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DOCTOR OF BUSINESS ADMINISTRATION

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An exploration of user intention and behaviour in the context of the economic development of technology-supported online social networks

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Document Five

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LIST OF ABBREVIATIONS

EOS - ease of use

PBC - perceived behavioural control

SN - subjective norms

SNT – Social Network Theory

TAM - Technology Acceptance Model

TPB - Theory of Planned Behaviour

U - Utility

ABSTRACT

Technology-supported online social networks have grown dramatically in recent years. Limited success has been achieved in economically developing them so that users make purchases through them. However these are largely ineffective as they are based on 'targeting' users with advertising in an attempt to stimulate them towards purchasing. The aim of the research was to explore how these networks could be economically developed in ways which users would welcome.

The existing literature had gaps on how the intentions and behaviours of online social network users could be better understood in this context. Using a qualitative methodology semi-structured interviews were carried out with online social networks users. The research draws on the Theory of Planned Behaviour (TPB) (Ajzen, 1991-2006). It also explores how some aspects of the Social Network Theory (SNT) model developed by the researcher in Document 2, as well as some key constructs of the Technology Acceptance Model (TAM) (Davis et al., 1991; Venkatesh and Davis, 1994), may impact on TPB in this context.

The findings arising from thematic analysis of the interviews led to proposing contextualised factors which could affect the key constructs in the TPB. Factors affecting network user attitudinal beliefs and evaluations in this context included Ease of Use, Utility and belief in the network's capacity to deliver benefits. Factors affecting normative beliefs and motivation to comply included information-sharing, resistance to 'assumed profiles', self-setting of norms, and attitudes to personal data. Factors affecting control beliefs and facilitation included 'Ultimate Control', 'Program Control', 2-way information/control exchange dynamics, emotional bonding and user self-modification of behaviour. These led to a conceptual framework modifying TPB in the context of purchasing by network users.

As well as contributing to theory there are some contributions to professional practice, including insight to providing more opportunities for enhancing user engagement and perception of control, 'one-click' access to 'in-network' vendors,

and facilities for users to express their interests in information on the goods and services which they would welcome.

A number of proposals are also presented for extending the research in the future.

SECTION 1 - INTRODUCTION AND OBJECTIVES

1.1 Introduction

The aim of the thesis is to explore how online social networks could be economically developed in ways which users would welcome. Gaps in the existing research suggest that there is little research focused on how the intentions and behaviours of online social network users could be better understood in the context of their purchasing goods and services through their network. Human beings engage in daily interactions and networks with each other, some of which are based on ‘strong ties’, like family relationships, with others on ‘weak ties’ including individuals and organisations one encounters in everyday living (Granovetter, 1983, p204). Social interactions are also now taking place online facilitated by technology-assisted social networks, such as Facebook, LinkedIn, Twitter and MySpace. These networks have a number of features according to Boyd and Ellison (2007, p211) as follows:

> "We define social network sites as web-based services that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system".

Use of online social networks is growing rapidly internationally, with Perrin, (2014) predicting that global access to online social networks will have increased from 1.47 billion people in 2012 to 2.55 billion by 2017. (Please see Appendix 1 for further details). Therefore it appears that online social networks are likely to significantly impact on the personal and economic lives of their members for the foreseeable future. Yet gaps continue in the research to date on the potential for economic development of online social networks. Limited research indicates that vendors tend to target social network users with advertising which is largely ineffective (Xu et al., 2012). Examples of extensive research on online shopping

generally include Hsua et al., (2006) who investigated continuance purchasing intention, and Seok-Jae and Ji-Hyun (2006) who explored the influence of referent members on online shopper intentions, and Abadi and Gharibpoor (2012) who researched the role of service quality in online repurchasing intentions. However, there continues to be a paucity of research on purchasing intentions and behaviours of online social network users.

Over the course of this thesis the researcher has developed a model of Social Network Theory (SNT) in Document No 2 which linked information-sharing, bonding social capital, bridging social capital and centrality together. This was followed by an interpretivist qualitative study in Document No 3 which raised the possibility that technology and social actants could influence member purchasing action. Later a positivist quantitative study in Document No 4 with a hypothetico-deductive approach led the researcher to proposing a theoretical framework around the interaction of advertising and social factors. Further analysis by the researcher led to a study of the Theory of Planned Behaviour (TPB), (Ajzen 1991, 2002; Ajzen and Fishbein 1979), as well as the Technology Acceptance Model (TAM), (Agarwal and Prasad, 1998; Karahanna et al., 1999; Venkatesh and Davis, 2000). These taken together with the researcher's SNT model offered a more comprehensive understanding of the purchasing intentions and behaviours of online social network users. For this reason, these frameworks are used as the theoretical basis for the study.

1.2 Purposes of the research and the research questions

Little is known about how the TPB may operate in the context of purchasing by members through their online social network. The purpose of the research is to explore how the attitudinal beliefs and evaluations of members may be influenced as they move from their everyday activities on the network to completing purchases through it. How normative beliefs and motivation to comply may be influenced by the way members interact with each other and with the network as they make purchases through it is also explored. How control may be exercised in

this context is also investigated, including what factors may affect member perception of control of their own purchasing behaviour. The study aims to address three research questions. The focus of Research Question No 1 is as follows:

Within the context of purchasing through their online social network to what extent may user evaluation of benefits from their network influence their behavioural beliefs about the network?

It addresses how, within the context of purchasing through their online social network, to what extent user evaluation of benefits from their network may influence their behavioural beliefs about the network. Within this question the researcher explores:

- how the user's initial awareness of the network, its tools and processes may have influenced their perception of the value of its potential benefits to them;
- whether the user's perception of value changed with their experience; and
- if so, how this may have influenced their attitude and future behavioural intentions.

The focus of Research Question No 2 is as follows:

Within the context of purchasing through their online social network what role may information-sharing through the network contribute to forming user normative beliefs and subjective norms?

It addresses how, within the context of purchasing through their online social network, the role of information-sharing through the network may contribute to forming user normative beliefs and subjective norms. Within this question the researcher explores:

- how user attitudes may be influenced by the types of tacit knowledge available on the network;
- the processes for sharing information, social capital, and centrality; and
- how users may be influenced to conform to certain behaviours in exchange for securing valuable tacit knowledge.

The focus of Research Question No 3 is as follows:

To what extent may user perceived control of their purchasing behaviour on their online social network be enhanced?

It addresses to what extent user perceived control of their purchasing behaviour on their online social network could be enhanced. Within this question the researcher explores:

- how completion of purchasing actions may influence user control beliefs;
- the potential for successful past purchasing actions to help in improving actual user control of their purchasing behaviour; and
- the extent to which responsiveness of network processes and facilities may be influential in perceived behavioural control.

1.3 Structure of the thesis

Chapter 1 contains the introduction and objectives. Chapter 2 is a review of the existing literature and explores key concepts in TPB and how the application of the researcher's model of SNT and key constructs of TAM may modify TPB in the context of purchasing through online social networks. It also sets out the three principal research questions arising from the review, as well as proposing a conceptual framework for a modified TPB. Chapter 3 is a discussion of the methodology underlying this research project and the research methods used to gather the responses of the thirty respondents who participated in this qualitative

process. Chapter 4 sets out the findings arising from the responses while Chapter 5 sets out the conclusions and the contributions to theory and practice.

SECTION 2 - LITERATURE REVIEW, CONCEPTUAL FRAMEWORK AND RESEARCH QUESTIONS

2.1 Introduction

The aim of this thesis is to gain a better understanding of the factors which help to shape online social network user beliefs and attitudes and how these in turn may affect their behavioural intentions and actual behaviours towards engaging in purchasing through their network. The Theory of Planned Behaviour (TPB) was developed to help to provide greater understanding of human intention-behaviour dynamics and postulates that behavioural intention is a strong predictor of subsequent actual behaviour (Ajzen, 2011). Key concepts in the TPB which was largely developed by Ajzen[1] and Fishbein between 1969 and 2006, include user behavioural intention (I), attitudes (A), and beliefs (B). The way in which subjective norms (SN) may influence users is also a significant concept in TPB, and another key concept is the user's perceived behavioural control (PBC), (Ajzen, 2011: 2002). (Appendix 2 contains an outline of the key concepts in TPB). TPB is a well-established and respected theory, applied in a wide variety of contexts, including environmental concerns (de Groot and Steg, 2007), HIV vaccine trials (Giocos et al., 2008), smartphone usage (Jengchung et al., 2010) and road freight (Plant, 2009), for example. However TPB has not been applied to date to try to understand the comprehensive range of factors which may apply in the context of purchasing intentions and behaviours by users of online social networks. Doing so now in the context of this research project may provide a meaningful insight to some of the factors influencing the purchasing intentions and behaviours of online social network users.

Earlier research by this researcher led to the development of a model of Social Network Theory which links bonding and bridging social capital, information exchange, and member centrality (Collins-Hughes, 2008, p26 - *Document No 2*). Given the context of this research project some elements of the researcher's

[1] Azjez in occasionally cited in academic literature as Aijen

model are also taken into account, as they have the potential to contribute to understanding key TPB concepts such as attitudes, subjective norms and intentions. For example beliefs and subjective norms may be influenced by the interaction of network users with each other and between themselves and the network. The application of this researcher's model of Social Network Theory may lead to modifications to the TPB which provide greater insight and understanding of the operation of subjective norms in this context. The model, through its application of bridging and bonding social capital, may also provide greater insight to how a user's attitudes and intentions may develop as successful purchases are made and repeated. Key constructs in the Technology Acceptance Model (TAM) as developed by researchers, including Davis et al., (1991) may also impact on the operation of TPB in the context of this research project. These are Ease of Use (EOS), Utility (U), and individual differences in attitudes to using technology (Mathieson, 1991). However none of these researchers has applied TAM together with TPB in the context of purchasing through an online social network. Nevertheless there is a strong history of researchers such as those just referenced in applying TAM concepts with closely-related theories, such as TPB to help to enhance understanding of the influence of the one on the other. The contribution of the EOS, U and individual difference concepts in TAM in understanding how user PBC may be influenced may lead to a modification of the TPB in the context of purchasing through the network.

The following sections of this literature review critically analyse the work of other researchers on TPB, researchers on relevant elements of TAM, and on Social Network Theory (as developed by this researcher in Document 2). It also explores how TPB may be modified by the effects of these elements of researcher's Social Network Theory model and the TAM constructs. From this analysis the three research questions for this research project emerge. In addition a conceptual framework is developed to help to explain how the various concepts interact together in this context. If it were possible to gain a greater insight to the factors which may influence user intentions to engage in purchasing behaviour then that could impact on the way online social networks operate in the future. It can be

argued that the contribution to both theory and practice from bridging this gap are potentially significant.

2.2 TPB – Understanding Beliefs, Attitudes, Intentions and Behaviours

As outlined in Section 2.1 earlier researchers have postulated that behavioural intention may be an indicator of subsequent actual behaviour (Agarwal and Prasad, 1998; Ajzen, 2011; Karahanna et al., 1999; Venkatesh and Davis, 2000). These researcher indicate that perception is linked to behavioural intention. Where the user's perception comes from and how it may be generated and effected may, amongst other things, be linked to the user's attitudes and beliefs. Before exploring the dynamics of beliefs, attitudes, intentions and behaviours in the context of economic development of online social networks a better understanding of these concepts is required. TPB links actual behaviour to behavioural intention, and also to the person's beliefs and attitudes, including those related to their belief in their own power to exercise control in the situation. Perception too is important in influencing attitudes and behaviours. Fig 2.1 depicts Ajzen’s 2002 Revised Model of The Theory of Planned Behaviour (TPB).

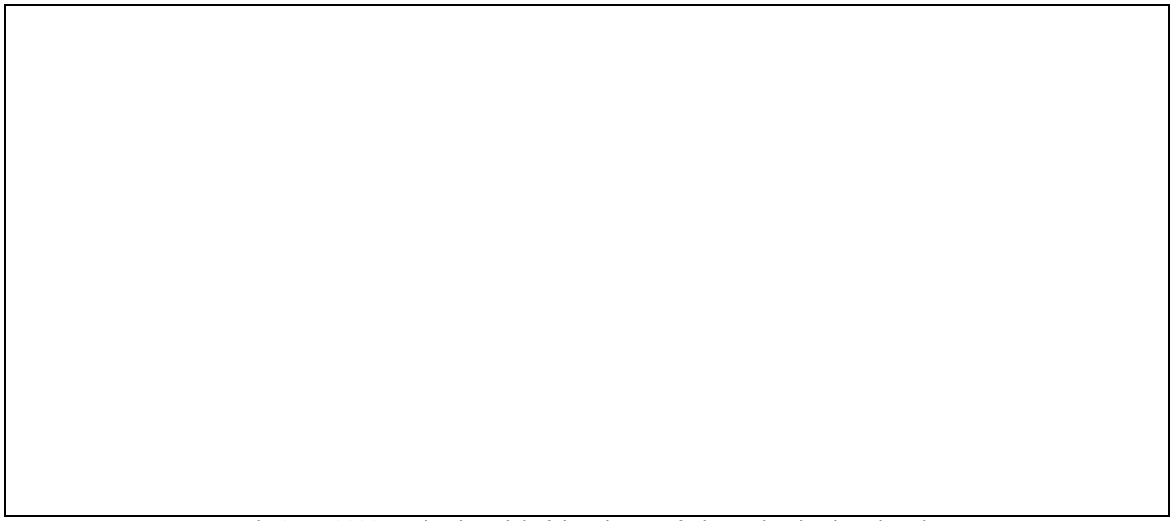

Fig 2.1 – 2002 Revised Model of the Theory of Planned Behaviour (TPB)
From Ajzen (2006). ‘Constructing a theory of planned behavior questionnaire.’ (p1-12)

Table 2.1 gives an overview of the key concepts and their effects and interactions.

THEORY OF PLANNED BEHAVIOUR (TPB)		
Concept	**How it works**	**Implications**

Table 2.1 - TPB - Overview of key concepts and their effects and interactions – reproduced from Ajzen (1991) 'The Theory of Planned Behavior', *Organisational Behaviour and Human Decision-Making*, 50, pp179-211

Ajzen and Fishbein developed TPB between 1969 and 2006. The important issues for them in attempting to predict behaviour are "... attitudes towards the performance of the behaviour, normative beliefs and the weights of these predictors" (Ajzen and Fishbein 1970, p468). However "unresolved issues" (Ajzen 1991, p179) centred on the person's expectations and sense of value to them of their behaviours also need to be factored in. Other issues include the user's experience of the outcomes of their own past behaviours and their motivation in the context in which they behave. In considering how TPB may be useful in trying to predict future purchasing behaviour of users of online social networks it is also important to understand the role of individual perception. Perception can pose a difficulty where users are asked to predict their own behaviours in hypothetical situations, such as future "...willingness to participate (WTP)" (Giocos, et al., 2008, p848). This may suggest that just because users say they plan to do something does not mean they will do so. Also how users may behave while acting on their own may be different to when they feel they must comply with social norms. Applying this to Facebook users, for example Cheung and Lee (2010) found that social norms were significant influencers of collective intentions – initially and with user experience. TPB therefore may apply strongly to collective behaviours by users but weakly to individual usage. This is because the model cannot be used to predict human behaviour to a very high degree of certainty. Ajzen, (2011, p1113) acknowledges “... even with good measures, the most we can reasonably expect in terms of correlations among the theory’s constructs are coefficients of about 0.60." The difficulty of designing experiments which test the application of TPB has been discussed by Sniehotta et al., (2014). They argue that while attitudes and perceptions of control may have been identified in participants across a range of experiments conducted by various researchers in health care fields there is little evidence of this leading to changed behaviours. It is not clear from their work if they looked at TPB-based research in other fields, as it may be that when it comes to one's health people may have a different way of perceiving things and acting than say, in shopping or using their online social network. It could be argued that users of online social networks may be particularly influenced by subjective norms given the high level of human

interaction on these networks. As well as that users may perceive that they have little control of how they can use their networks because of the way the technology underlying these networks operates. They may also develop attitudes and beliefs about these networks and their potential value to them and their roles in their personal or professional lives. Value-laden beliefs may extend to their attitudes towards purchasing through their network. In helping to gain a better insight to these issues Section 2.3 analyses the application of TPB in the context of online social networks.

2.3 TPB in the Context of Online Social Networks

Fig 2.2 is reproduced from Ajzen (1991, p182) and depicts how attitude towards the behaviour (A), subjective norms (SN) and perceived behavioural control (PCB) interact in influencing behavioural intention (I).

Fig 2.2 (from Ajzen, 1991, p182) 'The Theory of Planned Behaviour'.

The influence of three key sets of beliefs – behavioural, normative and control – was accommodated in the TPB model by Ajzen in 1991. The inclusion of subjective norms in TPB introduces a focus on how referent others may influence behavioural intentions of online social network users, and this is explored in Section 2.3.4 of this review. As social networks are facilitated by technologies, control beliefs may influence how users behave in using these and TPB offers a framework which incorporates actual and perceived control. For example if it is

not possible for the network user to behave the way they intend because they do not have the actual control they perceive they have, the TPB may be able to explain whether this distinction really matters. The distinction between perception of control and actual control is accommodated within TPB. It can be argued that this may be helpful in the context of online social networks as perception of control may be linked for example to the way members share information and tacit knowledge, or to individual member disposition (please see Sections 2.5.1 and 2.5.2 for further analysis on this). This can be helpful in addressing the gap where the user perceives they are (and need to be), in control when in fact they are not. It can also be helpful where users may not be overly concerned about where the locus of control actually lies, so long as they perceive that they have the control they need. Further, TPB may give insights to the roles of vested interests (such as network providers or vendors) in influencing user intentions, especially taking into account the moderating effects of user experience. It also can offer insights to the potential for individuals to behave differently even when they have the same general attitudes (Ajzen and Fishbein, 2002). Since within TPB beliefs are closely associated with attitudes and intentions, Section 2.3.2 considers the definitions and expansions of TPB behavioural beliefs, normative beliefs and control beliefs.

2.3.1 Defining and Expanding Behavioural, Normative and Control Beliefs

According to Ajzen (2002, p1) "...human action is guided by three kinds of considerations which combine together to form a behavioural intention - behavioural beliefs, normative beliefs and control beliefs ...” These are summarised in Table 2.2 below and expand the original model depicted in Fig 2.2.

