=5), showing convergent validity issues. The Cronbach's alphas for 'Socialising, Seeking friends and Information seeking' were below 70%, meaning there were reliability issues. In addition, the loadings of IC3, SOC1, INSK1, PLS1, PLS2, SOGR1, SOGR11, IPU1, and IPU6 were below 70%, showing low indicator reliability. Following the recommendation of Hair et al. (2011), these items were excluded from the model, showing an improvement, but there were still some issues. The second run of the outer model passed the internal consistency (composite reliability > 70%) and the indicator reliability (Loadings >70). However, seeking friends still presented a low Cronbach's alpha, so in order to keep the model parsimonious it was decided to exclude this variable. Checking the discriminant validity, 'Pleasurable way to spend time' presented a problem here, as the square root of the AVE was lower than its correlations with 'Boredom relief' and 'Seeking entertainment'. In addition, the VIF was above 5, showing multicolinearity problems. For this reason it was decided to exclude this variable as well. Once the measurement model had passed the assessment, the structural model was analysed.

3.5.3 Structural (inner) model

Figure 13 presents the resultant structural model after the modifications made on the measurement model analysis. The R^2 of the model changed from 38.6% to 37.9%, showing that the changes implemented had not affected the predictive power of the model. The value of R^2 is close to previous research using the intensity of use as a dependent variable, with R^2

being around 44%. (Krasnova et al., 2008) The tables with the detailed information about the measurement and structural model are in Appendix 4, section 6.2.2, including the Fornell-Larcker criterion, cross-loadings and the path coefficients with their correspondent t-value. The significance of the latent variable is illustrated in Figure 13.

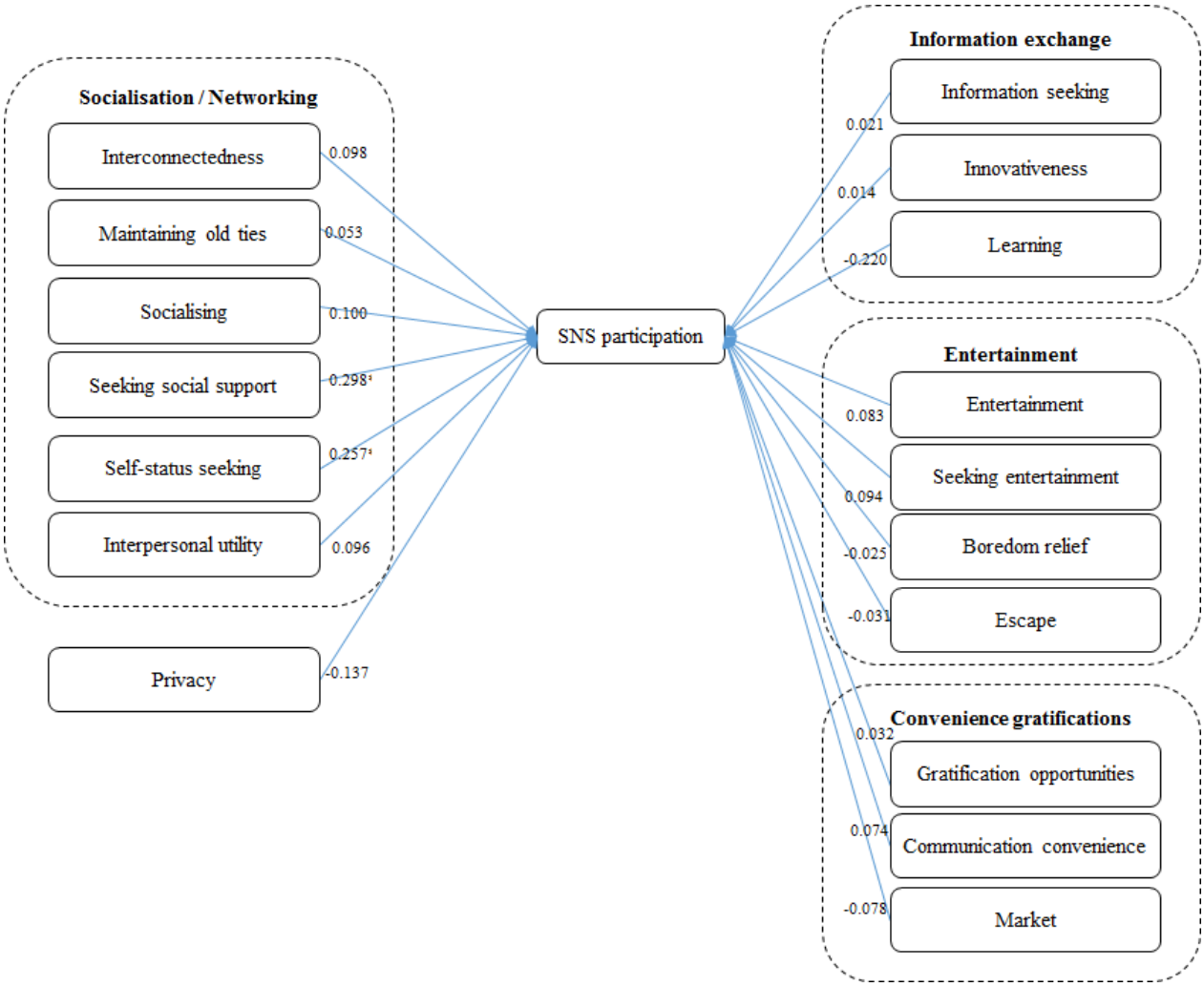


Figure 13: U&G Structural model

Based on these results obtained from Table 18 about the structural model, the main factors to participate in niche SNS are: 'Seeking social support', 'Self-status seeking' and 'Learning Gratifications', as they have the highest path and f^2 coefficients. These results show how people prefer to use the niche SNS for specific purposes and interact with like-minded people which in essence is the purpose of the niche SNS. Likewise, the results show that gratifications related with creating/maintaining the network of contacts are not significant for niche SNS, suggesting that these gratifications are mostly for general purpose network. In the same vein, the entertainment gratifications were found to be non-significant, showing that niche networks are considered for more "*serious*" purposes, leaving entertainment to the general purpose SNS. Regarding the convenience group, these gratifications were rejected as well, showing that users prefer general purpose SNS the convenience characteristics offered by the SNS. This situation might be due to the limited scope of the niche SNS which could give the impression of being limited in the advantages offered in terms of market and features. Table 19 summarises the results of the hypotheses which will be discussed in the next Chapter

	AVE	**Composite Reliability**	**Cronbach Alpha**	f^2
Intensity	0.658	0.906	0.870	
Interconnectedness	0.579	0.892	0.874	0.007
Maintaining old ties	0.727	0.930	0.912	0.003
Socialising	0.657	0.851	0.738	0.006
Seeking social support	0.750	0.900	0.837	0.073
Self-status seeking	0.701	0.875	0.786	0.048
Interpersonal utility	0.673	0.925	0.903	0.005
Information seeking	0.582	0.848	0.767	0.000
Innovativeness	0.671	0.890	0.835	0.000
Learning	0.800	0.941	0.915	0.049
Entertainment	0.872	0.953	0.927	0.004
Seeking entertainment	0.683	0.865	0.798	0.005
Boredom relief	0.743	0.896	0.891	0.000
Escape	0.930	0.964	0.925	0.001
Sociability gratification	0.559	0.919	0.901	0.000
Perceived usefulness- communication	0.732	0.916	0.879	0.005
Market	0.780	0.955	0.945	0.005
Privacy	0.680	0.895	0.859	0.012

Table 18: Measurement model results assessment for the second model.

Hypothesis	Supported
H2.1: Interconnectedness gratification has a positive and significant effect on the participation in niche SNS.	No
H2.2: Maintaining old ties gratification has a positive and significant effect on the participation in niche SNS.	No
H2.3: Socialising gratification has a positive and significant effect on the participation in niche SNS.	No
H2.4: Seeking social support gratification has a positive and significant effect on the participation in niche SNS.	Yes
H2.5: Interpersonal utility gratification has a positive and significant effect on the participation in niche SNS.	No
H2.6: Sociability gratification has a positive and significant effect on the participation in niche SNS.	No
H2.7: Self status seeking gratification has a positive and significant effect on the participation in niche SNS.	Yes
H2.8: Seeking friends gratification has a positive and significant effect on the participation in niche SNS.	No
H2.9: Interpersonal utility gratification has a positive and significant effect on the participation on niche SNS.	No
H2.10: Privacy gratification has a positive and significant effect on the participation in niche SNS.	No
H2.11: Information seeking gratification has a positive and significant effect on the participation in niche SNS.	No
H2.12: Innovativeness has a positive and significant effect on the participation in niche SNS.	No
H2.13: Learning gratification has a positive and significant effect on the participation in niche SNS.	Yes
H2.14: Entertainment gratification has a positive and significant effect on the participation in niche SNS.	No
H2.15: Pleasurable way to spend time gratification has a positive and significant effect on the participation in niche SNS.	No
H2.16: Boredom relief has a positive and significant effect on the participation in niche SNS.	No
H2.17: Escape gratification has a positive and significant effect on the participation in niche SNS.	No
H2.18: Gratification opportunities have a positive and significant effect on the participation in niche SNS.	No
H2.19: Communication gratification has a positive and significant effect on the participation in niche SNS.	No
H2.20: Market gratification has a positive and significant effect on the participation in niche SNS.	No

Table 19: Hypothesis results for Participating in niche SNS

3.6 Methodology for SNS withdrawal

Research on SNS is a growing body of knowledge. However, little attention has been paid to SNS withdrawal. The lack of information about this phenomenon leads to the adoption of an exploratory approach, in order to gain an initial understanding of SNS withdrawal. Sekaran and Bougie argue that "*exploratory studies are undertaken to better comprehend the nature of the problem since very few studies might have been conducted in that area*" (Sekaran and Bougie, 2010, p.104); This argument coincides with the current panorama of SNS withdrawal research.

The definitions reviewed about disidentification present this process as a cognitive state in which the self-identity is found to be different from the identity of the group. (Ashforth and Mael, 1989, Kreiner et al., 2006, Anand et al., 2013, Elsbach and Bhattacharya, 2001) In addition to the definitions aforementioned, Bhattacharya and Elsbach define disidentification as "*schemas that help define a person's self-concep*t". (Bhattacharya and Elsbach, 2002, p. 28) Thus, taking disidentification as a part of a cognitive scheme makes it possible considering the application of a methodology that helps identify the elements involved in the disidentification decision and how they are related in a structured way. Taking into account these requirements, the Means-End Chain (MEC) approach appears to be a valid alternative to understand the cognitive decision-making process by identifying the attributes, consequences and values of the subject of study. (McIntosh and Thyne, 2005, Morandin et al., 2013, van Rekom and Wierenga, 2007, Botschen et al., 1999)

3.6.1 The Means-End Chain approach

Means-End Chain (MEC) is an approach used for understanding decision making processes based on a model of consumers' cognitive structures, making it possible to identify how product or service characteristics are associated to a value (or end) desired by the consumer (McIntosh and Thyne, 2005, van Rekom and Wierenga, 2007). MEC is based on the linkage of three cognitive levels: the attributes (or means) of the product/service; the consequences for the consumer, which are a result of the attributes; and the personal values (or ends), related to the satisfaction of consequences and values which are relevant to the person (Reynolds and Gutman, 1988). As a result, a hierarchical chain connecting concepts, going from the more concrete (the attributes) to more abstract (the values), illustrates the elements and their relationships to explain the subject of study. (Olson and Reynolds, 2001) MEC argues that the attributes of the product per-se are not very relevant for the consumer, as their relevance come from the consequences that the attributes are expected to bring. In turn, the ends of the chain are often a desired personal goal or life values. (Olson and Reynolds, 2001) In other words, the decision maker bases his/her choices not on the product or service itself, but on the extent to which the product/service may contribute to achieving his/her goals.

Comparing the characteristics of MEC with SIT, both of them study cognitive processes (decision making and identification processes) that are ultimately concerned with the creation/reaffirmation of the self-concept. Thus, the use of MEC as the main method makes sense as it will help to understand the SNS withdrawal/disidentification process as it can help

identify the elements involved in the decision, as well as relations between these elements through the use of the techniques proposed for this method. The MEC basic model consists of three main elements (Reynolds and Gutman, 1988):

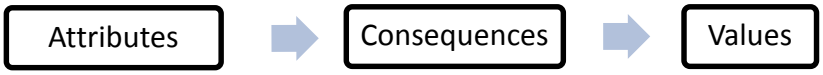


Figure 14: Basic Means-End Chain model (Gutman, 1982)

Definitions about these elements are similar across researchers using this model, originally proposed by Gutman (1982). One of the clearest definitions is provided by Reynolds and Gutman as follows:

> *"Attributes are features or aspects of products or services. Consequences accrue to people from consuming products or services. They may be desirable (benefits) or undesirable. Values, or end states, are important beliefs people hold about themselves and about their feelings concerning others' beliefs about them."*
>
> (Reynolds and Gutman, 1984. p. 31)

Latter models established different categories for each element. For example, the model proposed by Olson and Reynolds (1983) offers a higher level of detail about the attributes, consequences and values as shown in see Figure 15. In this model, concrete attributes are physical characteristics that can be measured, such as size or weight, whereas abstract attributes are properties of the product that are more subjective, such as taste or ease of use. Functional outcomes (consequences) are direct or tangible outcomes from the product consumption like saving time, compared with psychosocial outcomes which are more intangible outcomes of the attribute like having fun or looking more attractive to others. Instrumental values are related with others' perception (e.g. makes me feel accepted), in contrast with terminal values which are related to self-concept issues, such as self-esteem or security. (Reynolds and Gutman, 1984) Despite the acceptance of this model, Olson and Reynolds (2001) argue that six levels tend to overcomplicate the data analysis, thus proposing the standard three elements model.

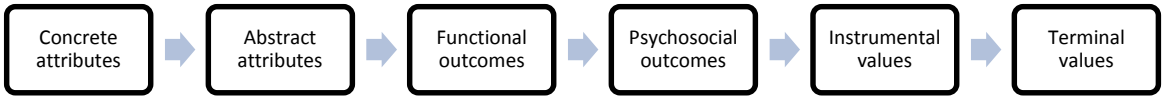


Figure 15: Extended Means-End Chain model (Olson and Reynolds, 1983)

In the IS – online context, this method has gained popularity due to its usefulness for uncovering users' motivation in the decision making process. (Subramony, 2002; Leão and Mello, 2007; Pai and Arnott, 2012; Xiao, 2013) Abeele and Zaman (2009) did a review about how MEC has been applied to Human-Computer Interaction (HCI), allowing them to understand users' choices. Likewise, (Pai and Arnott, 2012) applied the MEC theory to SNS, combining this theory with Uses and Gratification in order to elicit the reasons for SNS adoption. MEC theory proposes a mixed methodology combining qualitative techniques for data collection using laddered interviews which are codified using content analysis, with quantitative analysis by quantifying the relationships between the codes. The nodes and relationships obtained are presented graphically using a hierarchical value map. Each step is explained next.

3.6.2 Laddered interviews

Reynolds and Olson introduced laddering interviews as the 'preferred method' for identifying attributes, consequences and values that will configure the Means-End Chain. Laddering is a qualitative interview technique in which respondents describe why something is important for them. (Reynolds and Olson, 2001b) Reynolds and Gutman's (1988) seminal paper about laddering defines this method as an "*in-depth, one-on-one interviewing technique used to develop an understanding of how consumers translate the attributes of products into meaningful associations with respect to self*". (Reynolds and Gutman, 1988 p. 12) These definitions show how the use of a qualitative approach is adopted for gaining a deep level of detail in order to identify the elements of the chain and the way they are related. As mentioned above, these elements are based on personal perceptions and orientated to unveil the underlying personal values/goals affecting decision processes. The interview is based on probing "*why*" questions that will take the answers up the ladder from concrete to abstract concepts (McIntosh and Thyne, 2005, Pai and Arnott, 2012), make it possible to establish the relationships between attributes, consequences and values.

Reynolds et al. (2001) recommend a warming up round of questions in order to get the interviewee into thinking about the product/service, in this way making it possible to ease the recall of the true beliefs, feelings and goals that motivated his/her decision. For this research, warming up questions were related to the SNS each participant used to be part of and the

reasons that motivated them to participate in that network. An additional benefit of this warm up is providing the opportunity to collect extra information for the analysis through the insights about the opinions and expectations that the users had about the SNS.

Once the warm up is finished (around 15 minutes) the interviewer starts the laddering interview, consisting of two stages. The first one is the "*attribute elicitation phase*", in which the interviewee is asked to recall the salient attributes of the product/service consumed that encouraged his/her decision or, in the case of the thesis, the attributes that made them close the SNS. There are different techniques for attribute elicitation (see Figure 16) that can be used at different times of the interview, depending on the answers provided by the interviewee. It is worth mentioning as well that these techniques can be combined in order to improve the elicitation process. From Figure 16, Reynolds et al. (2001) introduce unconstrained general brand relationships as the ones offering general information about categories and their relationships, since it is based on the first thoughts coming to their minds. Brand relations constrained by current usage differences encourage the respondents to think about their perceived behaviour in order to probe the reasons for their decision. Finally, brand relations constrained by potential usage are focused on identifying future directions for the growth of products/services based on current perceptions about the product/service. For a detailed explanation of each technique one could refer to the work of Reynolds and Gutman (1988), Bech-Larsen and Nielsen (1999) and Reynolds et al. (2001).

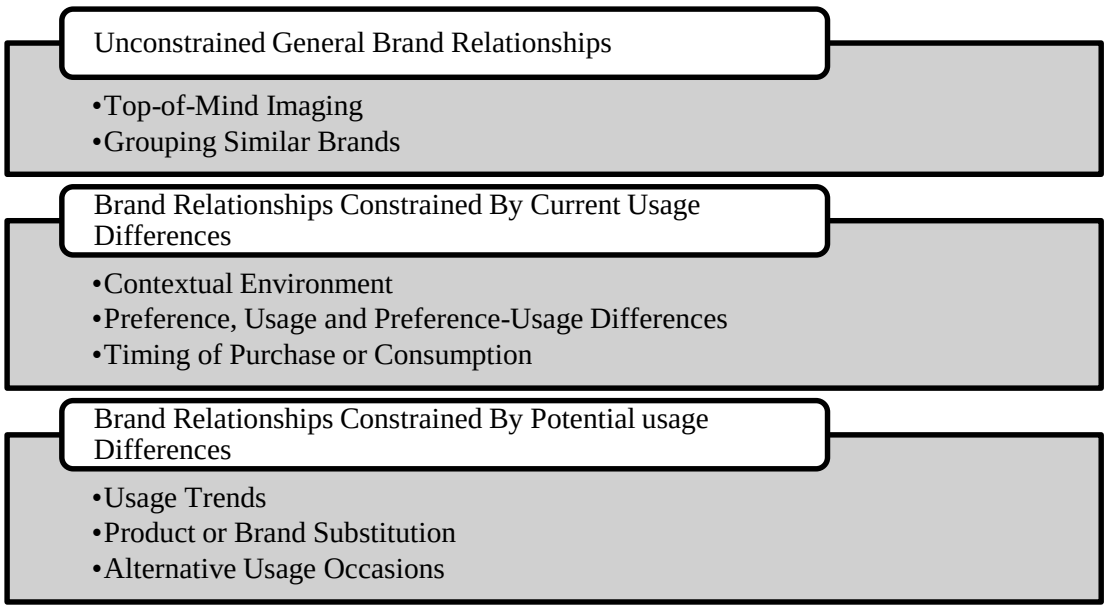


Figure 16: Attribute elicitation methods (Reynolds et al., 2001)

The second stage is the "*laddering phase*", consisting of probing questions following the "*why is that important for you?*" form. These questions are aimed at revealing salient higher level elements of the behaviour as well as the associations between the elements identified. The number of questions and therefore the length of the interview depends on the ability of the respondent to express his/her perceptions and feelings. Participants who provide in-depth answers will require less probing questions than those who are responding in a more simple way. (Reynolds and Olson, 2001b) Moving to higher levels of abstraction, or moving up the ladder, can be done through positive questions such as "*Why is that important to you?*" or "*How does that help you out?*" as well as by using negative questions like "*Why is that a negative to you?*" or "*How does that interfere with what you are doing?*" The latter form was adopted for this research in order to find the reasons that motivate the SNS withdrawal. This structured approach makes the difference of the laddering method in comparison with traditional qualitative interviews, enabling the researcher to uncover more abstract and personal reasons underlying the decision making process. (Reynolds et al., 2001)

3.6.3 Sample

The participants were sought based on two conditions: The first is that the person must have had a closed SNS account at the time of the interview in order to be considered for the sample and the second is being resident in the UK, preferably in Newcastle upon Tyne, the city where the researcher was based at the time of the study. The first condition was required

in order to follow the definition adopted for SNS withdrawal. In addition, closing an SNS account requires going through a process that is not always easy, as users who have closed their profile may have stronger reasons than those who just stop using the SNS.

This research aims to understand withdrawal based on the detail of the information that the interviewees provide in order to find the similarities as well as the differences between different networks and individuals. Once the data collection was started, it was found that there was a scarcity of people satisfying the condition of having an account closed which enforced the decision of keeping the sample open to different networks rather than focusing on a specific SNS. Due to the characteristics of the profile, participants were recruited through a snowball sampling which is a common method among SNS researchers (Bagozzi and Dholakia, 2002; Pai and Arnott, 2012; Vasalou et al., 2010; Ren et al., 2007, Hou, 2011), as well as SIT. (Terry et al., 1999; Havard, 2013; Valentine and Sporton, 2009) The process started with a general call in different SNS, mainly Facebook, Twitter and LinkedIn as well as University alumni websites and newsletters, asking for people living in the UK (preferably in Newcastle upon Tyne) who had closed any of the SNS they had been part of, or knew people who had done it. Participation was completely voluntary and before starting each interview every person was informed about the purpose of the research, followed by signing a consent form (see Appendix 5). The interviews were recorded using a digital device and transcribed using verbatim transcription. (Reynolds and Gutman, 1988; Reynolds and Olson, 2001a)

As a result, 26 face to face interviews were held following the general considerations proposed by Reynolds and Gutman (1988) i.e. a room without distractions in a non-threatening environment, so the interviewee feels more willing to collaborate. This sample size exceeded the accepted rule of thumb of at least 20 respondents for laddered interviews. (Reynolds et al., 2001) Table 20 presents a summary of the participants' information. 61.54% were women (with an age average age of 31.18 years old) and 38.46% men (average age 27.8 years old). Regarding the occupation, the main groups were people working and postgraduate students with 42.31% each. From the first group, 38.46% are full time employees and 3.85% part time; of the students, 34.62% were doing their PhD 7.69% and a Master. The SNS they were part of were Facebook (50%), Twitter (19.23%), MySpace (15.38%), Bebo (11.54) (there were two cases who had closed their profiles in both Networks) and other SNS represented 11.54% of the sample.

The age range of the participants reflects an interesting change in the users' characteristics when compared with the mainstream SNS research, which has typically

adopted undergraduate students as the sampling framework. (Cha, 2010) Cha (2010) justify using students as a sample framework based on the fact that students are the main target for general purpose SNS which are the most researched type of SNS. However, as SNS have been in the market for several years now, the adult population became a significant group with a longer exposure to SNS. Contrastingly, the adult population have received little attention in the literature, making it an interesting target for research. In addition, as adult people are more likely to participate in different social networks over time, this increases the odds of them having closed at least one of their accounts.

Interviewee	Age	Gender	Occupation	SNS	Country of Origin
1	33	Male	Self employed	Facebook	UK
2	26	Female	PG Student - PhD	Myspace	UK
3	25	Female	PG Student - PhD	Twitter	UK
4	51	Female	Full time Employed	Friends reunited	UK
5	32	Female	Self employed	Facebook	UK
6	38	Female	Full time Employed	Facebook	UK
7	37	Female	Part time Employed	Facebook	Tanzania
8	32	Male	Full time Employed	Facebook	UK
9	26	Male	PG Student – PhD	Twitter	China
10	29	Male	PG Student – PhD	Bebo	UK
11	21	Male	UG Student	Myspace- Bebo	UK
12	26	Female	PG Student – PhD	Twitter	Pakistan
13	32	Male	Full time Employed	Facebook	UK
14	51	Female	Full time Employed	Facebook	UK
15	34	Female	PG Student – PhD	Twitter	Greece
16	22	Female	Full time Employed	Facebook	Colombia
17	26	Female	Full time Employed	Twitter	UK
18	21	Male	Full time Employed	Facebook	Singapore
19	32	Female	PG Student – PhD	Myspace	South Africa
20	26	Female	Full time Employed	Facebook	UK
21	23	Male	PG Student	Hyves	Netherland
22	20	Female	UG Student	Myspace- Bebo	UK
23	29	Female	PG Student - PhD	Facebook	UK
24	32	Male	Full time Employed	Facebook	UK
25	24	Female	PG Student - PhD	Moi-Mir	Kazakhstan
26	29	Male	PG Student	Facebook	Thailand

Table 20: Interviewee information

3.6.4 Procedures and Data analysis

Once the interviews have been completed, the MEC model proposes a data analysis based on a quantitative approach. (Abeele and Zaman, 2009; Reynolds and Gutman, 1988; Reynolds and Olson, 2001c) This involves summarising the information collected during the interviews via content analysis to identify the key elements and grouping them according to the Attribute-Consequence-Value (ACV) structure. Next, the codes are translated into an implication matrix in order to quantify the strength of the relationships between the different elements, becoming the data source of the Hierarchical Value Map (HMV), which illustrates the ACV chains (or sequences), making it possible to map the cognitive structure behind the decision making process. (Pai and Arnott, 2012; Reynolds and Gutman, 1988; Reynolds and Olson, 2001b; Morandin et al., 2013; McIntosh and Thyne, 2005) The basic steps required to understand MEC data analysis are explained below, but for a detailed explanation refer to Reynolds and Olson (2001b) and Saaka et al. (2004).

3.6.4.1 Content analysis (CA)

The original version of MEC analysis proposed by Gutman (1982) followed the guidelines of Kassarjian (1977) and was later updated with new developments implemented by new research in the field by Krippendorff (2012) who came up with one of the most accepted frameworks for this type of analysis. The aim of content analysis is to identify the key elements of the information provided by the interviewee in order to generate an initial set of codes that afterwards will be classified according to the context into one of the attribute, consequence or value categories. The codes generated have to be broad enough so that they can be replicated in the different interviews while they still keep the meaning of what the interviewee wanted to say. (Abeele and Zaman, 2009)

One of the main decisions in CA is the selection of the units of analysis and meaning (or content). (Graneheim and Lundman, 2004; Krippendorff, 2012) Following Graneheim and Lundman's recommendation, the interviews were taken as the unit of analysis, allowing the preservation of the meaning and context of what the interviewee wanted to say. In turn, the sentences in the interview were selected as the meaning unit following the example of Ellison et al. (2006a) and Ceci and Iubatti (2012). Likewise, the unitisation is flexible in order to preserve the completeness of these units, allowing overlapping of the codes in line with Krippendorff (2012) and following the example of Ellison et al. (2006a).

In MEC theory, content analysis includes two rounds of codification. The first round identifies the ladders out of the answers provided by the interviewees. The second round is

closer to the content analysis tradition by grouping the elements identified in the first round into categories that make it possible to summarise the attributes, consequences and values into representative groups that can tell the story without losing much detail. The list of codes obtained as a result of the content analysis is now the elements that will be included in the implication matrix.

3.6.4.2 Implication matrix

The implication matrix is a square matrix (M x M) in which rows and columns are the codes obtained by content analysis. This matrix shows "*the number of times each element leads to each other element (operationally defined at this level as which elements in a given row precede other elements in the same row)*" in a quantitative way. (Reynolds and Gutman, 1988, p. 20) Two types of relationship are represented in this matrix. The first one is the direct relationship, showing the connection between two elements without the intervention of any other element, they are adjacent. Using Pai and Arnott (2012) as an example, Figure 17 shows this type of relationship between A6 - C22, C22 - C23, and C23 - V39. Indirect relationships are the relationship between non-adjacent elements of the chain, e.g. A6 – C23, A6 – V39 and C22 – V39. Each relation in the chain is counted and added to the implication matrix in the form of a fractional number. Thus, the numbers to the left of the decimal point are the direct relationships and the number to the right are the indirect relationships. For example, if a cell value is equal to 4.01, this means that there are four direct relationships and one indirect.

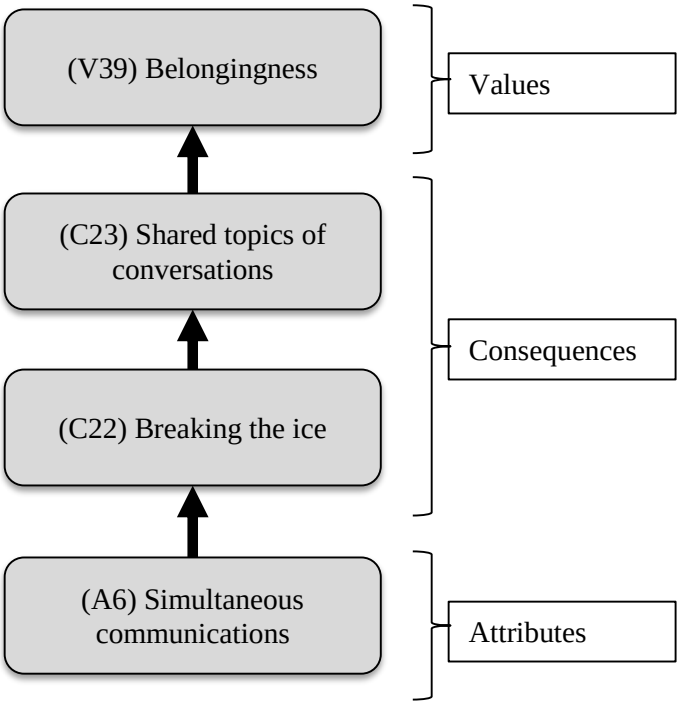


Figure 17: Example of ACV Chain (Pai and Arnott, 2012)

Once all the chains have been translated into the matrix, the relationships are represented graphically using the hierarchical value map. The implication matrix can be found in Appendix 7.

3.6.4.3 Hierarchical Value Map (HVM)

The hierarchical value map is a cognitive map, illustrating the relationship between the ACV chains at the different levels of abstraction going from the concrete attributes to the abstract values. (Reynolds and Gutman, 1988) This map has been traditionally used to graph the ACV chains by creating chains identified in the implication matrix and translated into a graphic representation. Next the process of creating an HVM is explained.

The first decision made in order to create the map is selecting a cut-off level of the relationships that will be presented visually. A cut-off value is the minimum value that a cell (as representation of a relation) must have in the implication matrix, so that it can be included in the map (Bagozzi et al., 2009). Choosing this cut-off level is a heuristic process, in which the level of detail has to be balanced with the ability to summarise and interpret the relationships related to the subject of the study, Botschen et al. (1999), or as Pai and Arnott (2012) state "*a trade-off between data reduction and retention*". (p. 6) Pieters et al. (1995) identified four heuristic methods aimed at finding an appropriate cut-off level. The first two

were proposed by Reynolds and Gutman (1988) and the last two by Pieters et al. (1995). These heuristic methods are looking for "*the most informative and stable set of relations*" (Reynolds and Gutman, 1988, p. 20) based on different criteria. The first method is trial and error based, testing different values and choosing the one providing the best representation of the information collected (according to the research team criteria). The second method is based on the proportion of relationships left in the map, depending on the cut-off level selected. Reynolds and Gutman recommend trying values between three and five for samples around 50 participants, allowing for the inclusion of around two thirds of the total of relationships identified. This proportion became an accepted rule of thumb for the cut-off level. (Reynolds and Olson, 2001b) The third method is based on the graphic of the relations present at a given cut-off level. This number of connections are plotted in a scree plot graph similar to the one used in factor analysis, and looking for the 'elbow' as the decision criterion, in which the level selected is the point before the elbow or inflection point in the graphic. The fourth method is based on the comparison of active cells in the implication matrix versus the proportion of all connections accounting for a given cut-off level. Leppard et al. (2004) criticise these heuristic methods, arguing that the application of arbitrary rules of thumb are not successful when applied to some data. Their findings showed that in order to get two thirds of the relations, a low cut-off level was required. This resulted in HVM maps being highly complex when it came to being represented graphically which in turn complicated their interpretation.

To address this challenge, Leppard's team proposed a top-down ranking method to determine the cut-off level. (Leppard et al., 2004) The top-down ranking method is based on the principle that "*the most important linkage is that associated with the largest entry in the SIM. That is, the rank order of the cell entries in the SIM [implication matrix] defines importance*". (Leppard et al., 2004, p. 492) In practice, the top-down method generates a set of cut-off points created by the values identified for the following relationships:

- Attributes - physical consequences
- Physical consequences – psychosocial consequences
- Psychosocial consequences – values.

The first set contains the largest values for each relationship; the second set contains the second largest, and so on. The process stops once the resulting map becomes too complex to interpret. According to the authors, the top-down strategy provides a criterion that is a more

"*rigorous, justifiable and transparent method*" (Leppard et al., 2004, p. 496) when it comes to deciding which information is included in the HVM.

Once the cut-off value has been decided, the next step is creating the chains based on the following steps (graphically the algorithm is presented in Figure 18), proposed initially by Reynolds and Gutman (1988) (for detailed information refer to Reynolds and Olson, 2001b, Saaka et al., 2004).

1. Starting from the upper left cell (row1, column 1), identify the intersection with a value greater than or equal to the cut-off point. As an example let's assume that this cell is relating an attribute (A1) with a physical consequence (PHC1).
2. Go to the row of the physical consequence pointed in step one, but remain in the same column.
3. From that cell, find the first value exceeding the cut-off point in the row. In this way one more point is attached to the chain. Continuing with the example let's assume that this new cell is linking a physical consequence (PHC1) and a psychosocial consequence (PSC1)
4. Repeat step two until the last column is reached. In the example it would be a relation between psychosocial consequence (PSC1) and a value (V1)
5. Go back to the first row and check if there is another cell greater than or equal to the cut-off point and repeat the same steps.
6. Once there are no more values in that row, continue to the next row and repeat the process.