Theory of Planned Behaviour - TPB – 2002	

Table 2.2 - Operation of Beliefs in the TPB Model

(From Ajzen, 2002, ‘Constructing a TPB Questionnaire: Conceptual and Methodological Considerations’, p1)

This integration of the factors affecting the three sets of beliefs was further reviewed by Mathieson (1991) and Fig 2.3 reproduces this expanded TPB framework.

Fig 2.3 – TPB – Expanded Version - Reproduced from Mathieson, (1991, p175)

2.3.2 Attitudinal Beliefs and Evaluations

The discussions in which Ajzen and Mathieson engaged on the potential linkages between attitudinal beliefs and evaluations can inform the current research project by exploring the importance the user of an online social network may make to their evaluation of the network. In the context of purchasing through the network what exactly is to be evaluated needs further clarification. For example it could be argued that the user's initial attitude to the network and therefore their behavioural intentions towards it could be influenced by their belief that the network is of little economic value to them. As the network provides valuable benefits to them their evaluation of these could alter their behavioural beliefs and intentions. For example, as users are introduced to products and services by the network which they welcome their evaluation of this benefit may enhance their beliefs in, and attitudes towards, the network. This changed attitudinal belief may be influenced continuously over time as repeated purchases are made through the network. The work of Hsua, et al., (2006) on continuance intention of online shoppers could give

some useful guidance on this. They found that shopper behaviour changed over time as "…their cognitive beliefs and attitudes changed from the pre-usage stage to usage stage" Hsua, et al., (2006, p889). During this transition their intentions also changed. Gaining insight as to whether this sort of dynamic would apply to purchases made through an online social network is part of the purpose of this research project. Prior awareness of the network may influence the user's attitudinal beliefs and evaluations. Initial experience in using the network to make purchases could further affect these. Ongoing successful purchases could dramatically alter the user's attitudes towards the network, especially if the user valued the network as a purchasing channel. The influence of elements of this researcher's model of Social Network Theory in shaping user beliefs and evaluations is discussed in further detail in Section 2.5 of this review.

The network user may or may not be conscious of their attitudes to their own behaviour. Individual differences, such as personality, may apply in how people link their beliefs, attitudes and subsequent behaviour, with Connor and Armitage, (1998) supporting this position. Some people in a network may consciously set out to secure benefits for themselves, while others may gain benefits simply by participating in the network. Egotistical pursuit of positive outcomes for themselves may drive the behaviour of some individuals (de Groot and Steg, 2007). While this is self-conscious behaviour there may not always be a direct link between intending to behave to get benefits and behaving accordingly (Patch et. al., 2005). Both attitudes and beliefs are very difficult to directly measure and can only be inferred (Ajzen, 2001, p8): and while behaviour can be observed it can be very difficult to directly link attitude and behaviour (Ajzen, 2002). Observation of user behavioural changes over time may give greater insight to this. For example the willingness of people to engage in certain behaviours to gain benefits for themselves may manifest itself in measurable differences in their behaviour which are directly linked to gaining these benefits. However up to now TPB has not considered the "cognitive effort (i.e. the learning costs and time to use the technology)" Bhattacherjee (2000, p412), and related monetary costs, which consumers bear in online purchasing.

Online customer attitude may be better where the exchange is seen as positive for them (Pavlou and Chai, 2002). Where the technology fosters greater engagement between the customer and the online retailer it may also lead to higher levels of customer enjoyment as the cognitive workload is reduced (Agarwal and Karahanna, 2000). Customer attitudes may also be more positive where support is offered such as easy-to-use menus (Baja and Nidumolu, 1998), and where users learn the website's tools and facilities quickly (Czerniak et al., 1999). While these research projects did not relate directly to purchases by online social network users nevertheless they suggest that it is very important that technology-based systems are easy to learn to use. It is also important they have engaging features, have the capacity to absorb users, lead users quickly to desired outcomes, and provide support users feel they need. The capacity of the network to respond to user purchasing needs may influence both user attitudinal beliefs, and their control beliefs. The role of the network's tools and facilities used in making purchases may also affect user control beliefs and perceived facilitation. These factors are discussed in greater detail in Section 2.3.4 and Section 2.4.2

2.3.3 Normative Beliefs and Motivation to Comply

In considering whether online social networks exercise control over the behaviour of a member the definition of subjective norms set down by Fishbein and Ajzen (1975, p. 302) is recalled:

> "The perceived social pressure that most people who are important to him/her think he/she should or should not perform the behavior in question"

Referent members may exert pressure on the user to behave in certain ways. It can be argued that the status of the network itself may have an influence on how the member behaves. This suggests then that the member may perceive referent norms in operation, and these may apply broadly or to a limited range of areas and behaviours. In that case the context in which the user establishes subjective norms may also be influential. Although related to purchasing through a dedicated online shop rather than through an online social network Seok-Jae

(2006) and Ji-Hyun (2006) found that new users were influenced by existing referent users. Referent users could be family members (Al-Jabari et al., 2012). However such influence does not always translate into purchasing behaviour in accordance with influencer norms (Li and Buhalis, 2006). More likely to influence social norms in online purchasing and repurchasing intention are quality of services (Abadi and Gharibpoor, 2012), self-presentation (Hee-Woong et al., 2012) and 'stickiness' where the customer has no desire to look for alternatives, (Li, et al., 2006, p115).

An example of the influence of others in establishing normative beliefs was identified by Galluc and Thatcher, (2006) who found that students who used Facebook were influenced by their perception of relevant peers. Users may also become cognitively absorbed in popular, convenient social networks and websites (Izquierdo-Yusta and Schultz, 2011), especially where there is increased social pressure on them to use it. It may be unique to students but Cha (2011) found that social norms were largely determined by student peers who had significant impact on purchasing intentions. Information searching goes hand-in-hand with online purchasing and Pavlou and Fygenson (2006) found a positive relationship could exist between information-seeking, intention and social norms, potentially impacting on online purchasing intention. While it can be argued that information-sharing about goods and services available to members through external links to the network is facilitated in these ways, whether information about the network's own benefits is shared in the same way is not as clear. It is suggested that this issue and the possible role of tacit knowledge related to purchasing through the network, as well as possible user conformance to secure this valuable information, is important and these are examined further in Section 2.5 of this review.

The research just referenced by Seok-Jae (2006) and Ji-Hyun (2006), Li and Buhalis (2006) and Pavlou and Fygenson (2006) have the limitations of being applied to specific groups of users of a given service or website. Nevertheless, some of them raise the possibility that normative beliefs and motivation to comply may strongly influence user purchasing behavioural intention. However, they also

indicate that people may ignore ongoing normative behaviours set down by referent others if they can use their own discretion, and it can be argued that the online nature of the network may facilitate this. It could further be argued that a possible issue in establishing normative beliefs is the role of the network itself, as opposed to the roles played by network members. For example being a member of a network which is perceived as influential may be a strong motivator on the member to comply with network norms. This may be explained by the operation of elements of this researcher's model of Social Network Theory and is discussed further in Section 2.5 of this review.

2.3.4 Control Beliefs and Perceived Facilitation

The degree to which users of an online social network perceive that they can exercise control over their behaviour - perceived behavioural control (PBC) - may affect their actual behaviour if Ajzen, (1991) is correct. It could be argued that there may be factors which the user perceives that either facilitate or impede their network activities. If so it may or may not matter if these are economically-related. "Psychological reactance" Kozcerga and Anna, (2012, p2) may occur when users perceive that their freedom to control transactional processes is restricted, making them feel badly about this and wanting to exercise the restricted choices. At the other extreme where users perceive they have too many possible choices they may restrict their future behaviours themselves (Coleman, 2012). Predicting behaviour may be easier with existing customers (Ramayah, et al., 2002). The fact that shopping is rarely purely utilitarian is important and the "flow" in the interaction between a vendor and an online shopper significantly influences perception of control and enjoyment Zhou, et al., (2007, p47). These researchers help to distinguish between new and experienced users and the need to carefully design systems to make control by the user as technically easy as possible. These same principles may need to be applied to online social networks as they are to online shopping sites.

Self-efficacy is the belief that one can complete tasks and achieve one's own goals, and influences one's belief that it is possible to exercise control over one's

own behaviour. It was found for example, to be a “strong link” between online purchasing intention, PBC and actual purchasing behaviour by George (2004, p.207). This was reinforced by Hsiu-Fen (2007), while Pookulangara and Natesan (2010) agreed and distinguished between practical functionality (or utilitarian benefits), and emotional desires (or hedonic benefits) – with the latter being less influential on PBC. Several research projects on PBC have found that self-efficacy may be a strong predictor of PBC and behavioural intention, including Comerford, (2012) in the education field, and in separate studies with healthcare professionals (Jengchung et al., 2010; Yi et al., 2006).

In explaining how control may operate within TPB Ajzen (2006, p1) says “…to the extent that perceived behavioral control is veridical, it can serve as a proxy for actual control and contribute to the prediction of the behavior in question”. If his argument is accepted then a user’s perception of their control in the situation can be taken as accurately representing the reality of control for them. However, this leaves a lot of room for interpretation and it would be helpful if some additional tools were available to reduce this. Elements of the Technology Acceptance Model (Venkates and Davis, 1994) may help in doing so and these are reviewed in Section 2.4 of this review.

2.4 Technology Acceptance Model (TAM)

Fig 2.4 is reproduced from the work of Davis (1991-1993) and sets out the key constructs of the Technology Acceptance Model (TAM).

Fig 2.4 – TAM – Reproduced from Davis, (1993, p476)

TAM was developed in exploring how providers of technology may facilitate its acceptance by those who are required to use it. It explores how cognitive responses may be derived and postulates that the key influences on these are "perceived Ease of Use (EOS)", Venkates and Davis, (1994, p214) and "perceived usefulness / Utility (U)" ,Venkates and Davis, (1994, p214), defined by them as:

1) Ease of Use (EOS) "…which is about how free of effort a user finds the technology system"; Venkates and Davis, (1994, p214), and

2) Utility (U) "…which is their subjective probability that the system will increase their job performance", Venkates and Davis, (1994, p214).

Depending on how these are perceived by the user they have the potential to produce an affective response and impact on the user's attitude; in turn attitude brings about a behavioural response as the person actually uses the system (Ajzen and Fishbein 1969, 1970, 1972, 1975; Davis et al., 1989; Davis and Fishbein, 1969, 1970, 1972; Davis, Bagozzi and Warshaw, 1989).

The social network user in making purchases through their network uses the network's tools and facilities for this purpose. In that regard the application of the Ease of Use (EOS) and Utility (U) concepts in the Technology Acceptance Model (TAM) to TPB may provide additional insight. Mathieson (1991) incorporated

these aspects of TAM to the TPB to help in understanding how users of technology develop their beliefs. This was supported by Davis et.al, (1991) and Venkates and Davis (1994). Dishawa and Strong (1999) extended TAM to include multiple-technology use, while Viswanath (2003) explored using TAM in conjunction with other theories to help to arrive at a unified view.

2.4.1 Ease of Use (EOS), Utility (U)

A very important finding by Davis et al., (1991) is that users of technology are more likely to use it based on its (U) rather than for its (EOS). However in that case user choices were restricted to only two different possible information technologies. It is not possible to predict if the findings would apply had a wider choice of information technologies been available, such as in the case of online social networks. Researchers such as Davis et al., (1991) considered TAM in the context of the benefits from using technology which would accrue to the providers of the technology, not to the users. However the importance of (U) in influencing attitude not just towards the technology per se, but towards the benefits to the user that may derive from its use was also recognised by Mathieson (1991). He also believed, like Davis, Ajzen and other TAM and TPB proponents that "…intention to perform a behaviour is a predictor of actual behaviour" Mathieson (1991, p173). In practical terms U and EOS may be facilitated both by the network's tools and facilities, and by its responsiveness to user requirements. Applied to purchasing through online social networks the interaction of U and EOS may reveal similar findings to Mathieson in a modification to TPB in this context.

2.4.2 Roles of individual difference and experience in TAM

Additional factors which may influence intention to use technology have been considered by other researchers, including individual difference as manifested by positive or negative states of mind (Lin and Chang, 2011). During the 1960s Ajzen and Fishbein explored the importance of individual choice and personality in helping to predict behaviour (Ajzen and Fishbein, 1969). In addition Davis (1993, p407) argued about the importance of "... individual perception". Again, Mathieson (1991) found individual user perception of control of resources and the particular

context in which to exercise it can affect their subjective belief in securing the outcomes they seek. Other factors also include beliefs as reinforced by direct experience and satisfaction (Agarwal, 2000; Legris, et al., 2003). Some of the research projects discussed were done with either students or office workers using a limited range of technologies (Legris, et al., 2003) and this may be a weak point. Nevertheless as set out in the last paragraph applying U and EOS from TAM in this research project is helpful in gaining greater understanding of user control beliefs.

2.4.3 Effects of these TAM constructs on TPB

The network facilitates the user in making purchases and how it does so may have an influence on perceived facilitation. The perceived capacity of the network to facilitate the user may depend on what the user expects from it. It may also depend, as Ajzen (1991, p182) puts it on "…the extent that the person has the required opportunities and resources". The user's perception of the value of all the benefit to them derived from exercising their control is also important. For example Bourdieu and Wacquant, (1992) found that virtual benefits also need to be taken into account. Meanwhile Ajzen (2002, p5) draws on empirical research to argue that evaluation has two components ... "(instrumental – for example sense of the outcome being beneficial or harmful) and experiential (pleasant /enjoyable as opposed to unpleasant)". This suggests that in providing users with opportunities to make purchases network tools and facilities may be very important. It can be argued that these and the capacity of the network to respond to user needs, could impact significantly on user control beliefs and perceived facilitation. This suggests therefore that the concepts of 'Ease of Use' and 'Utility' and individual user attitudes towards the network's technology, tools and facilities (which are key constructs in TAM), can play a role in modifying TPB.

As discussed in Section 2.1 the context of this research project is online social networking and there are some elements of this researcher's model of Social Network Theory which may impact on users making purchases through their network. These are reviewed in Section 2.5 of this review.

2.5 Elements of Online Social Network Theory

Section 1.1 drew on the work of Granovetter (1983) and Boyd and Ellison (2007) in defining the key features of online social networks. In Document 2 this researcher developed a Social Network Theory model to link information-sharing, bonding social capital, bridging social capital and centrality/influence (Collins-Hughes, 2008, p26 - *Document No 2*). It can be argued that there has been very little research on the application of TPB to contexts where Social Network Theory may also have an impact. The relevance of this researcher's model of Social Network Theory to this thesis is set out in Sections 2.5.1 to 2.5.4. This researcher's model may help to provide a better understanding of the role of information-sharing in establishing and maintaining normative beliefs, motivation to comply and subjective norms in an online social network. Information-sharing may be a facilitator of subjective norms, and provide a link between the TPB and this researcher's model of Social Network Theory.

It can be argued that members may receive benefits, both actual and virtual, from being part of an online social network. Practical benefits may be accompanied by enhanced relationships with other members and access to information and resources which are only available to network members (Bourdieu and Wacquant, 1992; Lin, 1999; Steinfield et al. 2008). Social capital may come into play as bonds develop between members, and benefits are available from the bridges the network makes to external resources (Granovetter, 1983). Members may value different types of benefits arising from "...functionality, emotional qualities or social value, or a combination of all of these", Kim et al., (2011). The effort made to secure benefits and interactions with other members may influence the readiness of the user to adopt network innovations (Al-Debei, et al., 2013; Katz and Shapiro, 1985; Lee et al., 2011). Members may be influenced or pressured by other members to engage in various actions on the network, or may feel some sense of social identity with it (Tajfel, 1972; Tuomela, 1995; Wang et al. 2012).

2.5.1 Information Sharing

Information sharing can act as a form of trust-building, cohesion, or social relationship-building in self-formed networks (Snowden, 2005). Member behaviour may be influenced and controlled by "...social systems...and their expectations and beliefs", Chiu et al., (2006, p1874). Some information-sharing is more ego-centric and some may be more open to all groups (Schultz-Jones, 2009). However hedonic factors such as helping others may also motivate members, with self-efficacy and sharing bringing their own rewards (Liao et al., 2013). Based on the work of these researchers one can see that information-sharing does not always have to be linked to power and control and that enjoyment and altruism may also be significant factors. It could be argued that this form of information-sharing also has the capacity to build confidence in behavioural beliefs, voluntary conformance to subjective norms and enhanced sense of control through support and encouragement. This suggests that members, although they may not openly discuss it, may understand that they have tacit knowledge within the network which is shared between them. Social networks can be very good for tacit knowledge sharing which can take many forms such as " '…tacit-to-tacit ...tacit-to-explicit ... and explicit to tacit ...' Panahi et al., (2013, p382). Social interaction, immediate feedback, everyday language and context facilitate tacit knowledge (Panahi et al., 2013). Examples of tacit knowledge related to purchasing through the network could include such things as the availability of otherwise scarce goods and services, special or reduced prices for network members, and information about which vendors are seen as the most trustworthy. Networks where withholding such information or being “me now” centred, Naaman et al., (2010, p189) can establish their own social norms, negatively affecting user behavioural intention towards purchasing.

2.5.2 Centrality and Influence

In a social network, access to information is a potential signifier of status where "...specific information is shared based on the member’s role", Sheard and Kakabadse, (2007, p334). Further "...resources such as information are shared on a peer-to-peer basis...”, Smith, (2005, p12), while the concept of "...information exchange...", Prenkert and Hallen, (2006, p384) provides opportunities for

members. If these writers are correct the relationship between role, status and information is significant with a member's social status perhaps being reflected in the "...quantity and quality of their information access...", Yang and Tang, (2003, p398). This may also lead to a perception by other members of 'central' members as exerting pressure on other members. Centrality refers to "...whether people have better access to information and better opportunities to spread information depending on their positions in a network", Toral et al., (2009, p382). Some members may be more important to the network than others because they are 'go-betweens' (Toral et al., 2009). A small core of members may be "…usually responsible for the majority of contributions" (Toral et al., 2009). 'Central' members may have the highest influence and numbers of 'connections' and be "...recognised by others..." Lea et al., (2006, p135), where privileges and "…rights of belonging…" Hersberger et al., (2007, p138) are established. Some information is publically available and some is private (Marouf, 2005), and while it may not to be readily made public, it is available to central members.