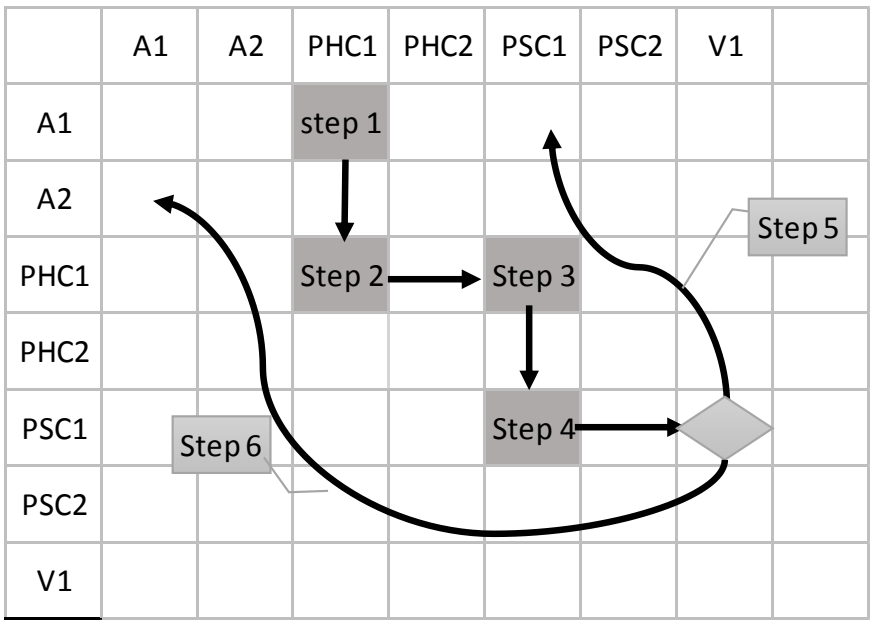


Figure 18: Hierarchical Value Map procedure. Adapted from Reynolds and Gutman (1988).

Once the map has been created, the final step is the analysis of the dominant perceptual patterns. This analysis is based on the direct and indirect relationships coming from and going to the different elements which is summarised in a table listing the code of the element, the total of relations going to other elements and the total of relations coming from other elements. Thus, the elements to be included in the analysis are those with higher values. Likewise, the map can be split on the main pathways for detailed analysis (Reynolds and Olson, 2001b) about the weak and strong links in the chain. Figure 19 presents part of the map to illustrate how the HVM might look (the full graphic can be found at Appendix 9). This map was created with the data from the first round of coding of the data collected and illustrated using LadderUX. (Vanden Abeele and Zaman)

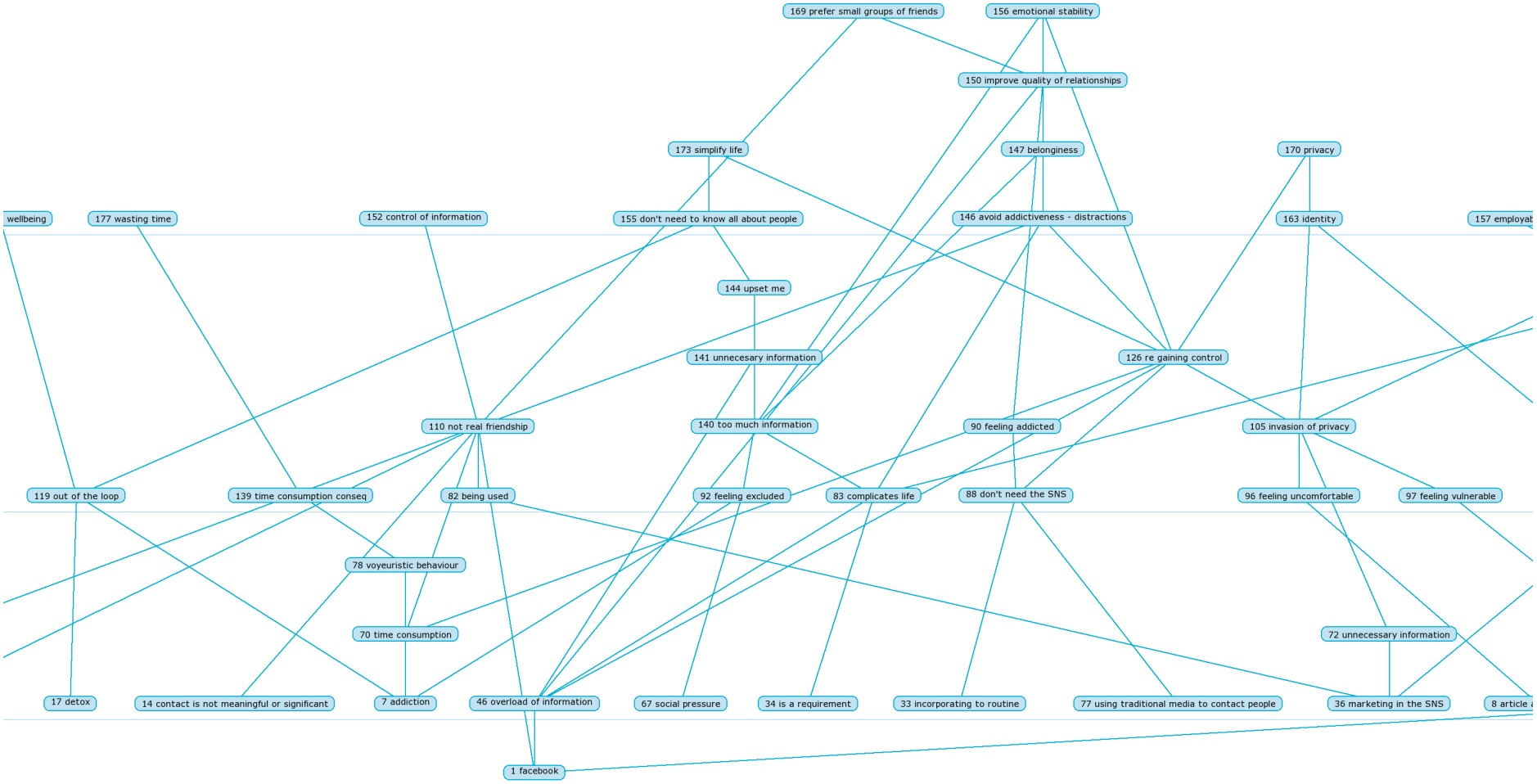


Figure 19: Example of the Hierarchical Value Map

3.6.4.4 Applying Social network analysis:

A number of MEC researchers have questioned the application of a hierarchical value map as an accurate way of representing relationships among the elements identified. (Morandin et al., 2013; Matook, 2013; van Rekom and Wierenga, 2007; Bagozzi et al., 2009; Gengler et al., 1995) The main argument against the HMV is related to the rigid structure of the map, which does not allow recursive relationships (loops) as well as the assumption that the asymmetry of the relationships cannot be taken for granted, as explained by van Rekom and Wierenga. (2007) Implementing Social Network Analysis (SNA) techniques is an alternative that is growing in popularity, due to the flexibility in analysing laddering data graphically and quantitatively.

The analysis is based on centrality, taken as the frequency by which any given node is linked to other nodes (Wasserman and Faust, 1995), as the main concept for the analysis. Centrality is related to the in-degree and out-degree summary (From – To table) proposed by (Gutman, 1982) in the original MEC method; both aim to find the most influential elements on the ladders. One of the earliest publications using SNA in MEC was by Pieters et al. (1995), who used abstractedness, centrality and prestige as measures to analyse consumer goal structures. They defined abstractedness as "*the ratio of in-degrees over in-degrees plus out-degrees of the goal*" (Gengler et al., 1995, p. 236), in which the higher the abstactedness, the more connections are established with elements in a higher level. Applying this definition to the MEC, nodes with a high abstractness index are associated to high level elements in the chain. (i.e. the Values) Conversely, low values of abstractedness are associated with low levels in the chain (i.e. attributes). Centrality is defined as "*the ratio of in-degrees plus out-degrees of a particular goal over the sum of all cell-entries in the implication matrix*". (Gengler et al., 1995, p. 236) An element with high centrality has a large proportion of connections passing through it. Finally, prestige is defined as "*the ratio of in-degrees of a particular goal over the sum of all cell-entries in the implication matrix*" (Gengler et al., 1995, p. 236), in which high prestige suggests that the element is the destination of other elements. The table for these three indexes can be found in Appendix 10: SNA Measures.

On the practical side, each chain created for the MEC analysis has to be translated into the SNA format, in which the chains have to be decomposed in dyads. The literature suggests using direct relationships to create the implication matrix for the network. Consequently, the chain (a) SNS dependency (c) addiction (v) keep regain control (codes: 32 – 38- 87- 80) is

decomposed in 32 -38, 38-87 and 87-80. Appendix 12 contains the code developed to create the direct relationship dyads. This was implemented in Microsoft Excel.

Due to the number of elements (or, in the SNA language, nodes), the network became quite large, making it necessary to introduce an extra step before creating the map. Hansen et al. (2010) recommend merging duplicated dyads, due to the inflating effect that this can have for some measures such as the centrality degree. Following this recommendation, duplicated dyads were merged, producing a new column called edge weight which was created to keep the information about the repetition of the dyads. The importance of this step is that the edge weight is what MEC researchers use as the cut-off level. (Bagozzi et al., 2009, Matook, 2013)

3.6.5 Criticism and limitations of means-end chain theory and the laddering technique

Application of the MEC model is growing in popularity in the information systems field, due to the advantages over traditional methodologies when eliciting and analysing information. (Chiu, 2005; Matook, 2013; Abeele and Zaman, 2009; Pai and Arnott, 2012) At the same time academics have also acknowledged its limitations. One of the main criticisms of the MEC relates to the assumption of how people decide which options to select based on the desired outcomes out of these choices. Pai and Arnott (2012, p.13) are critical about the rationality of the decision making process, arguing that this assumption "*overstates the rationality of choice*", showing a "*supposed to do*" persona, different to what people really are. This criticism also affects the chains elicited, as they represent the perception of how respondents "*think they or others should or might react*" (Bagozzi and Dabholkar, 2000, p. 536), instead of the real internal cognitions.

In line with the true internal cognitions, Botschen et al. (1999) raises a common criticism about laddered interviews, arguing that the continued used of '*why'* questions may lead to the creation of artificial abstract levels, as the respondents are thinking more in a way to justify their decisions or behaviour than about the real reasons. (Grunert and Grunert, 1995) As a consequence this method may "*force relationships between values and behaviour that may not be recognised by the respondent or have any clear meaning*". (McIntosh and Thyne, 2005, p. 260) These points about the subjectivity of the reasons identified through the MEC are in fact a valuable source of information for the SIT, since the (dis)identification process is related with a desired identity which is not always in line with the current one. (Elsbach and Bhattacharya, 2001) Grunert et al. (2001) pointed out that the motivations can change with time, which may become an issue for the analysis. This point raises a note of caution about the generalisation of the findings, because they are limited not only by the sample size and

sampling method, but also by the personal situation of the interviewee at the time of the data collection. A longitudinal study could potentially test at different points of time whether the reasons remain the same or even if participants went back to the SNS.

On a more operational level, Saaka et al. (2004) lists in five points the limitations of the MEC methodology, summarising the concerns expressed by other authors about this method. (Bagozzi and Dabholkar, 2000, Grunert et al., 2001, Grunert and Grunert, 1995, Veludo-de-Oliveira et al., 2006) The first two points are concerned with the data collection phase, the second two with the data analysis phase and the fifth with the application of the finding to real life cases. More specifically, the first point is related with the sample size and the time consumption of the laddered interviews. In the case of this thesis, the limitations of snowball sampling regarding generalisation are acknowledged (Saunders et al., 2009). However, as Saunders notes, this technique is recommended when the sample is difficult to find, like the case of people who have closed their profile in an SNS. Regarding the adoption of face to face interviews, this technique implies dealing with bias on account of the interviewer (Bryman and Bell, 2007) as well as by the environment in which the interview is held. (Reynolds and Olson, 2001b) In addition, collecting data through interviews represents a considerable investment of time, not only for data collection, but also for data analysis. (Bryman and Bell, 2007) Saaka makes a second point about the risk of lack of response that may happen with some interviewees who do not have much to say. In these cases, MEC has developed different techniques for eliciting information which can be reviewed in Reynolds and Reynolds and Gutman (1988), Reynolds and Olson (2001b) and Saaka et al. (2004).

The third limitation identified is related to the subjectivity of the method selected for data analysis. Saaka et al. (2004) argue that decisions involved in the codification process, as well as the choosing of an appropriate cut-off level, are highly subjective. In this regard, content analysis provides a structured framework helping to deal with the subjectivity implied in qualitative information. (Krippendorff, 2012) Likewise, one of the most common ways to deal with subjectivity is the use of parallel coders (Pai and Arnott, 2012) who do several rounds of codification separately comparing the differences at the end of each round until they reach an acceptable level. This level is measured by the inter-coder reliability, using different coefficients such as the Cohen's Kappa, Holsti's agreement measure or Krippendorf α, among others. (Krippendorff, 2012) However, due to the nature of this thesis, parallel coding was not possible, limiting the application of reliability coefficients. Nevertheless, as Grunert et al. (2001) state, the codification process implies a loss of data information due to the grouping

process which constitutes the fourth limitation of MEC. As part of the information loss is related to the context of the information being codified, Grungert's team argue that the interviewer is the best person to codify, as this person can relate the context to what he/she is coding. They contrast the coding done by the interviewer with a blind coder who could misunderstand what is being said in the interview, resulting in a low inter-coder reliability. In order to preserve the reliability and transparency of the coding process, these authors found that the iterative coding proposed by the MEC proved to be helpful. (Grunert et al., 2001) The fifth point concerns the translations of the findings obtained using MEC to practical actions. This thesis proposes the application of the SNA as an alternative to understand the relationships between the elements of the chain, showing the research about SNS withdrawal as an example.

Related to the first limitations about the data collection phase mentioned by Saaka et al. (2004), the MEC relies on the laddered interviews to collect data for the analysis. In this regard, qualitative researchers recommend the use of triangulation methods as a way to corroborate the findings (Miles and Huberman, 1994) by using one or more method or source of data to study the phenomena observed (Bryman, 2012). The characteristics of the sample along with the lack of research in this topic presented a challenge for triangulating information about SNS user withdrawal. The main condition to be considered as part of the sample for this phase is that the participants must have deleted their account, which prevents the triangulation based on their profile on the network. In addition, the voluntarily nature of the participation in the research, makes difficult to trace the participants context outside the interview. The search of information about SNS user withdrawal brought the term "online suicide" as the action of deleting the account from a SNS. One of the most popular websites assisting with this task is Seppukoo.com, which was developed as an art project by the 'Les Liens invisibles' group (Pestelli and Quintini, 2009). The team motivation to promote the deletion of SNS accounts is based on the fact "that our privacy, our profiles, our identities, our relationships, they are all - fake and/or real - entirely exploited for a sole purpose: to be sold as a product" (Pestelli and Quintini, 2009). A second popular website is the 'Web 2.0 Suicide machine', which is another art project from a Netherlands collective. This website points out the social isolation of SNS users as a consequence of the time spent these network. Thus, the creators of this website propose to reconnect again with friends and family in an traditional manner without the intervention of digital devices (Moddr and Gamba, 2010). It is interesting how both projects were created by collectives of artist as a response to the

pervasiveness of the SNS and the control that is taking of the user time and in a broader context of the user life.

3.7 Data analysis about why people withdraw from an SNS

All the interviews were transcribed verbatim using NVIVO 10 for the codification phase. As a result, 37 Attributes, 39 Consequences and 18 Values were identified which are presented in Table 21. Appendix 8: Examples of the codes presents examples of each reason to provide the context, and Appendix 6: chains lists the 401 chains identified in total. Each chain was loaded into Microsoft Excel in order to create the implication matrix and undertake further analysis related to the MEC and SNA indices. All the formulas used are in the Excel file attached and the macros developed to create the matrix are in Appendix 11: VBA Code to create the relationships.

Attributes	
Id	**Reason**
1	article against SNS
2	boring
3	contact is not meaningful
4	distraction
5	don't like things I'm not using - I can't log in afterwards
6	editing own profile
7	feel baby-ish
8	getting busier
9	getting older
10	improving privacy of SNS profile
11	invasion of privacy
12	lack of people to interact
13	Looking at others' profile
14	marketing in the SNS
15	new features in other SNS
16	new stage in life
17	no reply to my post - lack of interaction
18	obliged to post

Consequences	
Id	**Reason**
38	addiction
39	afraid of personal security
40	annoyance
41	being used
42	complicates life
43	disappointed with platform
44	don't feel part of the group anymore
45	don't like people in the SNS anymore
46	don't need the SNS
47	exposure of self
48	fake - superficial friendship
49	feeling commercialised
50	feeling excluded
51	feeling it wasn't me
52	feeling jealous
53	feeling vulnerable
54	got rid of the SNS
55	impact on professional image

Values	
Id	**Reason**
77	being informed
78	belongingness
79	don't care about people in there anymore
80	emotional stability
81	employability
82	fear of stealing financial /- identity data
83	grown up - maturity
84	identity
85	image - impression management
86	improve quality of relationships
87	keep - regain control
88	peer recognition
89	personal security
90	prefer small groups of friends
91	privacy
92	productivity - work
93	simplify life
94	time management

19	offensive - negative comments	56	information not credible - biased	
20	others' example	57	keep things private	
21	others looking at my profile	58	moving on with life	
22	over connected	59	not enjoying it	
23	overload of information	60	not interesting anymore	
24	people posting instead of living	61	not trendy anymore	
25	personal info security	62	not useful anymore	
26	personal information out there	63	noxious information	
27	personality reluctant to change	64	others' perception	
28	posting for me	65	overload of unnecessary information	
29	receiving unwanted post, request, reminders	66	performance decrease	
30	reduce posting frequency	67	regaining control	
31	relationship breaking up	68	recovering off line friendships	
32	SNS dependency	69	replacing	
33	social pressure	70	restricting information flow	
34	technical difficulties - restrictions	71	SNS feel impersonal	
35	time consumption	72	social pressure consequences	
36	unnecessary information	73	time consumption consequences	
37	usability	74	tired of the SNS	
		75	trust in social circles	
		76	using traditional media to contact people	

Table 21: Summary of content analysis

Following the aim of this research about identifying the main reasons as to why people withdraw from their SNS, Table 22 presents the totals for the out-degree (how many times the reason is the destination of the connection) and the in-degree (how many times the reason is the origin of the connection). The score for these two measures consists of the direct relations to the left of the vertical bar (¦) and the indirect relationships to the right of the bar. The values are not cumulative, i.e. having 110 indirect relationships does not add up to increase the direct relationships in one unit. An initial overview shows the importance of keep - regain control (87) which not only has the highest out-degree, meaning that this is one of the most cited reasons for closing the SNS profile (73 times directly and 110 indirectly), but also it has the highest in-degree, meaning that this reason is a popular bridge that connects with further ends. The second place is for emotional - mental stability (80), with an out-degree of 55¦84, but contrastingly has an in-degree of 0¦0, meaning that this reason is one of the ultimate goals for SNS withdrawal, as no connections start from this reason. The third place in importance based on the out-degrees is image - impression management, followed by time management,

productivity – work issues and privacy. This last reason presents the second highest in-degree level of the values, showing that even though people are very concerned about privacy issues, this is not the final concern as it is connected to higher level values.

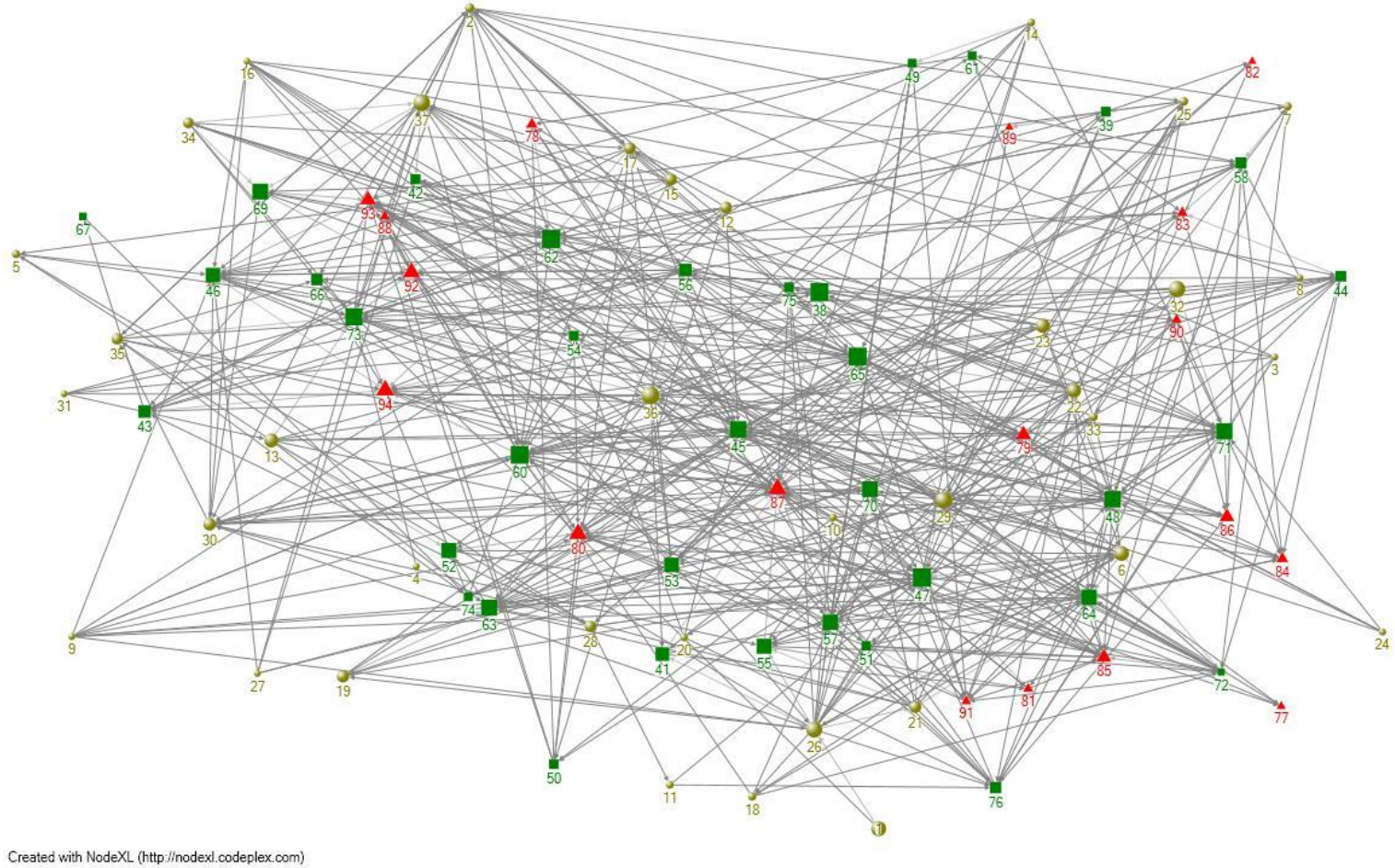
Code	Reason	To (Out-degree)	From (In-degree)	Abstractedness
77	being informed	5¦7	0¦0	100%
78	belongingness	8¦9	0¦0	100 %
79	don't care about people in there anymore	27¦33	1¦0	96.43%
80	emotional - mental stability	55¦84	0¦0	100 %
81	employability	19¦29	2¦0	90.48%
82	fear of stealing financial/identity data stolen	4¦5	1¦0	80.00%
83	grown up - maturity	15¦16	2¦0	88.24%
84	identity	11¦12	0¦0	100 %
85	image - impression management	40¦65	1¦0	97.56%
86	improve quality of relationships	24¦31	2¦0	92.31%
87	keep - regain control	73¦110	9¦0	89.02%
88	peer recognition	5¦5	1¦0	83.33%
89	personal security	9¦13	0¦0	100 %
90	prefer small groups of friends	8¦12	1¦0	88.89%
91	privacy	27¦36	4¦0	87.10%
92	productivity - work	34¦46	0¦0	100 %
93	simplify life	34¦55	3¦0	91.89%
94	time management	38¦47	2¦0	95.00%

Table 22: Summary of the Implication matrix for values

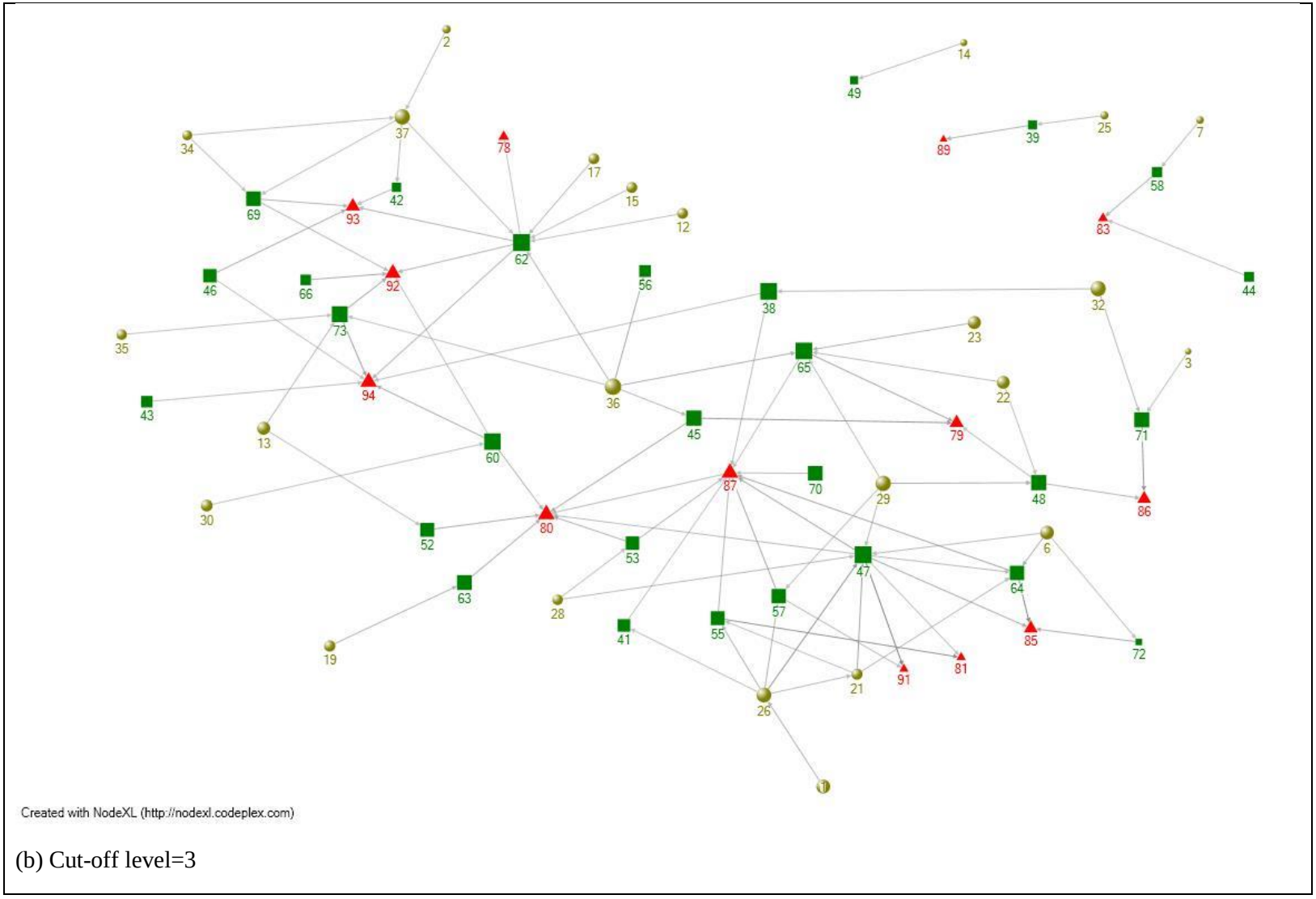
As discussed in the methodology, there are two options for the graphic analysis: the Hierarchical Value Map (HVM) and the Network Map. During the initial analysis it was found that 26 dyads were reciprocated (couples of reason in the form a->b and b->a), as well as relationships in which the number code of the origin is larger than the number code of the destination, creating problems generating the HVM. Such issues had also been encountered by previous researchers, as documented in the criticisms of this technique. This reinforced the decision to adopt the SNA approach as it made it possible to work with data of these characteristics.

The first decision for the analysis was the selection of the cut-off level. The traditional MEC method recommends a level between 3 and 5, whereas a level around 6 is recommended for network analysis. (Gengler et al., 1995; Morandin et al., 2013) To find the most appropriate cut-off level, a top-down ranking strategy was implemented (Leppard et al., 2004) using the software NodeXL (Smith et al., 2010; Hansen et al., 2010) to compare the different outputs. Appendix 12 presents the networks for each level, varying from one to seven. It is

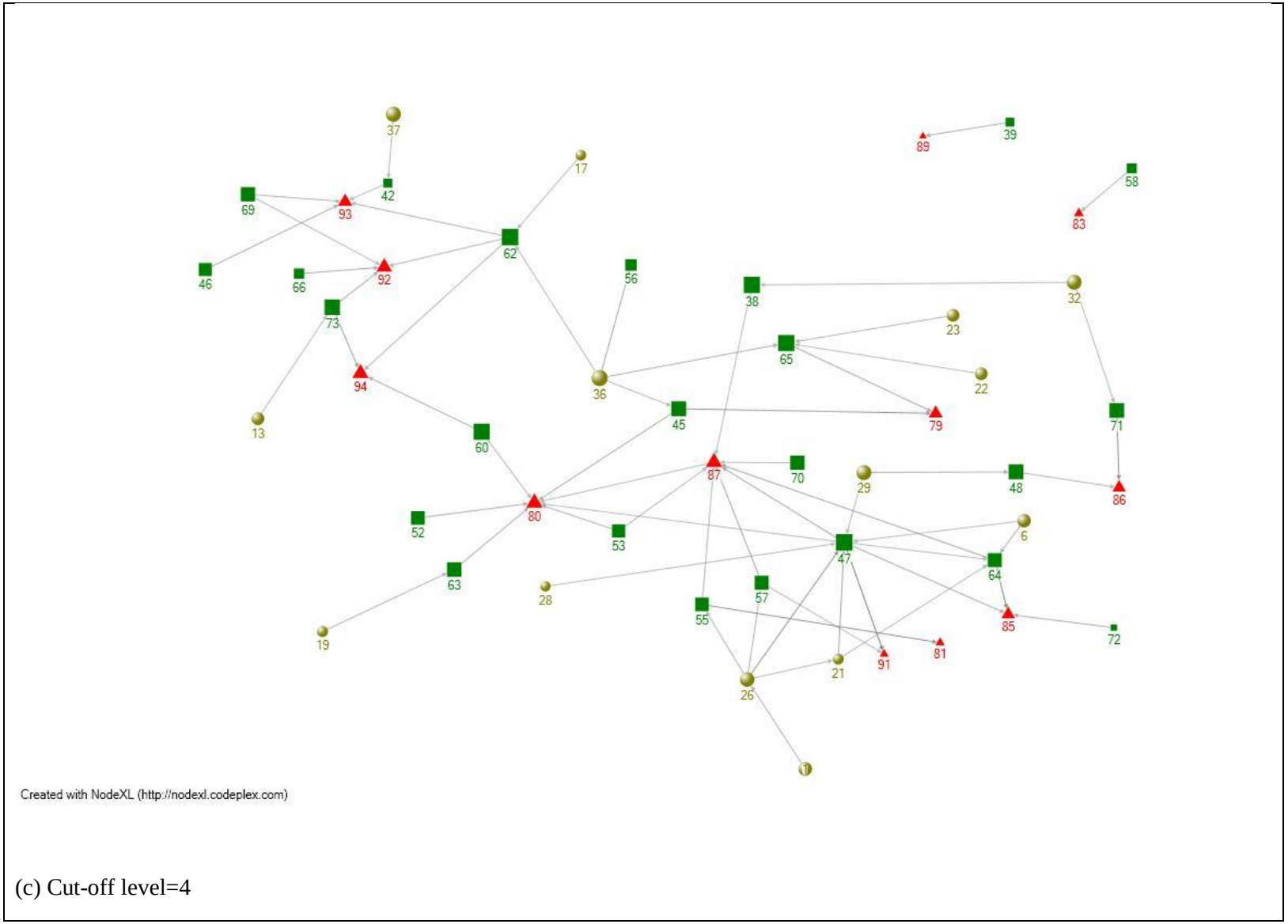
worth remembering that the cut-off level for networks is the edge weight generated during the data preparation stage. In Figure 20, attributes are represented by circles, consequences by squares and values by triangles. The size of the figures represents the degree centrality, in which the bigger the size of the figure (circles for attributes, squares for consequences and triangles for values) the more important is its role in the network. The opacity of the lines represents the weight of the relationship. The layout selected for the network was the Harel-Koren Fast Multi-scaling as this places adjacent nodes close to each other (Hansen et al., 2010), making the analysis more straightforward. Figure 20 illustrates the criteria of the cut-off, in which figure (a) shows a very complex network that is difficult to interpret, whereas figure (e) oversimplifies the network to the chains with the top score. A cut-off level of four offers enough level of detail with a moderate level of complexity.



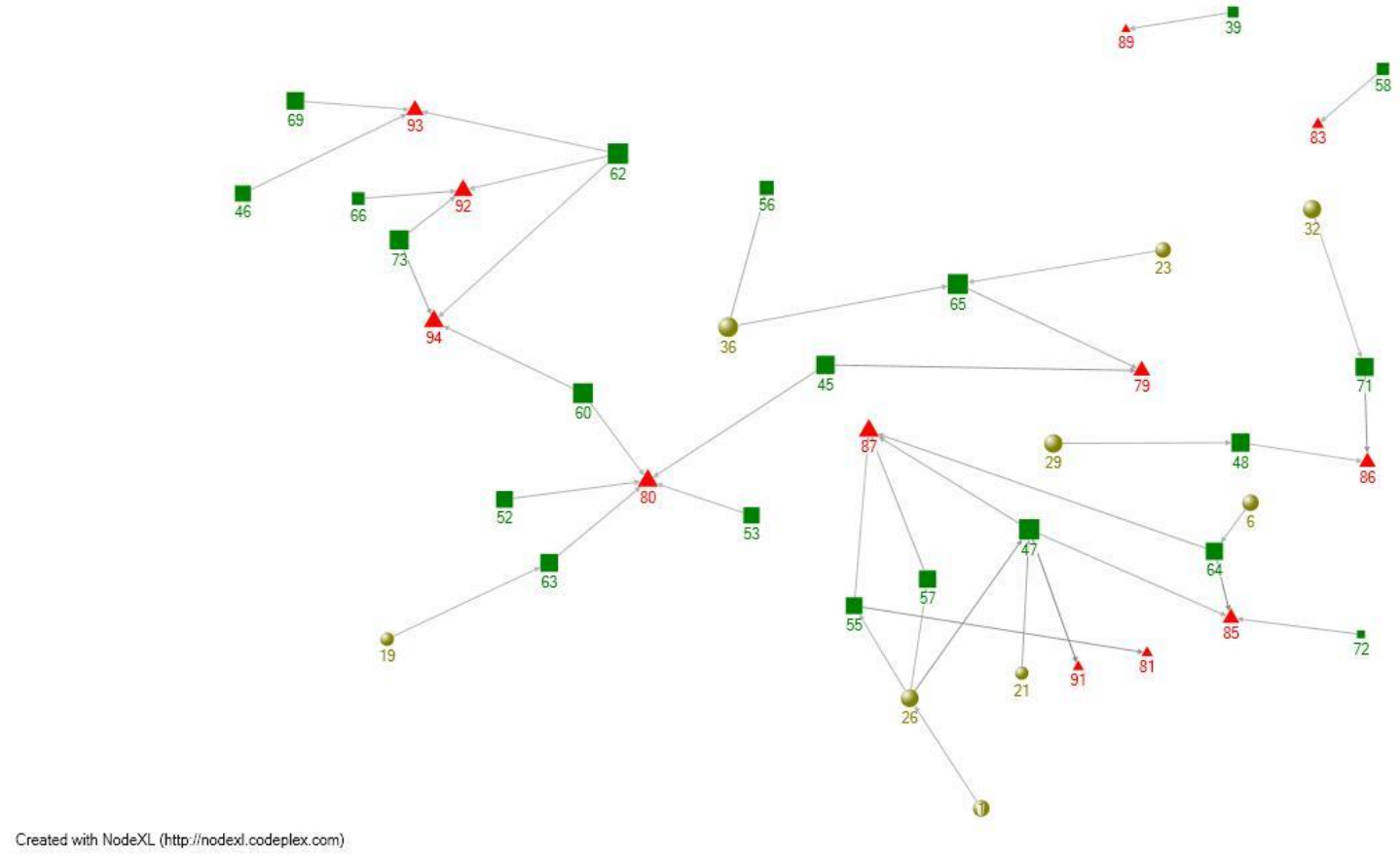
(a) Cut-off level=1



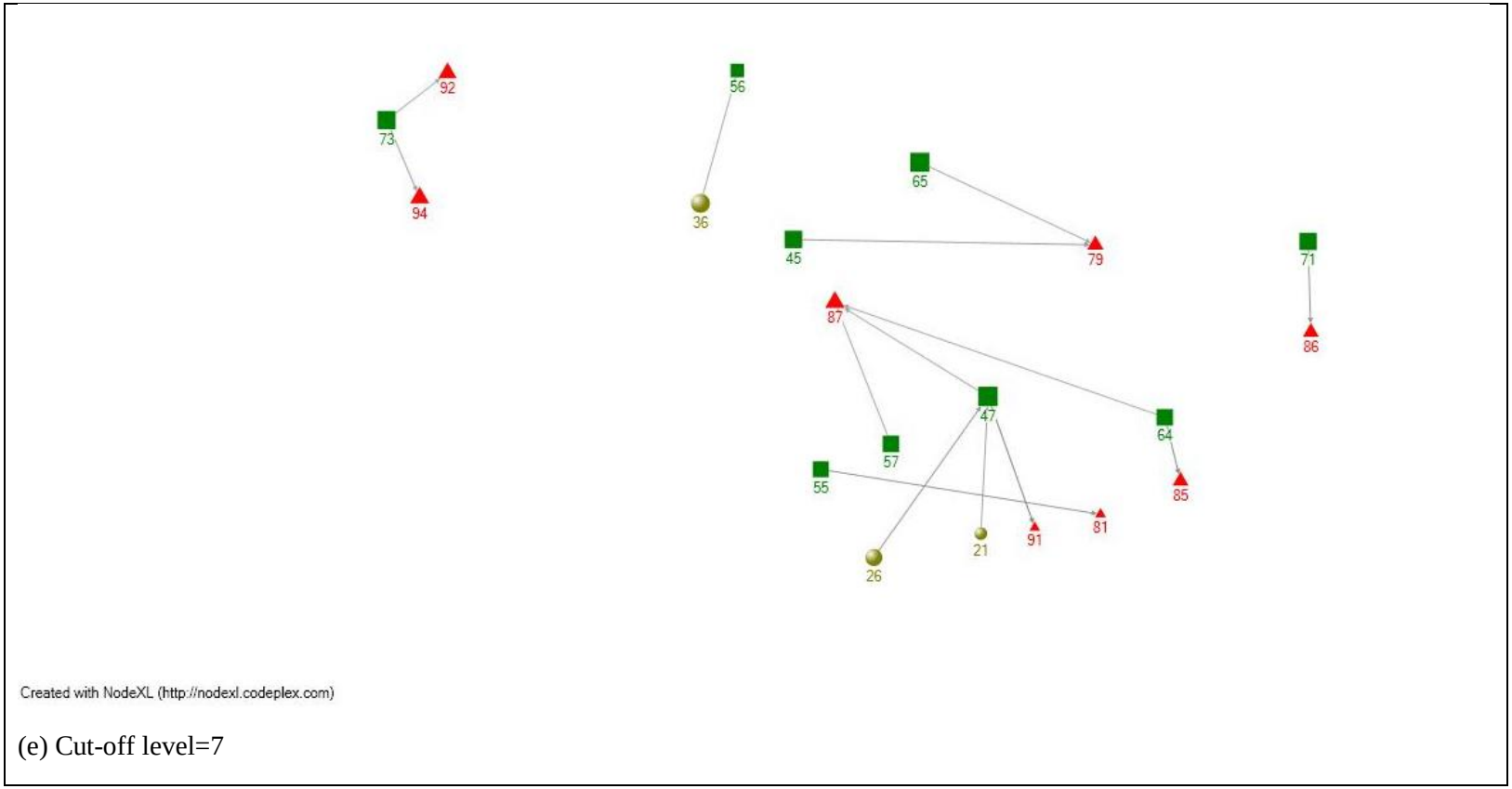
(b) Cut-off level=3



(c) Cut-off level=4



(d) Cut-off level=5



(e) Cut-off level=7

Figure 20: Cut-off levels for top-down ranking

An additional criterion for defining the cut-off level in MEC is the proportion of active links in relation to the number of active cells. (Pai and Arnott, 2012; Bagozzi et al., 2009; Pieters et al., 1995) Table 24 shows the number of active cells and active links for each cut-off level. The proportions are calculated based on the whole universe of elements (cells and links) in order to evaluate the loss of information out of the total data set. In this case, levels three and four offered the best balance between data reduction and retention. (Pai and Arnott, 2012) Based on the graphics and the cells/links criteria, a cut-off level of four was selected as this provides 36% of information using 7% of the elements present in the implication matrix.

Cut-off	Number of active cells	Number of active cells as a proportion of all cells	Number of active linkages	Number of active linkages as a proportion of all linkages
1	542	0.60	992	1.00
2	183	0.20	633	0.64
3	**94**	**0.10**	**455**	**0.46**
4	**62**	**0.07**	**359**	**0.36**
5	41	0.05	275	0.28
6	26	0.03	200	0.20
7	14	0.02	128	0.13
8	9	0.01	93	0.09
9	6	0.01	69	0.07
10	6	0.01	69	0.07

Table 23: Cut-off level comparison

3.7.1 Social network analysis

Following the studies relating to MEC and SNA, the analysis of the network is based on abstractedness, prestige and especially on centrality. (Bagozzi et al., 2009; Matook, 2013; Morandin et al., 2013; van Rekom and Wierenga, 2007) An initial analysis of the SNA indices shows how abstractedness and prestige values follow previous research patterns, in which lower scores are related to low levels of abstraction (attributes), whereas the higher scores of abstractedness and prestige are for values. (For the whole table see Appendix 10: SNA Measures) The advantage of prestige is that it is calculated over the total of the connections, giving a better measure of the importance of this reason for the whole network. Table 25 presents the top reasons by prestige (the complete table can be found in Appendix 10: SNA Measures), the highest score is to keep – regain control, making this the most prominent reason to leave the network. This means that the former SNS users felt that they were not in control of SNS, and therefore withdrawing from the networks could help them regain control. This finding contrasts with the findings of Buffardi and Campbell (2008) and Papacharissi (2002) about the control of the image that people want to portray in SNS. The second value is the emotional stability, meaning that the SNS they were using was causing trouble, affecting their emotional wellbeing or their mental stability. This varied from relationship break-ups to negative or offensive content on the network. The third item is exposure of self which represents the issues related with the exposure of personal information or exposure of the user in general terms to others, for example, being tagged in photos by other people.

ID	Reason	Abstractedness	Prestige
87	keep - regain control	89%	7.3%
80	emotional stability	100%	5.5%
47	exposure of self	49%	4.5%
85	image - impression management	98%	4%
94	time management	95%	3.8%
92	productivity – work	100%	3.4%
93	Simplify life	91.9%	3.4%

Table 24: Abstractedness and Prestige

Analysing centrality in Table 26 shows how the consequence Exposure of self plays an important role as connector between attributes and values, meaning that many of the reasons given by the interviewees involved the exposure of self as part of the problem. It is interesting to find evidence suggesting that to keep – regain control and emotional stability play a role not only as a receiver of consequences, illustrated in its prestige score, but also in terms of connecting with other less frequent values. Likewise personal information out there plays a similar role within the attributes. Figure 21 shows the role of nodes 47, 87, 80 and 26, with the thicker lines indicating the number of connections coming from and the connections departing from them as well. Based on the centrality *personal information out there (26) -> exposure of self (47) -> keep - regain control (87)* and the fact that they are connected, it can be said that this is the most frequent path within the network or, in MEC terms, the strongest ladder. The map was made using NodeXL. (Smith et al., 2010)

ID	Reason	Centrality
47	exposure of self	9.1%
87	keep - regain control	8.2%
80	emotional - mental stability	5.5%
64	others' perception	5.5%
62	not useful anymore	5.5%
26	personal information out there	5.3

Table 25: Centrality

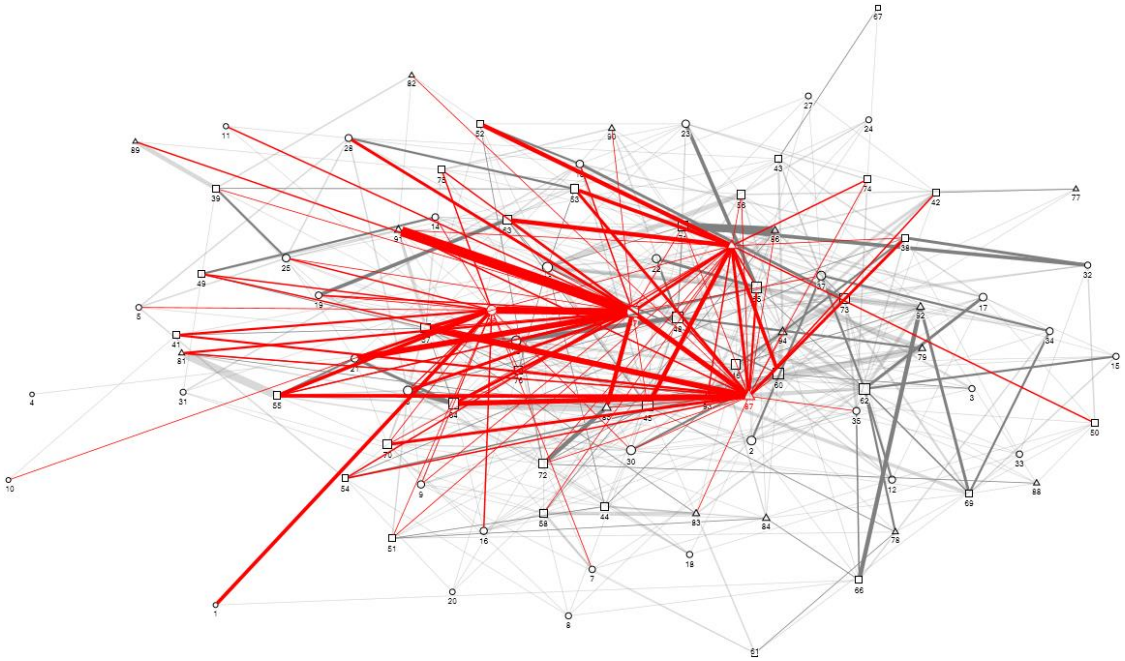


Figure 21: Means-end chain network of the reasons for SNS withdrawal

3.7.2 Ladders

3.7.2.1 Cut-off=7

In order to find the main reasons for withdrawing from an SNS, a top-down approach (Leppard et al., 2004) was used to identify the ladders based on the cut-off level, in which a high cut-off is related to a higher level of importance. In turn, this helps create a ranking of the reasons expressed by the interviewees. When the cut-off=7 two ladders were identified (see Figure 23.a):

- *(26) personal information out there (47) exposure of self (87) keep- regain control*
- *(26) personal information out there (47) exposure of self (91) privacy*
- *(21) others looking at my profile (47) exposure of self (91) privacy*
- *(21) others looking at my profile (47) exposure of self (87) keep- regain control*

These ladders on the one hand show the discomfort about other people being able to access personal information as showed by (26) personal information available and (21) other people looking at one's profile. By looking at the values, the ladders show that the strongest reason for closing the SNS account are related to the privacy of information and getting back control over it. These ladders show the level of awareness that the former users had about the level of exposure that SNS allows, makes them feel uncomfortable, as they cannot be in control of what people can see about them or what people can do with that information. In this regard, Interviewee 7 said:

> "*Other people who might have access or penetrate your account, like your employer or like anybody and anybody can break into your account can actually have access to that information and I just felt , hmm I'm too exposed now . why do I want my employer to know that I've been drinking silly you know so many days or that I went to holidays and did something silly here, and I was like hmm no. I like to maintain control of the information that I'm giving out to people*" (Interviewee 7)

Another example was provided by Interviewee 10, who talked about old photos of him in compromising situations (these photos were on other people's profiles). He finished the story saying "*It is stuff like that, you just want to lose that tag*" (Interviewee 10), meaning that there are cases in which if you cannot delete the information at least you can cut the links that connect that information to your profile, in this way restricting the information that people can get when they look for you online. One of the most common cases of people posting things for others was photo tagging in Facebook which revealed information that they did not want to be in the public domain as Interviewees 3, 5, 14 and 24 mentioned. For instance, Interviewee 3 said "*I guess I was a bit worried about everything I put up there, like I don't go around swearing or putting like offensive things, but I didn't know how much information I put out there, and people could hold of it, so I was a bit worried about that*"

One of the reasons that makes this ladder one of the most important is the centrality of its components. *Exposure of self* (47) has the highest centrality of all (9.2% and Eigenvector Centrality=2.5%), showing on one hand the importance of this node, and on the other hand that this node is connected to other nodes of high importance. *Keep –regain control* has the second highest centrality (8.3%) and highest Eigenvector Centrality (3.04%). These results allow us to infer that most of the reasons provided by the respondents are related directly or indirectly to one of these elements. Taking the respondents' profile, in which most of them are already working or in an advanced educational level, so they can be labelled as adults, this ladder makes sense, as they need to be more in control of the information available, due to the impact that the information from previous years could have for their future. So, in order to prevent incidents related with old information, they decided to close their account.

3.7.2.2 Cut-off=6

On this level two new ladders are identified as well as new connections appearing between the existing nodes. The first ladder is:

- (*6) editing own profile (64) others' perception (85) Image – impression management (see Figure 23.*c)

This ladder is basically about how the efforts related with impression management generated, starting from the edition of the profile in order to portray an image that is "*likeable*" for other people. Interviewee 18 is a good example of this ladder, stating: "*When I post something I try to post something good , positive, helpful, appealing, so is [sic] for attracting the likes, but I'm not hunting for likes*". This is aligned with what people want to find in social media. Interviewee 5 is an example of a case of someone going to the network for positive information. She used her lunch break for checking social media and what she hoped to find was good news and positive information, not to see people moaning about their lives. Nevertheless, the number of posts with positive information has a limit as well. When a user publishes too many positive posts, he or she runs the risk of being labelled as an attention seeker. Attention seekers are SNS users showing off the perfect life which in some cases ends in making others feel envious or bad about themselves. Interviewee 13 said "*it was annoying in the sense of seeing anybody that would post something that maybe other people would think was true. I found some comments and images as a way of trying to make you feel jealous of them*". This point is reinforced by Interviewee 20, who tried to show how good her life was.

> "*it's not who you are at all, it's like the kind of person who you want to be, who you aspire to be like, these are my friends that I've selected, these are the places where I like to hang out, this is what I like to do with my time. When actually, like … your life that probably…, you probably go there like once every month or something and you probably see them friends once every couple of months, but you are like, yeah, this is my life, come look at it*" (Interviewee 20)

The above can be regarded as an example of the literature on self-identification regarding the desired image people want to portray of themselves in their SNS profiles. In this case the emphasis on certain aspects (either positive or negative) makes the user likeable or appealing/repelling to certain groups of people which supports the findings by Zhao et al. (2008) about the desirability information posted on SNS profiles.

A consequence related with *others' opinion* is the *impact in the professional profile* as Interviewee 10 mentioned: "*well it wasn't that I was trying to look more professional I was just trying to look less idiotic, which I guess you could say is trying to look more professional*", showing how people were raising awareness about the impact that the "*wrong*"

image can have on their careers. In a broader sense, Interviewee 1 shows how the effect of editing the profile by deleting the photos in which the person did not look good (the same as Interviewee 24). This editing, creates to some extent a different persona online who looks better, more interesting and does more interesting things.

> "*Adjusting the fact that taking down the pictures that you don't like, removing things and editing your, putting across your perfect image, and you know posting images and things that you are doing to make you look more interesting than you are. And I feel like if there is a parallel or there's two people. [There] is the social network person online and there is the real you*" (Interviewee 1)

Another case about the others' perception and the image they want to project is related to the particular ways in which they express themselves online and people who know them can understand these expressions but they could be misunderstood by someone who is not close to the person, which can result in misunderstandings, as Interviewee 17 mentioned:

> "*Me and my friends were kind of writing random inappropriate sense of humour sometimes, and I would just worried [sic], again as I said, I did found out later [sic] that you can go private or whatever, but I just had this worry that, like, people looking at my account that I didn't wanted to [sic] and sort of seeing things and yeah, just being worried of somebody will write something about a joke and will be taking it in the wrong way and if it wasn't my people that know me on my Facebook* " (Interviewee 17)

The popularity of this ladder is related to the high degree of centrality of *others' perception* (64) and *Image – impression management (85)*. With an eigenvector centrality of *64, this* is the fourth highest reason among all the elements, while *85* is the third highest value (14th position in the general list). This means that many of the ladders identified are connected via these elements, showing how important the opinion that others having of them is for people. This situation is so significant that people can even be more concerned about the opinion of people they do not know than the opinion of people who already know them, as the case of Interviewee 18 demonstrated. Others' perception is connected as well to *keep – regain control (87),* as the interviewees wanted to have control again about the image that other people can have about them by becoming the gatekeepers of their own information. The following statement made by Interviewee 18 is a good example: "*I do have some part of me that I don't want to share with my colleagues or my managers or my relatives, so in order to avoid this I deleted my account*". This statement shows issues with controlling who can access the information and how the way to gain control of this sensitive information is by restricting

access, that is, by closing the SNS profile. The chain *(6)-(64)* is connected as well with *keep-regain control,* in this way creating a new chain, although the explanation is rather similar to what has been said by *(6)-(64)* and the control the former users want to have about the perception that others have about them. Likewise, a new value appeared connected to the ladder of level 7 as *Image – impression management (85)* is connected with *exposure of self (47)*, which is a natural relation between the way in which people perceive their online image and what they want to look like as an exercise of impression management.

The second ladder appearing in this level is:

- *(36) Unnecessary information (65) Overload of unnecessary information (79) Don't care about people in there anymore* (see Figure 23.b)

This ladder is related with the excess of information coming through the SNS which at a later stage turns into spam. As Interviewee 13 said, "*That's one of the reasons that I left Facebook [sic] that was the fact that [sic] people post everything about themselves on it*". The reason to consider information as spam is mainly because it comes from people who are not important for the users, as Interviewee 7 said:

> "*Can you imagine how much information I would have to manage if I knew anything and everything about every friend of mine? I don't have the brain of an elephant, so I can only manage so much information, and I like in control of the information that I can manage. I don't want to know anything and every think about you, what you've had for breakfast, who cares*". (Interviewee 7)

Similarly Interviewee 8 mentioned:

> "*Posting too much. Yes that's one of them that would get on my wick. But annoyance, it would be what they've post up, their content, I don't want to see pictures of their kids, pictures of their dogs, I don't care, I don't want to know if they're lying in bed eating nachos or something like that, I just don't care*" (Interviewee 8)

One of the consequences of information overload is that when the authors of the information are considered as spammers, they are more likely to be blocked or banned from the time line or even deleted from the list of contacts. Interviewee 14 said: "*I was like, do I really need to know that, how is that going to cheer me up? They're getting deleted when I get back to work!*". Another consequence of over-posting is that it makes it more difficult and/or time consuming to find information that the user is interested in. As Interviewees 11 and 26

pointed out, they have to scroll several times and go through a lot of post to find something interesting for them.

This excess in posting raises a question about the purpose of the users for sharing all this information. Why do they think that other people will be interested in knowing all these details of their lives? It is understandable that these posts can be interesting for some of their contacts, but then why make the post available to everyone? One explanation is that for the cases in which the user is posting these kinds of content, the user is looking for attention, reflected on the practice of fishing likes. However, these posts might generate the opposite effect, making other people ban the post coming from this attention seeker in their time line, or even a more radical decision to delete the contact, as in the case of Interviewee 16:

> "*when you block someone on Facebook it's because there is some issue going on with that person, but these friends that they've done nothing to me is just the fact that I was extremely bored with their post, but I still wanted to have them as my friends on Facebook, because I didn't want to delete them because I don't want them to get upset*" (Interviewee 16)

On many occasions the oversharing comes from what is considered attention seekers, whose posting activity is aimed at gaining some level of recognition either for positive or negative reasons. In such cases users are trying to make others envious of their perfect life, like the case of Interviewee 13 "*So maybe someone would post a picture of themselves in the Seychelles or something with a big bottle of champagne or something, like it might be a nice picture for them but I don't really want to see it*" (Interviewee 13). The issue with this type of information is that on many occasions the effect on the reader is making him/her feel bad or inferior as they cannot have this good time, affecting the emotional wellbeing in the end.

The level of importance of this ladder can be explained based on the eigenvector centrality, as *Overload of unnecessary information (65)* is in the fifth place and *unnecessary information (36)* in the eight place, showing the popularity of these elements to support SNS withdrawal. The excess of information that people share becomes annoying for people, as their timelines start to be full of irrelevant posts for them.

3.7.2.3 Cut-off=5

At cut-off=5 new ladders appear showing the values related with the quality of the relationship they had or wanted to have with their contacts, the impact on their employability as well as their mental wellbeing. The first ladder presented for this level is related with *emotional stability (80)* which includes the issues that affected the emotional wellbeing of the

participants or their mental stability. One example is Interviewee 20, who saw her competitors doing better than her which made her feel less successful than the others. Similarly, the impact on self-esteem due to negative comments applied to Interviewee 12, while the pressure for portraying a successful life was something that Interviewees 20 and 24 felt.

- *(19) offensive - negative comments (63) noxious information (80) emotional stability* (See Figure 23)

This ladder shows how this sort of noxious information ruins the SNS use as source of information and entertainment, as Interviewee 22 mentioned: "*I'm unfollowing people all the time, because even my friends they just moan all the time, and I don't want to read that, I'd rather read positive and inspiring things*". This phrase is evidence of the suggestion that when people find comments with a negative implication, they consider it as noxious information that is not contributing to their wellbeing. This point is expanded by Interviewee 20 in terms that information is taken as noxious depending on the individual situation, because what can be positive for the author or his or her friends can be considered as negative by other people.

> "*I was really becoming this incredibly bitter person, where I was reading over like people's lives, and I was like getting miserable and they're having just a shit time like I'm having. But like they're doing what I'm doing, just displaying like we're having a great time, like don't get me wrong, like, I do actually have like a really nice life and I appreciate everything that I do have but it just makes it 10 times better if you can share that great time with people and rub it in people's faces*" (Interviewee 20)

This comment helps identify the dual role of posting on an SNS. It is not only showing the success of the user posting, but also feeling better than the others.. However, this information can be taken as noxious by people who would like to be in their situation. In this ladder the eigenvector centrality is high for the chain *63 – 80*, showing the direct link that noxious information has over the emotional wellbeing of the users which is why emotional stability is the second highest value in this measure. This result reinforces the challenge that SNS already have when filtering the information that is showed in the main time line.

The next two ladders are related to the quality of the friendship relationships in the SNS context. In this case, the value is related with the desire to have more significant relationships with the people they are connected with in the SNS, following Baumeister and Leary's (1995) idea about belongingness. This value was identified through the perception of superficiality of

the relationships held in the network, and how contact with their friends was becoming more dependent on the SNS, to such an extent that it was the only way of communication. For instance, Interviewee 1 compared SNS friendship with fast food, saying: "*I think it's almost like eating McDonalds, you know. It taste [sic] good, but it didn't sustain you. You know, but it's like a rehearsal, and I felt that I was not getting the connection that I needed*". In his opinion, people think they have a friendship with the other person and can fulfil some social needs. Still, there are things missing for him.

- *(32) SNS dependency (71) SNS feels impersonal (86) Improve quality of relationships*
- *(29) Receiving unwanted post, request, reminders (48) Fake – superficial friendship (86) Improve quality of relationships.* (see Figure 23.d)

From these ladders, *29* is the second highest attribute for eigenvector centrality. For the consequences, *48* is in the 6th position and *71* is in the 8th place, showing the popularity of these reasons when people want to close their profile on an SNS. The reasons identified in these ladders reveal how former SNS users felt that network friendship did not provide what they need from a relationship. This point is part of a bigger debate about how real a friendship is in virtual environments, and how people use SNS to fulfil this social need. In fact, it was interesting to find out how the use of the word 'friend' still has a meaning inherited from the offline world, raising some implications for online relationships. It was found that Facebook is considered as a network for close ties whereas Twitter and LinkedIn are for weak ties, including celebrities, academic contacts, and sports people, as Interviewee 17 says, "*I think Facebook, I like the fact that my friends are there, and whereas twitter is kind of anybody really I know*". Consequently, the strength of the ties gives an insight to understand that it is easier to leave a network if the contacts in there are not close to the user, as was confirmed by most of the people (Interviewees 4, 12, and 14) "*For a split second, for a split second yeah it was like oh yeah, these people are... But then it was like, it doesn't matter… they were just acquaintances that were on the site anyway, it was like, university contacts and stuff, it wasn't really important. It wasn't family or anything*" Interviewee 14 or as Interviewee 17 said, "*it was some of the people that were following me on it, were people who, I don't either, I don't know or I don't speak that much on Facebook, like I don't really speak with them so I didn't felt I was losing out on anything in that sense*". These quotes suggest that users are not taking the ties created in the SNS very seriously, as they can afford to lose them without a second thought.

The next ladders are related with the concern about how information available in the SNS could impact on their current or future employability. The concerns can come from what people have seen in the media about the misuse of information available on the network, like the case of Interviewee 21, who saw a documentary on television about the amount of information available on social media, or Interviewee 6 and Interviewee 7, who read and watched reports in the media about how easy it is to access your information and the risk that people take by participating in social media. As a consequence, people start thinking about the information they had and which could be wrongly perceived by future employers.

- *(1) article against SNS (26) personal information out there (55) impact on professional image (81) employability (see Figure 23*.e) (55 connects as well with 87)
- *(26) personal information out there (57) keep things private (87) keep- regain control (see Figure 23*.e)

SNS users are becoming more aware that the information they post today can affect their future career. Based on the interviews, it could be argued that people closing their account for employability reasons are doing so in order to take control of the image they are portraying, being connected with the ladders aforementioned. This ladder can be explained by impression management, in which the value of the desired goal and target values motivations proposed by Leary and Kowalski (1990) helps to explain the case of closing the SNS profile in order to hide a past that may affect their future employability. As a result, young professionals are becoming more conscious of the implications that the SNS exposure can bring to their future career. The most obvious case is Interviewee 18, who pays extra attention to the information that he shares on Facebook and how this could affect future jobs. In addition, it was found that participants are willing to share more with their close circles; however, the risks that people outside these circles can see their posts makes them concerned about that. As Interviewee 10 said "*Well it wasn't that I was trying to look more professional, I was just trying to look less idiotic, which I guess you could say is trying to look more professional*". It is interesting to find how many of the interviewees were posting photos when drunk and partying when they were young. Their justification being that this is OK when you are at that age. But now, they are trying to restrict the access to this information, or even delete these posts, as they are not well-perceived in a professional environment.

A common case for employees is having working accounts like the case of Interviewees 8 and 14, which resulted in losing interest in using the SNS platform for personal use. Interviewee 8 explained that he was saturated with the intensive use during working hours

which made him close his personal account due to the lack of use. He said "*If I put it into context, a footballer plays football all day, when he comes home to his kids, his kids might want to play football but he doesn't want to play football because he's been playing it all day*". From this quote it can be seen how a person can reach a saturation point with a network, creating a need to be away from it at least for some time. From these ladders, the highest scores in eigenvector centrality are *exposure of self (47), keep things private (57)* and *keep - regain control (87),* showing how people want to feel in control of their image, as they can foresee the consequences that social media can have in their professional life.

In addition to the new ladders, there are new elements related to the ladders identified in previous levels. The new cases are, *overload of information (23)* and the connection of new consequences to *keep - regain control (87).* For the case of *overload of information (23),* this attribute is now connected with overload of *unnecessary information (65),* creating the ladder *23-65-79.* This ladder is related with the excess of information that can be present in the SNS and how this information can be too much for users, especially when it is considered irrelevant. As Interviewee 14 mentioned: "*I can't be arsed to read the comments on there because it's just crap, at the end of the day, I don't want to know what they've had for their tea, or what mountain they've climbed*". Similarly Interviewee 4 stated: "*I have 2, 3 friends on Facebook who I have maintained the friends connection [sic] but I have prohibited the time line, because I'm not interested in what they are doing, is too much [sic]*". This exemplifies how the oversharing habit of some people make their post considered as spam and therefore the overall experience of the SNS is not enjoyable, because people do not want to know all about the other people. In addition, oversharing practices are found to have the opposite effect to what the authors of the posts are looking for, because they are being banned or blocked, instead of getting recognised.

The new consequences associated with *keep - regain control (87)* are *keep things private (57)* and *impact on professional image (55),* which are preceded by *(26) personal information out there,* creating the ladders 26-55-87 and 26-57-87. These ladders show how people who left the SNS were concerned about the implications that personal information on the network can have on their professional image, as the former users still wanted to keep some information private, but found it difficult to achieve this privacy on the SNS. Consequently, they could not have control over it, they decided that it was better to leave the network.

3.7.2.4 Cut-off=4

In this level, the new ladders appearing are related with the time spent on SNS, making life simpler, and new nodes are attached to the existent ladders. Starting with *time management*, this value is related with the awareness that former users had about the time they spent on the network, as they felt it could be used on a different activity or a waste of time. For example, Interviewee 13 said: "*there is nothing at the end of it to show for two hours of my life. I could have gone out for a run or done something that was more beneficial to me*". The ladders associated with time management are:

- *(36) unnecessary information (62) not useful anymore (94) time management*
- *(13) looking at others' profile (73) time consumption consequences (94) time management*

The first ladder is associated with the amount of information available in the network that is of no interest for the user. This had as a consequence a feeling that the SNS was not useful for the original purposes that made the user join and it became a sort of waste of time. As Interviewee 26 said: "*in this time a TV series is on air and everyone talks about this, so I didn't see any TV series but I know about that because of the time line in Facebook, so I think that this doesn't answer my purpose for Facebook*". The second ladder is related with the time spent looking at others' profile which is exemplified by Interviewee 20 as follows:

> "*I think one of the main reasons was just how time consuming it was, where, in my spare time like I like to, I'm always productive like if I'm not at work then I'll have to do some work for my own personal hobbies and interests at home. And the second I get home it would be like, I'm just gonna have one quick look at Facebook then like four hours later, still there just looking at rubbish and just consuming this rubbish that means nothing to you then it's 10 o'clock and it's like , oh, great. Like, I've just wasted a whole evening on this just to find out like what other people are doing in their lives*"

It is interesting to find out how people can spend a good part of their time in the SNS and after having a sense of guilt for doing that, but the next day they are doing the same. This sense of time wasting is related to the *productivity – work (92)* value, which is related with this ladder *13-73-92*, which made users think they could be doing more productive things or it was affecting their performance at work or university.

The next value is *simplify life (93).* Some of the interviewees considered that using SNS as part of their everyday life resulted in making it more complicated and how closing the SNS helped them to make it simpler again. According to Interviewee 1, SNS are becoming an extra pressure that people are enduring unnecessarily. This comment is in line with the views of

Interviewee 20, who felt obliged to keep posting certain type of content regularly. Still given the time pressure she had to deal with, she did not enjoy posting any more. Getting away from that pressure was a way to simplify her life. The first ladder is a variation of the previous chain, making it *36-62-93*, which is summarised in the words of Interviewee 1, "*what you don't know you don't miss, you know, I think living a simple life and not being connected to all these people*", showing that sometimes having too much information about other people becomes an issue to the person and makes the network lose its purpose. The second ladder is related to the usability issues of the SNS, either because people did not know how to use it or because it was a slow or complicated process.

- *(37) usability (42) complicates life (93) simplify life*

The example of Interviewee 14 portrays the frustration that can involve being unable to do things in the SNS, especially when the network is often changing like the case of Facebook, which makes people feel that they can do it better without it.