The way a network's structure influences member information-sharing and behaviour - "network intelligence" Palmer and Richards, (1999, p201) - centres on how members connect with each other. Network benefits may be distributed "...both individually and collectively" Gray et al., (2007, p157), or unevenly. In addition some members may use networks to enhance their own reputations while damaging that of others (O'Mhurchu et al., 2004). Members may have to develop strategies to counteract the domination of others. An individual's behaviour in the network may be influenced by "...compliance with opinions of important members ...identification with a sense of belonging or attachment...or ...internalisation where the values and opinions are similar to one's own..." Zhou, (2011, p68). He found that "...group norms and social identity strongly influence member behavioural intentions" Zhou, (2011, p74-75) while "...subjective norms have insignificant effects on their network behaviour" Zhou, (2011, p76). Social identity is significantly influenced by group norms (Li, 2011) with user intentions framed by the compliance dynamic; however in this case members also derived high levels of personal enjoyment from the network. So long as network participation is

voluntary and can provide high levels of gratification and personal benefits some members may seek to use them and comply with the network's social norms simply to gain the gratification and benefits (Chiang, 2013; Lutters and Ackerman, 2003).

It can be suggested therefore that network members may or may not be aware of the social norms associated with it, who the central members are and how they exercise influence. It can be argued that the attitude of non-central members to central ones can be significant in normative belief formation and motivation to comply. For example where non-central ones are willing to be influenced by central ones that is one scenario. Where they are unwilling to be influenced that is another. As suggested earlier (Chiang, 2013; Lutters and Ackerman, 2003), members may consciously choose to comply fully with these social norms in order to secure benefits and gratification. Or they may gain as many benefits as they can without complying. It can be argued for example that a member of an online social network may choose to 'follow' a particular central member and agree to be bound by their rules in exchange for gaining valuable information from them. It could also be argued that a user may follow additional or special network rules in order to secure valuable information to enable them to buy specialised goods or services through the network. This suggests that in both examples the user is motivated to comply in exchange for the benefits available and their understanding of the way this exchange works may contribute to normative beliefs. At another level a member may be aware of a number of alternative 'central' members and select only those who interest them or whom they perceive as being of benefit to them. This could suggest that members may be assertive and not easily amenable to being influenced by other members, network providers and vendors and that this may be a modifying factor in establishing behavioural norms and compliance.

2.5.3 Social Capital Associated With Networks

While information-sharing is one way in which normative behaviours may be established another may be how the network's social capital operates. A definition of Social capital is:

> "Social capital is the investment in social relations by individuals through which they gain access to embedded resources to enhance expected returns of instrumental or expressive actions", Lin (2003, p139).

In practice members of a network may take a period of time in membership before they see the benefits available to them arising from the myriad connections between members. This is 'bonding' social capital as it bonds the members together to their mutual benefit. The network itself may be influential enough to have strong links with the external world which are used to gain benefits for the network itself and its members. The main writers in this field (Granovetter, 1973; Hersberger et al., 2007) emphasise the importance of both ‘strong ties’ and ‘weak ties’. In considering how people perceive things trust and knowledge may be at the heart of social capital (Lang, 2004; McElroy et al., 2006). For online social networks the importance of 'strong ties' may be demonstrated in the fact that most initial 'friends' on Facebook are “real-life” friends Bakshy et al., (2012, p2). Benefits may include access to information about jobs or discounts for example (Taylor et al., 2004; Thornley and Jephson, 2007). As the user learns the processes for sharing information and accessing benefits through the network they may also appreciate how bonding social capital and bridging social capital work. Their motivation to comply in these circumstances may be high, and they may be quite willing to conform to agreed rules to secure valuable information leading to benefits. If for example these relate to the purchase of desirable goods and services which are exclusively available to network members this is one way in which normative beliefs, subjective norms and conformance can readily result in expected outcomes.

As well as benefiting from the network’s social capital members may also contribute to it. As network members interact, change and innovation may be

facilitated in a 2-way process (Smith, 2006) - as network changes facilitate members their influence on the network may help it to change and grow. Bridging social capital "...provides members with opportunities to learn new things and be exposed to new possibilities" Smith, (2006, p723). Bonding social capital provides members of the network with a "…safe, supportive environment for sharing and discussing things with others they trust" Smith, (2006, p723). On a cautionary note bonding social capital since it is inward-looking, can exert negative pressures on members and it can be "…concerned with maintaining homogeneity" Patulny and Lind, (2007, p33).

In the context of online purchasing the potential for eWOM, Gladwell's tippling point and the momentum effect to influence consumer behaviour have been explored by other researchers. Section 2.6 considers the potential impact of this research on online social network users making purchasers through their network.

2.6 eWOM, Gladwell's tipping points and the momentum effect

As one of the first researchers to explore "word-of-mouth (WOM)" Arndt, (1967, p295) investigated its potential to influence the purchasing intentions of others. Later authors found that WOM could also apply to online purchasing settings (Balasubramanian and Mahajan, 2001; Hugstad et al., 1987; Mangold et al., 1999; Srinivasan, 2004; Van dens Bosch et al., 2005; Walsh et al., 2004; and Wangenheim and Bayon, 2004), with eWOM first defined as:

> "Any positive or negative statements made by potential, actual, or former customers about a product or company, which is made available to a multitude of people and institutions via the Internet", Henning-Thurau et al. (2004, p.39).

How eWOM may influence purchasing through online social networks may depend on the strength of shared "communal norms" Kozinets, et al., (2010, p83) between members. The impact of eWOM recommendations may also depend on

the energy, intensity and conviction with which they are made as "…people do not typically offer bland WOM" Sweeney et al., (2012, p251). The potential for network providers and vendors to control how eWOM may operate may also need to be explored. For example, Facebook, by using sophisticated mathematical models to analyse user posts as part of eWOM, was found to be improving its accuracy in predicting user behaviour (Chen, et al., 2014). However, the "…need to capture the attention of relevant consumers" Pieters and Wedel, (2004, p83) was reinforced in an online setting ten years later by Daugherty and Hoffman (2014). It could be argued that if social network providers such as Facebook are to effectively apply eWOM principles they need to both attract the attention of members and be perceived by them as sharing their norms and convictions. If they manage to do so perhaps this could create a tipping point resulting in a rapid development of online social networks as purchasing channels.

> "The tipping point is that magic moment when an idea, trend, or social behavior crosses a threshold, tips, and spreads like wildfire. Just as a single sick person can start an epidemic of the flu, so too can a small but precisely targeted push cause a fashion trend, the popularity of a new product, or a drop in the crime rate", Gladwell, (2000, p2).

How the relationship between a consumer and the brand(s) they like can affect their purchasing behaviour has been shown to follow Gladwell's principle (Woodside and Walser, 2006). Another example of the influence of eWOM on restaurant customer behaviour demonstrated that the "…power of the context" Longart, (2010, p122) creates a tipping point. The way Facebook sustains and perpetuates its own exponential growth also appears to follow a Gladwellian scenario (Patterson, 2012). In a network where there is a complex interflow of questions and answers a "…single issue" Woodside, (2015, p40) can be a tipping point leading to a sudden change in a consumer's response. Taking the principles established by these researchers it can be argued that online social networks provide both a complex environment for interflows of information and eWOM, as well as a

special context, both of which have the potential to create tipping points towards the network developing into an attractive purchasing channel. However, whether sufficient momentum can be generated for this to happen needs to be considered further.

The momentum for the network to develop as a purchasing channel may increase as the member makes a cognitive shift in their mindset towards it, with the shift taking them from "…a pre-decisional phase to a post-decisional phase" Gollwitzer, (1990, p.42) as a purchaser. This momentum may be further enhanced as the member learns the sequence of behaviours which achieves their purchasing goals (Dhar, et al., 2007). Making a deliberate decision to purchase something different enhances commitment, overcomes psychological resistance and builds a momentum towards repeat purchases (Chandran and Morwitz, 2005). Generally where repeated shopping behaviour leads to positive outcomes the momentum to repeat these may grow as the positive relationship between behaviour and desire outcomes strengthens (Goltz, 1999). Similarly it can be argued that the momentum towards further commitment to the network as a purchasing channel and repeat purchasing through it may build up once the initial deliberate decision to use it is taken. If Ramantahan and Dhar, (2010) are correct then the momentum effect will lead to further, unrelated purchases depending on the member's brand preferences. If the network has the capacity to provide "…compelling value" Larreche, (2008, p60) to members as purchasers by addressing their emotional drivers, fears and trust issues this has the potential to affect their attitudes and beliefs towards the network and strengthen the momentum effect.

2.7 Summary

2.7.1 Key theoretical concepts

Based on the researchers such as Xu et al., (2012) it can be argued that vendors who ‘target’ members based on their profiles and online activities are not very effective in selling through the network. This suggests that a more effective approach may be for network providers and vendors to better understand member attitudes and the processes that may lead them to voluntarily engage in purchasing behaviours through their network. The Theory of Planned Behaviour (TPB) was developed by Ajzen and Fishbein between 1969 and 2006, and it links behavioural intention, attitudes and beliefs together; with the user’s perception of subjective norms and control also affecting their actual behaviour. Behavioural intention may be a predictor of actual behaviour (Ajzen, 2002). While TPB has been applied to a wide range of research fields very little work has been done to date on how TPB may be applied to online social networks in the context of purchasing through these networks. This researcher argues that TPB may be modified in this context by constructs from the model of Social Network Theory developed by this researcher in Document 2. These constructs are information-sharing, member centrality and social capital (bonding and bridging). TPB may also be modified in this context by the operation of Ease of Use (EOS), Utility (U) and individual difference in attitude to using technology within the Technology Acceptance Model (TAM).

Whilst Boyd and Ellison (2007) and Granovetter (1983) provide an insight to key concepts in social networking, researchers like Kim et al., (2011) explore how network members derive and value benefits from the network. While bonding social capital results in members sharing benefits between each other within the network, bridging social capital brings in benefits for members from outside the network. Trust and access to knowledge may constitute a great degree of social capital (Lang, 2004; McElroy et al., 2006). In addition innovation and changes to a network may occur over time with both members’ behaviours and network services developing hand-in-hand (Smith, 2006). User willingness to alter their behaviour on the network to gain benefits from it (Al-Debei, et al., 2013) may exist alongside pressure to conform to network norms (Tajfel, 1972). Higher-status or ‘central’ members may wish to exercise significant influence over other members

(Hersberger et al., 2007; Lea et al. 2006) and this may manifest itself in their establishing normative beliefs and behaviours. Hypothetical behaviour is difficult to measure (Giocos, et al., 2008), nevertheless there is evidence that in some cases online social network users may be heavily influenced by social norms (Cheung and Lee, 2010). This might suggest that purchasing behaviour through the network may be influenced by 'central' or referent members. However such influence does not necessarily always translate into expected behaviours (Li and Buhalis, 2006). The role of the network itself in providing satisfaction to members (Li, et al., 2006) may suggest that it too has the potential to establish social norms and normative behaviour. The potential for information-sharing to influence attitudes and beliefs may be reflected in the tendency of so many new members of a social network to first learn about it from a 'real-life' friend (Bakshy et al., 2012, p2). On the one hand information-sharing may foster trust between members (Snowden, 2005); on the other hand it may act to control other members (Chiu et al., 2006). Tacit knowledge within the network which is available to members, comes in many forms and is beneficial if shared appropriately, but may also be used restrictively (Panahi et al., 2013). Information-sharing may also assist in forming social identity with and within the network and in establishing 'group norms' (Zhou, 2011, p74).

In considering the influence of EOS and U in TAM Mathieson (1991) argued that user attitude towards the technology can change over time as they appreciate the benefits from using it. It could be argued that in using the network's tools and facilities over time to make purchases through it member attitudes and future purchasing intentions may change in a positive way. If the findings of Bhattacherjee (2000) and Czerniak et al., (1999) can be applied then providing such tools and facilities in a user-friendly way may dramatically increase repurchasing intentions and behaviours. If Perceived Behavioural Control (PBC) in this context can be better understood this might suggest that more reliable insight to member behavioural intentions can be gained. This reflects the findings of researchers such as Comerford (2012), Jengchung et al., (2010) and Yi et al., (2006). At one extreme members may engage in 'psychological reactance'

(Kozcerga and Anna, 2012, p2) if they perceive that they do not have any real control over their network. At the other extreme if they feel they have too many options then they may restrict their own behaviours (Coleman, 2012). Individual difference in attitudes to using technology and their perception of technology may need to be taken into account in PBC (Ajzen and Fishbein, 1969; Davis, 1993; Lin and Chang, 2011). The nature of the technology used as well as the context in which it is used may also affect PCB (Mathieson, 1991). If the findings of Hsua, et al., (2006) are correct then the member's perception of value may also depend on their perception of the capacity of the network to deliver the benefits. It could be argued also that perception of value could also depend on the member's belief in their capacity to control the network. It could include both perception of network capacity to deliver and member's own capacity to control. With repeated experience in securing benefits through the network the user may alter their perceptions of these factors in a '….pre-use/post-use continuum' (Hsua, et al., 2006).

2.7.2 Conceptual Framework

The points highlighted in the literature review summary have been incorporated into a Conceptual Framework which is set out in Fig 2.5 It includes a number of factors which may influence TPB in the context of this research project. These include:

(A) Factors which may contribute to attitudinal beliefs and evaluation:

(B1) Prior awareness of the network;
(B2) Benefits from bonding and bridging social capital;
(A1) Ease of Use (EOS) / network tools and facilities;
(A2) Utility (U) / perceived capacity of the network to deliver benefits; and
(A3) Changed perception with purchasing experience.

(B) Factors which may contribute to normative beliefs and motivation to comply:

(B2) Benefits from bonding and bridging social capital;

(B3) Centrality, influence and individual member disposition; and

(B4) Information-sharing and tacit knowledge exchange.

(C) Factors which may contribute to control beliefs and perceived facilitation:

(B4) Information-sharing and tacit knowledge exchange.

(C1) Ease of Use (EOS) / network tools and facilities;

(C2) Utility (U) / perceived capacity of the network to deliver benefits; and

(C3) Individual difference in attitude to using technology.

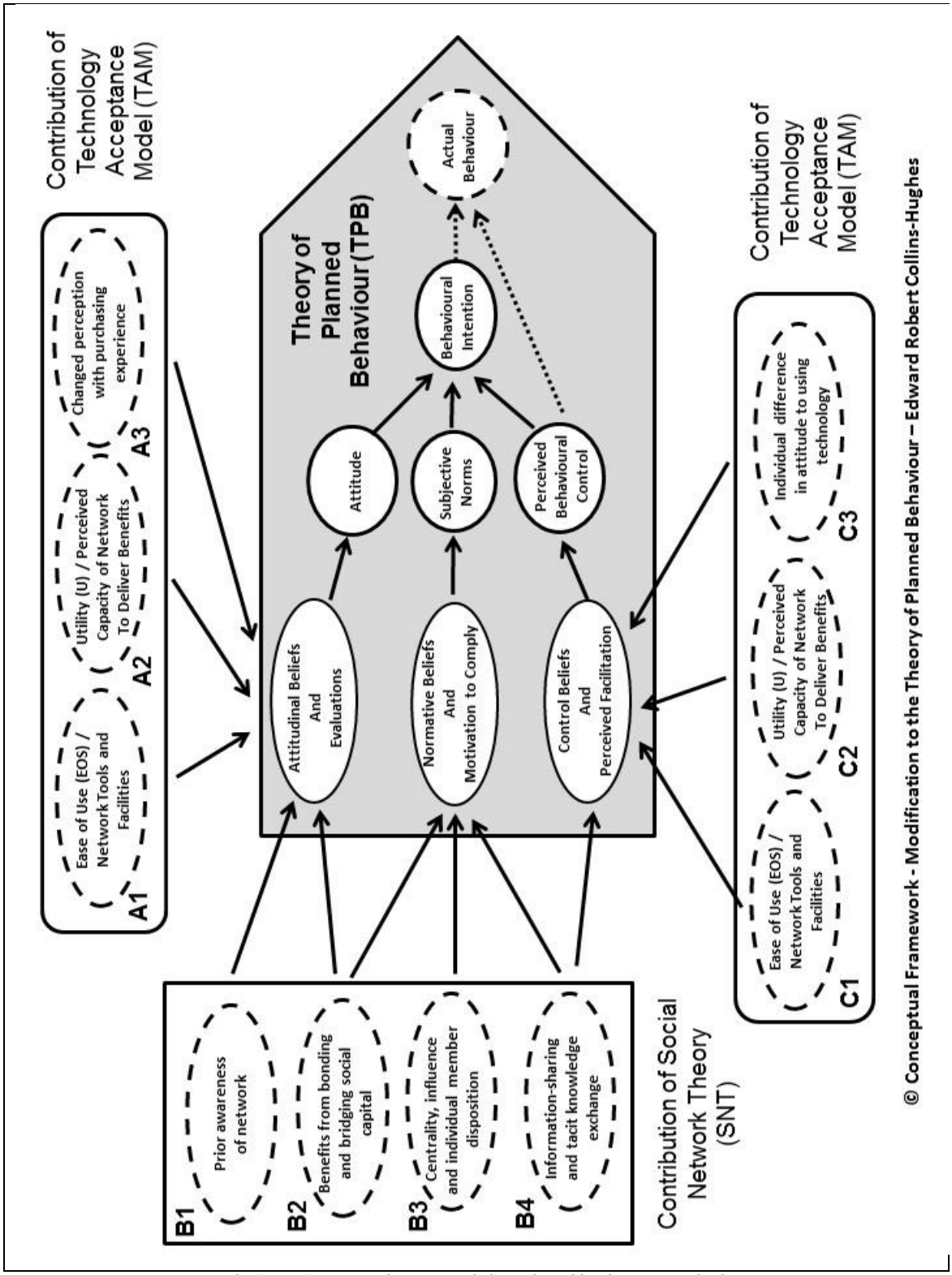

Fig 2.5 Conceptual Framework (Developed by the Researcher)

2.8 Gaps in existing research and the research questions

In the case of this research project there is a gap in existing theories that may help to explain the intentions and behaviours of online social network users in the context of engaging in purchasing behaviour while on their network. For example, the factors which may contribute to altering network user attitudinal beliefs and evaluations as they move from their everyday activities on the network to completing purchases through it need to be investigated. Also, how influence may be exercised by other members of the network and by the network itself in the context of purchasing through the network needs further clarification. In addition how control may be exercised in this context is not fully understood, with the factors affecting the user's perception of control of their own behaviour requiring particular investigation.

The answers to these questions which emerge from this research project may lead to modifications to the Theory of Planned Behaviour (TPB). They may also contribute to greater understanding of their impacts on this researcher’s model of Social Network Theory in this context.

2.8.1 Research questions

Three research questions developed from the literature review and conceptual framework are as follows:

Research Question No 1:

Within the context of purchasing through their online social network to what extent may user evaluation of benefits from their network influence their behavioural beliefs about the network?

Research Question No 2:

Within the context of purchasing through their online social network what role may information-sharing through the network contribute to forming user normative beliefs and subjective norms?

Research Question No 3:

To what extent may user perceived control of their purchasing behaviour on their online social network be enhanced?

SECTION 3 - METHODOLOGY

3.1 Philosophy, Methodology and Methods - Introduction

The literature review in Section 2 analysed the findings of other researchers and explored the applicability of the Theory of Planned Behaviour (TPB), as well as elements of Social Network Theory and the Technology Acceptance Model (TAM) in formulating three research questions and developing a conceptual framework. This section discusses the research methodology, philosophy and research methods adopted in the study to test the research questions.

The research questions are reproduced here:

Question No 1 - User Behavioural Beliefs in the Context of Evaluation of Benefits.

Within the context of purchasing through their online social network to what extent may user evaluation of benefits from their network influence their behavioural beliefs about the network?

Question No 2 - User Normative Beliefs and Subjective Norms in the Context of Their Information-Sharing on their Social Network

Within the context of purchasing through their online social network what role may information-sharing through the network contribute to forming user normative beliefs and subjective norms?

Question No 3 - User Perceived Behavioural Control Enhancement in the Context of Purchasing Behaviour through the Network

To what extent may user perceived control of their purchasing behaviour on their online social network be enhanced?

3.2 Research Philosophy and Methodology

Researchers may adopt different research methodologies and Hart (1998, p4) clarifies that "...the term **methodology** refers to the theory of how research should be undertaken". Different researchers may view the world differently and this may impact on the research methodologies they adopt and the research methods they

may use as a result. This needs to be taken into account in any discussion on methodology and methods. Their view of the world may be related to a particular philosophy, with different ways of perceiving reality, the way the world works and what this may mean. *Ontology* is about the "...nature of reality" (Hart 1998, p51) while *epistemology* is about "...different ways of establishing what can be accepted as real" (Hart, 1998, p51). While some researchers may adopt one strong stance or another on ontology for example, others take a more fluid view and see continua between extreme positions (Saunders et al., 2012). 'Reality' may be "socially constructed" for example Saunders et al., (2012, p129) and is subjective, as opposed to "law-like generalisations" which are seen as more objective Saunders et al., (2012, p129). However the nature of the research enquiry may see the researcher "...required in the context and purpose of this particular enquiry" to adopt a particular methodology (Clough and Nutbrown 2007, p18). The aim should be to gain a deeper understanding by "...arresting experience" (Clough and Nutbrown 2007, p23), a position reinforced by Holroyd (2001). A brief discussion follows on ontology and epistemology.

At one end of the spectrum is an approach which states that 'reality' can be objectively observed, with the other end of the scale seeing 'reality' as subjective and dependent on perception and interpretation. Saunders et al (2012, p131) put it this way:

> "Objectivism represents the position that social entities exist in reality external to and independent of social actors....subjectivism asserts that social phenomena are created from the perceptions and consequent actions of social actors".

In an effort to bridge the divide between these extremes Russell (1946, p744) believed that "...enquiry can be approached in a way that blends logic and scientific principle with openness and iterative learning to gain better understanding..." Even researchers who generally espouse one philosophical approach may change their positions in some cases or over time. Easterby-Smith

et.al (2012, p22) argue that "...philosophers within one school not only disagree with each other; they may also disagree with themselves over time".

In the current research project a subjective approach is adopted. This is because attitudes, perceptions and beliefs play such important parts in both TPB and Social Network Theory. How network users may behave could be related to a wide variety or social factors, actions and interactions between users and the network, between users and other users, and between the user/network dynamic and the external environment (such as network providers and vendors). Users may construct their own 'reality' arising from their own actions and behaviours, their perception of the outcomes of these and their beliefs about to what extent they may or may not have control over these.

3.2.1 Positivism Vs Interpretivism

In considering how one can establish what may be accepted as real many researchers adopt either a positivism or interpretivist approach. (Some other approaches are also available, such as realism). The key distinction between the two principal approaches is set out by Saunders et al., (2013, p134) as follows:

> "The positivist approach which depends on independent data and the interpretivist approach which relies on understanding feelings and opinions".

(a) Positivism

The positivist philosophy centres on the existence of observable cause-and-effect relationships (Bryman and Bell, 2011; Hart, 1998; Saunders et al., 2012). The researcher adopting this philosophy will normally (but not always) gather and analyse quantitative data. It may be that a positivist approach would be appropriate where phenomena related to the behaviour or interaction of objects is being studied. Such studies are expected to be "value-neutral" (Saunders et al., 2012, p134). However, this researcher is conscious that even in these situations

ensuring a researcher is not affected by their own value systems and biases may be easier said than done. Bryman and Bell (2011, p30) note "...the researcher may develop an affection or sympathy...for the people being studied ...to the extent that they may find it difficult to distance their stance...from subjects' perspectives". Even where a positivist philosophy is followed, Bryman and Bell (2011, p16) caution that "It should be noted that it is a mistake to treat positivism as synonymous with science and the scientific". With most positivist approaches the researcher postulates a hypothesis or number of hypotheses linked to a theory and gathers data that may 'prove' or 'disprove' the hypothesis or hypotheses. This aim is to apply deductive reasoning based on the data gathered to prove the existence of rules or laws which demonstrate the cause-and-effect relationships embedded in the theory. The intention is usually to establish objective truth(s) which can be applied in general in conformance with the set of rules and laws they set down, or "generalizable propositions" (Bryman and Bell 2011, p15). The data gathered will be largely descriptive and there is the danger than only what is observed and described therefore as 'data' will be regarded by the researcher as scientifically worthwhile.

The positivist approach is not appropriate to the current research project as the difficulty of measuring attitude, intention and beliefs has already been highlighted by Ajzen (2011). In addition there is a very wide range of potential behavioural intentions that may be linked to network user's perception of the value of their network. It would be extremely difficult to establish a cause-and-effect relationship between particular variables based on perceptions. In addition any attempt to establish rules or laws which would be universally generalizable to users of online social networks would fail given the roles of individual difference and the wide range of possible user-network relationships. Engaging with social network users to, as Easterby-Smith et al. (2012, p23) suggest "...focus on the ways that people make sense of the world especially through sharing their experiences with others…" is more likely to provide greater insights and understanding in the particular context of this research project.

(b) Interpretivism

In dealing with human beings acting in social roles, a great deal of interpretation may be required by the researcher in trying to understand others by using their "... own set of meanings" (Saunders et al., 2012, p137). If a longer period of time is required for meaning to become clearer an interpretivist approach centred on observation, reflection and adjustment by the researcher may pay off (Fisher, 2007). Human beings in the process of making sense and meaning engage in phenomenology as well as symbolic interactionism (Saunders et al., 2012) as they continually interpret and reinterpret the actions of others around them. Taking Research Question No 1 for example over time a user may develop behaviours on the network to derive benefits from it which they perceive as valuable. It may make sense to them to engage in particular behaviours which produce the benefits and these may be learned in an iterative process over time. As a researcher interpreting how the user defines value, how they learn the relevant behaviours and how they may decide to modify their behaviours can increase understanding and help to put meaning on particular behaviours and associated perceptions of value. Bryman and Bell (2011, p18) advise that the researcher has to "...gain access to people's 'common sense' thinking and hence to interpret their actions and their social world from their point of view". In the case of the current research project how the user makes sense of their own behaviour and their attitudes to the network could be quite different to how they would do so in other contexts.

The possible influence of others on network user attitudes and behaviours is explored in Research Question No 2. Attempting to understand how the user perceives the roles of other network users and of the network itself in influencing their own behavioural intentions requires an interpretivist approach. Exercising influence on others is a social phenomenon as is the decision (conscious or not) to pay attention to the influence of other people. The roles of information-sharing and of extending the benefits of bonding and bridging social capital are complex and require interpretation of the motivations of users to engage in these behaviours. How a network user may perceive their capacity to exercise control over their own behaviour is the key theme in Research Question No 3. The TPB

allows for distinction between perceived behavioural control and actual behavioural control. Given the adoption by the current researcher of a subjective ontology an interpretivist approach is the most appropriate in exploring how the user may make sense of their self-efficacy. The approach may also help in gaining a better insight to whether user perception of control in purchasing through the network may influence their behavioural beliefs and intentions.

3.3 Research Methods and Approaches

Having discussed the methodological approach it is time to turn to the process of knowledge generation and to the two distinct approaches. The research approach may be deductive or inductive in nature. Where the researcher gathers data to test an existing theory a deductive approach is usually followed (Saunders et al., 2012), whereas developing a theory based on analysis of data gathered involves an inductive approach. As mentioned earlier a positivist epistemology tends to be accompanied by a deductive approach. The inductive approach is more appropriate to the interpretivist epistemology.

3.3.1 Deductive Approach

Where a known theory already exists and it can be shown that "... the conclusion follows the premise" (Hart, 1998, p82) deductive reasoning links the particular findings observed to the general, and vice versa. It follows logically that conclusions can be drawn from the premise (Fisher, 2007). To establish cause-and-effect relationships between variables as anticipated in the hypothesis or hypothesis observations that "...will demonstrate the truth or falsity of these hypotheses are made" (Easterby-Smith et al., 2012, p23). Observations are taken with due regard to reliability and validity (Bryman and Bell, 2011, p4). (Please see later discussion on validity and reliability). Quantitative data is gathered which is measurable and the analysis is generalisable through the careful selection of representative samples.

3.3.2 Inductive Approach

In this case there is no pre-existing 'proven' theory and no hypotheses. Instead the probability of a statement being ‘true’ for example is enhanced by the accumulation of evidence supporting its truthfulness. The experience of gathering evidence that takes place and the accumulation of evidence of instances of the phenomenon are important. The more evidence of the instances of the phenomenon occurring that are gathered the more probable that the phenomenon is likely to occur again (Bryman and Bell, 2011; Easterby-Smith et al., 2012; Fisher, 2007; Hart, 1998). Inductive reasoning leads the researcher to try to predict with greater probability that the phenomenon will occur again. However as there is an absence of an underlying theory or theories the researcher may find that their research approach is perceived as weaker than say a theory-based deductive approach. Inferring meaning from observations in an inductive process can lead to an addition to the overall stock of theories (Bryman and Bell, 2011). Within this process theory emerges from the data analysis. The researcher may then emerge from the research process with a contribution to theory - either by way of some original one or as a modification to an existing one.

3.3.3 Contribution to Theory

In the case of this research project there is a gap in existing theories that may help to explain the intentions and behaviours of online social network users in relation to engaging in purchasing behaviour while on their network. For example how control may be exercised in this context is not fully understood, with the factors affecting the user's perception of control of their own behaviour requiring particular investigation. How influence may be exercised by other members of the network and by the network itself in the context of purchasing through the network needs further clarification. The theories and conceptual framework shaped this researcher’s approach to data collection. Data analysis led to a revision of the conceptual framework in the inductive approach, suggesting modifications to the Theory of Planned Behaviour (TPB). Data analysis also contributed to a greater understanding of how constructs within the researcher’s model of Social Network Theory, and within TAM, could impact on TPB in the contest of this thesis. The case for adopting a subjective ontology has already been made in Section 3.2.1

and Section 3.2.2 outlines the case for applying an interpretivist epistemology and inductive reasoning. The research design in centred on these approaches and methodology and the next section sets out the rational for the involvement of the research participants.

3.4 Research Design

A researcher can choose which research methods to use in generating either quantitative or qualitative materials for analysis (Fisher, 2007). He cautions that it "...should not be assumed that an interpretivist approach always requires qualitative materials..." (Fisher, 2007, p62). This is reinforced by Saunders et al., (2012). However Easterby-Smith et al., (2012) argue that a positivist approach normally leads to the use of survey instruments such as questionnaires which gather quantitative data for later analysis in the quest to establish patterns and cause-and-effect relationships. Quantitative data can be collected from interviews for example but Fisher (2007) points out that the questions would need to be pre-scripted and coded. In gathering quantitative data the level of engagement with research respondents is quite restricted, or virtually non-existent in some cases. This does not readily facilitate greater insight and understanding of key concepts as respondents cannot elaborate on their responses to any significant degree. Examples of research instruments for quantitative research include surveys, structured interviews and structured observation. The quantitative data is processed, generally using computer-based systems such as spreadsheets or dedicated statistical analysis programs. The concentration on how quantitative data may be measured can be a preoccupation for some researchers, and there can be tendency for the respondent-researcher relationship to be dominated by the researcher (Bryman and Bell, 2011). In quantitative data collection, the voice of the respondent may be considerably weakened because of the lack of closeness between them and the researcher, and there may be little allowance made by the fluidity of social situations, with concentration on the interaction of variables (Bryman and Bell, 2011; Saunders et al., 2012). Quantitative data is generally most appropriate where it is vitally important to clearly define variables and concepts, and where there is clarity on what exactly is being measured as

well as the tools and techniques for controlling the measurement process. Quantitative data is very important where the positivist-orientated researcher is working within the parameters of a particular theory and wishes to test it or a hypothesis related to it.

Qualitative research is an exploratory process, closely linked to a strategy based on the interpretive inductive approach. Qualitative research facilitates the respondents in elaborating on the views, opinions and feelings and in that way has the potential to provide richer and more meaningful material for analysis where social factors are involved. As qualitative research is generally conducted in a more natural setting the respondent's level of trust and interaction is usually much higher leading to deeper understanding. As the research progresses with a number of respondents the researcher may alter their approach to make it more responsive to respondents' needs and to strengthen rapport with them (Easterby-Smith et al., 2012; Robson, 2002; Saunders et al., 2012). Once collected the qualitative materials are analysed using techniques such as categorisation. However, Badley (2008, p364) found that the "...true meaning" of what is revealed in qualitative research perhaps depends on the difficulty in establishing the authenticity of the respondent's position. In addition Segal and Hershberger (2009, p79) advocate that qualitative analysis is "...time-critical, especially where there is rapid change..."

Given that the online social network users behave on their network in ways that make sense to them in that particular context the qualitative research approach is adopted for this research project. The approach is in keeping with the interpretivist epistemology enunciated in Section 3.2.2. Since online social networks and their facilities and services are constantly evolving, establishing the authentic position of users must be done in a way which is both context-sensitive and time-sensitive. This is a challenge and reflects the findings of Saunders et al., (2012, p163) that "...making sense of subjective and socially-constructed meanings expressed about the phenomena being studied" is the key to this research project.

3.4 Research Strategies and Methods

Where the problem may be difficult to understand at first and the researcher wishes to gain further insights and learn more they may use various research strategies and techniques. Appendix 3 is from Saunders et al., (2012, p.173) and is useful in helping to identify the most appropriate qualitative-based research strategies for research projects like the current one. Semi-structured interviews were chosen as the main method to collect qualitative data in this study.

3.4.1 Semi-structured interviews

Semi-structured interviews were used as this type of interview can be designed to allow the respondent to elaborate and add additional information and clarifications, while dealing with a number of themes and questions related to the research question(s). They also allowed new issues and unexpected responses to be explored, while the respondent could feel more comfortable by using their own words to answer and were therefore more likely to provide richer responses (Burns, 1998; Hussey and Hussey, 1997; Jankowicz, 1995). However the researcher in conducting the interviews needed to be plan the questions carefully to both ensure they were easy for the respondent to understand and that they related well to the interview questions (Clough and Nutbrown, 2007). As well as taking care in setting the practical locations and circumstances for the interviews the researcher needed to accommodate emotional responses related to motivations which may be elicited from the respondents, as well as the words used and their tone (Bell, 2005). The researcher also needed to be aware of non-verbal communication as well as the context within which particular words may be used (Robinson and Garratt, 1997; Robson, 2002). All of this takes skill, careful preparation and time if the objectives set out by Saunders et al. (2012, p372) are to be achieved:

> "The research interview is a purposeful conversation between two or more people, requiring the interviewer to establish rapport, to ask concise and unambiguous questions, to which the interviewee is willing to respond, and listen attentively".

Avoiding researcher bias and ensuring moral and ethical responsibilities in obtaining the true voice of respondents is very important (Bell, 2005; Clough and Nutbrown, 2002) while "superior access" to respondents strengthens authenticity (Gummesson, 2007, p130). Semi-structured interviews facilitate respondents in sharing information which is private and subjective in nature and help to overcome any researcher tendency to form erroneous impressions of motivations which may happen from less extensive interaction with respondents (Demaris and White 2004; Robinson and Mayblin, 2004). Done correctly the semi-structured interview has the potential to elicit interviewees' the true feelings, beliefs, views, opinions, intentions and their own understanding and insight to their behaviour on their network. Where necessary during the interview the researcher can also assist respondents to "...explore their own beliefs" (Easterby-Smith, et al., 2012, p132). Given the authentic setting for this research project the identification of issues and themes that can be derived from the interviews provided better insight on the research questions. What emerges from the process is a deeper understanding of the factors which may impact on the TPB in this context and the further development of the conceptual framework.

3.5 Sampling, Recruiting and Interviewing Research Respondents

Non-probability sampling was applied as this is the most appropriate approach for an exploratory study based on interpretivist research using qualitative techniques. This was required as generating sampling frames (as is often the case for positivist /quantitative research) was not possible (Saunders et al., 2012). Thirty semi-structured interviews were conducted. This sample size reflected the recommendations of other researchers, facilitated in-depth analysis within the project’s context (Miles and Huberman, 1992; Saunders et al., 2012), and was the point where theoretical saturation was achieved (Robson, 2002; Saunders et al., 2012). In selecting the sample members, purposive and snowball sampling were used and the researcher did not restrict respondents to try to achieve homogeneity instead selecting them "...because of their relevance to understanding the social phenomena" (Bryman and Bell, 2011, p442). Snowball

sampling occurred in cases where respondents recommended other potential respondents to the researcher.