> "*People have added photos of me on and tagged me, I have no idea how you do that, and I've no idea how you find them on the site. It's like- well they keep changing the damn thing as well! And as soon as you get used to one, well sort of, used to the buttons that I know how to use, they damn well move them! And I can't- oh now, I have no idea how to use it, and I haven't been on it for so long, I don't think I would know how to find a friend or use it. After the third time they changed I thought, oh stop it, I'm not going to bother*" Interviewee 14

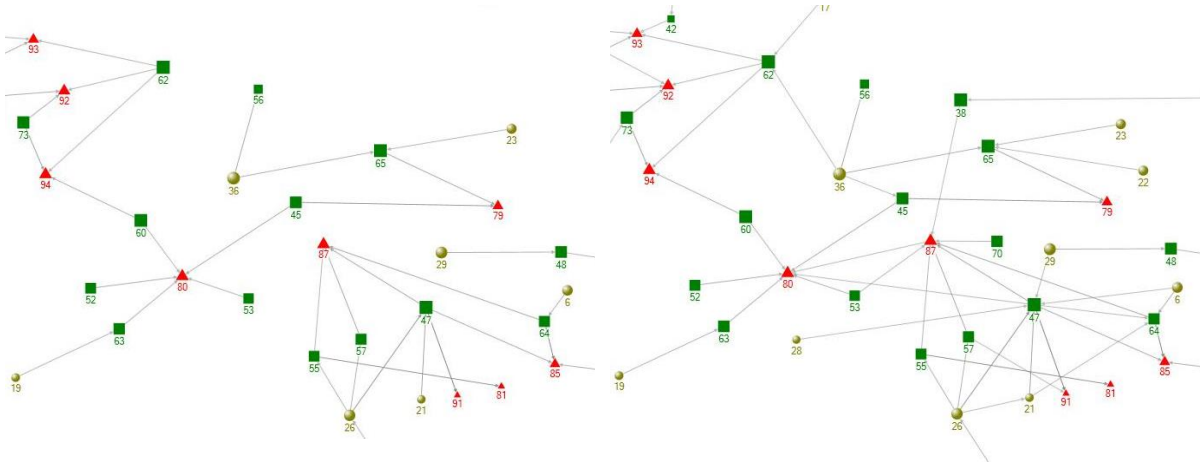
One of the reasons for withdrawal mentioned by the interviewees is the example of people who are not SNS users. These non-users show that you can have a normal life without having an SNS profile. In this way they become the influencers and the starters of a propagation phenomenon as studied by mathematical modelling. (Blaise et al., 2012, Garcia et al., 2013, Ko and Pu, 2011, Latif et al., 2013) It is interesting to see how on many occasions people cannot conceive the idea of living without having an SNS, but once they meet someone who has made it and looks happy, people feel encouraged to close their SNS profile. The experience of Interviewee 24 illustrates this influence.

> "*I knew friends who I had a lot of respect for, who lived very interesting lives and they wouldn't tell so. They don't have any social media, they just live their life and enjoy their friendships, enjoy the relationships and they don't need to do anything like that. And I was envious of this*." (Interviewee 24)

The ladder composed *by (32) SNS dependency – (38) addiction (87) keep - regain control (80) emotional stability* shows how the dependency of the SNS can become a problem that people need to take control of. In the words of Interviewee 1:

> "*I felt like, when I started smoking it was the night outs when I had the smoke, and it started to become a habit during the day and yeah I was addicted, I smoked during the day, and as soon I knew I was addicted I said, ok I'm stopping, and I feel this is the same with this you know. But being addicted to something, and for me I don't like. I like to be the kind of sort of leave things when I want , but I knew that I was opening my laptop every day , I was spending far too much time , and that addiction kind of scared me actually. It was a scary feeling to be feeling anxious about not checking your Facebook profile*"

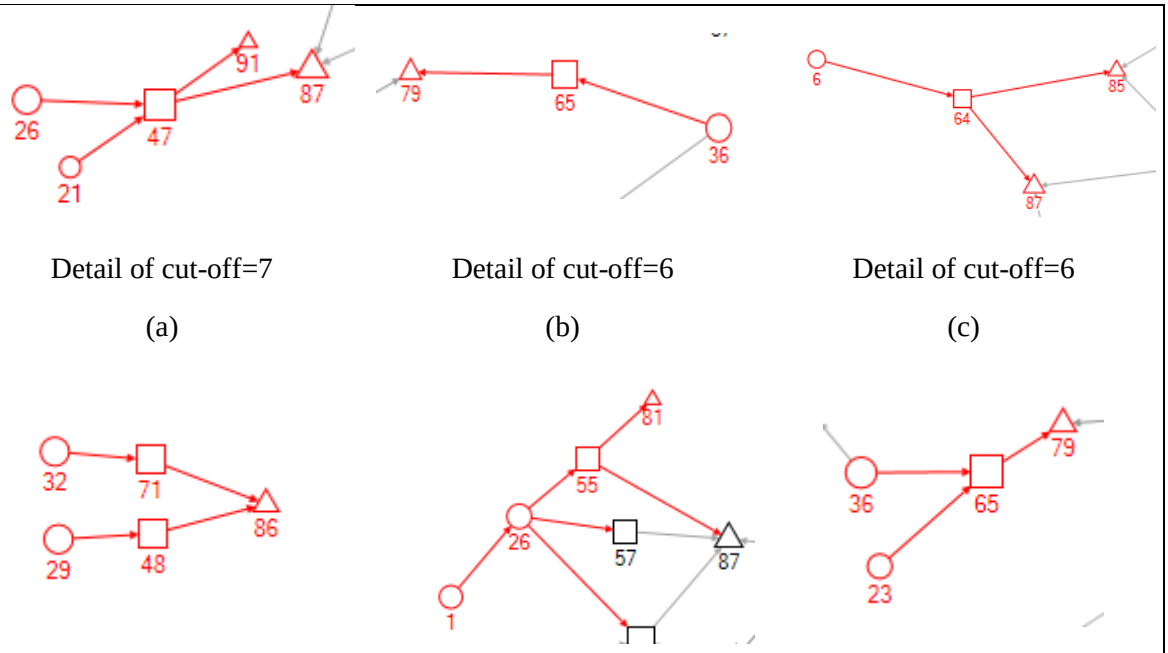
In this cut-off level new connections are linked to *exposure of self (47)* and *emotional stability (80),* which confirms their importance in the network as these elements are the nodes that connect the two groups of values in the network, in other words, the structural holes. The first group consists of *92, 93 and 94* and the second consists of *79, 81, 85, 86*. Thus, the importance of *47* and *80* is that they make it possible to connect elements that otherwise would be isolated, making it possible to create new combinations of attributes, consequences and values that can help to understand SNS withdrawal.



(a) Cut-off =5 (b) Cut-off =4

Figure 22: Structural hole

From these new connections it is interesting to see how receiving friend requests and reminders from the network (attribute 29, *receiving unwanted post, request, reminders*) in the email is a trigger to close the SNS as people will feel reluctantly exposed to people they do not want to be exposed to. An example is the case of Interviewee 18, who has to accept requests from former employees, otherwise it will be interpreted as being rude. But as he does not want to project that image to the others, he preferred to close the account.



Detail of cut-off=7 (a)

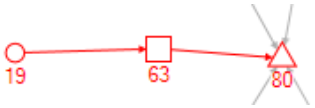
Detail of cut-off=6 (b)

Detail of cut-off=6 (c)

Detail of cut-off=5 (d)

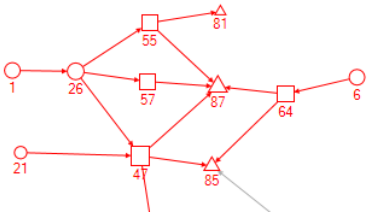
Detail of cut-off=5 (e)

Detail of cut-off=5 (f)



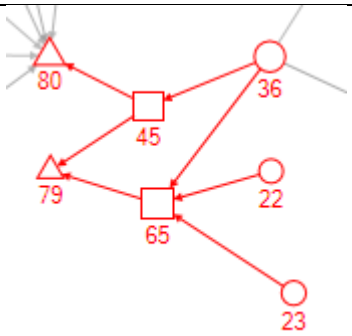
Detail of cut-off=5

(g)



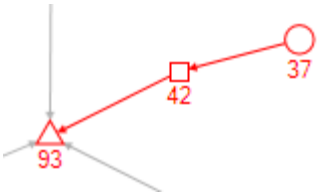
Detail of cut-off=5

(h)



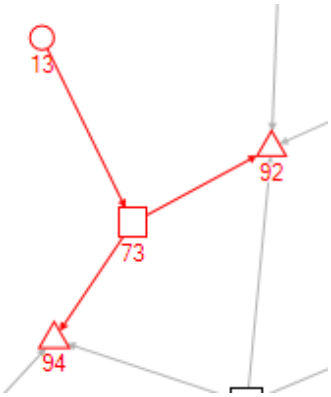
Detail of cut-off=4

(i)



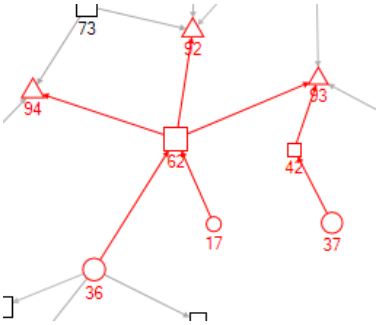
Detail of cut-off=4

(j)



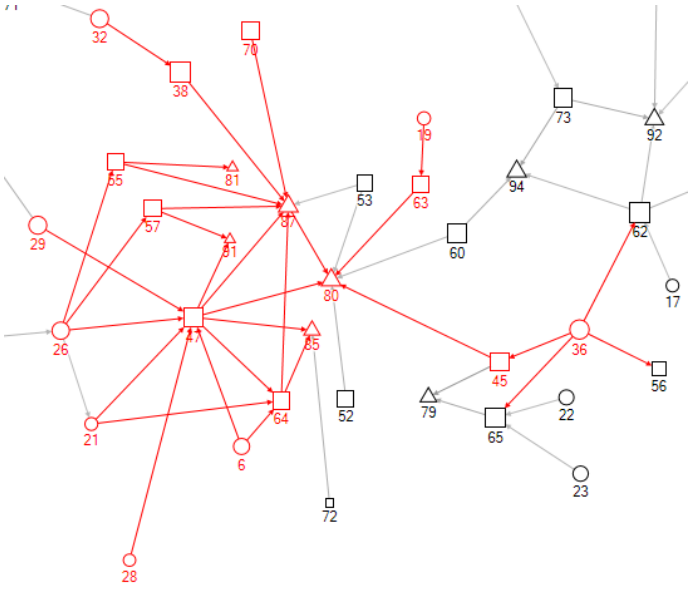
Detail of cut-off=4

(k)



Detail of cut-off=4

(l)



Detail of cut-off=4

(m)

Figure 23: Detail of ladders by cut-off level.

The data analysis shows how the social network analysis (SNA) makes it possible to manage complex data, complementing in this way the MEC analysis when it came to mapping the relationship. It also contributed to the analysis with the SNA measures.. Likewise, the weight of the edges has a twofold purpose. The first one is to work as cut-off criteria and the second one is to rank the level of importance of the ladders identified in the network. This section found that the main reasons to withdraw from the SNS by level of importance are: (91) privacy, (87) keep - regain control on first place; (79) don't care about people in there anymore, (85) image - impression management on second place; third place for (86) improve quality of relationships,(81) employability,(80) emotional - mental stability, followed by (92) productivity - work (93) simplify life (94) time management and finally (78) belongingness (83) grown up - maturity (89) personal security. The next section will discuss the ladders identified using a cut-off=4 to include a broader spectrum of relationships between the nodes and integrate these findings to the theory.

3.8 Ethical considerations

This thesis followed the ethical guidelines suggested by the University, including the ESRC Framework for Research Ethics (ESRC, 2010) and the Market Research Society Code of Conduct Guidelines (Society, 2012), following the principles of privacy, anonymity and confidentiality. Participation in all three stages was completely voluntary and those participating were informed about the option of stopping the interview and withdrawal at any time without further explanation or prejudices. The participants in the research of the third stage were informed that the interviews would be recorded and transcribed afterwards for analysis purposes, taking special care about the storage of the data in a secure place. Additionally, although all possible attempts are made to preserve anonymity participants were informed about the risk of being identified through phrases cited in the documents derived from this research. Every interviewee received the information sheet and the consent agreement before starting the interview (The forms used for this purpose are shown in Appendix 5). The consent agreement was signed by the participants, showing their understanding and agreement with the interview procedure.

Chapter 4. Discussion

This Chapter discusses the main factors emerging from the data analysis of the three main parts of this thesis. It aims to interpret the findings in relation to the SNS user life cycle as a whole and to each of the respective stage in particular. The elements identified on the theoretical framework are brought to the discussion to analyse the findings in light of their corresponding theories.

4.1 Why do people join a new SNS?

The SNS market is highly competitive for new networks as a large proportion of the population is already registered with at least one SNS. (Dutton and Blank, 2011) For this reason, finding the variables that could influence the decision to join a new SNS becomes a critical task. The implementation of the DTPB made it possible to study the intention to join a new SNS, finding that the variables related to *attitude* and *social norms* were influential factors for joining a new SNS. In addition, hypotheses extending TPB to DTPB were evidence of the utility of using a second order model to improve the explanation of the intention to join a new SNS consistent with previous research using DTPB. (Taylor and Todd, 1995; Zhang and Gutierrez, 2007; Ajjan and Hartshorne, 2008; Lin, 2008)

From the constructs included in the model, *attitude* was found to explain the most of the variance of the behavioural intention which is a common finding in DTPB. Thus, if the person has a positive attitude towards a new SNS, the intention to join is stronger. An unexpected result was the high correlation between *attitude* and *perceived usefulness*, which overshadows the contribution of the ease of use and compatibility. An initial explanation was that when users face a new situation, for example, as in this case, a new SNS, *usefulness* depends on the attitude towards the network. If the feeling is positive, then they will find it useful, resulting in a high correlation. Testing a second model without *perceived usefulness* showed a change in the other two components, in which the compatibility arose as a very influential factor not only for the attitude, but also for the intention to join. Thus, the perceived compatibility of the SNS with the way in which users manage their work-style is more important than how easy to use the person thinks the new SNS will be. This finding is similar to those of the study of Tsai et al. (2012). These authors studied the usage of the Internet filter software and found that the low importance of the ease of use is due to the computer literacy of users who perceived Internet applications as a trivial issue. This argument also applies to joining a new SNS, as the sample framework consisted of people who are current users of an SNS, their experience

helps them to feel knowledgeable about how to use an SNS. In addition, as users already feel comfortable working on the web and in mobile environments they may also believe they know if they are familiar with one SNS they should be able to use any other network. Segars and Grover (1993) argue that the role of the *attitude* elements can change according to the technological context, as in the case of To et al. (2008), who found that *perceived usefulness* was not significant in their research concerning instant messaging. Furthermore, other researchers using DTPB did not consider perceived usefulness in their model. For example, Gironda and Korgaonkar (2014) used DTPB to research joining SNS business pages, using relative advantage, compatibility and complexity of the activity as attitudinal factors. This lack of stability about the components of attitude points to future avenues of research, due to the importance of this factor, not only for DTPB, but also for researchers using TAM and Diffusion of Innovation models.

The results associated with *social norms* were as expected, confirming the relevance of peers influencing the intention to join a new SNS, followed by *superiors* and *external influence*. (Taylor and Todd, 1995; To et al., 2008; Lee et al., 2010; Mantymaki and Merikivi, 2010; Lee et al., 2013) The results confirm the importance of the role of the users in the network, not only as content generators but also bringing their contacts to the network. A popular example is Tinder which became a popular dating SNS among students who were talking about this Network with their friends and recommending them to join. In addition the information provided by external influences helped make this network even more popular. As an example, TV shows are using SNS as a platform to interact with their followers through the use of hashtags. In addition, TV news and newspapers are using SNS more frequently as a source of information, especially for news related with sports and celebrities. Consequentially, people started emulating this example and started using the SNS as a source of information as well. Another example of *external influence* is advertising in traditional media as Facebook does (see Figure 24). Advertising may sound contradictory for the SNS with most users in the world, as they could be relying on word of mouth and peer pressure. (Swift, 2015)

Figure 24: Example of Facebook offline advertising

Based on the model proposed to study this first part of the life cycle, *Perceived Behavioural Control* (*PBC*) was found not to be significant for joining a new SNS. Gironda and Korgaonkar (2014) obtained a similar outcome from their research about joining business Facebook pages. The explanation offered by Gironda and Korgaonkar (2014) for the non-significance of the PBC is related to the experience of the user with previous SNS. According to these authors, the experience gives a sense of confidence to the users, making them feel in control of the situation. Thus, as users perceive that joining a new SNS does not require much effort, the impact of *PBC* is reduced.

The non-significance of the *PBC* relates with the finding of the *ease of use* in the *attitude*. A combined interpretation of these two findings supports the importance of offering something new to the users. An example is the swipe left of right gesture made popular by Tinder which became a new standard for other SNS (e.g. Grabble, which is known as the Tinder of fashion). Likewise, the role of *compatibility* is connected to these two factors, as users may prefer the new SNS to be aligned to how they tend to work online already. Although design and user interfaces are important, in order to influence prospective users to join the network it is more important to show that the network is aligned to the way in which they work with their current online applications.

Trust and privacy were found to be not significant for the case of new SNS using the DTPB model. Previous research on these topics supports the hypothesis about the importance of these variables for SNS. (Dinev et al., 2006; Merikivi and Mantymaki, 2009; Nor and Pearson, 2008) However, for the context of the research about joining new SNS, the results obtained suggest that trust and privacy are not relevant for the users. One possible explanation relates to the interest in new features visible to the user or peer pressure, in which trust is more in the person who is inviting/putting pressure on you to join the network, than in how trustable or private the network, as such, is. From this explanation it is important to highlight the visible features to the user, as the user can understand these more easily and incorporate them to the daily use of the SNS. For the case of trust and privacy, these characteristics are usually intangible, just a few networks are using these characteristics as part of their strategy to promote their SNS. One of them is Diaspora which has been online for only a short period of time. It is known as one of the more secure SNS. (Zhitomirskiy et al., 2010) However, its success is still rather limited. Another recent case was Ello which was promoted as an ad-free network that will not sell user information (Arthur, 2014), in this way creating a sense of trust for the potential users, typically those unhappy with the privacy and marketing policies of Facebook.

4.2 Why do people participate in a niche SNS?

The literature about participations in SNS has identified a wide variety of reasons that motivate users to participate. These motives can be grouped into four categories: 1) socialisation, 2) information exchange 3) entertainment and 4) convenience and a final gratification related to privacy. The literature review suggests that users are highly motivated by socialisation and entertainment gratification, followed by the information available on the network and the convenience that SNS are offering as a communication tool, as well as a market place to buy/sell or promote products and services.

This second stage of the research took the motivations identified for general purpose networks and tested whether these motivations are important for niche SNS as well. The focus on niche SNS is a very interesting alternative given the continuous creation of new SNS orientated to specific targets of the population. The reason for this emphasis on general purpose networks is the amount of data available, along with the public character of the information. (Boyd and Ellison, 2008; Leskovec et al., 2008; Memic, 2009; Mislove et al., 2007; Goggins et al., 2011; Foregger, 2008) These characteristics are opposite to the information available on niche SNS, in which, due to the private nature of these networks,

getting access to their members is more difficult and can complicate the data collection task. Boyd and Ellison raised this issue back in 2008 when there was just a few SNS, so one may think that given the explosion of new niche SNS it could be easier to find a representative sample of niche SNS users. After collecting the data for this part of the research, the experience of the author of the thesis confirms that the argument posited by Boyd and Ellison still applies despite the number of networks currently available. The first issue is the mapping of the sampling framework. As niche networks are quite topical, many of them are known only by the people who are interested in those topics, meaning that many networks were not considered in the population, but this is virtually impossible to control due to the lack of directories or repositories with the information about the niche SNS. The second issue with niche networks is the lack of clarity about the understanding of the people about what a niche SNS is. On several occasions those who received the invitation to take part in the survey, asked for further explanation about the term, as the definition and examples provided in the invitation were not clear enough for them. A popular belief was to relate niche with small size networks about very narrow topics. But as mentioned in the literature review, niche is related to the definition and purpose of the network, rather than the size of the network.

The model proposed to explore the motivations for participating in niche SNS is aimed at finding the direct relationship of each construct with the intensity of use. The results obtained will provide the insights to find whether the networks share the same gratifications for SNS participation. In case there are differences between these networks, it is important to find which gratifications are important for niche SNS participation. After different modifications to the initial model, it was found that of the 19 gratifications proposed, only three were found to be significant. Keeping in mind that the model aimed to test whether the gratifications identified for general purpose networks applied to niche ones, it was not a surprise that a few variables were not as relevant and were eventually rejected. This suggests that there is indeed a difference in the motivations to participate in general purpose networks and niche SNS. In turn this provides evidence that the findings of previous studies on general purpose SNS do not necessarily apply to niche networks. The importance of this finding is that currently academics and practitioners are treating all networks as the same, as pointed out by Wilson et al.(2012), so further research on niche SNS is needed for a better understanding of these networks.

The motivations identified as relevant for participating in niche SNS are: *seeking social support, self-status seeking* and *learning gratifications*. The first gratification is based on the

support sought and/or provided by people sharing the same issues, interest, goals or tastes. (Cha, 2010, Foregger, 2008, Kim et al., 2011) As an example, one may consider a health related network called tudiabetes.org which is a network orientated to people dealing with diabetes, also providing a platform to share experiences with other people with the same condition. Kim et al. (2011) argue that the *social support* is rooted on the need of belongingness to a community of people with similar characteristics to the user created by a sense of identification. This identification with the group is reflected in the search for encouragement and companionship from the people in the network (either previous contacts or new contacts made in the network). This identification enables them to express themselves more openly, as people in the group can understand what the person is looking for more easily. Also sharing the same interest/condition makes it possible for them to be less concerned about being judged or misinterpreted by other people. A common practice in general purpose networks is to put together all the contacts, mixing family, friends, colleagues, etc. Still when people need support, they prefer to appeal to people who can understand them better. A niche SNS can potentially be a safe place in which the users can express themselves freely as these networks consist of people with similar characteristics to the user, that is, from physical conditions, to similar interests, etc.

The second gratification is *self-status seeking*, which is related to building and maintaining an image through the continuous participation in a group. This participation is based on the identification with the group and the desire to be acknowledged as part of the group. Sangwan (2005) argues that self-status seeking gratification looks to reaffirm the self-identity by being recognised as the image the user is projecting, as well as interacting with (influential) people in the group that otherwise would be difficult to meet. The identity is reaffirmed by the recognition from the others as a member of the group, feeding the self-satisfaction need. The importance of being acknowledged as part of the group is the validation of the identity by others that the user is perceived as their peer. This identification process again points to belongingness as one of the needs that people look for to satisfy participating in SNS. (Krasnova et al., 2008) The belongingness is fostered by the interaction with people that otherwise would be difficult to be in contact with, due to geographical distance, different social circles, etc.

It is important to highlight that the identity projected in the network does not necessarily match with the identity of the person in real life; in fact, the person can have several identities online, and even in the same network, as in the case of people with different Facebook

accounts. This point is important because when people join due to peer or superior pressure the person is not necessarily projecting his/her real self. The same may apply to those users participating in niche networks for operational reasons, e.g. trying to get some benefit from the network, such as information, contacts or knowledge. These people will participate in the network just to get what they are looking for. Unfortunately, there is no way of knowing what the intentions of the users who participate in the network are. There are filters which admit people, as in the case of aSmallworld which is an SNS for millonaires and people are accepted to join only if they are presented by a current member of the network.

The third gratification emerging as important factor for predicting participation in a niche SNS is *learning*. Users participate in niche SNS as these networks provide information about a specific topic, as well as access to people who know about the topic. (Cha, 2010; Huang, 2008; Kim et al., 2011; Papacharissi and Rubin, 2000; Park et al., 2009) The resources (people and information) that people find in the niche SNS is something that they will rarely find in the general purpose networks, due to the variety of contacts that a person usually has in the network. These contacts will be posting all kinds of information, creating not only an excess of information, but an excess of information that in many cases is not important for the user. This situation makes it even more difficult to find the information the user is interested in. Given that a niche SNS is specialised in a certain topic of interest to the user, a higher proportion of the information posted will be interesting to the user, encouraging them not only to read but also to contribute to the conversation. Self-status seeking provides an insight about the importance of interacting with people in the niche network, especially for those who are learning. They have the chance to ask the people in the network about different topics. The rejection of socialisation/ interconnection gratifications shows how people use the general purpose SNS for these activities, whereas users go to a niche network for a more specific purpose. According to the results obtained, people in niche networks do not join these networks with the purpose of socialising. Similarly, the rejection of entertainment activities is evidence of how niche SNS are used for more specific purposes that are not considered as entertainment as such, leaving these gratifications to general purpose networks which offer applications orientated to entertainment, such as games, as well as information about more people to read if they consider this as entertainment. (Cha, 2010; Foregger, 2008; Huang, 2008; Kim et al., 2011; Papacharissi and Rubin, 2000; Park et al., 2009; Sangwan, 2005)

Finally, the rejection of convenience gratifications shows how niche SNS users prefer to take advantage of the opportunities offered by the SNS platforms in the general purpose

networks which usually provide better tools for communication like Facebook messenger or Google chat. Based on the results, market gratifications are not significant for the users. Still, it would be interesting to know if the market conditions are important from a business point of view. As these networks gather together people with the same interests, it creates a natural niche for marketing. However, it is believed that most of the money spent on SNS marketing goes to the general purpose networks based on the promise of reaching millions of potential customers. Advertising in niche SNS has to be undertaken with caution, otherwise, it could happen th same to Pionner DJ network which had to close despite being one of the most popular brands amongst DJs. However, the possibility of having a group of users talking about a company's products or services is an opportunity that is simply too difficult to ignore for practitioners.

4.3 Why do people withdraw from SNS?

The combination of Social Network Analysis and Means-End Chain make it possible to establish the main reasons that move a user to close the profile in an SNS and, furthermore, to conceptualise the relationships between these reasons. Adapting the results obtained to the context of this research, the elements with high out-degree levels make it possible to identify the main triggers to close the SNS. These are usually related to the MEC attributes. Similarly, the elements with a high in-degree level make it possible to identify the ultimate reasons that motivated the SNS withdrawal which are related to the values in the ACV chain.

4.3.1 First group: Impression management

Taking into account the elements present in the ladders at each cut-off level, it was found that the main reason is related with the control that former users wanted to have over their profile, including who can access their information, as well as privacy issues. The attributes presented in the ladders show how most of the interviewees were concerned about the personal information being available in the network and the people looking at their profile. Both attributes were connected to the values through the consequence "*exposure of self*". Consequently, the exposure of the online persona and the information attached to it were identified as the main concerns for the former SNS users. These elements show that users have the need to feel in control of their online persona, on the one hand, controlling the information available about them, and on the other hand, the people that are looking at their information. This last point reveals an interesting situation in which the privacy becomes a blurry line related with who can see the user's information and the awareness that people have about the things they post on the SNS.

The control of the perceptions that other people create about the individual has been acknowledged through the research, namely, Impression Management Theory (Leary and Kowalski, 1990), and more recently in SNS environments by Ellison et al. (2006a), Ellison et al. (2006b), Krasnova et al. (2008), Nadkarni and Hofmann (2012). These aforesaid authors have highlighted the opportunity that these networks provide for having a better control of the self-presentation process. (Buffardi and Campbell, 2008; Mehdizadeh, 2010; Zhao et al., 2008; Ellison et al., 2006a; Krasnova et al., 2008) However, the ladders reveal another side of the control which is not as positive as previous research showed. In this thesis, the loss of control became a problem due to the multiple implications that it can have on their personal and professional life. One example is Interviewee 6 having a problem with her uncle, as he was talking with her parents about the information she was posting on Facebook. Still, as her parents were not on the Network, it seemed that the uncle knew more than the parents which created problem for her.

There are two more ladders related with the subject of impression management, but they are focused on the strategies that people use to keep an image in the SNS for personal and professional reasons. These ladders include the values "*impression management"* and "*employability"*. The interviewees mentioned the efforts required to keep the image that they were interested in projecting to others. A common behaviour was the self-restriction from posting some information (post or comments), due to the implications that this could have for their current or future stages (personally and professionally). An example is the case of Interviewee 18 who accepted a few colleagues due to social pressure, even though he did not want to. This situation forced him to have a moderated tone in his posts, in order not to offend anyone. Another case is Interviewee 23 who mixed the personal and professional contacts in her Facebook profile. The combination of these groups in one network made her change the content of her posts. An alternative that several people have considered is having a personal and a professional account (Interviewees 5, 8, 14, 18, and 23). However, the results for those who have tried this approach were not very positive, as people will try to connect both profiles, as happened to Interviewee 5 and Interviewee 14, or will close the one that they are using less as in the case of Interviewee 8 who closed the personal one.

One of the attributes that is evident of the work involved in keeping the image is the editing of their own profile. This editing includes deciding the information that they wanted to post, retouching photos to upload or review the information that other people posted about them, as Interviewee 1 and Interviewee 24 mentioned. These tasks became a sort of extra

work, as happened to Interviewee 20, who created a profile related with her career as a comedian, but with time she felt the pressure of having to post new material constantly, realising how time consuming it was. Interviewee 24 had a behaviour very common in SNS that consisted of showing what his holidays were like instead of enjoying his time. In this regard he said: "*I've found myself in Habana, on beautiful days, sitting in an Internet cafe, writing about how my life was in Cuba instead of actually enjoying my life in Cuba*". (Interviewee 24) Something similar happened to Interviewee 20, who was more concerned with finding a place with a signal for her mobile in order to brag about being at a concert than enjoying the concert itself. A common strategy used by the attention seekers to measure the success of their posts is based on the likes or comments they receive. If the post does not reach a specific number of likes they will delete it. That was the case of Interviewee 18 for photos posted on his profile and for Interviewee 20 with her jokes. The attribute and consequence connected to the impression management are considered as expected based on previous research, as people are editing their profiles in response to others' perception. The behaviour described in this paragraph is related to narcissism which has been identified as a driver for SNS usage. (Buffardi and Campbell, 2008; Mehdizadeh, 2010; Nadkarni and Hofmann, 2012) The experiences related by the interviewees confirm the narcissistic use of the SNS, but more importantly, helped to find that when people realise that they are becoming slaves of their image, their reaction is to stop using the SNS and start enjoying their activities more.

A variation of the impression management strategies is related to the opinion of the contacts when the users close their profile. A common reaction of their contacts is believing that they were blocked which is considered as offensive for most of them, for instance in the case of Interviewee 20 who stated: "*oh the hardest thing when you delete it is people don't, people think that you've blocked them, so you get like what's your problem, like why have you fallen out with me, it's like just pick up the phone and call me*". (Interviewee 20) Another popular case is exemplified by Interviewee 16, who prefers to deactivate people on her newsfeed to avoid questions about why she deleted someone. This behaviour is evidence of how users feel a pressure to keep a positive image even with people they do not want to have on their contact list. This was the case of Interviewees 13 and 22, who mentioned how they felt some pressure about people's opinion if they knew (or thought) that they were deleted from the friends list, showing the impact of peer pressure which can make users take drastic decisions such as closing the whole account.

The employability ladder is related to the information that users have posted on the network and how this information can impact on their professional profile. SNS users are becoming aware of the impact that the SNS can have on their professional life. This finding could be related to the age range of the interviewees who are from a more mature stage in life. This in turn contrasts with their opinions about the information posted when they were younger. During that time, their posts were aimed at helping them fit in the group and be popular based on how much of a thing they could do. An example is the case of Interviewee 10, who posted some pictures partying and drunk "*because that's what you do at that age*". But now that he is working, he considers that these posts could be detrimental should he be looking for a new job, even if it is evident that the photos were taken a long time ago. In this ladder the attribute related to articles against SNS add an extra element for the analysis, as it shows how the external influence can influence users not only about joining an SNS but also to quit from them. Every day there is news in the media showing the pros and cons of the networks, but with age, people become more aware of the risks involved in SNS usage, either because it may have happened to them, to somebody they know or because they have heard many reports about the dangers on the SNS. Former users assessed the potential dangers of the information they have posted, and how that could affect their professional image and their privacy. Once again, the age range plays an important role, as adults can understand the implications of revealing some information posted in the SNS better.

Impression management and the lack of control, as given reasons to withdraw from the social network represent a dilemma for the SNS user. The dilemma is based on sharing information as one of the main purposes of participating in an SNS, as posited by researchers on Uses and Gratifications in SNS. (Cha, 2010; Foregger, 2008; Huang, 2008; Kim et al., 2011; Papacharissi and Rubin, 2000) But at the same time there are implications (explicit and implicit) related with the information they post and how that may affect their life. This research found how negative factors related to information sharing motivate the user to look for another means to interact with others. This need can be satisfied either by going to another more private network or going back to simpler ways of interaction such as phone calls and having face to face interactions. (Interviewees 1, 23 and 24) Likewise, the creation of the profile is a process with double standards. People like Interviewees 18, 20 and 24, wanted to show that they were having a great time which is related to them as good news. However, the good news posted by other people can affect them as well because they are not having such a good time as others are showing. Here, narcissism plays an important role in understanding

this situation (Buffardi and Campbell, 2008; Mehdizadeh, 2010; Nadkarni and Hofmann, 2012) because the self-concept depends not only on what the users project to others, but also on the comparison between what the users are showing and what the others are showing. This comparison is quite tricky, because it is based on what the users show which does not necessarily reflect what they are doing or how much they are enjoying themselves. This projected image becomes a race of who is having the best time, resulting in a profile related with a desired identity, supporting the argument of Elsbach and Bhattacharya (2001) and Zhao et al. (2008) about what an actual profile of an SNS user looks like,.

4.3.2 Second group: Friendship

A second group of ladders is related with friendship and how users are related to others. The values included in this group are related with the importance of the people in the network and the quality of relationships. These ladders give an insight into the changes that relationships have had since the SNS became popular. Now the word 'friend' has different implications and being in a relationship is official when it is public on Facebook. In the words of Interviewee 13, "*I think it's a distorted idea of a friends list I think*". But curiously, despite the virtual component of the SNS interactions, there are still some manners inherited from the offline world that are applied here, making the SNS relations something more complex. For example, Interviewee 13 will not deny any friend request out of politeness and would rather ignore or unfriend afterwards. Compared to Facebook, Twitter makes it easier to unfollow someone as the interaction is based on shorter texts and the content is not usually as personal as on Facebook. From the interviews, it was found that the language matters, and the way the network refers to the contacts (friends, followers, connections, etc.) has an influence on the withdrawal decision. Former users think it is easier to follow/unfollow on Twitter and similarly with the connections on LinkedIn, whereas the word 'friend' on Facebook makes it more difficult as they associate the label with the meaning of the word, bringing different connotations. Related to language, was the correlation between the nomenclature used by each SNS and how users referred to other users. For example, Facebook calls contacts "*Friends*", and it is considered for close ties, whereas on Twitter, the user has followers, which a term used for other types of contacts, including celebrities, academic contacts, etc. (Interviewees 12 and 17)

Talking about the amount and relevance of the information posted by the members of the personal network, the growing number of posts in the timeline generates an overwhelming feeling in the users. Interviewee 8 commented: "*Posting too much, yes that's one that would*

get on my wick…, I don't want to see pictures of their kids, pictures of their dogs, I don't care, I don't want to know if they're lying in bed eating nachos or something like that". The annoyance with the overload of information is mainly due to the perception of it being unnecessary which is based not only on the content of the post, but also the frequency of posting and the opinion that the person has about the author of the post. Interviewee 8 commented in this regard that the continuous post of a close friend on his vacations is not the same as the continuous post of an acquaintance talking about everyday activities. This point is evidence of the level of subjectivity of the information on the SNS, and how information gains or loss relevance is consequently based on who is posting. This perception is related to the fact that the contacts were not important for the user. Hence, the information posted by these contacts was considered as irrelevant, and depending on the frequency of posting, even annoying. Due to the nature of the SNS, users are encouraged to have more contacts than they can handle. An average Facebook user has around 300+ contacts on the Network which is double Dunbar's number. According to Gonçalves et al.(2011) this number still applies to SNS. Therefore, a lot of people who are part of the network will be posting information that is unnecessary for the user. In turn, the valuable information becomes more difficult to find as the users have to scroll several times and even make the effort of searching for the information they are interested in, as Interviewee 21 pointed out. This situation contrasts with the networking gratifications which have been identified as an important factor for participating in an SNS. (Cha, 2010, Dimmick et al., 2000; Dimmick et al., 2007; Foregger, 2008; Kim et al., 2011; Nyland, 2007; Papacharissi and Rubin, 2000; Park et al., 2009; Ramirez Jr et al., 2008; Sangwan, 2005) The problem of an overflow of information has been identified by the SNS who proposed different alternatives to manage this issue. Facebook developed an algorithm to select the posts that will be displayed on the wall; Twitter proposed the lists to group the contacts they are following and Google+ created circles. The Facebook algorithm has been the target of different criticisms as users feel that they have lost the control of the information they want to see and Facebook is now deciding for them.

The attributes and consequences connected to improving the quality of relationships comes from two paths. The first path starts with the awareness of being dependent on the SNS in order to interact with other people which makes the user feel that the contact is impersonal. Interviewee 1 compared SNS interaction with McDonalds which is food but is not sustainable in the long run "*it's like a rehearsal, and I felt that I was not getting the connection that I needed*" (Interviewee 1). The second path is based on the reception of unwanted post and

friendship requests, generating a feeling that the relationships in the network are artificial, leading them to look for ways to improve the quality of the relationships. These ladders show how the interviewers were feeling the need to have more meaningful contact with the people they are interacting with, and how, despite the advantages on communication offered by the SNS, the interviewees felt it was not good enough. A common example raised by the interviewees was the situation of people getting together in a restaurant or a cafe and how they spent more time chatting on their mobile phone than interacting with each other (e.g. Interviewee 5, Interviewee 23), showing how impersonal the interaction can be. People agree that SNS are very helpful to keep in communication with people who are abroad, but Interviewee 15 and Interviewee 23 agreed that for people who live in the same city, the contact should be more personal. Part of the success of an SNS is based on the number of people they can get in the network. Thus, suggesting new contacts to add is one of the strategies used by the networks to increase the number of users and make the network useful to the user. But having a large number of contacts does not mean having a good or active social life. For example, Interviewee 20 had more than 2000 'friends' on Facebook, but as she mentioned, there are barely eight who she can count on. Thus, the dilemma present in this ladder comes from the idea that being connected with lots of people can increase your social capital, but at the same time users are looking for meaningful interactions with each other which is difficult to do with a large network of contacts. In order to overcome this situation, SNS offer some aforementioned alternatives to manage your contacts (groups, list and circles), but despite these alternatives people still feel they need something more personal. Another way in which suggesting contacts makes the network feel impersonal is by recommending people who are part of a past that users are trying to get over or are not interested in being in contact with anymore. Interviewees 3 and 5 commented how they had moved on with their lives and they are not interested in letting people who are not in touch anymore know about their life now. The case of Interviewee 10 is even more special, as she had issues related with her personal safety and the network was suggesting she connect with people who in the second and third degree are connected with people that could represent a danger to her.

These findings challenge the socialising and networking gratifications identified in the participation literature (Cha, 2010; Dimmick et al., 2000; Dimmick et al., 2007; Foregger, 2008; Kim et al., 2011; Nyland, 2007; Papacharissi and Rubin, 2000; Park et al., 2009; Ramirez Jr et al., 2008; Sangwan, 2005) as they posit that people go online to interact with

current contacts and create new ones. However, approaching the SNS from a withdrawal approach helps to identify the consequences of the participation approach. Research focused on participation is aimed at increasing the size of the network and stimulating the participation which results in an excess of information. The findings of the withdrawal research show how the drivers identified for participation have a limit and once this limit is exceeded it generates the opposite result. The ladders included in this group show one of the challenges that SNS are facing about the relevance of the information presented in the time line. However, ultimately the challenge is to find the people who are representative for the user, as there is a direct relationship between the author of the post and the relevance of the information, which is moderated by the period or stage of life that the user is going through. The inclusion of time as a moderator variable represents the dynamics of the network and helps to understand the influence of the environment surrounding the user.

4.3.3 Third group: Time Management

The third group includes values related with the users' concern about the time spent on the network and the impact on their productivity. The interviewees agreed on how once the hype of the SNS is gone, they started to be more conscious about their time management or started spending the SNS time on other types of activity. The values in this group find their origins in the unnecessary information posted on the timeline, generating the perception that the SNS is not as useful as before, hence the time spent on it is taken as a waste of time. Likewise, former users found themselves spending too much time looking at other people's profiles, reducing the time for the other tasks they were supposed to do during the day (Interviewees 1, 5, 14, 23 and 24). In fact, once people stop using the SNS they realise how much time they have on their hands, as in the case of Interviewee 20, who felt she had recovered four hours per day of her time. In addition to the time spent reading content on the network, some people found themselves spending a fair amount of time planning what they were going to post on their profiles. Interviewee 24 said in this regard "*I would spend 10 minutes to get a good sentence. I will get the wording right, the syntax right, etc.*" This example shows how the efforts to project a certain image to others results in the time spent planning their post, including the decision whether to publish the post, and if the post is not published the time lost is even worse. One factor that has an influence on the impact of time management and productivity is the age group of the sample, as adult people have more responsibilities that require their time and attention, and if they spend the time on the SNS these responsibilities will be affected.

Users tend to justify the time invested on the SNS based on the benefits that it brings to them, but afterwards, they feel some degree of guilt for the things that they were supposed to do and did not. That is the case of Interviewee 24, who mentioned the benefits of the social and cultural events that he could go to because of the information on Facebook, but he had the impression that he should be doing something else more important "*I had all these things that I was supposed to be doing like studying Spanish*". (Interviewee 24) Several people associated the time spent with addictive behaviour (Interviewees 1, 5, 23 and 24), being the most common way to explain the concern about the time. SNS addiction is a field in development, adapting research done on Internet addiction such as the internet addiction typology developed by Young (1999), which has been adopted as a common taxonomy to study SNS addiction. This typology differentiates five types of addiction: '*computer addiction'* (e.g. computer game addiction), '*information overload*' (e.g. web surfing addiction), '*net compulsions*' (e.g. online gambling or online shopping addiction), '*cybersexual addiction'* (e.g. online pornography), and '*cyber-relationship addiction'* (e.g. Measurement model for modified DTPB model. addiction to online relationships). Nevertheless, literature about SNS addiction is still scarce (Kuss and Griffiths, 2011) and due to the continuous development of different services in the SNS, the tools developed need constant updating. (Andreassen and Pallesen, 2013) Research on the SNS addiction has been studied mainly from a clinical approach, leaving a field for further research from a business perspective on the relationship between time management and SNS usage.

4.3.4 Fourth group: emotional stability

In the fourth group the ladders are related with making life simpler and emotional stability. The interviews revealed how SNS are becoming an extra source of situations that can complicate users' lives. The first ladder is identified by usability issues, showing how when the user finds difficulties at the time of using the network, it leads to a decrease in the frequency of use to the point of closing the account. Ease of use has been studied by models like Theory of Planned Behaviour (Krasnova et al., 2008; Park et al., 2009; Kelley et al., 2011) and Technology Adoption Model (Kwon and Wen, 2010; Lorenzo-Romero and Del Chiappa, 2013) among others, showing its relevance for SNS adoption and participation. The perception of the difficulties of use comes from two sources mainly. The first one is related with the fact that users could not figure out the way the SNS works, not only from the technical aspect, but the purpose of the network. This difficulty was frequently found on Twitter users, as people were used to Facebook and the change ended in a bad experience, as in the case of Interviewee 17. The second case comes from SNS updating the layout, tools and

policies. These changes discourage the use and produce frustration for the users (Interviewees 5, 6, 14 and 17) as they feel that they cannot cope with the pace of the updates and they are used to finding the buttons and menus at specific places. So, whenever there is any change they feel annoyed, especially when the changes are frequent, as Interviewee 14 who said "*they keep changing the damn thing as well! And as soon as you get used to one, well sort of, used to the buttons that I know how to use, they damn well move them!*" showing how changes affect the intention of use.

The feeling of using something unsuccessfully creates a belief that the SNS is an add-on that people do not need in their lives, as Interviewee 1 expressed. SNS are overcomplicating simple tasks and users do not want to see major changes in the display. They do not have the time or the willingness to learn again where the buttons and tools are. Likewise, the restrictions of the platform are quite frustrating for the users. Twitter is a case in point, where due to the change in the usage based on the restriction of the 140 characters people spent more time trying to write a short tweet than writing the whole thing on Facebook. (Interviewee 17) In addition, the simple fact of being restricted is not appealing to the users. (Interviewee 15) Thus, people preferred to close the network profile due to the hassle of adapting to the changes or disagreeing with the changes to the network, as happened with Facebook. Here, age plays an important role in this ladder, as the age of the sample is focused on an adult population, some of whom mentioned that they were not very familiar with the SNS use, with some of them in fact acknowledging that they only have a basic idea about how to use the platform (Interviewees 10, 11, 14) leading towards a decrease in the usage of the SNS until they closed it.

Interviewee 24 mentioned how people without SNS seem to have such a good life, which makes him want the same feeling "*I knew friends who I had a lot of respect for, who lived very interesting lives and they wouldn't tell a soul. They don't have any social media, they just live their life and enjoy their friendships, enjoy the relationships and they do not need to do anything like that. And I was envious of this*". In this quote, Interviewee 24 showed how the example of people having a happy life without an SNS helps others to realise that people can live without being on an SNS and in fact their life is much better without it. Interviewee 24 pointed out how some people can work as an example of taking the withdrawal decisions, a sort of champion. In this case it was people who were not on social media and they were proud of it "*I had a few friends who didn't have social media and they were basically very happy in fact they were quite buzzed up , they were very proud of the fact of not being in*

social media". (Interviewee 24) However, there is a trick made by these champions which is asking the friends who are on social media about the events constantly. So, it is a kind of double standard, because they are bragging about not being part of the social media, but at the same time are dependent on it, as Interviewee 24 said "*The contradiction is that they depend very much on people who are on social media for social events. My friends who didn't have social media, they depended on me a lot for social events that they would never know about*". (Interviewee 24)

The ladders related with emotional stability show how people can be affected by the content of the post they find in their timelines (Offensive negative comments- 19). But it is not only the presence of explicit negative comments, as happened to Interviewee 19, who was bullied through the SNS, but also the positive posts of other people that produce negative reactions in the readers (i.e. jealousy or envy , as happened to Interviewee 13, 15 and 20). The feeling of other people achieving things that you as the reader have not, makes the reader feel bad or inferior. This happened to Interviewee 5 with some friends and their photos of engagement, kids or the happy life they portrayed which made her feel uncomfortable. Interviewee 13 pointed out how people can still feel bad even when they know that what others have posted is not true (or partially true), showing the impact of others' publications on the self-esteem of the people. People's fake posts are explained by narcissistic behaviour on the SNS (Mehdizadeh, 2010), but the impact of these posts on others' self-esteem needs further research, as well as how and why people think that posts are not true. Some researchers have studied the opposite case of people feeling happy with the bad news of others which is known as "*schadenfreude*" (Havard, 2013) which is an open field for further research.

4.3.5 The SIT perspective

From the SIT perspective, the ladders related with the loss of control follow the uncertainty reduction process as the users' effort at projecting an identity (real or desired) is challenged by the control that other users and the network itself are taking by being able to post/filter information about them. As a consequence, users prefer to close the profile in order to take back the control of the image they want to portray. This is exemplified by Interviewee 1 saying "*if somebody wants to meet me, he can call*", showing how being away from the network allows him to control the image and the information he wants to share with other people who are interested in that. In contrast, the ladders related with impression management and employability follow the self-enhancement process as they are trying to create and

maintain an image of professionalism that otherwise could affect their future career as well as personal projects. Thus, the distinctiveness from previous stages in their lives or from groups that may impact on the image they want to portray now allows them to reinforce the belief that their identity does not fit the identity of the group they belong to on the SNS, generating the disidentification process explained by. (Elsbach and Bhattacharya, 2001) Disidentification can be due to differences with the organisation or with the members. In this case, the organisation is the platform, and users are the members. To some extent, former users now consider their previous SNS a necessary evil, like Interviewee 1, showing characteristics of the negative relational categorisation proposed by Elsbach and Bhattacharya (2001).

The need to improve the quality of the relationships can be explained by the need for belongingness (Nadkarni and Hofmann, 2012, Baumeister and Leary, 1995), as users need meaningful interactions that provide part of feeling part of the group. In addition, belongingness can be analysed from the self-enhancement process from the SIT via the distinctiveness that the users are trying to create which is related to the difference of the group that the user belongs to. This in turn reinforces his/her identity (Ashforth and Mael, 1989), maintaining and enhacing the identity of the group. (Griepentrog et al., 2012) Additionally, the distinctiveness is reinforced in the fact that the user is the one who is withdrawing from the group rather than being excluded or isolated, showing that the decision to retire from the group was their choice which implies a rational process of assessing whether they belong to the group they were in on the SNS. The ladders related with time management and productivity follow the uncertainty reduction process. Former users were trying to block an undesired behaviour that was generating a problem to keep their identity aligned to the groups and activities they are interested in participating in, e.g. keeping their jobs or keeping their place in the university and progress in their degree.

The noxious information present in the SNS impacts on the emotional stability of the user, especially their self-esteem which is one of the pillars of the identification process, making the user avoid people who are a source of negative information. This is a distinctiveness strategy, as they do not want to be in the same group, and in some cases do not want to be associated with the authors of noxious information. Thus the self-enhancement process from the SIT makes it possible to understand SNS disidentification, as this process is based on the differences with the people posting the unwanted information. On the other hand, the difficulties with the SNS usage follow the uncertainty reduction process as the interviewees showed a preference for platforms that are more stable. The reason for this

preference is because they are used to the layout, so they know where to find the tools and services they use regularly and changes in the SNS make them feel they need to learn how to use it again. Accordingly, the disidentification process occurs from the users to the platform as they do not feel comfortable/confident using the SNS.

4.4 The SNS user life cycle

The previous sections identified the main factors that influence each stage. In this section, these elements are integrated into one overarching framework aimed at understanding the main elements of the SNS user life cycle. One of the characteristics of this cycle is that the user is in continuous identification assessment, checking whether the identity of the users (real or desired) matches the SNS identity. This assessment has two levels, the identification with the people on the SNS and the identification with the platform as such, following the two-levelled approach proposed by Elsbach and Bhattacharya (2001). Consequently, when the person wants to join the SNS the compatibility factor is related with the identification with the network. During the participation, the identification with the network and with the members of the network is what moves the user to ask for support, self-status and learn from them. The users are evaluating, permanently, the identification process, and when the users feel that their identity is not matching one of the components (or both) the disidentification process starts, leading to SNS withdrawal.

SNS developers and administrators have to keep in mind that the members of the network are evolving over time. As they grow up, their needs from the SNS change as well. Therefore, SNS have to pay attention to how their members are changing to adapt/update the platform according to these changes. Otherwise, SNS could be perceived as outdated as they are not matching the current situation of the user, generating a domain disidentification. (Woodcock et al., 2012) Myspace is an example of the domain disidentification, as this network is considered to be a network for teenagers. Additionally, this SNS remains without major changes throughout most of the time. These two elements ended in people moving to another network when they started university, as their identity changes from the school-teenager to the cool university student as mentioned in the stage three interviews.

A second element present throughout the life cycle is the sense of belongingness, as proposed by Krasnova et al. (2008). People join a new SNS because they want to be part of a group that shares the same interest/goals. They participate in the network because they feel part of the group which enables them to be more open and share more with the group. In turn

this interaction with likeminded people helps them to reaffirm who they are which is an overlap with the identification process. At this point it is very important that the users feel that the participation in the network is meaningful, not only because it makes them feel important, but also because they will not feel as if they are wasting their time on the network. Finally, the users withdraw when they feel that they do not want to be part of the SNS anymore. The belongingness is closely related to the identification/ disidentification process, as when the belongingness perception is fed by the identification perception.

A factor influenced by the identification/belongingness perception is peer pressure which is a constant in the life cycle. The pressure of the peers can make users join a new SNS, as they want to be part of the group so if joining a network allows them to be part of the group they will do so. Likewise, the pressure for being recognised as part of the group drives users towards participation, as the more they participate, the stronger the feeling of belongingness which in turn increases the identification with the group. However, this same pressure to keep an image and to be recognised as part of the group can have the opposite effect on the user, leading to withdrawal from the SNS as people want to live their life as they want, not as the group expect them to. Therefore, the SNS disidentification happens because people want to retake control of their lives. Related with the peer pressure is the influence of external sources. People can join a new SNS because they come across positive comments on the TV or the newspapers. Still the same external influence can make users re-evaluate their participation in the network and lead them into withdrawal when the information they receive is against the network, as was found in the third stage. For this reason, SNS have to take care of the image of the network and how they are being presented in the media.

SNS have to find a good balance about the ease of use, as the network has to be perceived as something new, but at the same time give the feeling that people can use it based on the knowledge and experience acquired in previous networks. People need to understand the aim of the network and how to use it. Findings of the research showed how Twitter had some problems related with these two elements. People are used to the long posts on Facebook. For them, it was more complicated to write short tweets than writing on Facebook, because for them the idea of a short post did not make sense. As a consequence of peer pressure, it was found that some people were ashamed to ask for help, as they do not want to be perceived as dumb, so they preferred to close the network rather than ask for help. The ease of use has to be considered in the evolution of the network, as users want the right amount of innovations through their whole experience in the SNS, otherwise it would feel outdated. However, the

changes have to be easy to assimilate, as users do not react well to changes, as can be noticed every time that Facebook makes big updates to the layout or on the services provided, users tend to complain rather a lot.

Chapter 5. Conclusions and contributions

5.1 Conclusions

Social Networking Sites are becoming the flagship of Web 2.0 technologies. These websites facilitate the distribution of user-generated content, in which the user plays a decisive role in the success of the network. Currently, research on user behaviour is focused on user participation which answers the question as to why people participate in the network. Still it is not clear why people join the network or why people might withdraw from it. Aware of this gap, this thesis aimed to understand the SNS user life cycle and shed light on areas of special interest. In order to gain this understanding, the life cycle was split into three stages, namely joining, participation and withdrawal, around which the thesis revolved. Based on the literature review and the gaps identified, the research questions and associated findings for each stage are outlined below.

Research Question 1: What are the main factors that motivate a user to join a new SNS?

The initial conclusion from the joining stage is that the users want new networks with some novelty. This conclusion is based on the low coefficient of the ease of use along with the lack of significance of perceived behavioural control. SNS users feel that they are experienced enough to feel comfortable using any network. SNS may want to offer something different so that they are not perceived as "*more of the same*". Still, the SNS developers have to take into account the role of the perceived compatibility, as people will have a higher intention to join a new network if they perceive that the new network is compatible with what they have now and the way they work online. Also, it was found that social norms is one of the main sources of influence for people to join a new SNS. Of the factors associated with social norms, peer pressure stands as the most influential factor, confirming previous research on the topic. The importance of peer pressure lies in the fact that an SNS only works if it has users actively participating. As users tend to believe the recommendations of the people they know more, users will consider the idea of joining a new SNS more seriously if the invitation comes from an existing contact. In addition to peer influence, the findings offer evidence for the importance of external influence. For example, SNS developers should consider the influence of traditional media when it comes to the intention to join. Using traditional channels for advertising can help the SNS neutralise bad press that they could be receiving.

Research Question 2: What are the main factors that motivate a user to participate in a niche SNS?

The research on the second stage showed that there are different factors influencing the participation in general purpose networks and niche SNS. From the literature review it was identified that people participate in general purpose networks based on four groups of gratifications: '*socialisation'*, '*information'*, '*entertainment'* and '*convenience'*. Each group contains different gratifications that were tested on niche SNS users, finding that the gratifications related to '*social support*', '*self-status seeking*' and '*learning*' are the main factors that motivate users to participate in niche SNS. '*Social support'* and '*self-status seeking'* revealed how belongingness is an underlying factor in the participation in the network. Users want to be with people who share the same interest, they want to be part of the groups of likeminded people. Identity plays an important role as people participate in the niche SNS as a way to reaffirm their identity (real or desired) by the participation in the network. These two elements, belongingness and identity, trigger the identification process, which enables the user to share the situation they are going through more easily, looking for support from the people in the network. Similarly, users reaffirm their identity through group validation. The results related to the '*learning gratification'* suggested that users participate in niche SNS as an alternative to improve their knowledge about a specific topic. Niche SNS present a good opportunity for users not only to access specialised information, but also to interact with other similarly-minded users interested in the same topics and even ask for help when they need it, integrating the '*self-status seeking'* and '*social support*' characteristics in this gratification.

Research Question 3: What are the main factors that motivate a user to withdraw from an SNS?

The research on the third stage made possible the exploration of salient ladders that help to understand the reasons for SNS withdrawal which were grouped in four major categories. These were '*control and impression management*', '*quality of the relationships*', '*time management and productivity*', and '*making life easier*'. Most of these reasons have been studied by SNS researchers following the users' participation approach. However, the differences between the findings obtained using the SNS participation approach and the findings of this research indicate that the focus on participation needs to be adapted to the withdrawal situation. The ladders associated with the need to feel in control of the image that the user is projecting on a network appear as the strongest reason for withdrawing. This

finding is based on centrality measures and the cut-off level of the different elements of the ladders, especially from the exposure of the Self. Former users felt that they were not in control of their information any more as other users had the chance to read and post information related to them. Based on the age range of the sample, it was found that older users were concerned with the impact that the information available on the SNS could potentially have, not only for their personal life, but also on their professional career.

The second group of ladders is related with the pursuit of more meaningful relationships with the members of their network. This group suggested that when talking about friendship online quantity does not mean quality. Closing the SNS profile helped them to concentrate on fewer contacts that are closer to the person, making the friendship relation more meaningful. The connection of this second group with the previous one is based on regaining the control of the image by restricting the access to their information only to a close circle of strong ties. Associated with controlling effort is a downsizing of the contact's network, resulting in a shift towards a more personal communication means. In this sense, the use of different means showed a preference for conversations that are felt to be more personally orientated, i.e. chats or telephone, showing how people want to feel that they have an interlocutor rather than that they are talking to the crowd on an SNS.

The third group was related to '*time management and productivity*'. The interviewees agreed when it came to the impact that the SNS was having on their available time and time management and how they found themselves spending several hours just looking around others' profiles or editing the information on their profiles. The age of the sample made it possible to control for how the everyday responsibilities made former users more critical about the time spent on the SNS and how they felt guilty after spending time on the network, even though they had other things to attend to. When the incoming information is not interesting for them, and they are required to actually start searching for valuable information amongst all the clutter of posts on the timeline, they felt they were wasting their time in the network and that the network had lost its original purpose.

The fourth group was related to emotional stability and how SNS had complicated modern life instead of making it easier. The emotional stability was affected by negative information appearing on the SNS affecting users' self-concept and self-esteem. Negative information includes even positive information that had a negative effect on the user. Users were looking for information that was interesting or at least positive enough to entertain them, but when the information coming shows negative news or the success of other people while

the user was having a normal or even a boring time, it made them feel bad (or worse), affecting their emotional stability. The part related with making life easier is related with the complications that SNS users have when they work with a new network or when the SNS updated its features. It is very common to read of Facebook users complaining every time there is a change to the Network. The resistance to change is reinforced when the network keeps changing often which made the users feel that they could not cope with the pace of development. In turn this can generate a great deal of frustration. Likewise, when users struggled with a new network and its idiosyncrasies, they often felt frustrated as they did not understand the logic or the purpose of the network.

This research about SNS user lifecycle has provided different elements to gain a deeper understanding of the SNS user behaviour. By dividing this life cycle on three stages, it was possible to confirm how the SNS user has different motivations on each stage, as proposed by Blattberg et al. (2001) in their customer life cycle. Moreover, it was found the need to incorporate different theoretical frameworks and well as implementing different methodologies to provide an answer to the research questions. Thus, the different needs of the user at each stage, along with the characteristics of the sample and the amount of literature available on the topic made necessary the use of the theories and methodologies aforementioned, as there was not found a theory that could explain all three stages thoroughly.

5.2 Contributions

This thesis contributes to extending the knowledge about SNS user behaviour by extending the focus on user participation to include the antecedents and the subsequent stages. As a result, the SNS user life cycle integrates the three stages of the SNS user: joining, participating and withdrawing. The next sections present the contributions to theory and practice based on the research carried out regarding this life cycle.

5.2.1 Contributions to knowledge

SNS user behaviour is growing along with the interest in SNS research. However, as most of the research focuses on user participation, there is a need to understand the reasons why a potential user will withdraw as well as why a user will join. This research has shed some light on these questions.

The research about joining contributes to the knowledge by confirming the importance of attitude, compatibility and peer pressure as the main drivers of this process, which was expected from the theory. However, the new contribution comes from the role of the perceived compatibility as an influential factor for the joining decision. The users want

something that they can match with how they are doing things now, making them feel that they are in control of the network. This element is important not only for the joining process but also for the participation. As users change over time, there is an evolution process that has to be matched by the SNS, so they can keep their participation in the network. When people feel that the network is not aligned with how they do things online now, they may even withdraw from the SNS.

The research on participation contributes to knowledge by finding that there are differences between niche and general purpose SNS. This contribution impacts on the SNS field, as the developments achieved so far on general purpose networks do not necessarily apply to niche SNS, as people use them for different purposes. Therefore, more research is required for niche SNS. However, due to the difficulties of accessing primary sources, it is recommended to use qualitative research approaches. In addition, research related to participating in niche SNS brought to light the importance of belongingness and identity as underlying factors in this stage. The sense of belonging along with the identity and identification process become the connection points between the three stages as people join because they want to be part of a group they feel identified with. Users participate in the network because they want to feel they are part of the group, and in turn this participation reaffirms their identity. Finally, users withdraw from the SNS when they feel disidentified with the group, hence they feel they do not belong anymore.

The research about withdrawal contributed to knowledge by finding an initial set of reasons that help to understand this phenomenon. Likewise, it was found that people continuously assess their identification with the people there (peer identification), but also their identification with the platform. SNS is a trendy world, so people want to be associated with the trendy ones and non-related with the outdated ones. For example, adults have a bad perception of their peers still using Myspace, as this SNS is associated with teenagers. In addition, the research helped identify how SNS withdrawal follows the uncertainty reduction and the self-enhancement processes proposed on the SIT (Kreiner et al., 2006), providing a framework to analyse this phenomenon. The values related with impression management and image control follow the uncertainty reduction as users need to feel in control of their identity (real or desired) which is challenged by the way in which the SNS might manage the privacy of your information, as well as the power that other users have to affect your identity in the network. Similarly, time management and productivity follow uncertainty reduction processes as the former users were blocking undesired behaviours that could cause discordance with

their identity and the identity of the groups they belong to in real life, such as the group of company employees or a group of students at the university. The values related with friendship are related with self-enhancement processes through distinctiveness perception. In this process, users are trying to create a difference between their individual identities and the identity of the group they belonged to which is in line with the research about organisational disidentification. (Elsbach and Bhattacharya, 2001)

Methodologically, the application of the MEC model combined with SNA made it possible to find out how the perception of some initial elements in the SNS (*attributes*) impact on the perception about the network (*consequences*), and how the consequences are leading towards SNS withdrawal as users are pursuing some underlying ends (*values*). At low levels of abstraction (*attributes* and *consequences*), differences between networks were found due to the diversity of purposes for the network and/or the type of information posted. However, escalating up the ladder from *consequences* to *values*, common *values* were found regardless of the SNS analysed.

The findings of this thesis are useful not only to understand withdrawal, but also to contribute to the understanding of current problems faced by SNS relating to SNS development and participation. By studying SNS withdrawal, this thesis contributes not only to the factors influencing this decision, but also proposing the theoretical foundations to continue further research into this subject. As a result, the research into SNS withdrawal complements the research into SNS participation, helping with the growth of SNS as a subject field.

5.2.2 Contributions to practice

The practical contributions of this thesis are orientated to social media practitioners such as SNS developers and administrators, as well as SNS users in fields like marketing, public relations, media and communications.

Results show the SNS market to be a highly competitive field in which users tend to be registered with several networks, making the entrance of new SNS a hard job. Therefore, having a good SNS-oriented service/idea, combined with good advertising and word of mouth, is important, but it is not enough to encourage a person to join a new SNS. Based on our research, SNS developers /entrepreneurs have to pay extra attention to offering a new SNS, emphasising how useful it is related to the purpose of the network, performing its task/functions as has not been done before, giving that sense of novelty that will make users

generate word of mouth and curiosity to join the new SNS. Hence, although design and novel user interfaces are important, when it comes to influencing and encouraging people to join the network it is more important to show that the network is aligned to the way they do things online.

Identification is a key factor regarding the networks for joining; people will join if they perceive that the network fits them and they the network. They will participate if they identify with the network and with the people, and will withdraw if they want to disidentify with the network and the people. So, acknowledging and embracing the difference of the SNS and the users on it to generate a better identification of the users with the SNS, will improve the joining and participation levels, as well as reduce the risk of withdrawal. Likewise, attempting to make things to be perceived as significant or meaningful for users, in this way, after spending time on the network, they will not feel as if they have been wasting their time.

Understanding the reasons why people want to leave the SNS provides tools not only to prevent this phenomenon on current SNS but also to design strategies in order to increase the engagement with the network. In addition, developers of future SNS will benefit from this thesis as they can design new SNS including the elements that people desire based on the values pursued by the users. Thus, incorporating the elements identified in the findings, new developers and SNS managers can increase the chances of success as they are satisfying the users at different levels (from the concrete or attributes, to the more abstract or values). For example, knowing that one of the main reasons for SNS withdrawal is related with the control of identity, the SNS has to provide a high perception of control. However, the control level has to be carefully designed so that it does not affect the ease of use. Additionally, one of the characteristics of the network that should be apparent for the user is that they are in control of the image on the network as well as in control of the intensity of use. For this reason, the SNS should deliver a perceived reward about using the network that should match (or even overtake) the level of guilt produced by the time spent on the network.

One of the key elements for the rewards is based on the information which should be perceived as positive or relevant for the users which in turn is related with the relevance of the contact. The relevance of the person is explained by the need for meaningful interactions (belongingness). In other words, people are not very interested in knowing things about the people they do not know or do not care about. The attention seekers and their oversharing practices are an example of this situation, as many of their post could be considered as noise, ending in many cases in being banned or blocked instead of getting recognition.

Related with the quality of the contacts is the strategy of recommending new contacts to the user, which is a common practice for SNS growth. However, the withdrawal analysis show how this strategy can be counterproductive, as the larger the network, the more difficult it becomes to manage as well as the larger the amount of information received. As a consequence, the timeline is loaded with posts that are not interesting for the user. These consequences impact on the time that people are spending on the network, as well as on the productivity, because the user has to scan through all posts looking for interesting information, which makes them feel that they are wasting their time in a network that has lost its purpose.

5.3 Research limitations and future research avenues

The DTPB model was developed to study the factors influencing user behaviour based on the intention. For future research it is recommended to include behaviour in order to complete the model. This research considered all SNS without differentiating between categories. For future research the study could be narrowed towards specific types of network, either general purpose or niche SNS, in order to test whether there are differences in the factors. Likewise, future research could consider a broader research framework in order to study whether there is cultural impact on the variables influencing the decision to join a new SNS.

The different variation of the components of the attitude shows the continuous evolution of the theory based on the application to new fields. The findings about joining new things on the SNS suggest that perceived usefulness should be reconsidered as part of the model, but more research is required. The importance of finding the main antecedents for attitude relies on the fact that this variable is used not only on TPB and DTPB, but also in TAM and Diffusion of innovation models.

Research design used cross sectional studies, but being aware that the users and the SNS evolve over time, doing a longitudinal analysis could bring new elements to the discussion. Another topic to extend the research into niche networks is exploring privacy and trustworthiness in these networks. These topics come from how the networks talk more openly and share more things based on trusted contacts, applying a triadic closure process, or in other words, the friend of a friend mechanism. The relevance of gratifications such as '*self-status seeking*' and '*social support*', reinforces the importance of researching how trustworthiness mechanisms work in niche networks. Websites like TripAdvisor and Couchsurf have scores assigned to their members, offering a sort of presentation card for other members. These scores work similar to the seller categories that eBay have for their

users, which are built by the experiences in previous transactions and the comments made by users who have traded with him/her. Still for networks that do not have this score system, how can a user manage to be considered as trustworthy, so gratifications like social support and interconnectedness can be obtained without constraint?

Finally, as niche SNS factors are proven to be different to the general purpose ones, a natural step forward in this network study is testing the network properties based on the social network theory, supported by social network analysis as the methodology designed specifically for this task. In this way, comparing the results obtained for niche SNS against the results already collected for general purpose networks will contribute to expanding the knowledge not only of niche SNS, but SNS in general terms.

The role of the information in the social network contrasts with how an SNS can identify relevant information for the user and keep a balance between relevant information and posts received, especially when the personal network starts growing. Related with the growth of the network, SNS developers have to think about how to identify the relevant people for the user in order to make a large network manageable but still find the interaction meaningful These dilemmas are connected, as it was found that the increase in the size of the personal network results in a decrease in the perception of the quality of the interactions as well as the quality of the information found in the network.

The analysis showed how the SNS have to evolve with the users. However, the dilemma here is how to manage the change and updates in the platform, so users do not feel that the network is changing too much too fast. In addition, a question for SNS developers is about how to create new SNS that look familiar enough to the users so they feel that they are easy to use, but they are still different from the existing ones. This dilemma is based on the finding on the third stage about usability, in which the users complained that the feeling of having to learn how to use an SNS will affect their permanence in the network, but at the same time if the network does not change as happened to Bebo or Myspace, then other networks that offer new features could take over their users. For new SNS, developers are recommended to create platforms that users feel are easy to use and where they feel in control of the network based on the experience of a previous network. The challenge comes in keeping this sense of familiarity at the same time that the new network is offering novel features in order to make the user feel that the new network is not more of the same.