For this research project the general population is defined as adult users of online social networks. It did not matter to the researcher which online social network any particular respondent used. Some of the respondents used more than one network. Initially purposive sampling was used to select twenty respondents based on their usage levels of online social networks, their interest in the particular focus of this research project, and their willingness to freely discuss with the researcher their beliefs, attitudes, behaviours and thoughts in relation to online social networking. Further respondents were selected using snowballing techniques guided by those respondents purposively selected. Prospective respondents had either been identified to the researcher, or had identified themselves, as willing to participate. The researcher is a college lecturer and, for example, some adult learners volunteered to participate having been informed of the general nature of the research by the researcher. Some potential respondents had become aware of the research through the researcher's presence on the LinkedIn professional social networking site. Fifteen of the interviews were carried out at the researcher's office at the college. Four were carried out at the premises of the respondents. Five were carried out over Skype and another six over the telephone. Interviews were done at times convenient to the respondents, including in the evenings and at weekends. Most interviews lasted for about one hour, with a few taking a few minutes less, and a small number taking up to an hour-and-a-half. All respondents agreed that the interviews could be recorded digitally using a hand-held dictation recorder, and they were.

A pilot interview was carried out with one of the respondents to help the researcher to become more proficient and to identify any gaps or potential improvements emerging from the initial interview format, design and implementation. One of the issues for the researcher was learning to spend more time initially in putting the respondents at ease by engaging in general conversation about their network before proceeding to the semi-structure interviews. The interviews covered themes on behavioural beliefs and evaluations

of benefits, norm and normative beliefs and information-sharing on the network, and control-related issues in the context of purchasing through the network. These were derived from the literature review and the research questions. The detail of the questions are contained on in the Interview Guide reproduced in Appendix 5. Conversations with a range of users of various online social networks also helped to inform the development of the Interview Guide.

3.6 Reliability and Validity

Miles and Huberman (1992, p38) argue on qualitative research that “...issues of instrument validity and reliability ride largely with the researcher’s skills... How valid and reliable is this person likely to be as an information-gathering instrument?" Saunders et al., (2012, p382) clarify that validity "refers to the extent to which the researcher has gained access to a respondent's knowledge and experience, and is able to infer meanings that the respondent intends from the language used by that person". The researcher must be careful not to create biased responses because of their own tone of voice or behaviour, or in the way they present information, or because they have their own agenda (Chung, 2003; Saunders et al., 2012). On the other hand bias on the part of the interviewee could be related to their perception of the interviewer, or their sensitivity to some issues raised, or to "...practical matters such as inconvenience" (Bryman and Bell 2011, p30). However, by keeping notes and details of how interviews are managed and conducted the interviewer can "...establish the consistency of their research design, methods and data collection" (Saunders et al 2012 p.382). All interviews were recorded on a small digital recording device. As the interviews were completed the researcher transcribed them to word-processed documents and also made handwritten notes for each one. The notes in particular were used to check the consistency of the interview process, with any variations arising from the circumstances of the interview or from the manner in which respondents responded taken into account. For example if any background noise partially interfered with the physical quality of the recording this was taken into account in the transcription.

3.7 Ethical Issues

In considering why people agree to take part in research the importance of trust and the need to '…ensure, and demonstrate, that research is conducted in an acceptable and ethical way' (McGivern, 2006, p27) is paramount. The current research project was carried out in accordance with the relevant sections of Nottingham Trent University's policies and procedures on ethical behaviour for researchers. These cover voluntary participation, avoidance of harm to respondents, informed consent, anonymity, confidentiality, privacy, transparency, and not deceiving subjects. The purpose of the research was clearly set out and made available to all relevant parties. Care was taken to ensure that all consent was properly informed, encroachment on privacy was avoided, and that confidentiality and anonymity was maintained in accordance with commitments made. Interview recordings and original transcripts from them were stored securely in a safe. Anonymised transcripts and related interview notes were stored in a separate location and all digital copies were password-protected. All the relevant procedures for due care and safety of such materials were followed in accordance with the relevant UK legislation and guidelines and Nottingham Trent University policies and procedures. Anonymity was preserved in compliance with Data Protect Act rules and the agreement between the Market Research Society and the Office of the Information Commissioner which governs the use of anonymised data and its appropriate retention. 'Confidentiality' was guaranteed to all respondents, to ensure that promises not to identify people and their contributions were honoured. Findings and any published materials are presented in such a way as to prevent identification of respondents.

All of the respondents were aged over eighteen years old, and during the course of the interviews no ethical issues arose.

3.8 Analysing the material collected during interviews

The data collection process was completed once a theoretical saturation point was reached (Robson, 2002; Saunders et al., 2012), and it appeared that the research objectives had been achieved. The interviews were transcribed

incorporating spoken words, non-verbal communication, sounds, pauses and mis-starts, and tone of voice in order to provide the fullest record of the interaction of respondent and researcher in each case. As each of the interviews was completed and transcribed the researcher did initial analysis and interpretation which fed into the ongoing interview process (Sanders et al., 2012). Following the first tranche of interviews the researcher began to reconsider the conceptual framework and this refining process continued as the interviews continued as some serendipitous findings appeared (Miles and Huberman, 1994). For example one of the things which emerged from the first interview was the possibility that the 'control' concept of the TPB may need to be expanded to incorporate the additional concepts of 'Ultimate Control' and 'Program Control' (please see a fuller discussion of these in Section 4 - Findings of this report).

3.8.1 Thematic analysis

Codes and themes arise not so much from the words the respondents use during the interviews but from what "...the words mean in the context" (Miles and Huberman, 1994, p55). Names are given to codes, some of which will be descriptive and some inferential, and these may be redefined, re-made and transitioned from descriptive to inferential as analysis develops over time and with a lot of hard thinking (Bryman and Bell, 2011; Fisher, 2007; Miles and Huberman, 1994). For this research project the initial codes were linked to the original conceptual framework (Figure 2.5) and research questions, with later themes emerging and coalescing from inductive reasoning by the researcher (Miles and Huberman, 1994). This iterative process was applied as "...the most appropriate of the forms of qualitative enquiry" for this research project suggested by Butler-Kisber (2010, p8). Both NVivo software and manual open coding was used to categorise data and to identify themes with initial 'coarse-grained' analysis completed through readings and re-readings of the transcripts and preparation of notes, (Butler-Kisber 2010, p30). This was followed by "fined-grained analysis" involving closer reading of the transcripts and re-arranging of chunks of text and placing them into different codes (Butler-Kisber (2010, p31). For this research project words or phrases associated with the concepts of attitude, belief, control,

behaviour, intention formed codes on initial review of the transcripts. Open coding linked to these concepts was later grouped into categories. Such categories, for example *beliefs*, incorporated elements of behavioural beliefs for example. Axial coding allowed data to be rearranged between categories when the particular contexts or interactions were taken into account. An example of the initial codes from one of the transcripts is contained in Fig 3.1

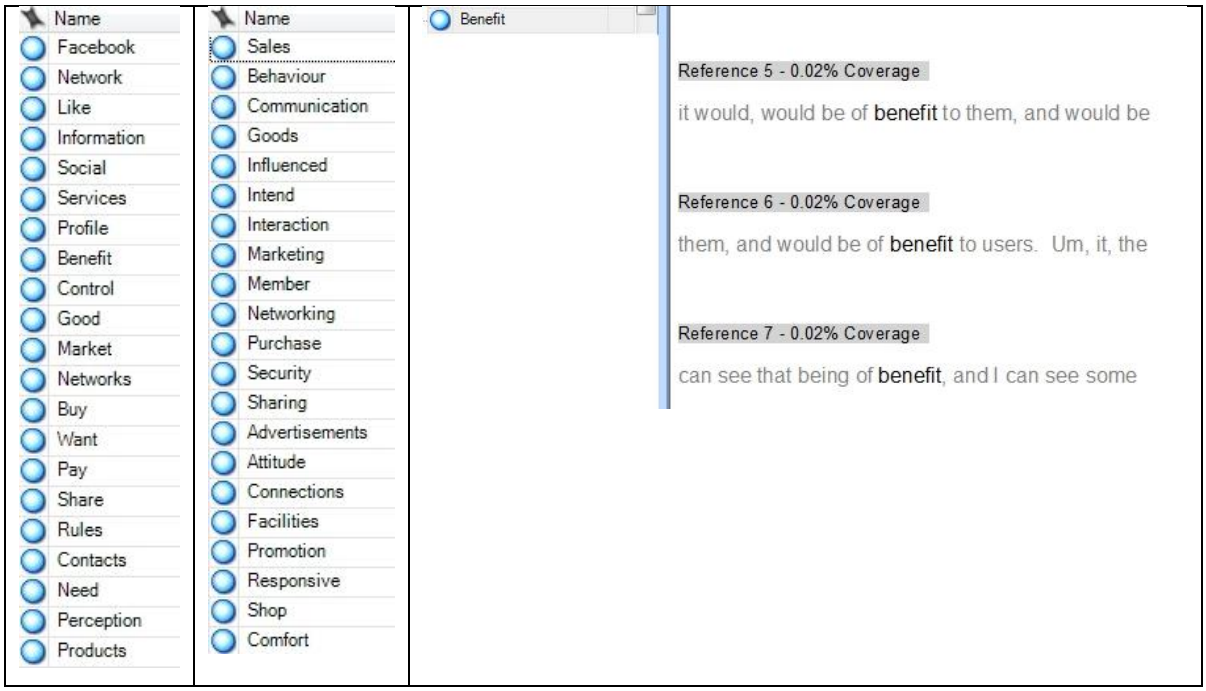

Fig 3.1 Example of the initial codes from one of the transcripts

3.9 Section Summary

The subjective ontological standpoint was taken for this research project, and the interpretivist approach followed, with qualitative data gathered involving thirty users of online social networks. Inductive reasoning was applied to the qualitative materials gathered in the exploratory semi-structured interviews with respondents that was followed by thematic analysis and coding. The initial codes and themes related to the conceptual framework postulated by the researcher at the outset of the data gathering stage. However as is demonstrated in Section 4 the findings of this research project also reflect themes which emerged from the data. The

refinement of the codes and themes led the researcher to proposing an updated conceptual framework.

SECTION 4 – FINDINGS AND DISCUSSION

4.1 Introduction

The methodology, research methods, techniques and strategies as well as the approach to analysis for this research project were set out in Section 3. The findings arising from thematic analysis of the semi-structured interviews with the thirty respondents are contained in this section. The findings are discussed in relation to six interrelated themes which are:

User attitudes and attitudinal beliefs;
User attitudes and evaluations - user-friendliness and utility;
Control / Changing user behaviours;
Information;
Emotional bonding and belonging; and
Social networking.

Prior to the completion of the semi-structured interviews with respondents a conceptual framework was developed by the researcher based on a modification to the Theory of Planned Behaviour (TPB) incorporating elements of the Technology Acceptance Model (TAM), (Ajzen 1991, p182; Mathieson 1991; p175). It also took into account the potential application of the researcher's model of Social Network Theory from Document 2, (Granovetter (1983). Analysis of responses was shaped by a conceptual framework.

An overview of the profiles of the cohort of the thirty respondents is contained in Appendix 4. Respondents used either Facebook or LinkedIn as their principal online social network, with a few also using Twitter and Instagram as secondary networks. Nineteen respondents were male and eleven were female. Twelve respondents were educated to secondary level, ten were graduates and the remaining eight were educated to postgraduate level. Regarding respondents' ages five were in the 18-29 years category, twenty were aged 30-49 years and

the remaining five respondents were all aged 50 years or more. In order to ensure anonymity, respondents are referred to in this section as "R1" (for Respondent No 1), "R2" (Respondent No 2) and so on.

4.2 THEME - USER ATTITUDES AND ADDITUDINAL BELIEFS

The following section explores initial user attitudes and beliefs and how these may change over time as changes are made to their network. It also explores the potential effects of purchasing through the network on user attitudes and behavioural intentions.

4.2.1 Initial attitudes and beliefs

None of the respondents stated that their prior knowledge of the network significantly influenced their initial attitudes and beliefs towards using it. R8 said *"I knew about Facebook before I ever joined"* but did not feel any strong desire to use it, while R6 had been happily using a messaging service before trying Facebook. Some respondents spoke of '*graduating*' to Facebook from earlier networks such as Bebo (R1, R2 and R25 for example); while R20, being practical, found Facebook to be *'just so much quicker'* than their old network.

However user attitude towards the person first bringing the network to their attention may have a significant influence. While this may indicate the influence of subjective norms as discussed by Fishbein and Ajzen (1975) it may also arise from the influence of existing referent users, (Seok-Jae and Ji-Hyun 2006), such as family members, (Al-Jabari et al., 2012). Some users joined under a certain amount of peer pressure or friendly cajoling. A few joined under advice from other significant influencers in their lives, such as teachers, work colleagues or a manager. Initiation by a friend applied in many cases (R20, R11, R7, R8, R17, R5 and R6) where *"My friends told me that Facebook was brilliant"* (R8) is a typical comment.

Users were also quite clear in distinguishing between their 'real-life' friends on the network and other network users who asked to become their network 'friends' (R7, R10, R11, R18 and R20). Many users only linked initially with real-life friends when first joining their network and remained cautious about whom they later accept as 'friends'. An indicative comment is *"I wouldn't have a conversation with them on Facebook if they were not my friends in real life"* (R18). This reflects the findings of Bakshy et al. (2012, p2) on the overlap between network contacts and 'real-life' contacts, and the role of strong ties with friends and family members in fostering network activity, (Granovetter, 1983). Therefore the initial attitudes and beliefs theme highlights the complexity of attitudes and attitudinal beliefs. For example, the user's perception of how 'real' a friend is and how important that person is in their lives may influence the importance they place on the network the person recommends to them.

4.2.2. Changes in attitudes and beliefs with experience

Most users felt that their attitude to the network was quite positive (R5, R14, R15, R16, R18, R19, R20, and R22 for example). A typical user comment includes:

> *"Facebook is brilliant and absolutely wonderful to allow you to maintain the loose connections you make at work and socially"* (R5).

The findings indicate that user attitudes and beliefs may change, both positively and negatively, with network use. This may also occur as the network itself changes over time (see Section 4.2.3 below). The findings indicate that negative experiences may lead to curtailed use or cessation of future use. This may come from simple disappointment or boredom, as for example revealed by the comment from R8 *"The initial excitement is kind of gone because it was all new to me at the time"*. Other comments such as not liking the behaviour of others on the network (R11), to restrictions on self-expression (R2) to a sense of wasting time (R6) indicate firm intention to reduce use.

Network users may compare what they expect to get from their network with what they perceive themselves as getting. User positive attitudes, beliefs and behaviours can positively influence their future behavioural intentions according to Ajzen (1991), who emphasised the effect of the expectance-value relationship between a user and a system in this regard. Valued added instrumentally as 'beneficial outcomes', or experientially as 'pleasant /enjoyable' experiences, Ajzen (2002, p5) can influence future behavioural intention he argued. For respondents this appears to hold true. In addition if using their network is perceived by users as a 'normal' part of their everyday lives then they may put such usage into that context. If so the case that Ajzen (1991) made that context influences subjective norms may also hold true for respondents. Some respondents have a somewhat neutral attitude to their network (R1, R3, and R4 for example). R1 felt that *"It's just a part of life"* (R1). In this scenario users may come to accept this as 'normal'. If so, subjective norms may be partially set by the network itself, rather than by referent users of the network alone. The role of the network itself as a contributor to establishing and maintaining subjective norms may need to be further considered.

4.2.3 Changes in attitudes and beliefs as the network changes

As the network itself changes user attitudes and beliefs may change in tandem. Generally users welcomed the changes which had been made to their network since first use. R1, R3, R15, R18, R17, R20, and R21 welcomed changes such as availability on mobile devices and telephones, notifications directly to their devices and online communication services such as Skype. Such changes facilitate greater levels of interaction with other members, for example, Steinfield et al., (2008) explored the importance of information-sharing between members, while Lin (1999) studied the importance of tools which embed resources. R20 welcomed new facilities and tools in their network and commented that *"Facebook is downloaded in ten seconds and all your friends and contacts are automatically linked*". The changes to their networks made some respondents so happy that they saw no reason to change the networks in any way. *"Facebook should be kept*

as a social tool only" (R18).*"For Facebook I don't see how they could improve it"* (R20). *"I'm probably happy with LinkedIn the way it is"* (R17).

One of the changes frequently commented on by users is the increased level of advertising and commercialisation of their networks. Users tended to be tolerant of changes such as 'liking' companies and their products and services on the basis that the core network services continue to be provided to them free of charge (R1, R5, R7, R10, R12 and R23). They know that 'liking' will result in offers and notifications about goods and services and they have little-or-no objection to this from commercial members of the network. This type of trade-off in the interests of product/service use by other members of a network was recognised by Katz and Shapiro (1985).

On the negative side users were concerned about privacy changes (R11, R18 and R19), possible restrictions on the behaviours of other users, and the absence of a 'dislike' option. Concern about possible inappropriate use by some young users was expressed by R11 as *"I think that Facebook needs to strengthen age restrictions e.g. users should be over 16 years old"*.

Users too were generally quite clear in the sorts of changes they wished to see for the future, including keeping everything as simple as possible (R17), improving interfaces and navigation (R14 and R3), and reducing advertising generally (R10 and R9). The proliferation of notifications, likes, images, videos and advertisements was commented on by R5 as follows:

> "*If people have too many choices and too many distractions on Facebook they won't go for any of them*" (R5).

Many members believed that they could have an input to future changes to their networks. User perception of their capacity to influence their own control behaviours is a key issue in Ajzen's revised TPB model (2002 and 2006). Should

this user belief be translated into actual network changes this could play a very important part in guiding user behavioural intention.