The findings showed how the posts on the SNS can affect the self-esteem of the users, even when they know that this information is not true, therefore, this requires further information to understand how the user interprets the information and decides what to believe. The information's interpretation is a field that has many aspects requiring further research. In relation to this thesis, it was found that the interpretation of the posts can generate opposite effects in the user. For example, positive posts can generate envy, jealousy or sadness in other readers, but it is known that it can happen the other way around and bad news can make other readers happy. This good feeling about bad news of others is known as "*schadenfreude*" (Havard, 2013), and still needs further research in the SNS context.

Finally, the third stage was focused on user withdrawal which is the most extreme of the decisions in usage decline as identified by (Sillaber et al., 2013), but there are previous stages identified as permanent and temporary inactivity which need further research to understand the factors influencing these stages and the differences in the factors identified for inactivity and withdrawal.

Chapter 6. Appendices

6.1 Appendixes for joining

6.1.1 Appendix 1: Measurement model results for initial DTPB model

	Initial model			Modified model	
Item	Loading	T-value		0.911	59.9679
AT1	0.909	57.84		0.925	74.3533
AT2	0.927	77.03		0.948	108.701
AT3	0.948	112.8		0.946	100.601
AT4	0.947	106.3		0.921	61.4442
AT5	0.920	60.92		0.956	79.8287
BI1	0.956	78.88		0.973	205.435
BI2	0.974	204.6		0.937	79.2779
BI3	0.937	77.97		0.848	25.2042
CO1	0.848	25.85		0.797	21.2131
CO2	0.797	21.2		0.926	107.05
CO3	0.926	107.7		0.804	21.9012
EI1	0.804	22.16		0.890	47.1723
EI2	0.890	47.74		0.890	56.2421
EI3	0.890	55.36		0.908	65.428
EI4	0.908	64.32		0.886	49.6911
EU1	0.886	49.52		0.799	26.1606
EU2	0.799	25.93		0.868	42.0007
EU3	0.868	42.13		0.787	21.1709
EU4	0.787	21.17		0.886	49.7712
EU5	0.886	49.39		0.890	47.4845
EU6	0.890	47.32		0.983	215.043
FA1	0.983	213.5		0.983	240.2
FA2	0.983	238.4		0.904	32.3119
PBC1	0.904	32.72		0.887	29.4007
PBC2	0.887	28.88		0.925	79.3292
PBC3	0.925	79.58		0.959	131.105
PI1	0.959	130		0.954	104.023
PI2	0.954	102.1		0.932	11.1465
PR1	0.932	12.65		0.926	10.866
PR2	0.926	13.05		0.935	10.4951
PR3	0.935	11.82		0.930	10.2262
PR4	0.930	11.82		0.911	59.9679
PU1	0.888	53.59		Variable excluded	
PU2	0.853	31.83			
PU3	0.894	54.33			
PU4	0.918	72.18			
SE1	0.867	50.42		0.867	51.6471
SE2	0.874	39.77		0.874	41.8298
SE3	0.799	20.19		0.799	19.973
SE4	0.797	22.36		0.797	22.5745
SE5	0.864	38.15		0.864	37.5422
SI1	0.921	67.51		0.921	66.6565
SI2	0.896	42.48		0.896	41.3123

SN1	0.944	115		0.944	113.102
SN2	0.929	68.97		0.929	67.2281
TR1	0.921	54.79		0.921	65.5305
TR2	0.882	36.15		0.882	37.2022
TR3	0.872	30.88		0.872	31.2712

Table 26: Loadings and t-value for joining a new SNS. First model

6.1.2 Appendix 2: Measurement model for modified DTPB model

	PBC	TR	AT	CO	EU	EI	FA	BI	PI	PR	SE	SN	SU
PBC	0.905												
TR	0.054	0.892											
AT	0.163	0.402	0.930										
CO	0.290	0.320	0.530	0.859									
EU	0.446	0.262	0.347	0.471	0.854								
EI	0.089	0.425	0.497	0.361	0.235	0.874							
FA	0.468	-0.101	-0.011	0.110	0.199	-0.036	0.983						
BI	0.073	0.288	0.605	0.390	0.202	0.472	-0.059	0.956					
PI	-0.026	0.240	0.271	0.232	0.037	0.441	-0.018	0.296	0.957				
PR	0.094	-0.112	-0.083	-0.014	-0.004	-0.008	0.215	-0.104	0.117	0.930			
SE	0.552	0.279	0.182	0.287	0.430	0.246	0.391	0.155	0.109	0.034	0.841		
SN	0.005	0.227	0.243	0.283	0.049	0.397	0.040	0.304	0.649	0.066	0.084	0.937	
SI	-0.061	0.267	0.287	0.277	0.112	0.465	-0.008	0.296	0.523	0.137	0.019	0.469	0.909

*Elements in the diagonal are the square root of the AVE, the other cells are the correlations

Discriminant validity (Fornell-Larcker Criterion)

	PBC	TR	AT	CO	EU	EI	FA	BI	PI	PR	SE	SN	SU
BI1	**0.956**	0.573	0.185	0.370	0.282	0.257	0.254	0.429	0.070	0.124	-0.059	0.272	-0.092
BI2	**0.973**	0.572	0.176	0.343	0.287	0.281	0.259	0.451	0.044	0.146	-0.053	0.268	-0.116
BI3	**0.937**	0.589	0.217	0.403	0.302	0.309	0.334	0.471	0.094	0.174	-0.056	0.283	-0.090
AT1	0.610	**0.911**	0.287	0.515	0.236	0.289	0.263	0.479	0.139	0.169	-0.005	0.387	-0.075
AT2	0.533	**0.925**	0.317	0.481	0.207	0.229	0.272	0.468	0.181	0.133	0.011	0.332	-0.048
AT3	0.556	**0.948**	0.378	0.501	0.198	0.228	0.274	0.465	0.158	0.185	-0.018	0.387	-0.079
AT4	0.558	**0.946**	0.301	0.470	0.215	0.235	0.246	0.436	0.143	0.174	-0.017	0.388	-0.094
AT5	0.553	**0.921**	0.333	0.496	0.271	0.275	0.281	0.460	0.138	0.186	-0.022	0.372	-0.089
EU1	0.190	0.314	**0.886**	0.416	0.042	0.029	0.067	0.194	0.403	0.364	0.141	0.241	0.006
EU2	0.229	0.309	**0.799**	0.334	0.058	0.098	0.137	0.261	0.248	0.294	0.072	0.246	-0.058
EU3	0.184	0.289	**0.868**	0.426	0.018	0.023	0.097	0.206	0.420	0.375	0.214	0.206	0.007
EU4	0.152	0.290	**0.787**	0.434	0.068	0.014	0.102	0.160	0.416	0.357	0.223	0.171	0.077
EU5	0.135	0.272	**0.886**	0.406	0.036	0.016	0.080	0.168	0.407	0.421	0.217	0.226	-0.004
EU6	0.133	0.296	**0.890**	0.394	0.027	0.004	0.089	0.209	0.397	0.396	0.162	0.245	-0.044
CO1	0.346	0.428	0.408	**0.848**	0.195	0.209	0.258	0.323	0.203	0.213	0.022	0.249	-0.012
CO2	0.228	0.395	0.395	**0.797**	0.237	0.130	0.150	0.226	0.304	0.281	0.178	0.204	0.020
CO3	0.411	0.529	0.414	**0.926**	0.289	0.245	0.290	0.367	0.248	0.252	0.092	0.351	-0.037
SN1	0.332	0.213	0.013	0.262	**0.944**	0.630	0.439	0.388	0.009	0.084	-0.004	0.187	0.058
SN2	0.233	0.244	0.083	0.268	**0.929**	0.584	0.440	0.354	-0.001	0.072	0.084	0.242	0.067
PI1	0.273	0.244	0.028	0.193	0.640	**0.959**	0.473	0.406	-0.062	0.092	-0.047	0.208	0.130
PI2	0.293	0.275	0.043	0.252	0.601	**0.954**	0.529	0.439	0.015	0.118	0.014	0.251	0.092
SI1	0.292	0.269	0.109	0.259	0.452	0.559	**0.921**	0.460	-0.123	-0.001	-0.057	0.290	0.124
SI2	0.244	0.253	0.095	0.244	0.397	0.380	**0.896**	0.381	0.023	0.039	0.049	0.190	0.125
EI1	0.396	0.390	0.184	0.321	0.280	0.291	0.344	**0.804**	0.116	0.199	-0.006	0.333	0.077
EI2	0.390	0.438	0.190	0.277	0.306	0.402	0.409	**0.890**	0.072	0.222	-0.021	0.365	-0.036
EI3	0.404	0.427	0.176	0.286	0.398	0.438	0.408	**0.890**	0.058	0.219	-0.091	0.369	-0.032
EI4	0.456	0.477	0.269	0.378	0.381	0.392	0.455	**0.908**	0.076	0.220	0.002	0.414	-0.020
PBC1	0.052	0.121	0.426	0.271	-0.021	-0.033	-0.092	0.079	**0.904**	0.534	0.419	0.063	0.047
PBC2	0.066	0.157	0.357	0.248	-0.024	-0.052	-0.043	0.082	**0.887**	0.449	0.356	0.065	0.049
PBC3	0.080	0.167	0.423	0.266	0.052	0.009	-0.030	0.082	**0.925**	0.510	0.485	0.024	0.152
SE1	0.140	0.136	0.418	0.264	0.084	0.063	-0.004	0.192	0.566	**0.867**	0.410	0.226	0.049

SE2	0.159	0.162	0.366	0.264	0.070	0.078	0.033	0.235	0.465	**0.874**	0.315	0.295	-0.026
SE3	0.110	0.144	0.339	0.258	0.080	0.115	-0.006	0.168	0.396	**0.799**	0.345	0.173	0.026
SE4	0.065	0.159	0.296	0.174	0.046	0.074	0.004	0.215	0.381	**0.797**	0.228	0.287	0.081
SE5	0.162	0.173	0.368	0.239	0.068	0.138	0.052	0.228	0.474	**0.864**	0.320	0.201	0.017
FA1	-0.073	-0.031	0.187	0.094	0.039	-0.029	-0.009	-0.039	0.459	0.380	**0.983**	-0.112	0.214
FA2	-0.043	0.010	0.205	0.122	0.040	-0.007	-0.007	-0.032	0.460	0.389	**0.983**	-0.087	0.209
TR1	0.294	0.358	0.261	0.336	0.203	0.187	0.212	0.380	0.120	0.294	-0.033	**0.921**	-0.101
TR2	0.248	0.403	0.218	0.246	0.189	0.241	0.272	0.389	-0.002	0.205	-0.160	**0.882**	-0.074
TR3	0.219	0.312	0.216	0.263	0.219	0.221	0.236	0.371	0.011	0.241	-0.089	**0.872**	-0.129
PR1	-0.100	-0.063	0.008	0.004	0.062	0.115	0.145	-0.018	0.102	0.050	0.214	-0.076	**0.932**
PR2	-0.104	-0.097	-0.027	0.002	0.085	0.128	0.131	-0.013	0.057	0.002	0.184	-0.068	**0.926**
PR3	-0.087	-0.092	-0.007	-0.041	0.046	0.102	0.126	-0.010	0.049	0.020	0.183	-0.133	**0.935**
PR4	-0.095	-0.057	0.013	-0.022	0.050	0.088	0.105	0.012	0.140	0.055	0.219	-0.146	**0.930**

Cross - loadings

6.2 Appendices for participation

6.2.1 Appendix 3: Gratifications and questions included in the pilot questionnaire.

		Construct	Question	Source
		Group 1: Socialisation / interconnectedness		
ic1	21	Interconnectedness	To network with others	(Foregger, 2008)
ic2	22	Interconnectedness	To see who knows who	
ic3	23	Interconnectedness	To look at pictures of my "*friends' friends*"	
ic4	24	Interconnectedness	To see who my contacts and I have in common	
ic5	25	Interconnectedness	To see if my contacts and I know the same people	
ic6	26	Interconnectedness	To see how everyone is connected	
ic7	27	Interconnectedness	To see where people know each other from	
mat1	30	Maintain/Establish old ties	To keep in touch with old friends	
mat2	31	Maintain/Establish old ties	To contact out-of-state friends	
mat3	32	Maintain/Establish old ties	To track down old friends	
mat4	33	Maintain/Establish old ties	To see where people are at now	
mat5	34	Maintain/Establish old ties	To maintain old friendships	
soc1	35	Socialising	To stay in touch with people I know	(Park et al., 2009)
soc2	36	Socialising	To meet interesting people	
soc3	37	Socialising	To talk about something with others	
soc4	38	Socialising	To get peer support from others	
sup1	39	Seeking Social Support	To let out my emotions easily to others who will understand me	(Kim et al., 2011)
sup2	40	Seeking Social Support	To talk out my problems and get advice	
sup3	41	Seeking Social Support	To let others know I care about their feelings	
	42	Interpersonal Utility	To help others	(Papacharissi and Rubin, 2000)
	43	Interpersonal Utility	To show others encouragement	
	44	Interpersonal Utility	To tell others what to do	
	45	Interpersonal Utility	Because I want someone to do something for me	
	59	Interpersonal Utility	To give my input	
	28	sociability gratification	To keep in contact with people I don't have enough time to see in person	(Dimmick et al., 2007) and (Ramirez Jr et al., 2008)
	29	sociability gratification	To keep in contact with others who live far away	
	48	sociability gratification	To feel or express caring	
	49	sociability gratification	For a feeling of companionship with people I know	
	50	sociability gratification	To give or receive advice on personal matters or issues	

	51	sociability gratification	To give or receive information with people I know	
	52	sociability gratification	To communicate personal messages with those closest to me	
	53	sociability gratification	To send or receive personal messages	
	72	sociability gratification	To share ideas and opinions	
sogr1	112	sociability gratification	To resolve conflicts	
sogr2	113	sociability gratification	For coordinating social events with people I know	
sta1	54	Self-status seeking	Because it makes myself look cool	(Park et al., 2009)
sta2	55	Self-status seeking	To develop my career through group participation	
sta3	56	Self-status seeking	Because I feel peer pressure to participate	
sfrie1	57	Seeking Friends	To hang out with people I enjoy	(Kim et al., 2011)
sfrie2	58	Seeking Friends	To talk with people with the same interests	
ipu1	60	Interpersonal utility motive	To meet new people	(Cha, 2010)
ipu2	61	Interpersonal utility motive	To belong to a group	
ipu3	62	Interpersonal utility motive	To express myself freely	
ipu4	63	Interpersonal utility motive	Because I wonder what other people said	
ipu5	64	Interpersonal utility motive	To keep contact with my contacts	
ipu6	65	Interpersonal utility motive	To feel involved with what's going on with other people	
ipu7	66	Interpersonal utility motive	To keep my contacts up–to–date	
ipu8	67	Interpersonal utility motive	To strengthen my relationships with my contacts	
		Group 2: information exchange		
ifseek1	76	Information seeking 1	To get useful information about product/services	(Park et al., 2009)
ifseek2	77	Information seeking 1	To get information about events outside the niche network	
ifseek3	78	Information seeking 1	To learn about niche network events	
insk1	79	Information seeking 2	To look for information	(Papacharissi and Rubin, 2000)
insk2	80	Information seeking 2	To get information for free	
insk3	81	Information seeking 2	Because it is easier to search for information	
insk4	82	Information seeking 2	To see what is out there	
insk5	83	Information seeking 2	Because it is a new way to do research	
skinf1	84	Seeking Information 3	To learn about unknown things	(Kim et al., 2011)
skinf2	85	Seeking Information 3	To learn about useful things	
skinf3	86	Seeking Information 3	To get new ideas	
innov1	87	Innovativeness	Because I am very curious about how things work	(Cha, 2010)

innov2	88	Innovativeness	Because I like to experiment with new ways of doing things	
innov3	89	Innovativeness	Because I like to take a chance	
innov4	90	Innovativeness	Because I like to be around unconventional people who dare to try new things	
learn1	91	Learning motive	Because it lets me explore new things	
learn2	92	Learning motive	Because it extends my mind	
learn3	93	Learning motive	Because it advances my knowledge	
learn4	94	Learning motive	Because it opens me up to new ideas	
		Group 3: Entertainment		
ent1	95	Entertainment motive	Because it's entertaining	(Cha, 2010)
ent2	96	Entertainment motive	Because it's enjoyable	
ent3	97	Entertainment motive	Because it amuses me	
pls1	98	Pleasurable way to spend time	Just to waste time	(Foregger, 2008)
pls2	99	Pleasurable way to spend time	To make time fly by	
pls3	100	Pleasurable way to spend time	Because it's interesting	
pls4	101	Pleasurable way to spend time	To be entertained	
pls5	102	Pleasurable way to spend time	When I don't want to study/work	
pls6	103	Pleasurable way to spend time	Because it is funny	
pls7	104	Pleasurable way to spend time	To pass the time	
skent1	105	Seeking Entertainment	To forget about work or other things	(Kim et al., 2011)
skent2	106	Seeking Entertainment	To Relax	
skent3	107	Seeking Entertainment	Because it is exciting	
	108	Entertainment	Because I just like to use it	(Papacharissi and Rubin, 2000)
bor1	109	Boredom relief motive	To pass time when I'm bored	(Cha, 2010)
bor2	110	Boredom relief motive	When I have nothing better to do	
bor3	111	Boredom relief motive	To occupy my time	
esc1	46	Escape motive	To forget my problems	
esc2	47	Escape motive	To escape my worries	
		Group 4: convenience gratifications		
sogr3	114	gratification opportunities	For communication that is convenient	(Dimmick et al., 2007) and (Ramirez Jr et al., 2008)
sogr4	115	gratification opportunities	For communication that is simple and easy	
sogr5	116	gratification opportunities	For communication that is economical	
sogr6	117	gratification opportunities	For communication that is quick and fast	
sogr7	118	gratification opportunities	For ease in getting a hold of someone	

sogr8	119	gratification opportunities	For communication that fits people's work schedules	
sogr9	120	gratification opportunities	For communication with people in different time zones	
sogr10	121	gratification opportunities	For communication that is conversational	
sogr11	122	gratification opportunities	For communication that is "*different*" than face to face	
pu1	123	Perceived usefulness	Using SNS makes me more efficient	(Cha, 2010)
pu2	124	Perceived usefulness	Using SNS helps me accomplish things more quickly	
pu3	125	Perceived usefulness	Using SNS makes my life easier	
pu4	126	Perceived usefulness	Using SNS would be useful in my life	
mkt1	127	Market	Because Using SNS would enable me to accomplish shopping or information seeking more quickly than using search engines such as Google or Bing	(Huang, 2008)
mkt2	128	Market	Because using SNS would improve my performance in shopping or information seeking (e.g. save time or money)	
mkt3	129	Market	Because Using SNS would increase my productivity in shopping or information seeking (e.g. make purchase decisions or find product information within the shortest time frame)	
mkt4	130	Market	Because Using SNS would enhance my effectiveness in shopping or information seeking (e.g. get the best deal or find the most information about a product)	
mkt5	131	Market	Because Using SNS would make it easier for me to shop or find information	
mkt6	132	Market	I find SNS very useful in my shopping or information seeking	
priv1	68	Privacy concerns	Because I am concerned that the information I submit on the SNS could be misused	(Cha, 2010)
priv2	69	Privacy concerns	Because I am concerned about submitting information on the SNS because of what others might do with it	
priv3	70	Privacy concerns	Because I am concerned about submitting information on the SNS because it could be used in a way I did not foresee	
priv4	71	Privacy concerns	Because When I shop online, I am concerned that the credit card information can be stolen while being transferred on the Internet	

The items without code name were excluded from the questionnaire.

6.2.2 Appendix 4: Measurement and structural model

	G11_INNOV	G1_LEARN	G13_ENT	G15SKENT	G16_BOR	G17_ESC	G18_SOGR	G19PU	G1_IC	G20_MKT	G21_PRIV	G2_MAT	G3_SOC	G4_SUP	G5_STA	G7IPU	G9-INSK	INT-USE
G11_INNOV	0.819																	
G1_LEARN	0.403	0.894																
G13_ENT	0.250	0.093	0.934															
G15SKENT	0.171	0.176	0.690	0.827														
G16_BOR	0.094	0.242	0.540	0.633	0.862													
G17_ESC	0.140	0.338	0.343	0.468	0.397	0.964												
G18_SOGR	0.556	0.299	0.282	0.279	0.164	0.153	0.756											
G19PU	0.395	0.228	0.206	0.279	0.135	0.078	0.554	0.856										
G1_IC	0.487	0.295	-0.037	0.054	-0.049	0.140	0.389	0.360	0.761									
G20_MKT	0.269	0.250	0.218	0.321	0.341	0.187	0.376	0.536	0.215	0.883								
G21_PRIV	0.310	0.176	0.356	0.319	0.111	0.149	0.251	0.373	0.282	0.333	0.825							
G2_MAT	0.460	0.359	0.041	0.123	0.144	0.244	0.419	0.278	0.503	0.226	0.001	0.853						
G3_SOC	0.298	0.090	0.246	0.247	0.077	0.301	0.393	0.284	0.459	0.187	0.390	0.173	0.810					
G4_SUP	0.218	0.320	0.197	0.253	0.259	0.534	0.351	0.134	0.263	0.202	0.048	0.327	0.481	0.866				
G5_STA	0.243	0.108	0.383	0.252	0.065	0.140	0.386	0.177	0.186	0.129	0.490	-0.085	0.565	0.200	0.837			
G7IPU	0.227	0.080	0.324	0.301	0.136	0.152	0.195	0.302	0.250	0.339	0.736	-0.062	0.392	0.011	0.524	0.820		
G9-INSK	0.466	0.210	0.424	0.382	0.071	0.190	0.514	0.368	0.327	0.269	0.550	0.081	0.607	0.241	0.588	0.517	0.763	
INT-USE	0.200	-0.032	0.286	0.259	0.107	0.205	0.325	0.193	0.252	0.094	0.180	0.139	0.476	0.395	0.427	0.240	0.362	0.811

Discriminant validity (Fornell-Larcker Criterion)

	G11_INNOV	G1_LEARN	G13_ENT	G15SKENT	G16_BOR	G17_ESC	G18_SOGR	G19PU	G1_IC	G20_MKT	G21_PRIV	G2_MAT	G3_SOC	G4_SUP	G5_STA	G7IPU	G9-INSK	INT-USE
Int_use1	**0.828**	0.210	0.197	0.340	0.430	0.341	0.140	0.258	0.181	0.010	0.272	0.271	0.173	0.226	0.353	0.146	0.170	0.126
Int_use2	**0.756**	0.198	0.036	0.409	0.203	0.350	0.237	0.322	0.133	-0.069	0.225	0.153	0.009	0.149	0.137	0.178	0.020	0.277
Int_use3	**0.828**	0.229	0.217	0.357	0.424	0.298	0.162	0.271	0.216	0.066	0.228	0.213	0.103	0.231	0.269	0.127	0.066	0.063
Int_use4	**0.867**	0.246	0.103	0.477	0.324	0.410	0.226	0.332	0.162	-0.014	0.250	0.226	0.087	0.145	0.305	0.176	0.063	0.179
Int_use5	**0.771**	0.128	-0.019	0.345	0.188	0.333	0.219	0.292	0.109	-0.146	0.177	0.175	0.044	0.068	0.228	0.158	0.050	0.101
ic1	0.309	**0.693**	0.199	0.372	0.062	0.199	0.219	0.340	0.371	0.051	-0.119	-0.124	-0.225	-0.047	0.341	0.230	0.052	0.226
ic2	0.118	**0.754**	0.437	0.269	0.221	0.065	0.171	0.117	0.312	0.283	-0.029	0.088	-0.004	0.192	0.203	0.258	0.166	0.175
ic4	0.093	**0.762**	0.417	0.341	0.260	0.096	0.191	0.180	0.354	0.254	-0.029	0.073	0.024	0.152	0.249	0.282	0.243	0.208
ic5	0.144	**0.823**	0.495	0.317	0.261	0.112	0.147	0.215	0.413	0.345	-0.008	0.052	0.029	0.127	0.297	0.279	0.160	0.160
ic6	0.085	**0.771**	0.426	0.342	0.187	0.136	0.194	0.225	0.347	0.290	0.032	0.133	0.054	0.201	0.240	0.298	0.239	0.261
ic7	0.156	**0.755**	0.516	0.363	0.350	0.129	0.166	0.226	0.358	0.338	0.104	0.250	0.165	0.240	0.306	0.322	0.281	0.231
mat1	0.093	0.431	**0.920**	0.114	0.320	-0.084	-0.062	0.018	0.402	0.327	0.034	0.086	0.160	0.225	0.370	0.185	0.213	-0.013
mat2	0.165	0.392	**0.889**	0.173	0.254	-0.046	-0.061	0.145	0.366	0.294	0.044	0.136	0.104	0.193	0.384	0.299	0.234	-0.042
mat3	0.017	0.422	**0.803**	0.065	0.291	-0.130	-0.032	-0.009	0.325	0.305	0.009	0.025	0.102	0.233	0.303	0.222	0.218	0.027
mat4	0.109	0.556	**0.762**	0.217	0.273	-0.072	0.030	0.072	0.432	0.311	0.056	0.139	0.170	0.239	0.311	0.242	0.170	0.125
mat5	0.096	0.366	**0.880**	0.078	0.302	-0.101	-0.131	0.000	0.416	0.316	0.003	0.049	0.076	0.188	0.380	0.189	0.132	-0.058
soc2	0.309	0.410	0.153	**0.711**	0.192	0.377	0.325	0.492	0.199	-0.022	0.191	0.135	-0.028	0.133	0.192	0.238	0.119	0.369
soc3	0.420	0.314	0.084	**0.850**	0.460	0.536	0.348	0.506	0.212	0.051	0.239	0.243	0.143	0.290	0.381	0.164	0.155	0.281
soc4	0.416	0.409	0.190	**0.862**	0.474	0.448	0.288	0.487	0.309	0.168	0.170	0.209	0.049	0.285	0.355	0.296	0.177	0.318
sup1	0.268	0.198	0.319	0.272	**0.845**	0.061	-0.054	0.147	0.189	0.300	0.216	0.274	0.293	0.511	0.240	0.053	0.137	-0.001
sup2	0.404	0.244	0.205	0.548	**0.867**	0.267	0.070	0.273	0.182	0.201	0.124	0.188	0.158	0.387	0.309	0.122	0.170	0.087
sup3	0.327	0.232	0.353	0.373	**0.886**	0.148	-0.013	0.179	0.197	0.355	0.192	0.214	0.250	0.519	0.351	0.160	0.212	0.020
sta1	0.331	0.107	-0.131	0.479	0.071	**0.821**	0.560	0.507	0.194	0.040	0.310	0.170	0.072	0.047	0.229	0.143	0.125	0.517
sta2	0.367	0.190	-0.021	0.494	0.167	**0.894**	0.413	0.540	0.256	0.167	0.300	0.184	0.017	0.058	0.398	0.195	0.150	0.387
sta3	0.372	0.165	-0.067	0.446	0.252	**0.795**	0.357	0.432	0.160	0.059	0.351	0.275	0.076	0.237	0.334	0.106	0.052	0.338
ipu2	0.233	0.209	-0.114	0.346	-0.087	0.525	**0.854**	0.505	0.189	-0.008	0.204	0.157	0.007	0.083	0.216	0.206	0.233	0.595
ipu3	0.198	0.258	-0.013	0.287	0.014	0.437	**0.844**	0.375	0.244	0.146	0.247	0.213	0.152	0.144	0.168	0.191	0.215	0.515
ipu4	0.162	0.192	0.031	0.218	0.090	0.296	**0.754**	0.291	0.168	0.094	0.234	0.238	0.194	0.170	0.167	0.202	0.369	0.491
ipu5	0.187	0.207	0.010	0.357	0.019	0.392	**0.820**	0.447	0.213	0.091	0.351	0.350	0.113	0.138	0.093	0.314	0.305	0.645
ipu7	0.199	0.160	-0.094	0.324	0.029	0.387	**0.814**	0.409	0.129	0.046	0.274	0.295	0.140	0.149	0.122	0.295	0.331	0.654

ipu8	0.190	0.207	-0.098	0.383	0.024	0.513	**0.833**	0.492	0.172	0.044	0.302	0.252	0.099	0.078	0.187	0.288	0.244	0.720
insk2	0.355	0.290	0.259	0.422	0.330	0.319	0.289	**0.732**	0.439	0.277	0.438	0.366	0.188	0.245	0.530	0.348	0.256	0.324
insk3	0.249	0.230	-0.050	0.466	0.055	0.544	0.469	**0.819**	0.296	0.082	0.269	0.211	-0.039	0.094	0.306	0.219	0.144	0.445
insk4	0.232	0.085	-0.127	0.441	0.089	0.595	0.497	**0.738**	0.258	0.117	0.288	0.306	0.041	0.091	0.326	0.217	0.193	0.466
insk5	0.222	0.373	0.066	0.538	0.188	0.388	0.364	**0.760**	0.385	0.103	0.231	0.239	-0.043	0.095	0.328	0.305	0.200	0.486
innov1	0.147	0.380	0.476	0.216	0.120	0.105	0.078	0.384	**0.841**	0.290	0.169	0.117	0.025	0.057	0.515	0.328	0.148	0.168
innov2	0.154	0.343	0.214	0.303	0.222	0.296	0.358	0.372	**0.692**	0.221	0.272	0.274	0.179	0.194	0.416	0.338	0.351	0.364
innov3	0.116	0.438	0.462	0.156	0.241	0.118	0.110	0.299	**0.845**	0.446	0.187	0.098	0.111	0.152	0.506	0.366	0.253	0.215
innov4	0.210	0.433	0.382	0.271	0.153	0.238	0.176	0.435	**0.885**	0.376	0.191	0.082	0.019	0.076	0.417	0.286	0.157	0.256
learn1	-0.022	0.299	0.377	0.142	0.304	0.161	0.076	0.217	0.425	**0.896**	0.115	0.179	0.198	0.314	0.291	0.245	0.232	0.156
learn2	-0.030	0.273	0.356	0.028	0.290	0.062	0.036	0.201	0.393	**0.956**	0.112	0.163	0.240	0.309	0.280	0.227	0.220	0.139
learn3	-0.036	0.251	0.278	0.060	0.272	0.107	0.104	0.207	0.359	**0.950**	0.073	0.167	0.229	0.314	0.254	0.190	0.222	0.209
learn4	-0.021	0.254	0.304	0.131	0.304	0.066	0.067	0.118	0.270	**0.763**	0.030	0.119	0.195	0.278	0.265	0.161	0.235	0.108
ent1	0.237	-0.044	0.025	0.193	0.171	0.323	0.300	0.404	0.197	0.116	**0.934**	0.643	0.478	0.330	0.215	0.182	0.192	0.349
ent2	0.291	-0.042	0.026	0.257	0.175	0.382	0.290	0.417	0.250	0.063	**0.958**	0.623	0.478	0.295	0.286	0.184	0.182	0.323
ent3	0.267	-0.018	0.064	0.234	0.205	0.364	0.320	0.367	0.249	0.088	**0.909**	0.669	0.557	0.339	0.281	0.211	0.238	0.329
skent1	0.158	-0.030	0.136	0.134	0.249	0.082	0.182	0.204	0.109	0.188	0.535	**0.790**	0.606	0.496	0.145	0.143	0.287	0.140
skent2	0.091	-0.095	0.055	0.068	0.208	0.118	0.217	0.193	0.094	0.172	0.653	**0.765**	0.672	0.385	0.179	0.069	0.208	0.194
skent3	0.295	0.131	0.104	0.297	0.201	0.318	0.310	0.433	0.182	0.123	0.599	**0.917**	0.466	0.353	0.307	0.341	0.288	0.367
bor1	0.094	-0.061	0.182	0.033	0.261	0.045	0.122	0.097	0.130	0.260	0.580	0.628	**0.936**	0.428	0.179	0.065	0.265	0.105
bor2	-0.024	-0.039	0.220	0.036	0.226	0.029	0.122	0.163	0.173	0.298	0.535	0.593	**0.730**	0.380	0.238	0.049	0.228	0.128
bor3	0.070	-0.026	0.107	0.115	0.222	0.075	0.139	0.062	0.065	0.217	0.438	0.573	**0.906**	0.316	0.156	0.186	0.373	0.115
esc1	0.181	0.137	0.236	0.275	0.505	0.124	0.134	0.150	0.113	0.301	0.331	0.457	0.393	**0.958**	0.133	0.034	0.132	0.125
esc2	0.212	0.134	0.234	0.304	0.525	0.144	0.157	0.211	0.153	0.348	0.330	0.447	0.375	**0.970**	0.159	0.111	0.222	0.160
sogr10	0.304	0.237	0.266	0.353	0.346	0.312	0.101	0.428	0.320	0.160	0.259	0.299	0.143	0.174	**0.712**	0.316	0.288	0.211
sogr2	0.244	0.316	0.446	0.260	0.320	0.217	0.080	0.351	0.460	0.346	0.286	0.224	0.176	0.179	**0.683**	0.331	0.311	0.147
sogr3	0.287	0.322	0.319	0.326	0.205	0.355	0.166	0.484	0.519	0.164	0.240	0.208	0.097	0.019	**0.839**	0.514	0.282	0.213
sogr4	0.308	0.295	0.245	0.306	0.260	0.363	0.103	0.382	0.483	0.161	0.231	0.180	0.107	0.023	**0.816**	0.387	0.163	0.103
sogr5	0.227	0.320	0.338	0.259	0.266	0.302	0.215	0.351	0.450	0.236	0.223	0.207	0.178	0.134	**0.834**	0.483	0.331	0.235
sogr6	0.177	0.303	0.259	0.216	0.185	0.261	0.176	0.350	0.397	0.185	0.180	0.160	0.107	0.064	**0.767**	0.465	0.291	0.172
sogr7	0.179	0.323	0.413	0.245	0.294	0.159	0.096	0.277	0.406	0.359	0.114	0.197	0.159	0.129	**0.722**	0.493	0.346	0.126
sogr8	0.158	0.315	0.349	0.298	0.233	0.213	0.193	0.362	0.313	0.283	0.081	0.138	0.029	0.125	**0.678**	0.433	0.339	0.232
sogr9	0.232	0.256	0.282	0.365	0.253	0.355	0.243	0.452	0.398	0.242	0.207	0.241	0.103	0.222	**0.735**	0.424	0.289	0.288
pu1	0.193	0.311	0.261	0.240	0.126	0.135	0.219	0.327	0.400	0.200	0.168	0.248	0.103	0.098	0.487	**0.885**	0.448	0.305
pu2	0.125	0.304	0.293	0.245	0.132	0.124	0.191	0.336	0.337	0.216	0.218	0.325	0.158	0.139	0.527	**0.845**	0.485	0.307

pu3	0.176	0.337	0.233	0.258	0.120	0.163	0.300	0.334	0.297	0.202	0.187	0.245	0.149	0.052	0.473	**0.862**	0.493	0.315
pu4	0.150	0.279	0.169	0.230	0.081	0.183	0.322	0.265	0.310	0.165	0.141	0.149	0.057	-0.015	0.421	**0.830**	0.417	0.355
mkt1	0.077	0.228	0.286	0.116	0.303	0.054	0.242	0.168	0.228	0.239	0.202	0.319	0.264	0.185	0.330	0.434	**0.733**	0.239
mkt2	0.061	0.183	0.213	0.193	0.167	0.079	0.273	0.249	0.215	0.227	0.182	0.323	0.330	0.158	0.349	0.499	**0.909**	0.292
mkt3	0.030	0.171	0.183	0.181	0.169	0.050	0.250	0.209	0.196	0.208	0.158	0.279	0.309	0.186	0.325	0.476	**0.889**	0.267
mkt4	0.052	0.170	0.205	0.173	0.160	0.106	0.283	0.252	0.208	0.266	0.174	0.306	0.312	0.189	0.342	0.493	**0.925**	0.306
mkt5	0.100	0.179	0.174	0.194	0.138	0.149	0.312	0.228	0.287	0.204	0.226	0.257	0.367	0.151	0.350	0.464	**0.909**	0.322
mkt6	0.113	0.190	0.155	0.150	0.143	0.164	0.359	0.287	0.234	0.199	0.177	0.250	0.241	0.150	0.302	0.482	**0.920**	0.307
priv1	0.205	0.207	-0.113	0.369	-0.011	0.470	0.707	0.597	0.233	0.044	0.314	0.237	0.004	0.044	0.171	0.311	0.289	**0.870**
priv2	0.104	0.198	0.047	0.318	0.052	0.429	0.597	0.395	0.283	0.211	0.306	0.311	0.136	0.215	0.206	0.259	0.277	**0.837**
priv3	0.040	0.277	0.075	0.256	0.006	0.306	0.581	0.387	0.280	0.188	0.268	0.238	0.089	0.123	0.187	0.272	0.291	**0.809**
priv4	0.133	0.295	0.117	0.282	0.120	0.328	0.490	0.315	0.272	0.241	0.272	0.281	0.195	0.178	0.276	0.361	0.256	**0.779**

Cross loadings

Path coefficients

Construct	Path coefficient	t-value
g1_interconnectedness	0.098	1.136
g2_maintain_old_ties	0.053	0.58
g3_socialising	0.1	1.006
g4_seeking_social_support	0.298***	3.682
g5_self_status_seeking	0.257***	2.908
g7_interpersonal_utility_motive	0.096	0.988
g9_information_seeking2	0.021	0.243
g11_innovativeness	0.014	0.174
g12_learning	-0.22***	2.103
g13_entertainment	0.083	0.805
g15_seeking_entertainment	0.094	0.92
g16_boredom_relief	-0.025	0.175
g17_escape	-0.031	0.381
g18_gratification_oportunities	0.032	0.373
g19_perceived_usefulness_convenience	0.074	0.793
g20_market	-0.078	0.85
g21_privacy	-0.137	1.461
*** *p<0.01, **p<0.05 * p<0.1*		

Table 27: Path coefficients. Stage 2

6.3 Appendices for withdrawal

6.3.1 Appendix 5: Consent forms

Information for participants

Title of the project: Social Networking Sites life's cycle: Why users withdraw of the SNS?

PhD Student: Carlos Osorio, Newcastle University Business School (NUBS)

Supervision Team: Prof. Savvas Papagiannidis (NUBS), Dr. Rob Wilson (NUBS)

Dear Participant,

The proposed research is undertaken by a PhD student from Newcastle University Business School. It is focused on the motivations to carry on certain actions during different stages of his/her participation in a social networking site (SNS).

The main aim of the research is to explore and to analyse the main reasons that a person has to withdraw from a SNS. The results of the study will contribute to better understanding the social network users, as well as the impact of SNS in society.

The data from this research will be used mainly for the PhD thesis, but can be extended to academic research papers, presentations and reports of the research findings to the project management.

Ethical issues

The proposed research is based on collecting data from people and about people, so the Researcher is striving to protect participants from undue harm and to minimise disruption as much as possible. To achieve this, the Researcher will be governed by three principles based on Ethical Guidelines of Social Research Association namely: privacy, anonymity and confidentiality.

It is proposed that to achieve the aim of the study, interviews and meeting observations will be recorded and fully transcribed. All the notes, quotes and recordings will be stored in a secure location to which only the Researcher and the team of supervisors will have an access. People's names and job titles will be anonymised and not be included in reports, PhD thesis and academic papers and presentations, but informants should be aware that they may be identifiable through comments that they make. You will be offered a copy of their interview transcript and provided with opportunity to take out and amend any part of it that you do not wish to be reported in the findings.

We hope that you will be able to help with this important area of research. If you agree to take part please complete the Statement of informed consent for interview and /or the Statement of informed consent for documents.

Your participation in the study is voluntary and you are still free to withdraw at any time, and without giving a reason.

Please, indicate on the consent form if you would like to receive a summary of the key findings of the study.

If you have questions about the research or you would like to get further information about the study, please do not hesitate to get in touch:

Carlos Osorio – 074110 33337; c.osorio@ncl.ac.uk

Thank you

STATEMENT OF INFORMED CONSENT FOR INTERVIEW

Title of the project: Social Networking Sites life's cycle: Why users withdraw of the SNS?

Dear Participant,

Thank you for your agreement to participate in the research on the life cycle of social network users for my PhD Thesis.

Please read the full informed consent document. You are asked to sign two of the forms and will be given one to keep.

- I was provided with the Research participant information sheet and the Interviewer explained me the purpose of the research.
- I understand that my participation in this interview is voluntarily and that I may withdraw at any time without prejudice and without providing a reason.
- I agree to the interview being audio recorded .....Yes/ No
- I agree to the interview being video recorded .....Yes/ No
- I understand that what I say in the interview will be kept confidential by the Researcher. As far as possible all comments will be anonymised in any reports or papers that are produced as a result of the research. My name will not be used in any research reports and nothing will be published that might identify me, but there is a possibility that I may be identifiable through comments that I make.
- I understand that no-one will have an access to the recording beyond the Researcher and his team of supervisors.
- I understand that I will be offered a copy of my interview transcript and provided with the opportunity to take out or amend any part of it that I do not wish to be reported in the findings.
- I understand that the data from this research will be used research will be used mainly for the PhD thesis, but can be extended to academic research papers, presentations and reports of the research findings to the project management.
- I understand that if I have any further questions I can contact the Researcher using contact details mentioned below.

_____	_____	_____
Name of Respondent	Signature of Respondent	Date

_____

Signature of the Researcher

Carlos Osorio, PhD Student, c.osorio@ncl.ac.uk

Address slip – to receive a copy of your interview transcript or summary of research findings

I would like to receive a copy of my interview transcript.....YES/NO

I would like to receive a summary of the key findings this study .....YES/NO

If you would like to receive a copy of your interview transcript and/or a summary of research findings please provide your contact details here:

Name: .....

Contact address: .....

6.3.2 Appendix 6: chains

The following table list the chains identified from the laddering interviews. The yellow cells are the attributes, the green cells are the consequences and the red cells are the values

L1	L2	L3	L4	L5	L6
9	47	85			
16	26	55	81		
32	48	86			
24	48	78			
13	35	87			
6	72	85			
28	6	72	85		
23	6	64			
32	33	38	48	87	
6	64	85			
6	48	76	93	87	
32	48	71	90	86	
14	71	84			
26	57	47	91		
26	47	81	85		
32	71	94			
32	71	86			
1	26	55	87		
32	38	87			
22	20	45	86	93	
32	38	87	80		
32	50	80			
32	38	87			
16	26	34	57	87	
12	50	78			
26	51	72	93		
33	50	93	80		
33	18	57	87		
22	36	65	87		
13	38	87	85		
22	42	93			
22	42	93			
23	42	87			
24	71	48	86		
1	26	47	85		
14	49	87			
14	49	93			
2	25	43	94		
31	13	63	80		
25	28	43	67	74	87
25	5	54	80		
31	39	89			
7	58	84			
31	13	45	80		
31	36	63	80		
36	62	65	93		
31	58	80			
25	28	53	39	89	
25	53	82	87		

L1	L2	L3	L4	L5	L6
26	57	87			
26	41	87			
26	21	55	81		
36	56	85			
29	44	84			
21	55	81			
9	26	7	58	85	
9	58	83			
36	58	83			
36	56	80			
12	30	69	92		
16	62	83			
16	64	85			
6	47	80			
12	46	94			
25	39	89			
31	44	48	79		
16	30	46	85		
34	37	69	93		
26	47	87			
21	55	81			
20	54	93			
12	62	94			
9	60	85			
36	44	83			
34	62	93			
7	61	83			
15	62	78			
9	60	84			
9	64	85			
29	54	87			
9	64	81			
28	47	87			
28	53	87			
9	44	83			
22	65	79			
34	37	73	94		
36	65	92			
15	46	92			
32	38	80			
36	56	92			
12	62	78			
17	62	88			
17	50	88			
19	39	89			
2	56	77			
17	62	79			
36	56	46	94		
23	56	94			

37	62	94		
6	2	72	87	
16	26	70	93	
16	51	84		
23	65	80		
22	38	94		
16	58	86		
26	6	64	87	
6	26	5	54	80
23	65	53	92	
8	30	44	94	
30	70	87		
16	44	51	78	
26	21	64	55	81
26	75	85		
14	62	92		
2	30	60	92	
29	46	93		
12	45	79		
7	62	79		
34	66	94		
2	37	62	93	
30	45	79		
29	46	93		
17	45	78		
36	45	79		
19	60	80		
23	65	87		
28	11	47	91	
29	37	65	86	
29	72	44	79	
29	22	65	91	
25	29	39	89	
29	47	39	89	
11	47	91		
11	76	92		
37	47	57	91	
29	47	89		
19	63	80		
23	63	80		
13	38	94		
35	38	94		
24	36	65	94	
36	76	64	85	
2	60	94		
13	47	64	85	
13	47	64	85	
2	62	94		
13	28	47	85	
6	51	85		
26	10	41	87	
17	71	86		
21	47	91		
34	37	54	93	
26	47	91		
26	21	47	85	

8	54	87		
8	66	92		
36	56	94		
36	65	79		
36	62	94		
3	76	86		
36	43	56	77	
26	25	5	46	93
12	62	78		
29	48	45	85	
36	57	60	79	
13	73	92		
23	75	87		
6	70	87		
36	6	45	79	
36	53	80		
13	73	94		
6	47	87		
22	53	80		
26	76	57	90	
36	56	87		
23	52	80		
36	47	87		
26	47	91		
30	70	47	85	
13	73	92		
21	64	87		
30	48	64	87	
18	60	94		
37	62	94		
2	37	42	93	
29	57	91		
25	39	82		
30	35	94		
29	45	80		
37	42	62	93	80
29	48	86		
22	57	87		
16	45	79		
21	47	87		
24	65	94		
9	46	93		
23	71	76	86	
2	37	43	94	
37	42	93		
2	65	46	73	94
15	62	93		
27	71	87		
8	70	94		
22	36	62	92	
27	46	93		
35	2	73	94	
34	66	84		
36	73	93		
36	45	79	85	
13	73	94		

21	47	91			
22	48	86	87		
32	50	80			
20	76	70	87		
6	70	87			
6	64	85			
3	71	86			
32	71	91			
32	71	86			
34	71	86			
14	65	79			
29	65	79			
6	29	55	87		
37	69	93			
29	47	91			
1	26	64	55	47	87
29	71	75	90		
22	64	84			
29	48	86			
15	37	69	93		
26	55	81			
36	65	79			
26	41	57	91		
36	60	79			
16	46	83			
22	76	87			
6	55	85			
2	58	45	83		
29	57	87			
35	74	94			
23	74	60	80		
23	74	80			
12	46	79			
9	70	57	83	87	
9	6	47	55	87	
26	49	57	87		
1	26	49	91		
21	30	87			
26	14	49	87		
2	35	74	80		
29	65	79			
3	2	45	60	93	
29	45	48	87		
36	45	79			
36	65	79			
22	45	80			
6	64	87			
26	47	55	81	87	
26	57	87			
15	69	84			
15	69	88			
36	71	84			
21	70	55	81		
17	43	62	92		
3	62	92			
36	56	73	92		

36	30	60	80		
36	62	45	79		
3	60	90			
32	73	92			
3	71	86			
34	17	71	86		
23	65	60	80		
14	57	49	91		
26	47	64	87		
23	65	80			
8	2	66	92		
37	60	92			
21	57	91			
37	71	86			
37	2	62	69	93	
34	69	93			
21	64	91	87		
26	47	91			
37	42	77			
21	47	91			
30	46	87			
22	65	87			
26	57	87	80		
29	57	87			
34	73	62	69	92	
3	71	86			
27	37	60	80		
27	42	87			
27	53	87			
26	21	64	85		
26	75	87	91		
28	47	64	87	91	
21	47	89			
37	43	94			
5	28	53	87		
29	48	79			
15	17	62	93		
29	64	85			
26	47	81			
21	25	64	81		
29	19	47	85		
29	33	48	85	93	
6	47	81			
37	73	93			
28	47	80			
25	91	82			
19	53	80			
36	60	94			
21	47	80			
21	60	87			
28	6	64	87	80	
30	71	47	80		
17	43	92			
5	28	63	87		
15	60	92			
25	47	91			

12	73	92		
12	60	88	92	
2	17	62	92	
34	69	92		
34	69	92		
22	37	46	94	
22	34	65	73	92
26	30	55	81	
8	58	83		
19	45	80		
26	55	87	81	
17	46	93		
33	61	78		
13	52	80		
19	63	45	80	
13	45	47	90	
9	61	83		
12	17	60	77	
13	71	86		
36	52	80		
26	57	80		
19	63	53	87	80
12	60	94		
30	60	94		
26	25	39	82	
26	55	87	81	
21	47	91		
35	73	94		
26	19	47	63	80
6	57	64	85	
21	63	64	85	
29	73	94	85	
30	55	81		
14	63	65	84	
36	73	77		
35	73	86		
4	73	86		
22	48	90		
19	63	79		
29	48	79		
19	63	87		
22	48	53	80	
26	41	81		

16	58	83		
35	73	92		
6	18	72	85	
3	48	90		
14	36	41	87	
6	55	81		
6	72	85		
6	52	80		
16	70	72	80	
21	48	80		
17	53	92		
35	66	92		
29	47	87		
36	45	79		
1	66	92		
13	63	52	80	
35	66	92		
17	53	80		
24	56	85		
18	72	88		
6	51	80		
13	52	80		
13	52	72	85	
13	23	48	63	80
29	72	64	80	
12	7	64	85	
29	48	45	79	
22	65	93		
7	72	85		
1	26	47	91	
32	71	86		
7	58	83		
29	65	92		
15	62	83		
19	45	80		
18	64	85		

Table 28: Chains identified

6.3.3 Appendix 7: Implication matrix

Due to its size, the implication matrix can provided on request as an Excel file. A small sample is included below. The yellow cells represent the attributes, the green represent the consequences and red for the values.

	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	subtotal
1			0|1		1|0																			0|1		0|2				0|2	0|1			6|13
2	2|2			1|0	1|0			0|1			1|0	1|1	0|1			0|1			0|1			0|1			0|1					0|3	0|4	0|6	17|29
3	1|0								3|0						1|0									0|4				0|2		0|1	0|1		8|10
4												1|0												0|1									1|1
5		0|1																	0|2						0|2						0|1		5|7
6			6|1						2|0		3|2				0|1			0|1	0|5	0|2			0|9		0|10						0|1		27|36
7	1|0		1|0								1|0							0|1				0|3											7|7
8					1|1				1|0												0|1				0|1					0|2		0|2	6|8
9			2|0						1|0										0|1		0|4	0|1	0|4		0|2						0|1		12|18
10																										0|1								1|1
11															1|0															0|2	0|1			3|3
12	3|0		0|1					0|1				1|0				0|1	0|3	0|2					0|1			0|1				0|3		0|3	13|17
13		2|1	0|2							1|0	0|1	4|0							0|6				0|5	0|1	0|2			0|1			0|2		0|3	19|28
14	1|0	1|0		1|1						1|0								0|1				0|2		0|3				0|1	0|1	0|1			9|12
15	3|1							2|1									0|1				0|1	0|1				0|1				0|2	0|3			9|11
16	1|0		1|0						1|1		0|1					0|1	0|1	0|1	0|1		0|3	0|1	0|2	0|1							0|1		12|17
17	4|1									2|0						0|1	0|1	0|1	0|1					0|2		0|2				0|4	0|2		14|15
18			1|0								2|0												0|2		0|1	0|1						0|1	5|5
19		5|1																0|1	0|7					0|1		0|2		0|1						11|15
20									0|1						1|0										0|1	0|1						0|2		3|5
21		1|0	4|2						1|0										0|2	0|6				0|3		0|5		0|1		0|6				22|27
22	0|1		1|0	4|2								0|1			1|0			0|1	0|3				0|1		0|2	0|5			0|1	0|1	0|2	0|4	0|2	20|29
23		1|1	0|1	5|0						1|0			2|0	1|0	0|1				0|8					0|1	0|3					0|1		0|1	15|20
24				1|1						1|0							0|1							0|1	0|1							0|2	5|7
25			1|0			0|1							0|1						0|1	0|1	0|4				0|2		0|3		1|1		0|1	0|1	13|22
26		0|1	1|4						1|0		0|1		2|0	1|0				0|4	0|11	0|1			0|6		0|16			0|1	0|8		0|3		44|75
27										1|0									0|1						0|3						0|1		5|6
28		1|0	0|2			0|1					0|1		0|1					0|2					0|2		0|7		0|1		0|2				12|21
29			1|1	3|2						1|0	2|0	1|0		0|1			0|6	0|2				0|1	0|5	0|3	0|6		0|3	0|1	0|3	0|1	0|3	0|1	33|46
30			0|1					1|0	2|0	1|0								0|1	0|2	0|2				0|2		1|3					0|2		0|3	16|18
31		0|2																0|1	0|4									0|1					6|10
32										5|1		1|0							0|4					0|5	0|4			0|1	0|1	0|1		0|1	15|20
33																	0|1		0|1					0|1	0|2						0|2		5|9
34	1|1			1|0	2|0			3|2		1|1		1|2											0|1		0|2					0|4	0|4	0|2	13|20
35					2|0							3|1	2|0						0|1					0|1	1|0					0|3		1|4	12|10
36	4|0	1|0	0|1	6|1						1|0		3|1			1|0	0|2		0|11	0|5		0|2	0|1	0|3		0|4					0|4	0|2	0|5	39|48
37	3|2			1|0				3|1		1|0		2|0				0|1			0|2					0|2					0|1	0|1	0|10	0|6	22|27
38																			1|1					0|1		4|1						3|0	9|3

6.3.4 Appendix 8: Examples of the codes

Attributes		
ID	**Reason**	**Example**
1	article against SNS	I think I read something about or listened to a podcast about kind of addiction of social media and I sort of realised you know
2	boring	it is sort of thought is the same thing again and again , at some point I was like not worthy any more
3	contact is not meaningful	using social networks to interact with people, when actually, if I just pick the phone up I can have quicker and more meaningful conversation with someone,
4	distraction	It becomes very distracting, not just for work, but I found it quite rude that you could be sat there in a pub having a conversation with someone and they would be on Facebook, very distracting
5	don't like things I'm not using - I can't log in afterwards	I don't like having accounts all over the place that are open and if I'm not using something I'd rather close it down than keep it open
6	editing own profile	I felt like I was editing my life to look really cool. and I always put the best photographs on, I never, I didn't like people tagging me in photographs that I didn't look very good in.
7	feel baby-ish	I thought Bebo is quite outdated in the sense of what I was trying to do is quite, I thought is more for younger audiences,
8	getting busier	Actually depends on out age. If you are 20 years old, you are not working, let's say you are a student who will have a lot of time to go and write things and rewrite things in Facebook and Twitter account, when you are 30+, the you'll probably have a job, you will have a family, children, you'll need your personal time
9	getting older	you use it in a sense of making friends and showing the girls how good you are, that was important at that time, whereas now once grown up, I don't think the games are cool
10	improving privacy of SNS profile	privacy settings in Facebook keep changing so often that it was really difficult to keep up with who had access to what and the bigger it goes and the Facebook floated on the stock exchange
11	invasion of privacy	What I didn't like what Facebook did was take all the contacts from my phone, that was something that I was really, really annoyed about
12	lack of people to interact	My inactivity was the result of other people's inactivity
13	looking at others profile	You'd click on one person, look through his friends list and you'd be like, "*Oh, I recognise him*" so you'd click on him and you'd look and you could be away for hours on end on this massive web of
14	marketing in the SNS	I really feel that is all marketing you know, that is the psychologist and the marketer that know that we are social people and they just want us to be there, as much they can for us to click in to buy
15	new features in other SNS	I was using Myspace but I think that when you are going to other networks that are doing it better, you realise that there is much more to do
16	new stage in life	the tipping point came when I started my course and I was very worried about my data being out there

17	no reply to my post - lack of interaction	if I wrote in somebody timeline and he didn't reply then what's the point of having one I'd rather use Facebook where I'll get response
18	obliged to post	I've never said this, but my friends always asked me "*like my status*" and I was like, are you joking? this is ridiculous
19	offensive - negative comments	they send you DM, like direct messages, like "*we hate him really, and we hate you and we are gonna kill you*"
20	others example	I got some family members in Wales, and interestingly one of them deleted her Facebook account
21	others looking at my profile	at you just want to cut ties with people maybe and that type of person that I don't wanted to want them know about me, so I just closed
22	over connected	I went through and it was only like 10 people really that I wanted to be in touch with. and is out of 200 I just get rid out like that I don't need to know about their lives
23	overload of information	in Facebook you can create an album and upload 300 pictures, and this is too much
24	people posting instead of living	I remember when I went to this concert down in London at like Twickenham stadium and there was no 3G reception and I was going crazy, I was like, oh my god like no one's going to know that I'm at Twickenham stadium
25	personal info security	I had this concern that my name would be out there and security issues maybe
26	personal information out there	My information was out there and I didn't liked. I felt uncomfortable with so much information out there and I just decided one day ok, that's it
27	personality reluctant to change	probably I would be more familiar with the environment , but I still think that I'd prefer fb, just because it was the first account that I opened
28	posting for me	I didn't like people tagging me in photographs that I didn't look very good in.
29	receiving unwanted post, request, reminders	I hate that. Like, people request and you don't know them. It's like, well do you add them? And then they're on your space? No I don't like that
30	reduce posting frequency	I just started using it less and less and less so I just didn't want to see it
31	relationship breaking up	I had lost contact with my mate he had moved to London and I never saw any of his mates anymore
32	SNS dependency	I feel like is the first thing that I did when I woke in the morning, laptop open , let's see what is happening and you know you are getting your mobile and it just takes off your life I
33	social pressure	you feel this pressure where you have to always be somewhere and doing something or be on holiday or be at a concert or be at a gig so everyone can go
34	technical difficulties - restrictions	I went to central America and the electricity was poor and in my job I would never spend time on it and I hardly use the internet at all
35	time consumption	that's just social media, and sometimes is just you find yourself on it all the time and then I don't liked that ,
36	unnecessary information	300 friends with 300 status updates and 300 photographs, that's too much
37	usability	I remember the uploading process of the photos was more complicated than Facebook for example, it drove me nuts
Consequences		

ID	Reason	Example
38	addiction	I remember when I feel uncomfortable, I press the button to get rid of it , but whiten a week I was back on , it was so addictive, I felt like it was really addictive and you know, I would end , ok it's alright, ok that's it , I'm not going to going back on Facebook, and then I'll be back on in a week , I couldn't stop myself from going on, so I found that this is sort of addiction
39	afraid of personal security	I think it got to a point that I got scared, and I was, especially when people from the state or, you know England started doing it, it's like okay maybe it is getting out of hand
40	annoyance	I was just getting increscent annoyed by Facebook and every little thing was just another reason and another reason and another reason to delete your account
41	being used	I meet a French lecturer on twitter and he is doing near the same topic with me, but he has more experience because he is a professional academic so he knows everything, but when I chat with him, I've found that I'm not study with him, I became a part of his experiment . yeah
42	complicates life	all this kind of iPhone, apps, things that are supposed to make our life simpler and easier, make it more complicated as far as I'm concerned
43	disappointed with platform	I immediately closed it mainly because it reminded me to fb, so I had to do exactly the same thing. Finding my friend in Facebook and add them to Twitter. so it was pointless for me, because I already have my friends in Facebook
44	don't feel part of the group anymore	I guess you try to disassociate yourself from the group of people that still put pictures up on platforms of themselves drinking lots of alcohol and stuff
45	don't like people in the SNS anymore	Because then you're not following people from school, who you're not that interested in after al
46	don't need the SNS	if I still have to go looking into the daily mail or guardian, there's not much point join twitter or staying on it
47	exposure of self	I think when you are younger is really important to be connected, and I really enjoyed that, but I think that when you got older at that level of self-exposure and being connected wasn't enough for me.
48	fake - superficial friendship	I could sit next to somebody who has been a friend to me on Facebook for like a year at a gig, and I'd be like oh yeah, like I know this guy's wife and his kids and where he went on holiday and like what he did last night and what he's had to eat and I've never met him before in my life. And it makes me feel a little bit more relaxed that you're not around strangers cause you've already profiled them all
49	feeling commercialised	is so commercial, the whole internet is so commercial , I just feel like that something that was really cool you know, that was a little bit subversive, just turned it into a marketing tool
50	feeling excluded	I think psychologically, it goes back to being excluded , being a small child and didn't get picked for the football team
51	feeling it wasn't me	kind of self-policed what I was putting up there more and for me it felt like if I was being less honest,
52	feeling jealous	then I'll read someone's Facebook and they've took like a picture of the crowd and it's like great gig tonight like that's going to make me feel awful
53	feeling vulnerable	I deleted a lot of my friends, is like a judging your life
54	got rid of the SNS	cause I'm not using it, is better to get rid of it

55	impact on professional image	I don't think professional people should look for me via fb, I think professional people, again maybe is to do with me being very conservative, if an employer wants me , they will put an advert
56	information not credible - biased	It's like a CV and you can be the best person in the world and write an absolutely shit CV but you can also be the worst person and write one of the greatest CVs. So it's a very distorted opinion of someone
57	keep things private	if I want to express those opinions I do it on a personal level with someone who I know will be interested in what I am saying, rather than blurting it out to everyone and praying and hoping that someone would come and make a comment
58	moving on with life	I don't care about my image anymore to be honest I'm more interested in what I'm doing. I don't care about my image anymore to be honest I'm more interested in what I'm doing.
59	not enjoying it	that was the last straw for me, because I wasn't enjoining
60	not interesting anymore	then as less and less people got to use it I think it wasn't as interesting, no one posted anything , no one was writing to each other, there was nothing even to look at
61	not trendy anymore	because Facebook is made far better in the social life now and everyone in daily life knows fb, and hyves they don't know
62	not useful anymore	It's pointless trying to contact somebody on something that they don't use anymore
63	noxious information	I'm unfollowing people all the time, because even my friends they just moan all the time, and I don't want to read that, I'd rather read positive and inspiring things
64	others perception	I think I adjusting the fact that taking down the pictures that you don't like, removing things and editing your, putting across your perfect image, and you know posting images and things that you are doing to make you look more interesting that you are.
65	overload of unnecessary information	can you imagine how much information do I have to manage if I knew anything and everything about every friend of mine, I don't have the brain of an elephant
66	performance decrease	the time that I have I would probably say I save about four hours a day not being on Facebook
67	re gaining control	a couple of my friends texted me and saying you deleted your Myspace, and I thought, yeah, I do really tired , I just got rid of it
68	replacing	I think it was unnecessary I much prefer to using Facebook with my real friends and this fitoracy for like my weightlifting things
69	restricting information flow	now, on a professional level, it's really just a communication tool, I don't post status's up, I don't post photographs up, I don't share anything or anything like that, all of my opinions are kept to myself
70	SNS feel impersonal	I'd rather talk to somebody face to face, because on Facebook you don't get that interaction
71	social pressure consequence	I thought that was pressure. and my kind of status updates you know will be just everyday stuff, trying to be funny , trying to be witty, and you know, I think one thing that I didn't liked was when, because sort at the beginning you can be sort of creative, and say you know, I like this, I like that but actually in the end you have choices,
72	time consumption consequence	yes my time is valuable, I would like to use it in important things, rather than sitting through what is good and what is junk
73	tired of the SNS	it's the reason why I don't go out on weekends, I spend that many hours in bars and clubs working on a night time, the last thing I want to do on a weekend is go out and get drunk!

74	trust in social circles	my twitter was like open to the public, my Facebook is , like, I don't have anyone on Facebook that I haven't met in real life, they are real people
75	using traditional media to contact people	I'd rather have the personal contact of calling someone up or sending a text message, something that wasn't so public
Values		
ID	Reason	Example
76	being informed	I think hearing it from the horse's mouth would be good, but maybe I'm just not interested in people
77	belongingness	so when I got the time then I could be part of this group, and now I'm not , and I think I never was, I think
78	don't care about people in there anymore	I didn't like my school anyway so, and I got, ok that's it , there is nothing more ,
79	emotional - mental stability	I feel like with twitter I don't get that, is not kind of anxiety with not being part of it, because I'm not part of anything, is just feeds that are coming in
80	employability	I actually physically deactivated the account when I started to think about jobs and my online profile generally, what people may or may not be able to see.
81	fear of stealing financial - identity data stolen	Use your identity to get credit or something? Like, or use it for unlawful purposes, you just don't know. Because your mind- my mind doesn't work like a criminal's mind does, so you just don't know what they're going to do with it
82	grown up - maturity	So you try to separate, "*oh I've got a degree now, going to have to start behaving, going to have to finally take some responsibility"*
83	identity	I think about it now like that was a different part of my identity that was just gone
84	image - impression management	you know, social media and Facebook only show the good sides and in that way you attract people instead of showing the bad side and pushing people away, and that's what people is doing I reckon
85	improve quality of relationships	I kind of made a new year's resolution last year that I was going to ring more people and talk to more people face to face, because I felt myself kind of isolated myself more at home
86	keep - regain control	because I haven't used it during 6 moths or 12 months and if somebody write something in my profile "*what do you've done*" if I don't have a look someone else does and creates a false image and I'll feel out of control of the social network
87	peer recognition	I think there is a certain amount of validation, especially when all these other people were looking after these, sort of you know
88	personal security	I just thought right back, staying off because if I'm looking them, then they can look at me and my close friends and my family. that's why I deleted the account
89	prefer small groups of friends	I feel like kind of having a small network of friends is so much manageable that having a wide network.
90	privacy	I keep my memories in a different place, not online, not publicly, not for everyone
91	productivity - work	some written work given to me and it was really nice just to be able to sit there...for four hours without like having this screen open and then this screen with like notifications it's like something like constantly tapping you on the shoulder

92	simplify life	I like it kind of simple life where I got 10 really good friends who I seeing, and that's all I need you know
93	time management	I would never spend time on it and I hardly use the internet at all because of the geographical situation and the dial up