4.2.4 User attitude to change

Some respondents bought things directly through their networks while others made purchases through links and advertisements presented to them by the network. "*If it was a separate page for that by way of a link off your own page and you could search for what you are looking for that would be great*" (R26). On the one hand some respondents welcomed the fact that their network, while it had undergone some cosmetic changes over the years, essentially worked the way it always had. For example R13 lauded that fact that Twitter "*still has only 140 characters - it's exactly the same - no changes*" while R21 was happy that "*LinkedIn hasn't really changed at all since I started using it*, *and it doesn't need any changes*". Others felt that changes were good such as R17 who when talking about changes to Facebook, said "*I have a positive outlook to it*". In discussing changes to the network to facilitate purchases respondents were generally open to new ideas. R16 summed up many of the areas which need to be changed for them to become a regular purchaser through their network:

> *"It depends on how much money you spend really, and also what you buy. You probably buy things online for convenience, maybe the price is better, but then you worry about delivery and security of the credit card details and so on*"

In summary while some users become bored or disappointed with their network, generally user attitudes and behavioural intentions are quite positive. They intend to continue to use their network and tend to be open to ongoing changes and have views on what changes they would like to see to meet their expectations. The initial attitude of people towards a particular online social network tends to be influenced by introductions by their 'real-life' friends, family members and others in their referent groups. This is in keeping with well-established principles of social

networking (Al-Jabari et al., 2012; Granovetter 1983; Seok-Jae and Ji-Hyun 2006) and the influence of subjective norms within TPB as discussed by Fishbein and Ajzen (1975). Their subsequent attitudes and behavioural intentions are influenced by their subjective sense of how well their expectations are met by their use of the network and by how much they perceive they can influence desired network changes for the future, (Ajzen, 1991; Ajzen, 2002). Users are willing to trade off minor annoyances, such as offers from commercial organisations they have 'liked' and continuous presentation of network content so long as they get the network services free of charge. They recognise that other members of the network have interests of their own and that there needs to be a trade-off between everyone's interests as recognised by Katz and Shapiro (1985). Where the user makes a successful purchase through their network and develops a changed attitude towards it, they may perceive it as not just for 'fun' (say, Facebook), or professional development (say, LinkedIn), or news (say, Twitter). It may become a welcome vendor of goods or services as they consciously engage in purchasing behaviour, reflecting the finding of Hsua, et al., (2006) and (Abadi and Gharibpoor, 2012) for online shoppers generally.

4.3 THEME - ATTITUDES AND EVALUATIONS - USER-FRIENDLINESS AND UTILITY

In providing tools and facilities to users, network designers may be guided by the importance of Ease of Use (EOS) and Utility (U) as defined by Venkates and Davis, (1994) in their Technology Acquisition Model (TAM). The Utility (U) concept was extended by Ajzen (2002) to incorporate user subjective evaluation of perceived benefits and its potential impact on user behavioural intention. Davis et al., (1991) found that (U) could be more significant than EOS on users, provided the perceived benefits were worth the effort involved in learning the required technologies to gain these. The conceptual framework envisages that user interactions with network tools and facilities can affect their attitudinal beliefs and evaluations and this influenced the development of this theme.

4.3.1 Ease of Use (EOS)

Users generally found learning the principal network tools and facilities quite easy (R7, R8, R12, R13, R19, R20, and R21) with user-friendliness commented on by many respondents. Comments included this one: *"Facebook is a very user-friendly site"* (P20). Also, users seemed to perceive that the energy they invested in learning was reasonable - "*In less than a week you should be familiar with the whole thing*" (R23). As the network changed the way the tools and facilities worked over time users accommodated these changes generally with ease (R1, R13, R17, R21, R23, R25 and R28). R21 said "*I'm still learning new things about Facebook every day after five years on it*". While a few respondents found Facebook a bit difficult to learn initially (R3, R6, R15) one respondent commented *"As you get more familiar with Facebook it gets more unlimited in what you can do with it*" (P6). In addition respondents generally perceived that the amount of time they spent in learning network tools and facilities was short, even though this varied from 10-12 hours (R20), to 15-20 hours (R10) to 40 hours (R22) and longer for other respondents - *"I did not spend much time on it - fifteen to twenty minutes a day for two weeks*" (R23).

Lin and Chang (2011) found that individual differences may be important in perceptions of ease of use of technology, and some respondents may have had a more positive or negative state of mind towards learning the technologies involved. For example one respondent said "*I think it depends on your usage. If you're absolutely addicted to it - there's people on it 12 to 15 hours a day - a few hours should get the basics"* (R3). If Connor and Armitage (1998) are correct then personality differences may also matter in the way respondents learned the tools and facilities, with more positive beliefs reflecting the findings of Patch et al., (2005). A comment which illustrates a respondent's positive attitudes is *"Once you know how to use a social network they are all pretty much the same. The first one is the hardest to learn"* (R6). This echoes other respondents who felt the 'graduation' from earlier networks was relatively easy (R1, R2 and R25). This may

suggest that the transferability of skills learned on earlier networks may positively influence the perception of EOS for other networks.

The role of external factors and parties in framing user perception of EOS was identified by Davis, Bagozzi and Warshaw in 1989 as part of TPB. In the current research respondents reported that they were largely self-taught through processes of trial- and-error, or were given guidance or assistance by other users. In some cases respondents followed the network's own help services or instructional videos on YouTube, or used a combination of all of these. The majority of respondents therefore were influenced by other users either directly or indirectly, (R5, R7, R8, R10, R11, R12, R13, R18, R19, R20, R21, R22, R23, R27, R30). Comments included *"I picked it up as I went along, and I also looked at the way other people were doing it"* (R11) and *"My brother showed me. He was my mentor"* (R8). This can be linked back to Section 4.2.1 as it indicates that users may be influenced by others not only in initial intention to use the network but also in how to use it.

4.3.2 Utility (U) and Benefits

Respondents began using their networks with initial expectations and intentions, and over time their experiences grew, while at the same time some tools and facilities also changed and developed. What changes if any, occurred in user intentions based on user perceptions of network utilities and benefits informed the development of these elements of the theme.

Initially most respondents joined Facebook for 'fun' or 'entertainment (R2, R4, R6, R8, R 11, R14, R18, R24 and R29), and LinkedIn for employment and business opportunities (R7, R18, R19, R20, R22, R25 and R27). Respondents - including those with profiles on both Facebook and LinkedIn - consciously maintained the separate intentions appropriate to the network they were using at a particular time. A typical Facebook user explained "*I use Facebook to connect with old friends"* and a typical LinkedIn user said *"I joined LinkedIn to make connections*

with other professionals" (R19). Generally Facebook users reported that they received the expected benefits, as the network tools and facilities allowed them to enjoy themselves and engage in social activities (R5, R6, R7, R8, R10, R23, R 15, R20, R24, R27, and R29). A good example of the catch-all nature of networking with friends and neighbours is set out by R3:

> *"It keeps me aware of local things - local businesses, start-ups, shutdowns, local groups, local events (everything from a cake sale to an auction, and neighbourhood watch groups)".*

Some Facebook users expressed disappointment or frustration with the lack of meaningful benefits from the network as the social aspects were no longer of interest to them. *"To be honest I don't think there's any other benefit to Facebook than keeping in touch with friends"* (R6). Generally LinkedIn users expressed the benefits of this network in terms of career or business opportunities secured (R2, R7, R10, R16, R18, R19, R20, R22, R28 and R30). "*It helps me to keep up with the jobs market by updating my profile as I acquire additional skills"*, (R19). For both Facebook and LinkedIn, users were happy with the benefits the network tools and facilities allowed them to gain from their networks. In speculating about future possible benefits they were quite positive, with one respondent linking their intention, behaviour and attitude to overall experience as follows "*Well it is what you make of it so your behaviour stems from your attitude - you know - which probably stems from your overall experience of using it in the first place. So they're all linked"* (R1). R13 repeatedly commented on the predictability and simplicity of using Twitter.

In summary respondents generally derived the benefits they expected from their networks and were happy that the network tools and facilities allowed them to do so. EOS was somewhat taken-for-granted by users of all networks. This is important and reflects the work of Agarwal and Karahanna (2000) that tools and technologies are important in enhancing online purchaser engagement and reducing cognitive workload. That EOS can be taken for granted also reflects the work of Baja and Nidumolu (1998) on positive attitude formation. A short learning

curve should enhance perception of EOS and benefits, especially where support is provided, (Bassellier et al., 2000; Czerniak et al., 1999). Users expect both EOS and U to be readily available to them and for the network to work effectively and efficiently in delivering these. This may contradict Davis et al. (1991) who claimed that users may tolerate less-than-perfect EOS so long as U is perceived as valuable. Designers of human-technology interfaces and modes of network access into the future will need to take this into account. In addition in determining the sorts of intentions and expected benefits of each user individual difference as identified by Lin and Chang (2011), and Connor and Armitage (1998) need to be facilitated. This is not an easy thing to do in every case. In addition anticipating the moods and attitudes of individual users as reflected by Patch et.al., (2005) would require enhanced tools and facilities which aim to address the user's subjective sense of how well their expectations can be met, (Ajzen, 1991; 2002).

4.4 THEME - CONTROL

In attempting to anticipate user behavioural intention for the future the difficulty of reconciling user perception of control and user actual control was identified as one of the "unresolved issues" by Ajzen (1991, p179). If the working model for TPB developed by Ajzen and Fishbein in 2006 is correct then how the user perceives their ability to perform various behaviours on the network may influence their perceived behavioural control (PBC) and behavioural intentions. To try to resolve these conflicts in their model Ajzen and Fishbein, (2006) substituted user perception of their power to control their behaviours for their actual behavioural control. If users believe they have high levels of control this may also help to motivate future behaviours, Ajzen (1991). These issues helped to inform the development of this theme.

4.4.1 Power/Powerlessness

A member's perception of how much control they have in using their network may relate to whether they feel they can control the network. It may also relate to how

much control they feel the network has over them. Some respondents felt that they controlled whether to use the network or not, with for example R1 stating "*I have 100% control because I can always just turn it off, you know what I mean? If it's not 'floating my boat' I don't have to use it*". This was echoed by R6, R8, R10, R11, R13, R14, R15, R17, R19, R21, R25 and R27 who all perceived themselves as exercising this power. In addition quite a number of respondents discussed the degree of freedom or flexibility they felt they had in using the network. This included users who were quite happy with the network's controls over them, such as R20 said "*Facebook is quite well-run so I wouldn't have much control over it. I would say that Facebook is definitely in control*". Similar sentiments were expressed by R3, R5, R9, and R12. However it also included users who were unhappy with the degree of network control over them with R18 referring to some changes made by Facebook stating "*I thought I had a lot of control until recently*".

Other respondents felt powerless, but not necessarily put off, because their network exercised full control over what they could do with it "*In reality I'm simply a pawn and one of their numbers and I'm resigned to that*" (R7). Being tightly controlled by the network's rules and regulations was a common theme (R22, R23 and R29). Users perform various functions on the network, such as 'liking' other users and exchanging information. How successful the user may feel they can be in performing such functions may be related to the strength of their sense of control both over whether to use the network or not, and how they can control how to use it. If so this would reflect the findings of Comerford (2012), which linked positive performance to a strong sense of control. Further if user perception of control is quite strong this could reflect the findings of Yi et al., (2006) where intention was strongly influenced by the user's sense of control of their own behaviour.

4.4.2 Control of Data/Personal Information:

In this research project respondents differed in the way they perceived how the network controlled their personal data. Some respondents felt unconcerned about any loss of control of both the data they put on the network and how it is put on

(R12, R13, R15, R19 and R28), as well as over how it is subsequently used by the network. *"I don't think anybody cares really about privacy*" (R15). Quite a number of respondents distrusted the way their network used their data (R7, R19, R25, R26 and R28). For example R7 said "*With Facebook I am not happy to surrender information*". Meanwhile some respondents said they would like to see more control over the sort of data that users are permitted to put on the network (R4, R5, R14, R23, and R30), including features such as more parental controls. This perceived continuum from having no control at one end of the spectrum to having full control at the other end could highlight the difficulty of defining 'ownership' of the data. For some users the issue of 'ownership' of their personal data may not be very significant to them and see the network as free to use it as it wishes. At the other end users may feel that their data is their property and that the network is obliged to guarantee its security. One's sense of need to control one's data may be closely correlated to one's sense of ownership of the data. Whichever part of the control/ownership continuum to which a user feels attached may reflect not only their attitude to their own data but to the data of other users. A user with a strong sense of ownership/need for control may be gravely concerned about the attitude of other users to their data who are not as concerned, and vice versa. There is the danger that some users may wish to exercise more control over other users than either those users or the network wish to have.

The sense of control of one's personal data placed on a network could affect one's sense of self-efficacy, and future behavioural intentions. This is turn may be linked to trust as found by George (2004) and Hsiu-Fen (2007) in the context of online purchasing. The user's need to trust the way personal information and data is used by the network may, for those users who care about this issue, affect their behavioural intentions. For many respondents a strong sense of control of, or trust in, how their network used their personal data did not exist and this had negative implications for user behavioural intentions. In addition applying the work of Mathieson (1991) if one's data is regarded as a resource over which one may

wish to exercise control then the degree to which the user perceives they can control its use may influence the outcomes they expect.

4.4.3 Willingness to cede more control to the network

In exploring respondents' willingness to follow network rules in return for really useful information from the network, some reluctantly said they would only do so if the changes they were asked to make in their online behaviours were minimal and gave them significant benefits (R7, R8, R10, R15, and R26). *"It depends on the information I have to supply"* (R5). However the great majority of respondents were willing to follow network rules to gain more useful information of benefit to them (R2, R3, R4, R6, R11, R13, R14,, R17, R18, R19, R20, R21, R22, R23, R25, R27 and R30) *"I'd be 100% willing if there was something at the other end that I wanted"* (R12). Only a few respondents said that they would not follow rules in these circumstances (R1, R4 and R5), for example *"If there was a big swing and obligation or something like that, that Facebook introduced, I'd have no interest at all"* (R1).

Where user perception of control is restricted they may engage in 'psychological reactance', (Kozcerga and Anna, 2012, p2), reducing user motivation to behave in accordance with network rules, reflecting the motivation-based concerns of Ajzen (1991). For example R19 was very annoyed with LinkedIn for not allowing them to undo their decision, made at the prompting of LinkedIn, to allow it to access their contacts in their email program. This resentment festered as R19 continued to be offered features by LinkedIn which they perceived as unwelcome and further restricting their control over how they could use LinkedIn. Network providers may need to better understand how users perceive the control dynamic between themselves and their network. For example, by providing users with facilities and tools which let them easily reverse earlier actions which ceded more control than they intended to the network, users' motivation may improve.

As the user interacts with evolving network rules and protocols the network provider should pay close attention to user changes in behaviour. This may then make it easier to predict the user's future behaviour, (Ramayah, et al., 2002) and

facilitate user interaction accordingly. This suggests that with care, network providers can adjust the user-network balance of control and rules. Predicting future behaviour in these circumstances may also be easier where behaviours perceived by users as providing positive outcomes can be facilitated, leading to more positive user attitudes towards such future behavioural intentions, (Pavlou and Chai, 2002). One practical example is offering users more information which they perceive as being useful to them (see Section 4.5.3 below for further discussion). Users may be willing to concede greater control over their behaviours to the network so long as they perceive this outcome as positive. However, taking the research of (Kozcerga and Anna, 2012) into account, it is important not to over-restrict user behaviours (or perhaps to manage how users perceive how their behaviours are controlled). In summary two principal concepts arise from analysis related to this theme. These concepts are coined by this researcher as follows:

Ultimate Control (UC) - this refers to the user's perception of their control over whether to use the network or not. A user with a strong perception of UC sees themselves as the one who will decide to use the network or not, and they can freely decide if to use it, when to use it and if and when they wish to stop using it. They also freely choose if they wish to re-use it having previously decided to end using it. They perceive the network as having no control over these decisions and related intentions and behaviours; and

Program Control (PC) - this refers to the user's perception of how much control they have over how to use their network's tools and facilities. Users with a strong perception of PC see themselves as being able to control how they use the network's tools and facilities. They know what the tools and facilities can do and they decide how best they want to use them for their own purposes.

User motivation may partially depend on the strength of their perception of UC and PC. There may be a strong correlation between UC and PC, but this is not necessarily the case. For example a user with a high level of UC may still perceive themselves as having a low level of PC; while a user with a low level of UC may nonetheless have a high perception of PC. For example, even though the

user may feel that they can decide whether to use say, Facebook, they may also feel that they are given very little real control by Facebook over how they can use it. This UC is high while PC is low. This interaction may affect the motivational dynamic discussed by Ajzen (1991). Where the user has a strong perception of UC it is easier to anticipate behavioural intention, and a clear link may be said to exist between positive performance and this strong sense of control, (Comerford, 2012). Further such a strong sense of control is an indicator of behavioural intention, (Yi et al., 2006), and of actual future behaviour, (Ajzen and Fishbein, 2006). Variations may occur in the user's perception of PC and this makes it far more difficult to anticipate behavioural intention related to the way they use the network.

To the extent that users are concerned about how their network gathers and uses their personal data and information user self-efficacy may be adversely affected, as well as their trust in the network, (George, 2004; Hsiu-Fen, 2007), and this may have negative implications for user behavioural intentions. If the user has a strong sense of need for ownership/control of personal data as discussed earlier this may impede their willingness to use the network at all, and to actively use its tools and facilities. The user cannot trust the network because they feel they do not have the ownership/control they need and that the network cannot be trusted to give them the protection they need. In this way self-efficacy, trust, UC and PC are all interlinked, and, in the context of purchasing through the network, have the potential to affect user motivation, attitudes and behavioural intentions.

4.5 THEME - THE NETWORK-INFORMATION DYNAMIC

The processes of building and using profiles and sharing information, the usefulness of information, and how these may affect user attitudes and behavioural intentions informed the development of this theme.

4.5.1 Profile-building and Assumed Profiles

In analysing this part of the theme the researcher coins the phrase 'assumed profile'. This concept refers to the so-called 'profile' which the network controllers compile on a user. Most users perceive that they have no control over how this 'assumed profile' is compiled. The sense of powerlessness sometimes felt by network users was referred to in Section 4.4.1. Many users suspect that the 'assumed profile' is largely based on the network controller's analysis of the user's behaviours on the network, and on some of their other online activities. Such 'assumed profiles' may partially influence the presentation of information and offers to users, including details of goods and services for sale.

In building their profile on their network many respondents seem to have put up a limited amount of information about themselves initially, subsequently expanding their profile over time. *"Each time you go on Facebook you are asked to add bits and pieces to it. It kind of updates itself"* (R7). With Facebook a good deal of user-controlled profile-building seems to be derived from interaction between members sharing news, comments, information and photographs and other media (R1, R2, R3, R5, R6, R7,R8, R10, R11, R13, R14, R15, R17 and R21) in a 'fun' environment. LinkedIn users were more deliberate and careful generally in the information they placed on their profile (R12, R18, R19 and R20), often being prompted by LinkedIn to add certain kinds of additional information *"It's not social in any way. It's just business and professional"* (R20).

An issue frequently raised by respondents was the way Facebook in particular directed advertisements to them based on their profile (R1, R2, R6, R10, and R11 for example). Many users complained that Facebook effectively erroneously extended their profiles through its use of an 'assumed profile' for them. They did not welcome this either for themselves or for their online connections. For example, referring to the way Facebook notifies users of changes in the profile of their connections R1 commented "*If every time I clicked a friend's profile page something popped up offering me something I'd go nuts*". R2 commented "*Over time I think your profile kind of reaches a saturation point where you don't need any more blurbs or you don't need any more recommendations*".

Network providers may need to re-consider their current approach of 'targeting' users based on 'assumed profiles', especially where users resent such assumptions. As Xu et al., (2012) discovered attempting to 'target' users assumed to be potentially valuable online purchasers is fraught and there are no clearly-defined methods for successfully doing so. Users may find approaches centred on their expressing their own preferences far more welcome (please see the separate Theme 4.6 centred on emotional bonding and belonging for further discussion).

4.5.2 Sharing Information

Section 4.4.2 discussed network user attitudes to the use of their personal data and information on the network. This information can be seen as separate from the non-personal information users may wish to share on the network, such as details of events of interest, or about goods or services for sale for example. Most of the information respondents shared was in the form of comments, opinions, postings of images and videos, links to news and events, and group discussions. Respondents distinguished between the information they shared with others on the network and that shared by others. Respondents generally felt that their sharing of information was a positive thing (R5, R6, R10, R11, R12, R13, R14, R15, R19, R20, R21, R22, R23, R26, and R27). For example R10 said "*I only share things that are really important or beneficial*" while R17 said "*There's no point in being on it if you don't share information".* Some respondents felt that others share information as an altruistic or communal exercise (R1, R3, R12, R13, R14, R17, R23 and R29) and they welcomed this.

On the other hand respondents frequently expressed the view that some information shared by other members was too personal, trivial or boring (R4, R10, R8, R15, R18 and R22). Many respondents were concerned that inappropriate information was being placed on the network by younger users. *"Young people share too much"* (R15) and *"I'd be worried about the types of information that people share"* (R4) are two typical comments. R21 commented "*A lot of people don't seem to have much of a life and spend a lot of time putting up stuff that I*

don't want to see". Many respondents also felt that some members share information to validate or promote themselves (R2, R6, R7 and R19). *"I know a person on LinkedIn who shares information from a career mileage perspective, to be seen to be active and have a lot of contacts"* (R19).

4.5.3 Useful information

Almost all respondents expressed the view that their network can provide useful information to them and also felt quite positive about the network as a consequence. Individual differences dictated what respondents considered to be useful. Details of work-related, business-related or college-related events and group activities of direct benefit to them were identified by R1, R2, R3, R7, R8, R10, R12, R17, R19 and R23 as useful information. R4, R5, R6, R8, R10, R15, R18, R20, R28 and R30 identified information about family events and friends as very important to them. Sports results, news and social events interested R11, R14, R23 and R29. A handful of respondents felt that the information they got from other members about opportunities to purchase goods or services, such as bargain prices, special offers, competitions or promotions was very useful (R6, R10, R13, R15, R18, R25 and R26). However some respondents felt that their information needs would be better met through dedicated search engines such as Google.

In summary respondents in this research project tended to regard information available through the network to be useful to them if it related to their personal or social lives, their professional lives, news and events which interested them, and occasionally, opportunities to buy goods and services. It appears that few network users at present make a mental association between their network and information leading to the purchase of goods and services through the network. The sharing of information was identified by Boyd and Ellison, (2007) as integral to social networking as part of this networking process. The effects of social norms and intention to secure information through the network which positively impacted on intention to purchase online as discussed by Pavlou and Fygenson (2006) does not appear to strongly apply to this group of respondents. There is

limited evidence that some of the respondents could be influenced by information supplied by referent users as Seok-Jae and Ji-Hyun (2006) suggested. However only a handful of respondents clearly identified links to persons or organisations through their network which provided them with useful information which led to them making a subsequent purchase. Nevertheless the fact that some respondents did do so may support the work of Wang et al. 2012 on the influential effects of consumers sharing information in a network.

The practical effects of targeting network users based on the concept of 'assumed profile' may need to be further explored. For example perhaps the network providers should apply the findings of As Xu et al. (2012), and change how they communicate with users. Improved communications could be welcomed by users so long as the information provided is seen by them as useful and relevant to their interests. The development of a two-way exchange where useful information is provided by the network to the user and in return users have a positive attitude to the network may be useful. Especially in an era where the availability and exchange of useful information is valued, network providers should appreciate the need to establish longer-term mutually-beneficial relationships with their users centred on this. Married carefully with enhanced user perception of both UC and PC this 2-way exchange has the potential to enhance user trust, self-efficacy and network behavioural intentions. This could include purchasing behaviour through the network.

4.6 THEME - EMOTIONAL BONDING AND BELONGING

This theme centres on emotional ties between the network and its users, user sense of 'belonging' to the network, and how strongly they may sense that the 'own' it in the context of making purchases through it. The effect on user emotion and sense of responsiveness when purchases are made through the network are also explored in this theme.

4.6.1 Attitude and feelings towards buying through the network

Although only twenty per cent of respondents had bought something through their network many were positive about using it in the future for purchasing (R3, R5, R6, R10, R11, R12, R13, R15, R17, R18, R19, R20, R21, R22, R23, R25, R28 and R29). Future intention was generally linked to past positive experience with purchasing through the network on through other online services. For example R20 said "*I've bought quite a bit of stuff online and I'm going back to do more. I've had good experiences with very good products at very reasonable prices*". When asked how they felt when they completed an online purchase the great majority of respondents expressed themselves in terms of 'happiness' or 'feeling good'. For example R18 said "*My overall experience is very happy with buying things online*" and R8 was also "*very happy*". It is important to reiterate that these feelings related to all online purchases, including purchases through the network, and respondents made no distinction in their feelings between purchasing from websites or social network sites. Indeed when anticipating future purchases through the network R12 said "*I'd feel very good about it*" and R25 said "*I quite enjoy online shopping and I can't see why I would not buy though Facebook".* There was consistent use of positively emotionally-laden language by respondents to describe past online shopping experiences generally. This positive language use was also strongly extended by respondents to future potential purchases through their online social networks.

4.6.2 Advertising

Section 4.5.1 briefly discussed advertising through online social networks based on 'assumed profiles'. Most respondents expressed the view that most of the advertising on their network was irrelevant to them as it did not relate to their interests. Typical suggestions included "*Minimise the amount of ads they throw at you - maybe two or three*" (R10), and "*I don't want to see pages of adverts that are irrelevant to me*" (R8). Advertising as part of the social networking experience was accepted by most respondents with R9 stating "*Everybody says get rid of the advertising but if it keeps it free and you can either click on it or not like, that's okay*". While respondents generally commented on the fact that advertising can be annoying, for example R6 said that "*Advertisements just put me off',* few

respondents had a serious issue with it, even though some said they 'hated' it. In general Facebook users had more issues with advertising than LinkedIn users, "*Facebook lost the plot years ago*" (R7) with some respondents feeling that LinkedIn does not advertise enough about potential services and products it may provide to users (R12).

Some respondents considered responsiveness in terms of how existing advertising could be tailored to their specific interests (R5, R6, R7, R8, R14, R26, and R28) with for example R8 stating *"If the advertisements were tailored to me I would be interested*". This approach tends to be somewhat passive and leaves it to the discretion of the network to decide which advertisements should be drawn to the user's attention - *"It depends on how they present these advertisements to me"* (R6). One respondent felt that LinkedIn used Search Engine Optimisation (SEO) techniques very well in presenting them with potential purchases, but said "*I will lose interest if they start sending me unconnected messages*" (R7).

Other respondents took a more proactive approach and wanted their network to provide them with tools, such as filters and forms, they could use to have the network present them with products and services of interest to them (R1, R10, R11, R12, R13, R15, R16, R17, R18, R19, R20, R21, R25 and R28). "*If I could let Facebook know what advertisements I wanted that would be handy!"* (R15), while others wanted to be able to bypass advertisement-based messages and get direct offers based on specifying to the network what they are looking for (R10). As well as setting up initial filters some users wanted to be able to vary these over time (R16, R18 and R21) and to be able to say "*stop sending me that*" (R18).

Respondents distinguished between random advertisements on the network and information they received from vendors which they had 'liked'. Notifications from these vendors were welcome (R1, R2, R3, R5, R8 and R13 for example). Some respondents had signed up for enhanced services on LinkedIn (R7, R19, R17 and R22 for example) which they were generally happy with. 'Liking' applied to both vendors (both well-known ones and local-interest ones - R25 and R26 for example), and to individuals (who were seen somewhat as 'market mavens' - R3,

R6 and R11 for example). User perception of information-sharing was discussed in Section 4.5.2 and Section 4.5.3 In so far as advertising may be seen by users as sharing of valuable information then it is generally welcomed by respondents.

4.6.3 Protection, Payment Systems, and Convenience

Payment protection and security was a recurring theme for many respondents who were open to purchasing goods and services through their network (R2, R3, R8, R11, R14, R15, R16, R25 and R26). Both the protection of personal and financial data, and refund processing were seen as key factors in enhancing trust and willingness to buy. *"PayPal makes me feel I can trust it a bit more"* (R11). There were a number of suggested variations on how secure payment systems might work with R22 suggesting that networks allow users to buy credits to be used for ongoing online purchases through the network. Some respondents were quite concerned about legal protection for online purchasing through their network (R3, R25 and R26) and helping to identify network users attempting to sale fake goods or perpetrate other such scams.

The convenience of buying through the network was highlighted by some respondents (R2, R3, F7, R10, R13, R15 and R17). This fostered positive emotions towards the network, as reflected by R25 who said *"I'd be happy with it, as I would with any other online place I buy things*", and R15 who said they would *"feel very good!"* The inclusion of purchasing features to make the network something like a 'shop' was mentioned by a number of respondents. *"They need to make Facebook more like Amazon or eBay"* (R10), or like Tesco Online (R7), *"People want convenience: people want things easy"* (R15). Allied closely to convenience for many respondents was the belief that their network should provide them with special deals or offers as part of their membership (R1, R3, R3, R5, R6, R11, R13, R14, and R15). *"Special deals just for me would make me feel an awful lot better about Twitter"* (R11).

In summary in the context of purchasing through the network members may see the network's capacity to make them feel good about their purchases as providing an emotional link to them. However this is somewhat tenuous and it is difficult to

see the sort of strong emotional qualities which lead to valuable benefits to respondents anticipated by Kim et al., (2011). In the context of purchasing through the network neither can it be argued that the network generates a strong sense of social identity with its members or a feeling by them that they 'belong' to it Tajfel (1972, p292). This is especially the case where users are passive recipients of advertising messages or directed information. However where the network is seen by the user as being more responsive to them they have a stronger sense or control and may develop more 'emotional belonging' (Tajfel, 1972) with ongoing successful purchasing experiences: certainly, respondents anticipated feeling good about future purchases. Users who can instruct the network on an ongoing basis on which types of goods and services they would welcome are more likely to have positive experiences with it. The processes which lead online shoppers generally to feel satisfied with their shopping site (Agarwal, 2000) may also apply to network users who are satisfied with their purchasing experiences through it. Elements such as convenience, protection from scams, secure payment tools, and methods to enable the user to trust, filter and customise how the network interacts with them are important in influencing user attitudes and beliefs. Perhaps reflecting the comments of R10 and R7 this can be enhanced by providing online payment processes and the sort of 'online shop' facilities with which users are familiar (similar to Amazon and eBay). However caution regarding respondents' expressions of hypothetical future purchasing behaviours on their networks must be exercised. Few respondents had bought anything through their network to date. Yet many, in expressing an interest in doing so in the future, linked this attitude to the need to be satisfied with the network’s capacity for facilitating purchases (Agarwal, 2000).

4.7 THEME - SOCIAL NETWORKING

The theme explores how members may share benefits with each other in the network in the context of making purchases through the network. It also explores if some members may have more influence on other members and play a role in

affecting their purchasing actions. It also explores to what extent, if any, pressure on members to comply with group norms applies.

4.7.1 Degree to which members are influenced by other members

Some respondents stated in a matter-of-fact way that they were influenced by the attitudes and behaviours of other network members (R5, R10, R23, R27, and R30). For example R5 felt that "*You cannot not be influenced because you see what people say*" (R5) and stated that their attitudes and beliefs can be changed through interaction with other network members. R10 often exchanged their views on the network and believed that Facebook members are influenced by what their friends are saying. Speaking on inter-member relationships R23 stated "*Of course they have an influence on each other's attitudes*". However many other respondents initially stated that they were not influenced by other members, yet during further discussion gave examples of how they were so influenced (R2, R4, R6, R7, R8, R12, R14, R15, R20, R21 and R28). The respondents' initial statements later varied as they qualified their positions. For example R12 stated that "*It depends on who they are and whether you'd respect their opinions*", while R8 initially stated that "*I would like to think that I am my own person*" and then sated "*My friends tag me on posts and they say 'look at this', and I will go to the post".* R20 was adamant that others cannot tell them what to like, and then stated that as part of a writers' group on the network they are influenced by the reading matter suggested by other members.

Some respondents were quite adamant that they are never influenced by other members (R1, R3, R7 and R30). Some respondents even went so far as to state they don't want to see comments from certain other members anymore "*I have unfollowed them which means I can't see the things they say any more*" (R1). R7 blocks other members who annoy them, while R17 talking about members who annoy them stated "*Sometimes you know them and you say 'typical' "*. R21 stated they "*just don't like the attitude of some members*". R24 was concerned that some

network groups can become "...*a forum for people to vent their woe-betides. So I don't tend to get into that*".

4.7.2 Influencing other members

Members occasionally stated that they believed that they could influence the attitudes and behaviours of other members of the network (R7, R10, R11, and R17). This belief was usually stated in a matter-of-fact way, without considering the possibility that they may not be able to influence others. Sometimes this attempt to influence is exercised in an individual capacity, and sometimes as part of a group or forum on the network. Members use the network or group to express their views with R10 stating "*Sometimes I agree with some attitudes and post my views*". While R11 stated that they were not influenced by other members they felt that they had influenced their friends to join Facebook (see Section 4.2.1). While many respondents stated that they had become aware of their network through friends and significant influencers in their lives few respondents themselves recall influencing others to join their network. However R7 was in no doubt about their influence - "*I am probably more of an influencer than being influenced*". The difference in self-reporting by members of being influenced by others to join a network compared to those who stated that they influenced others to join one is striking. In a similar way to the continuum discussed in Section 4.4.2. a continuum may also exist between users perception of having no influence over others to user perception of having very high levels of such influence. This may be explained by individual difference (Lin and Chang, 2011) applied to this context, to approaches to learning (Connor and Armitage, 1998), or to the degree of positivity of user self-beliefs (Patch et al, 2005), or a combination of these factors.

4.7.3 Influence by trusted members

Respondents tended to be more influenced by members with whom they had some sort of 'bond' of trust, such as real-life friends, celebrities they followed, and colleagues or classmates whom they respected (R2, R4, R8, R11, R12, R13,

R14, R15, R17, R18 and R19). Speaking about colleagues R2 states "*Well if I was impressed by what they had to share or how they shared it I would think to myself 'is there a way of mimicking that?"* (R2). The importance of being able to trust other members was emphasised by R4 while R19 was annoyed by what they perceived as the way some members who they knew on LinkedIn who have leadership roles "*Should share their knowledge with other people*" but did not. R6 spoke about the influence of real-life friends on the network - "*I think with the people I like that I have something in common with them*".

Members who followed actors, sports personalities, well-known bloggers, and other celebrities expressed their enjoyment at the way they were influenced by these people. While R8 stated that they were not generally influenced by other network members they "...*buy T-shirts worn by my favourite TV personalities"*. R14 was adamant that because they could not do anything about the attitudes of other network members they did not let them affect their own attitudes, but went on to state that they had role models whom they followed closely on Facebook. Practical advice related to buying goods and services through the network was appreciated by a number of respondents. "*The examples of practical advice I get on Facebook are absolutely brilliant and they influence me alright*" (R26). R15 spoke about how a local blogger influenced them to shop in certain places for clothing for example.

Some networks and groups within networks were perceived by respondents as more trustworthy than others and to be able to exert more influence for the benefit of members. For example R12 stated "*Some people in LinkedIn are looked up to because it's assumed they must have some ability or that they are successful*". R17 stated "*I join groups to get something out of it*" (R17). Somewhat confusingly R22 liked to follow the inventor of the Blackberry on LinkedIn but stated that this person did not influence them. On pressing the respondent further on this they explained that they saw the inventor's circumstances as quite different to their own and did not envisage themselves as an inventor.

In summary respondents generally were influenced by other members of their network, even if initially they felt that they were unlikely to be. Where they had a trusting relationship with other network members, such as real-life friends or persons they had chosen to 'follow' they were open to taking on board their opinions and advice, including about purchasing. In such relationships the findings of Steinfield et al., (2008) hold up. The trust element involved in joining particular networks or groups within networks demonstrates the workings of bonding capital. The fact that members know they can gain benefits from these networks and groups strengthens the potential for bridging capital as the influence of the network itself is seen by members as significant. In both scenarios the case put forward by Granovetter, (1983) applies. The openness of respondents to being both influenced by, and influencing, other network members reinforces Lin's work, (1999) as for example sharing information, opinions, comments and recommendations about sources of goods and services is fostered. While network members recognised that some other members may be more influential they were not impressed generally by members who promote themselves where this is seen as being to their own advantage rather than that of the other members of the network generally. This reflects the earlier findings of O'Mhurchu et al., (2004) who found this to be the case in their study also.