Table 29: Codes' examples

6.3.5 Appendix 9: Hierarchical Value Map

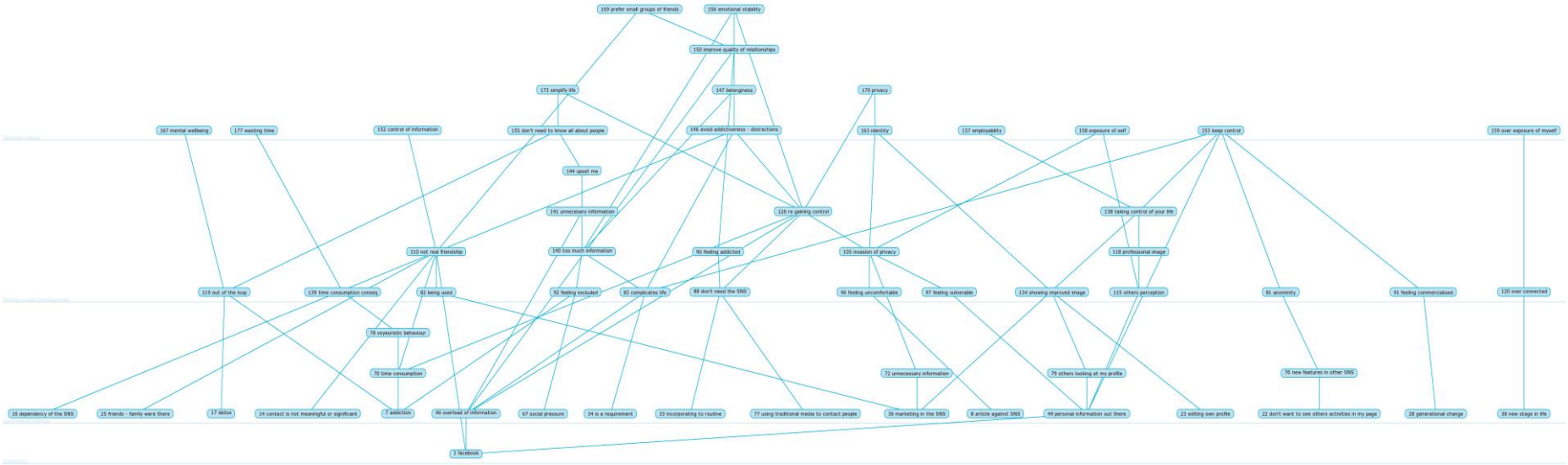


Figure 25: Example of Hierarchical Value Map using LadderUX

6.3.6 Appendix 10: SNA Measures

ID	Element	Out Degrees	In Degrees	Abstractedness	Prestige	Centrality	Eigenvector Centrality
1	article against SNS	6	0	0.00	0.00	0.01	0.40%
2	boring	17	5	0.23	0.01	0.02	0.58%
3	contact is not meaningful	8	0	0.00	0.00	0.01	0.51%
4	distraction	1	0	0.00	0.00	0.00	0.38%
5	don't like things I'm not using - I can't log in afterwards	5	3	0.38	0.00	0.01	0.47%
6	editing own profile	27	6	0.18	0.01	0.03	0.58%
7	feel baby-ish	7	2	0.22	0.00	0.01	0.51%
8	getting busier	6	0	0.00	0.00	0.01	0.47%
9	getting older	12	0	0.00	0.00	0.01	0.54%
10	improving privacy of SNS profile	1	1	0.50	0.00	0.00	0.39%
11	invasion of privacy	3	1	0.25	0.00	0.00	0.43%
12	lack of people to interact	13	0	0.00	0.00	0.01	0.52%
13	looking at others profile	19	2	0.10	0.00	0.02	0.54%
14	marketing in the SNS	9	1	0.10	0.00	0.01	0.52%
15	new features in other SNS	9	0	0.00	0.00	0.01	0.46%
16	new stage in life	12	0	0.00	0.00	0.01	0.52%
17	no reply to my post - lack of interaction	14	4	0.22	0.00	0.02	0.53%
18	obliged to post	5	2	0.29	0.00	0.01	0.49%
19	offensive - negative comments	11	2	0.15	0.00	0.01	0.51%
20	others example	3	1	0.25	0.00	0.00	0.45%
21	others looking at my profile	22	4	0.15	0.00	0.03	0.54%
22	over connected	20	1	0.05	0.00	0.02	0.56%
23	overload of information	15	1	0.06	0.00	0.02	0.52%
24	people posting instead of living	5	0	0.00	0.00	0.01	0.47%
25	personal info security	13	4	0.24	0.00	0.02	0.53%
26	personal information out there	44	9	0.17	0.01	0.05	0.56%
27	personality reluctant to change	5	0	0.00	0.00	0.01	0.47%
28	posting for me	12	5	0.29	0.01	0.02	0.49%
29	receiving unwanted post,	33	2	0.06	0.00	0.04	0.61%

	request, reminders						
30	reduce posting frequency	16	7	0.30	0.01	0.02	0.59%
31	relationship breaking up	6	0	0.00	0.00	0.01	0.46%
32	SNS dependency	15	0	0.00	0.00	0.02	0.47%
33	social pressure	5	2	0.29	0.00	0.01	0.47%
34	technical difficulties - restrictions	13	1	0.07	0.00	0.01	0.50%
35	time consumption	12	3	0.20	0.00	0.02	0.52%
36	unnecessary information	39	5	0.11	0.01	0.04	0.61%
37	usability	22	10	0.31	0.01	0.03	0.58%
38	addiction	9	10	0.53	0.01	0.02	0.51%
39	afraid of personal security	8	8	0.50	0.01	0.02	0.47%
40	annoyance	0	0		0.00	0.00	0.00%
41	being used	5	5	0.50	0.01	0.01	0.49%
42	complicates life	8	8	0.50	0.01	0.02	0.50%
43	disappointed with platform	7	7	0.50	0.01	0.01	0.52%
44	don't feel part of the group anymore	8	7	0.47	0.01	0.02	0.53%
45	don't like people in the SNS anymore	24	23	0.49	0.02	0.05	0.61%
46	don't need the SNS	15	15	0.50	0.02	0.03	0.58%
47	exposure of self	46	45	0.49	0.05	0.09	0.63%
48	fake - superficial friendship	22	22	0.50	0.02	0.04	0.60%
49	feeling commercialised	6	6	0.50	0.01	0.01	0.48%
50	feeling excluded	5	5	0.50	0.01	0.01	0.46%
51	feeling it wasn't me	5	5	0.50	0.01	0.01	0.50%
52	feeling jealous	7	7	0.50	0.01	0.01	0.48%
53	feeling vulnerable	13	13	0.50	0.01	0.03	0.57%
54	got rid of the SNS	6	6	0.50	0.01	0.01	0.50%
55	impact on professional image	18	18	0.50	0.02	0.04	0.53%
56	information not credible - biased	12	11	0.48	0.01	0.02	0.56%
57	keep things private	20	19	0.49	0.02	0.04	0.60%
58	moving on with life	10	10	0.50	0.01	0.02	0.53%
59	not enjoying it	0	0		0.00	0.00	0.00%
60	not interesting anymore	23	22	0.49	0.02	0.05	0.62%
61	not trendy anymore	3	3	0.50	0.00	0.01	0.42%
62	not useful anymore	28	27	0.49	0.03	0.06	0.60%

63	noxious information	14	14	0.50	0.01	0.03	0.57%
64	others perception	27	28	0.51	0.03	0.06	0.61%
65	overload of unnecessary information	25	25	0.50	0.03	0.05	0.62%
66	performance decrease	8	7	0.47	0.01	0.02	0.45%
67	re gaining control	1	1	0.50	0.00	0.00	0.38%
68	recovering off line friendships	0	0	!	0.00	0.00	0.00%
69	replacing	11	11	0.50	0.01	0.02	0.49%
70	restricting information flow	10	10	0.50	0.01	0.02	0.56%
71	SNS feel impersonal	21	21	0.50	0.02	0.04	0.60%
72	social pressure consequences	13	13	0.50	0.01	0.03	0.56%
73	time consumption consequence	21	21	0.50	0.02	0.04	0.57%
74	tired of the SNS	5	5	0.50	0.01	0.01	0.50%
75	trust in social circles	6	6	0.50	0.01	0.01	0.53%
76	using traditional media to contact people	8	8	0.50	0.01	0.02	0.58%
77	being informed	0	5	1.00	0.01	0.01	0.44%
78	belongingness	0	8	1.00	0.01	0.01	0.49%
79	don't care about people in there anymore	1	27	0.96	0.03	0.03	0.52%
80	emotional - mental stability	0	55	1.00	0.06	0.06	0.61%
81	employability	2	19	0.90	0.02	0.02	0.48%
82	fear of stealing financial - identity data stolen	1	4	0.80	0.00	0.01	0.45%
83	grown up - maturity	2	15	0.88	0.02	0.02	0.54%
84	identity	0	11	1.00	0.01	0.01	0.52%
85	image - impression management	1	40	0.98	0.04	0.04	0.59%
86	improve quality of relationships	2	24	0.92	0.02	0.03	0.54%
87	keep - regain control	9	73	0.89	0.07	0.08	0.67%
88	peer recognition	1	5	0.83	0.01	0.01	0.47%
89	personal security	0	9	1.00	0.01	0.01	0.42%
90	prefer small groups of friends	1	8	0.89	0.01	0.01	0.51%
91	privacy	4	27	0.87	0.03	0.03	0.55%
92	productivity - work	0	34	1.00	0.03	0.03	0.54%
93	simplify life	3	34	0.92	0.03	0.04	0.57%
94	time management	2	38	0.95	0.04	0.04	0.58%
		992	992				

Table 30: Social network analysis measures

6.3.7 Appendix 11: VBA Code to create the relationships

```
Sub direct_matrix()
Dim relation As String

Range("b2").Select
ladder = InputBox(" how many ladders have you identified?")
Level = InputBox(" how many levels have you identified?")
For  = 1 To (Level - 1)
   For j = 1 To ladder
   'While ActiveCell.Value <> "" And ActiveCell.Offset(0, 1).Value <> ""
   If ActiveCell.Value = "" Or ActiveCell.Offset(0, 1).Value = "" Then
    relation = ""
   Else
    relation = ActiveCell.Value & "x" & ActiveCell.Offset(0, 1).Value
   End If
   Worksheets("direct_rel").Select
   ActiveCell.Value = relation
   ActiveCell.Offset(0, 1).Value = "L" & i
   ActiveCell.Offset(0, 2).Value = j
   ActiveCell.Offset(1, 0).Select
   Worksheets("raw_data").Select
   ActiveCell.Offset(1, 0).Select
   Next j
   ActiveCell.Offset(-ladder, 1).Select
   Next i
   MsgBox ("the process has been successful")

End Sub

Sub indirect_matrix()
Dim relation As String

Range("b2").Select
ladder = InputBox(" how many ladders have you identified?")
Level = InputBox(" how many levels have you identified?")

For k_lad = 1 To ladder

col_left = 2

For j_col = 1 To Level - 2
```

```
i_col = Level - col_left

For i = 1 To (i_col)
   If ActiveCell.Value = "" Or ActiveCell.Offset(0, i + 1).Value = "" Then
    relation = ""
   Else
   relation = ActiveCell.Value & "x" & ActiveCell.Offset(0, i + 1).Value
   End If
   Worksheets("direct_rel").Select
   ActiveCell.Value = relation
   ActiveCell.Offset(0, 1).Value = "L" & i
   ActiveCell.Offset(0, 2).Value = j_col

   ActiveCell.Offset(1, 0).Select
   Worksheets("raw_data").Select
Next i

col_left = col_left + 1

ActiveCell.Offset(0, 1).Select

Next j_col

ActiveCell.Offset(1, -col_left + 2).Select

Next k_lad

MsgBox ("the process has been successful")
End Sub
```

6.3.8 Appendix 12: Ladders identified

The maps of the following ladders are based in cut-off=3. The size of the nodes is based on the eigenvector centrality; attributes are represented by circles, consequences by squares and values by triangles.

6.3.8.1 87: keep - regain control (cut-off level=7)

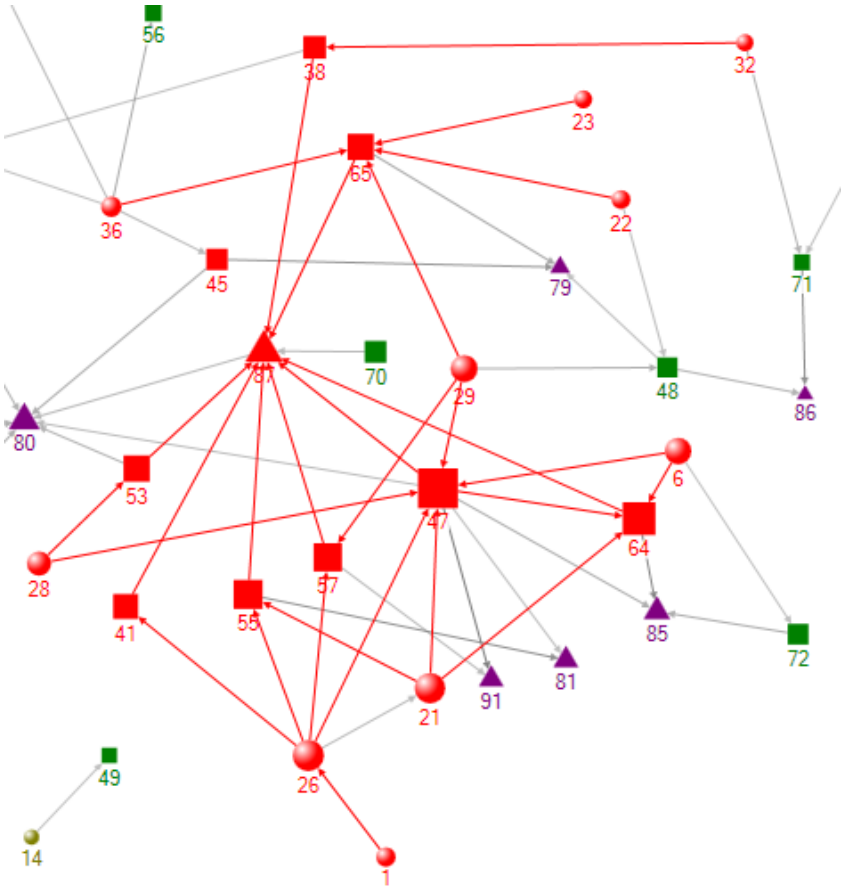


Figure 26: Keep - regain control ladders (cut-off level=7)

Attributes- Attributes:

From		To	
1	article against SNS	26	personal information out there

Attributes - consequences:

From		To	
6	editing own profile	67	re gaining control
6	editing own profile	64	others perception
21	others looking at my profile	47	exposure of self
21	others looking at my profile	55	impact on professional image
21	others looking at my profile	64	others perception
22	over connected	65	overload of unnecessary information
23	overload of information	65	overload of unnecessary information
26	personal information out there	41	being used
26	personal information out there	47	exposure of self
26	personal information out there	55	impact on professional image
26	personal information out there	57	keep things private
28	posting for me	47	exposure of self
28	posting for me	53	feeling vulnerable
29	receiving unwanted post, request, reminders	47	exposure of self
29	receiving unwanted post, request, reminders	57	keep things private
32	SNS dependency	38	addiction
36	unnecessary information	65	overload of unnecessary information

Consequences

From		To	
47	exposure of self	64	re gaining control
38	addiction	87	overload of unnecessary information
41	being used	87	exposure of self
47	exposure of self	87	exposure of self
53	feeling vulnerable	87	overload of unnecessary information
55	impact on professional image	87	others perception
57	keep things private	87	others perception
64	others perception	87	impact on professional image
65	overload of unnecessary information	87	impact on professional image
70	restricting information flow	87	being used

6.3.8.2 91: Privacy (cut-off level=7)

(26) Personal information out there (47) exposure of self (91) privacy (weight=10)

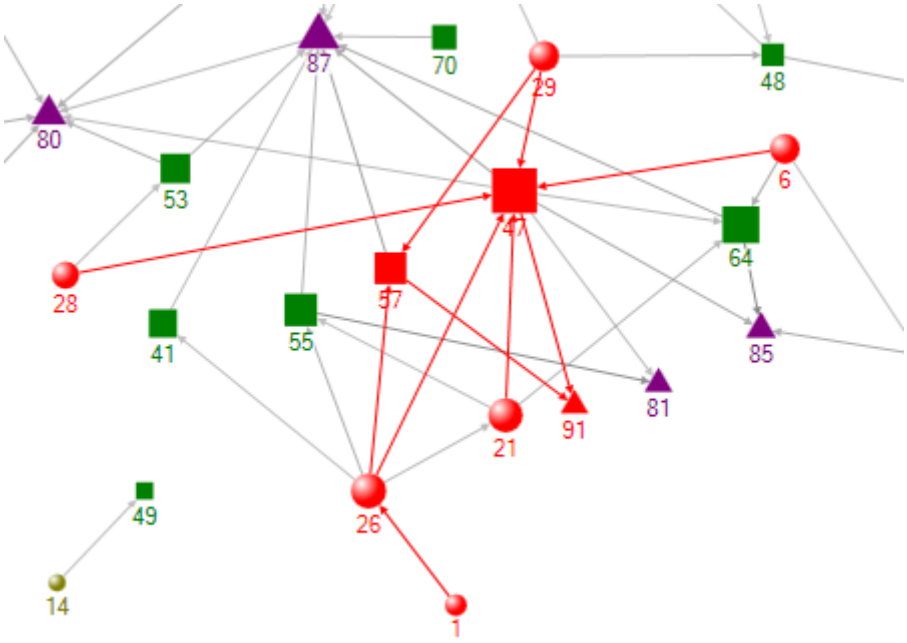


Figure 27: Privacy ladders (cut-off level=7)

Attributes:

From		To	
1	article against SNS	27	personality reluctant to change
6	editing own profile	47	exposure of self
21	others looking at my profile	47	exposure of self
26	personal information out there	47	exposure of self
26	personal information out there	57	keep things private
28	posting for me	47	exposure of self
29	receiving unwanted post, request, reminders	47	exposure of self
29	receiving unwanted post, request, reminders	57	keep things private

Consequences

From		To	
26	personal information out there	91	privacy
47	exposure of self	91	privacy

6.3.8.3 79: don't care about people in there anymore (cut-off level=6)

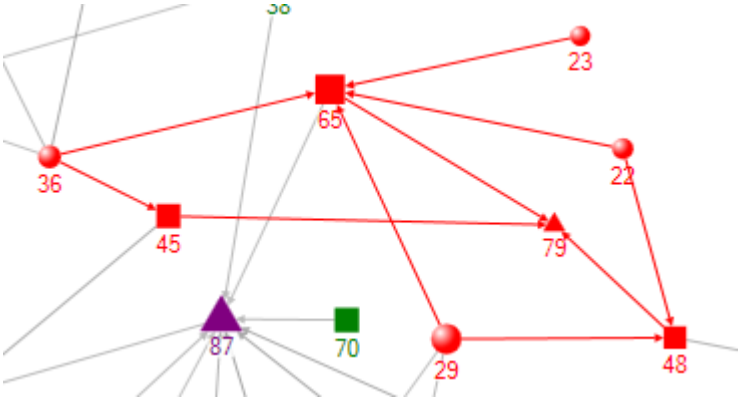


Figure 28: Don't care about people in there anymore ladders (cut-off level=6)

Attributes- Consequences

From		To	
22	over connected	65	overload of unnecessary information
23	overload of information	65	overload of unnecessary information
23	overload of information	48	fake - superficial friendship
29	receiving unwanted post, request, reminders	48	fake - superficial friendship
29	receiving unwanted post, request, reminders	65	overload of unnecessary information
36	unnecessary information	65	overload of unnecessary information
36	unnecessary information	45	don't like people in the SNS anymore

Consequences-Values

From		To	
45	don't like people in the SNS anymore	79	don't care about people in there anymore
48	fake - superficial friendship	79	don't care about people in there anymore
65	overload of unnecessary information	79	don't care about people in there anymore

6.3.8.4 85: image - impression management (cut-off level=6)

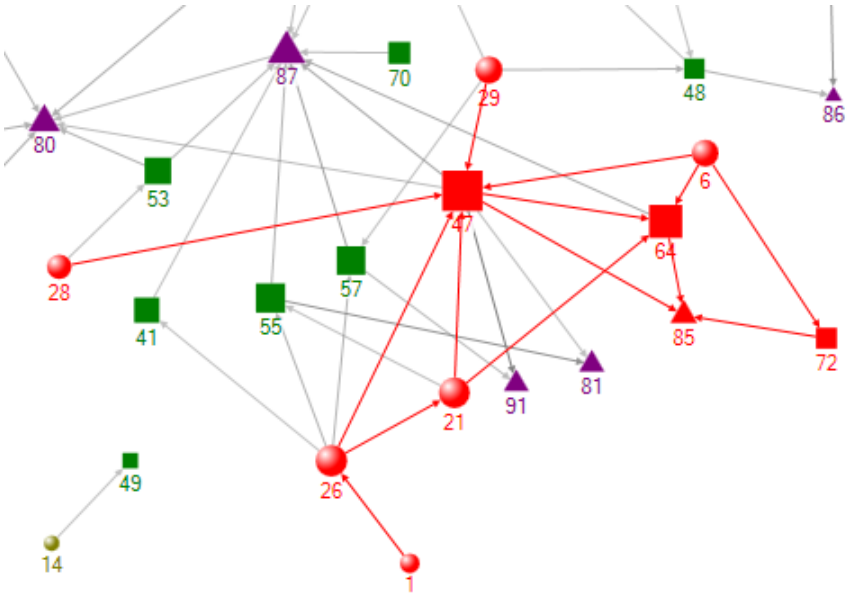


Figure 29: Image - impression management ladders (cut-off level=6)

Attributes

From		To	
1	article against SNS	26	personal information out there
6	editing own profile	47	exposure of self
6	editing own profile	64	others perception
6	editing own profile	72	social pressure consequence
21	others looking at my profile	47	exposure of self
21	others looking at my profile	64	others perception
26	personal information out there	21	others looking at my profile
26	personal information out there	47	exposure of self
28	posting for me	47	exposure of self
29	receiving unwanted post, request, reminders	47	exposure of self

Consequences

From		To	
47	exposure of self	64	others perception
64	others perception	85	image - impression management
47	exposure of self	85	image - impression management
72	social pressure consequence	85	image - impression management

6.3.8.5 80: emotional - mental stability (cut-off level=5)

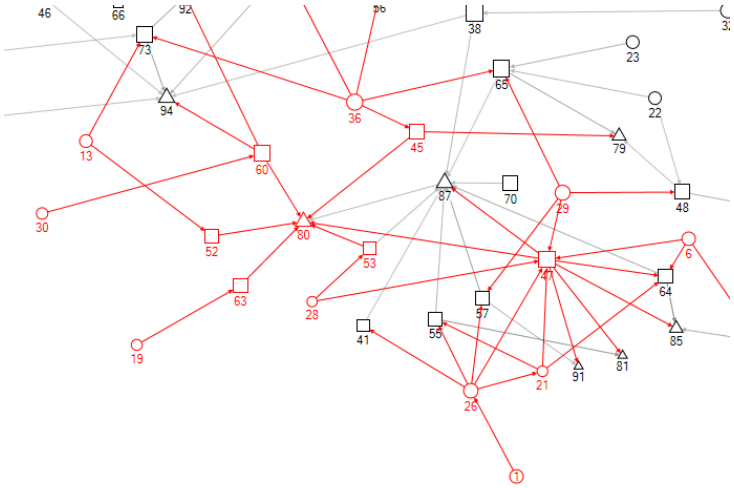


Figure 30: Emotional - mental stability ladders (cut-off level=5)

Attributes

From		To	
1	article against SNS	26	personal information out there
6	editing own profile	47	exposure of self
13	looking at others profile	52	feeling jealous
19	offensive - negative comments	63	noxious information
26	personal information out there	47	exposure of self
21	others looking at my profile	47	exposure of self
28	posting for me	47	exposure of self
28	posting for me	53	feeling vulnerable
29	receiving unwanted post, request, reminders	47	exposure of self

Consequences

From		To	
45	don't like people in the SNS anymore	80	emotional - mental stability
52	feeling jealous	80	emotional - mental stability
63	noxious information	80	emotional - mental stability
53	feeling vulnerable	80	emotional - mental stability
60	not interesting anymore	80	emotional - mental stability
47	exposure of self	80	emotional - mental stability

Values

From		To	
87	keep - regain control	80	emotional - mental stability

6.3.8.6 81: employability (cut-off level=5)

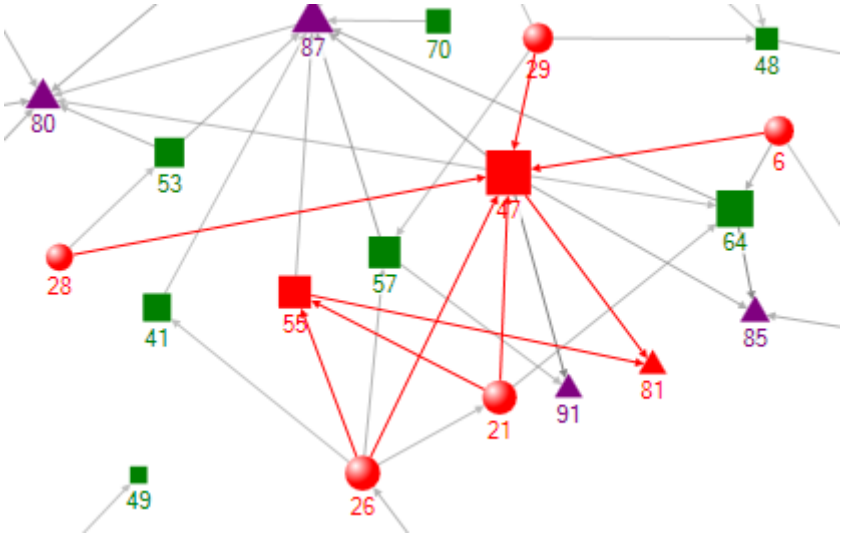


Figure 31: Employability ladders (cut-off level=5)

Attributes

From		To	
6	editing own profile	47	exposure of self
21	others looking at my profile	47	exposure of self
21	others looking at my profile	55	impact on professional image
26	personal information out there	47	exposure of self
26	personal information out there	55	impact on professional image
28	posting for me	47	exposure of self
29	receiving unwanted post, request, reminders	47	exposure of self

Consequences

From		To	
55	impact on professional image	81	employability
47	exposure of self	81	employability

6.3.8.7 86: improve quality of relationships (cut-off level=5)

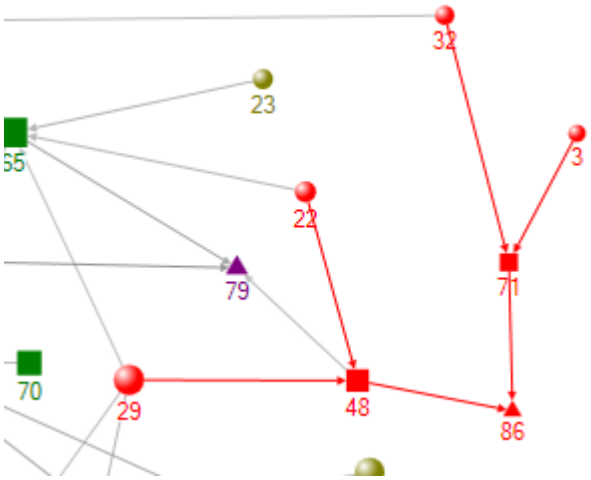


Figure 32: Improve quality of relationships ladders (cut-off level=5)

Attributes

From		To	
3	contact is not meaningful	71	SNS feel impersonal
22	over connected	48	fake - superficial friendship
29	receiving unwanted post, request, reminders	48	fake - superficial friendship
32	SNS dependency	71	SNS feel impersonal

Consequences

From		To	
71	SNS feel impersonal	86	improve quality of relationships
48	fake - superficial friendship	86	improve quality of relationships

6.3.8.8 92: productivity – work (cut-off level=4)

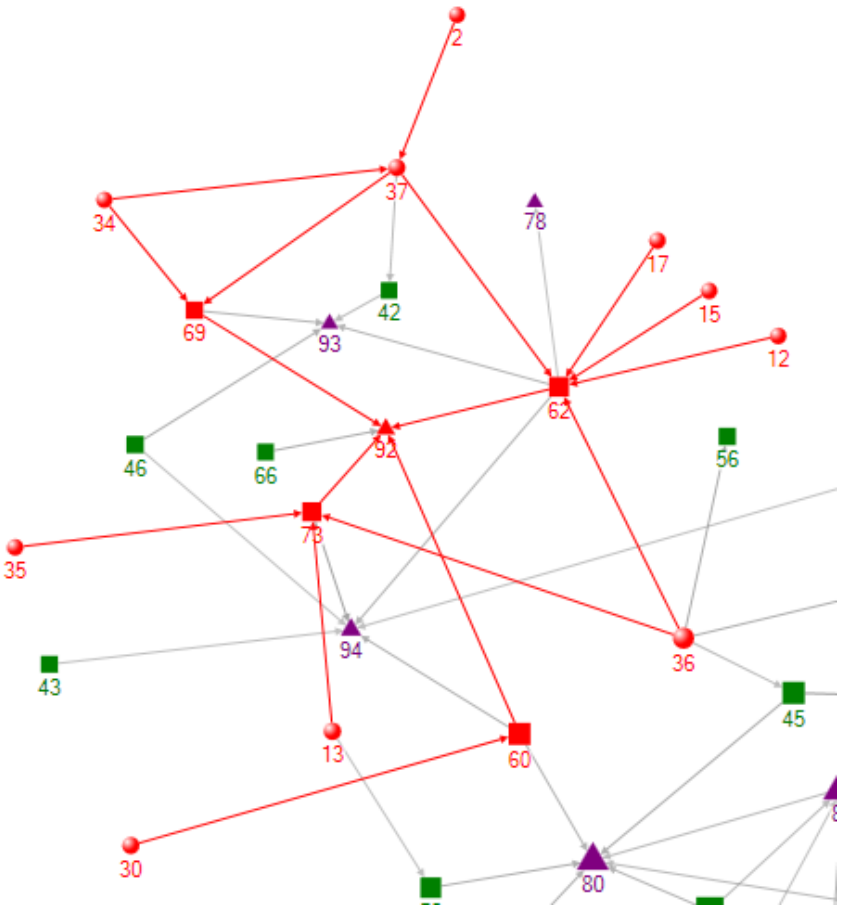


Figure 33: Productivity - work ladders (cut-off level=4)

Attributes

From		To	
2	boring	37	usability
12	lack of people to interact	62	not useful anymore
13	looking at others profile	73	time consumption consequence
15	new features in other SNS	62	not useful anymore
17	no reply to my post - lack of interaction	62	not useful anymore
30	reduce posting frequency	60	not interesting anymore
34	technical difficulties - restrictions	37	usability
34	technical difficulties - restrictions	69	replacing
35	time consumption	73	time consumption consequence
36	unnecessary information	62	not useful anymore
36	unnecessary information	73	time consumption consequence
37	usability	62	not useful anymore
37	usability	69	replacing

Consequences

From		To	
73	time consumption consequence	92	productivity - work
62	not useful anymore	92	productivity - work
69	replacing	92	productivity - work
60	not interesting anymore	92	productivity - work

6.3.8.9 93: simplify life (cut-off level=4)

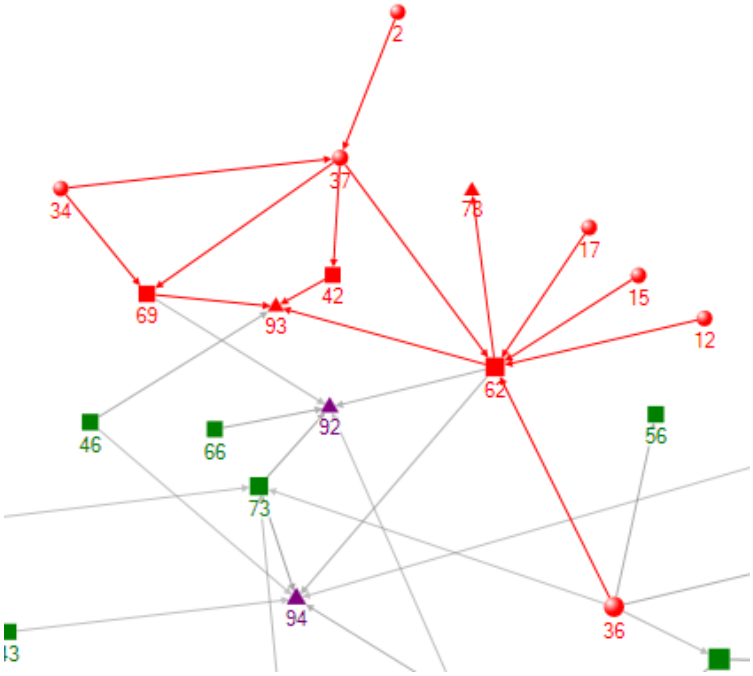


Figure 34: Simplify life ladders (cut-off level=4)

Attributes

From		To	
2	boring	37	usability
12	lack of people to interact	62	not useful anymore
15	new features in other SNS	62	not useful anymore
17	no reply to my post - lack of interaction	62	not useful anymore
36	unnecessary information	62	not useful anymore
34	technical difficulties - restrictions	37	usability
34	technical difficulties - restrictions	69	replacing
36	unnecessary information	62	not useful anymore
37	usability	42	complicates life
37	usability	62	not useful anymore
37	usability	69	replacing

Consequences

From		To	
62	not useful anymore	93	simplify life
69	replacing	93	simplify life
42	complicates life	93	simplify life

6.3.8.10 94: time management (cut-off level=4)

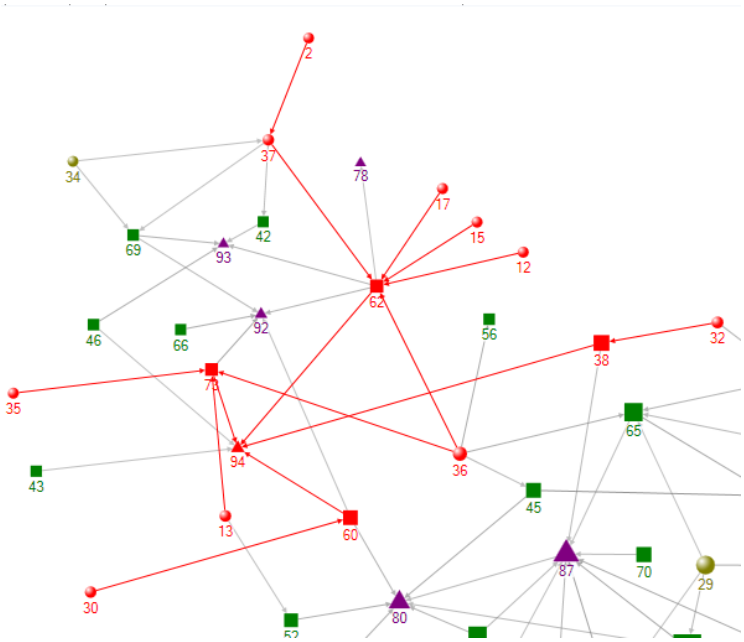


Figure 35: Time management ladders (cut-off level=4)

Attributes

From		To	
2	boring	37	usability
12	lack of people to interact	62	not useful anymore
13	looking at others profile	73	time consumption conseq
15	new features in other SNS	62	not useful anymore
17	no reply to my post - lack of interaction	62	not useful anymore
30	reduce posting frequency	60	not interesting anymore
32	SNS dependency	38	addiction
35	time consumption	73	time consumption consequence
36	unnecessary information	62	not useful anymore
36	unnecessary information	73	time consumption consequence
37	usability	62	not useful anymore

Consequences

From		To	
73	time consumption consequence	94	time management
62	not useful anymore	94	time management
38	addiction	94	time management

6.3.8.11 78: belongingness (cut-off level=3)

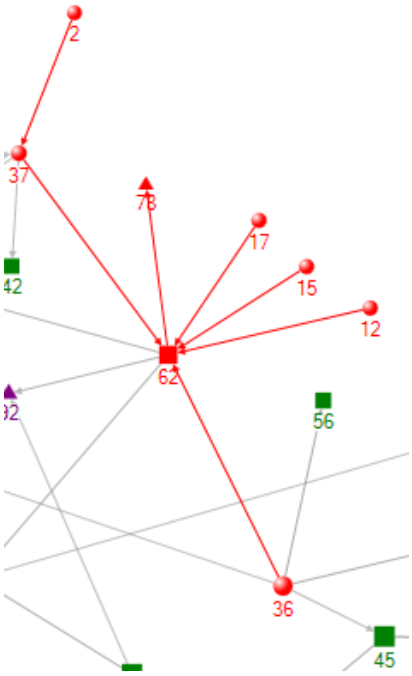


Figure 36: Belongingness ladders (cut-off level=3)

Attributes

From		To	
2	boring	37	usability
12	lack of people to interact	62	not useful anymore
15	new features in other SNS	62	not useful anymore
17	no reply to my post - lack of interaction	62	not useful anymore
36	unnecessary information	62	not useful anymore

Consequences

From		To	
62	not useful anymore	78	belongingness

6.3.8.12 83: grown up – maturity (cut-off level=3)

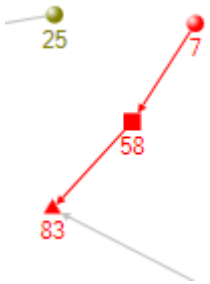


Figure 37: Grown up - maturity ladder (cut-off level=3)

Attributes

From		To	
7	feel baby-ish	58	moving on with life

Consequences

From		To	
58	moving on with life	83	grown up - maturity

6.3.8.13 89: Personal security (cut-off level=3)

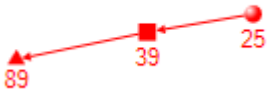


Figure 38: Personal security ladders (cut-off level=3)

Attributes

From		To	
25	personal info security	39	afraid of personal security

Consequences

From		To	
39	afraid of personal security	89	personal security

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