Members expect certain things from their network, especially where the network is seen to be prestigious or influential. Respondents generally did not accord special treatment or 'rights of belonging' to other members or recognise them as being 'central' and in this case the work of Yang and Tang, (2003) and Hersberger et al., (2007, p138) does not appear to strongly apply. Exceptions could be said to be made where respondents followed particular individuals or organisations on their network or read the blogs and Facebook pages of national and international celebrities. In these cases respondents may be seen as granting 'rights of belonging' and 'central' status to such people and organisations rather than the people and organisations establishing them in their own right. It could be argued that in such cases the only degree of 'compliance with norms' is the degree to which respondents expect those they choose to follow to continue to interest and

satisfy their interests. This is the opposite to the case argued by Zhou, (2011) and Li, (2011) and puts the onus on those followed, and the networks and groups facilitating this process to comply with user interests and norms of expectation.

This may be summarised in the table in Figure 4.2

Influence By Others	Influence On Others
Trusted 'real-life' friends and significant others leads to joining particular networks.	Members extend bridging and bonding social capital to other members of the network. 'Rights of belonging' and 'centrality' are extended at the member's discretion.
Those followed are expected to continue to comply with user norms and expectations set down by the member. Member purchasing behaviour may be influenced by trusted other members.	Member are not impressed generally by members who promote themselves where this is seen as being to their own advantage rather than that of the other members of the network generally.

Fig 4.2 - Influence Matrix

4.8 SUMMARY AND REVISED CONCEPTUAL FRAMEWORK

The revised conceptual framework emerges from the analysis of the findings as set out in Sections 4.1 to 4.7 above. In some cases the findings of earlier researchers appear to have been reinforced, while in others additional insights have been gained providing potential for better appreciation of the key factors involved.

The revised conceptual framework is set out in Figure 4.3 and incorporates a number of modifications to the Theory of Planned Behaviour (TPB). The central area with the grey background is the TPB and the oval shapes are this researcher's modifications to TPB. The explanation of the operation of the revised conceptual framework in contained in Sections 4.8.1 to 4.8.4

4.8.1. Attitudinal Beliefs and Evaluation **(A)**

As found by earlier researchers attitudes of respondents in this research project are affected by their beliefs and evaluations. In this project while users may have an open mind initially about using the network they are unlikely to continue to use it unless they see that it is useful to them and that they can gain desired outcomes from it. For that to happen network users must perceive that the network has the capacity to meet their needs and expectations (**A1**). This is an extension of the belief-formation element of the TPB in this context. Earlier researchers may have argued that users are willing to offset ease of use (EOS) against utility (U), where U is perceived as worthwhile to the user (**A2**). However respondents in this research project were clear that EOS should be taken-for-granted and it has no value of itself except as part of a process of providing useful benefits/utility (U) to the user. This is important for designers of the facilities and tools provided to network users.

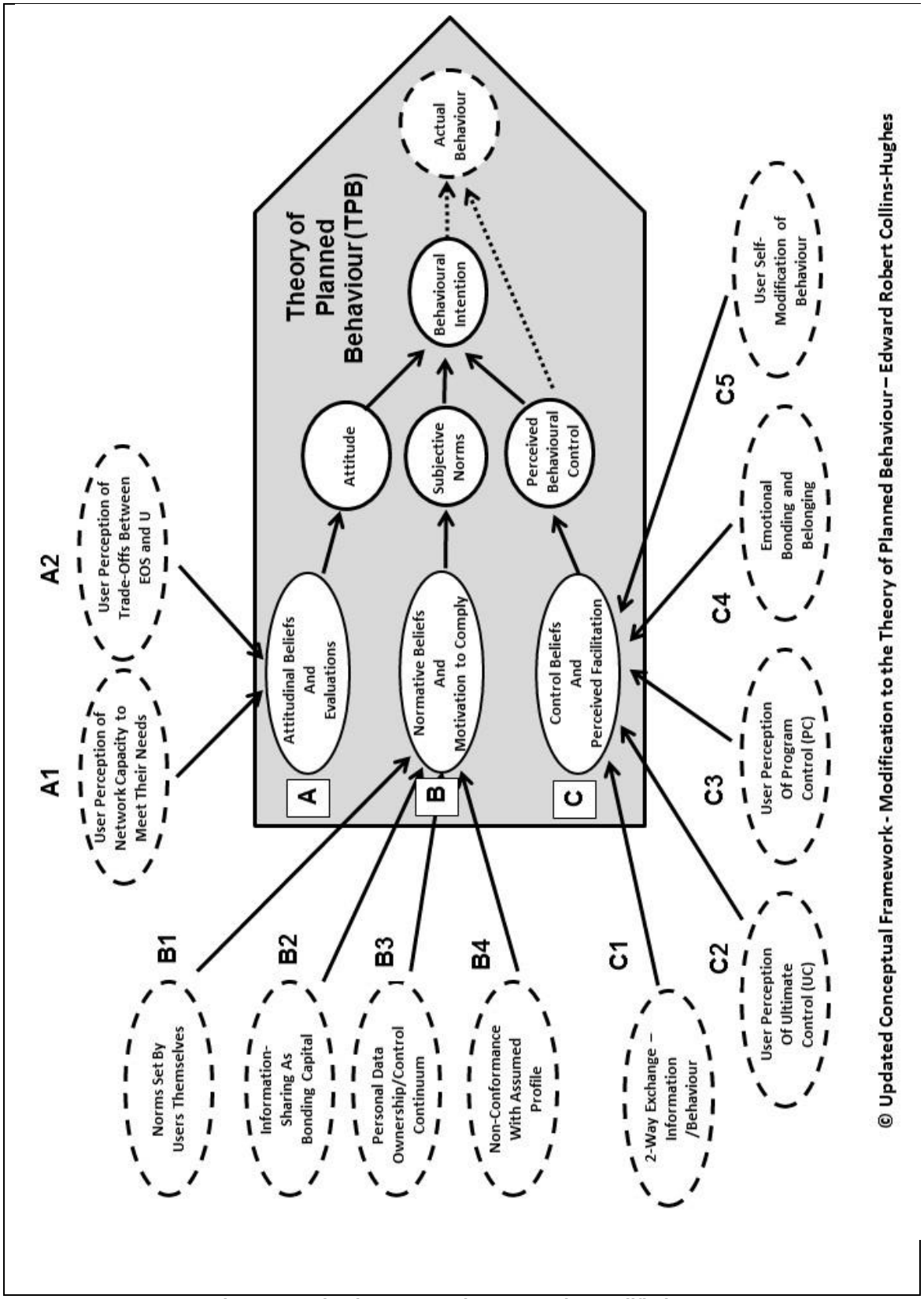

Fig 4.3 - Revised Conceptual Framework - Modified TPB

4.8.2 Normative Beliefs and Motivation to Comply **(B)**

An important concept to emerge from this research project is the role of network members themselves in driving norms of attitudes and behaviours, rather than these being set by either other network members or the network providers **(B1).** The importance of both bonding and bridging social capital has been identified by earlier researchers (**B2**). Users are aware of the value of the network to them in providing bonding social capital with other members, as reflected by their restricting influence over them to trusted friends and other significant people known to them in 'real life'. It is also reflected in their willingness to be influenced by other network members who continue to conform to the user's perception of 'belonging'. This may extend to allowing themselves to be influenced towards purchasing actions through the network.

Where they perceive the network itself as having a value they avail of the bridging social capital it can provide to enhance benefits to them. Sharing information is done as part of both bonding and bridging social capital. Such non-personal information is perceived by users as of benefit to other network members. As regards personal data individual differences apply in the continuum of perception from a very strong need to control it to little need to do so **(B3).** This impacts on the level of user trust in how the network gets, uses and shares user data and on the attitude of users to the way other users perceive their personal data. In particular users are generally adverse to having the network creating 'assumed profiles' for them and then providing information or offers to them which they perceive are based in incorrect assumptions **(B4).**

4.8.3 Control Beliefs and Perceived Facilitation **(C)**

Users are willing to modify their behaviour on the network to gain information which they perceive as useful, and in turn to provide what they perceive as useful information to the network **(C1).** So long as this continues to be facilitated by the network in ways which users like they will continue this cycle of 2-way

information/behaviour exchange. Users may exercise Ultimate Control (UC) or Program Control (PC) **(C2) (C3)** and their motivation levels to engage in various behaviours, including purchasing actions, depends on how they balance UC and PC. The UC and PC concepts add to the established model and may contribute to a better understanding of motivational factors in user behavioural intention. Emotional bonding with the network and developing a sense of their own 'belonging' to it must be considered in the context of user purchasing behaviour through the network **(C4).** While few respondents had completed purchases through their network most expressed a quite positive outlook towards doing so in the future. However this is contingent on the network providers moving away from assumed profiles, passive advertising and targeting of users. Instead network providers need to engage users in the processes of network changes and development to facilitate in-network purchasing. Strengthening trust through online shop-type facilities, and providing tools for user filtering and selection of welcome goods and services which can be tailored to them are two examples of how this could be done. In these circumstances users are willing to self-modify their behaviour to gain these desired benefits **(C5).**

4.8.4 Purchasing through the network

The key concepts in the TPB are attitude, subjective norms and perceived behavioural control. The modifications to the TPB suggested by the findings of this research project may help in explaining how these can converge towards purchasing behavioural intention and actual purchasing behaviour. However, they cannot guarantee that any particular user will definitely intend to purchase and actually make a purchase if the factors which modify the TPB as set out in the revised conceptual framework come into play.

SECTION 5 - CONCLUSIONS

5.1 Introduction

The aim of the thesis was to explore how online social networks could be economically developed in ways which users would welcome. There were gaps in the existing literature on how the intentions and behaviours of online social network users could be better understood in the context of their purchasing goods and services through their network. The thesis adopted a qualitative methodology, and semi-structured interviews were carried out with thirty respondents who used online social networks. The thesis draws on the Theory of Planned Behaviour (TPB) and also explores how some aspects of the Social Network Theory (SNT) model developed by the researcher in Document 2, as well as some key constructs of the Technology Acceptance Model (TAM), may impact on TPB in this context.

5.2. The research questions

Question 1 focused on the extent to which a user's evaluation of network benefits may influence their behavioural beliefs about it. As many respondents were introduced to their network by 'real life' friends (Bakshy et al., 2012, p2), they initially influenced their attitudes. They were also influenced by the benefits of the network's bonding and bridging 'social capital' (Granovetter, 1983), which provided useful benefits from the interaction between network members and between the network and the external environment. As they gained 'pleasant and enjoyable experiences' (Ajzen, 2002, p5) their attitude become more positive towards the network. As the network changed and developed, offering more useful benefits such as access to welcome goods and services their evaluation of the network became more positive, reflecting well-established social network principles. The Ease of Use (EOS) and Utility (U) constructs of the TAM (Davis et al., 1991; Venkates and Davis, 1994) saw respondents taking EOS for granted in delivering benefits / (U) to them. How individuals differed in learning network tools

and facilities in securing benefits reflects the findings of Lin and Chang, (2011) on learning new technology.

In using the network for purchasing respondents reflected the findings of Agarwal and Karahanna (2000) that tools and technologies are important in enhancing online purchaser engagement and reducing cognitive workload. Only a small percentage of respondents had made purchases, yet the majority were very positively disposed to doing so. Caution is required in relying on hypothetical behavioural intentions (Giocos, et al, 2008), nevertheless the fact that so many respondents expressed a future purchasing intention is significant. The language used by purchasers and potential purchasers describing their attitudes to the network for purchasing was very positive, provided they believed the network could actually deliver desired benefits. The responsiveness of the network in this regards was quite highly-valued by users, something designers of network tools and facilities may need to take into account.

The research question was therefore answered in a generally positive fashion. While the findings cannot be generalised they indicate that users may develop positive attitudes towards their networks as purchasing channels so long as they perceive them as easy to use and as having the capacity to deliver the benefits they want.

Question 2 focused on what role information-sharing through the network may contribute to forming user normative beliefs and subjective norms. Information-sharing is a construct within the SNT model of the researcher that may modify TPB. It took place between respondents, between them and the outside environment, and between them and the network providers and vendors. Providers and vendors ‘target’ respondents in their advertising campaigns based on their ‘assumed profiles’, as respondents built their ‘profiles’ and added data (Boyd and Ellison, 2007). This ‘targeting’ was generally unwelcome (Xu et al., 2012). However, respondents found that vendor approaches centred on their expressing their own preferences were far more welcome.

Sharing their own information with others on the network was perceived by respondents as useful, and that by others as often trivial, irrelevant, and in some cases of concern (about privacy, confidentiality and potential mis-use). There was a continuum between respondents who felt a strong need to control their personal data and those who did not, with individuals at various points on the continuum. Strong control needs were matched by high levels of distrust in the network, and vice-versa. Where the network provider was perceived as using this information to try to set norms this negatively impacted on respondents' normative beliefs and motivation to comply. 'Useful information' was defined by respondents as that which is directly relevant to their lives (personal, social and professional). Such information contributes to bonding and bridging social capital (Granovetter, 1983), and included information for purchasing through the network, such as sources of certain desired goods or services. Networks perceived as providing useful information induced positive attitudes towards them, with information provided by 'real-life' friends most trusted. Respondents did not generally allow others to influence their attitudes, intentions or behaviours on the network, except where other members had a shared sense of 'belonging' to the network. Again this is a form of bonding social capital. In cases for example where respondents chose to 'follow' celebrities ('referent others', Seok-Jae and Ji-Hyun (2006)) they were open to being influenced by them in their purchases. However, respondents generally set their own values, behavioural norms, and normative beliefs linked to valuable information, and did not defer to so-called 'central' network members, unless by their own choice.

The research question was therefore answered in a generally positive fashion as respondents were open to information-sharing in the context of purchasing through their network. However, they would only allow the information to contribute to establishing normative beliefs where they trusted the person providing it and where they had a common sense of 'belonging'. While these findings may not be generalisable they indicate that accessing and sharing information (such as tacit data) may play an important role in motivating network users and enforcing compliance. This may be all the more so where the

information is relevant to, and of benefit to themselves. It may also indicate that network users will reject so-called ‘norms’ and ‘targeting’ set by providers and vendors based on ‘assumed profiles’ for users or control of their personal data.

Research Question 3 focused on the extent to which user perceived control of their purchasing behaviour on their online social network could be enhanced. In trying to resolve the issue of actual control compared to perceived control (Ajzen 1991) developed the construct ‘Perceived Behavioural Control, (PBC)’ as a substitute for actual control (Ajzen, 2002). As discussed earlier EOS and U affected respondents’ attitudinal beliefs as EOS facilitated following network rules and procedures. Respondents interacting in this way were willing to modify their own behaviours to gain valuable information in a 2-way cycle of information / behaviour exchange. Paying close attention to such online behaviours may make it easier to predict future behaviours (Ramayah, et al., 2002), and it could be argued that vendors should do so for purchasing behaviours on the network.

Ultimate Control (UC) and Program Control (PC) were coined by this researcher in this thesis and respondents applied both with varying balances between them. A positive link may exist between a person’s sense of control and behavioural intention (Yi et al., 2006), and their performance (Comerford, 2012). Respondents with strong UC and PC felt more empowered and had greater trust in their networks, taking more control of its tools and facilities. Some respondents went further and wanted more power over the flow of information for purchasing through the network, as well as the power to modify and tailor it to their ongoing requirements. Tools commonly found in trusted online shops (shopping baskets, secure payments and data protection) were requested by some respondents. Whilst the significance of these tools in dedicated online shops was researched by George (2004) and Hsiu-Fen (2007), such trust-building approaches have not been applied to online social networks to date.

The research question was therefore answered in a generally positive fashion. While the findings may not be generalisable respondents modified their behaviour over time as the technology acted to influence their control beliefs as anticipated

in TPB. It can be argued that respondent willingness to modify their own behaviours in a conscious, participatory way was context-related. Both the network's social capital in the form of emotional bonding, and the information-exchange facilitated by it may act in this self-behaviour modification process. A positive symbiotic relationship between respondents and their networks was established as their experiences in purchasing through them led them and the vendors to facilitate each other.

5.3 Contribution to Theory

This study contributes to theoretical knowledge by developing a contextualised framework for updating the TPB based on the integration of the EOS and U constructs of TAM along with the information-sharing, social capital and centrality constructs of the researcher's model of SNT. The concept of user perception of trade-off of EOS and U is further developed in the context of purchasing through online social networks. A positive user perception of this trade-off has the potential to positively affect their attitudinal beliefs and evaluations of the network and its capacity to deliver benefits to them. The framework also accommodates the influence of the constructs of the researcher's model of SNT on user normative beliefs and their motivation to comply. The information-sharing construct potentially influences user normative beliefs and motivation to comply, with these linked to the concept of 'valuable information'. The more users perceive that the information shared with them is valuable the more likely their normative beliefs and motivation to comply may be positive. The development by the researcher of the 'assumed profile' concept helps in understanding the potential for formation by users of negative normative beliefs and lack of motivation to comply. In addition, the researcher's concept a 'personal data ownership / control continuum' may help to better understand the variation in user control beliefs and motivation to comply. The lower the user's perceived need to control their own data use on the network the more likely they may be to be less concerned about the locus of control and to be more positively disposed to complying with network normative beliefs. The 'centrality' construct of the researcher's model of SNT helps to explain why users may set their own norms and decide whom they

choose to ‘follow’ and allow to be ‘referent’ members with some influence with them.

‘Ultimate Control’ (UC) and ‘Program Control’ (PC) are two concepts developed by the researcher to help bridge the gap between actual control and PBC in TPB and may help in understanding how user control beliefs and perceived facilitation are influenced. The concept of a ‘2-way exchange dynamic’ contributes to understanding how users may concede control in exchange for valuable information in a 2-way process. Control beliefs and perceived facilitation may also be better understood if the researcher’s concept of ‘user self-modification of behaviour’ is applied, as EOS and U facilitate the user in voluntarily changing their behaviour in making success purchases through the network. The concepts of ‘emotional bonding’ and ‘emotional belonging’ developed by other researchers in relation to online shopping has been extended to the context of purchasing through online social networks.

Table 5.1 summarises these contributions to theory.

ISSUES AND PRINCIPAL AUTHORS	MAJOR SIMILARITIES WITH EXISTING RESEARCHERS	DIFFERENCES FROM EXISTING RESEARCHERS
User attitudes and attitudinal beliefs (Agarwal and Prasad, 1998; Ajzen, 2002; Ajzen, 2011; Ajzen and Fishbein, 1969 – 2006; Karahanna et al., 1999; Panahi et al., 2013; Venkatesh and Davis, 2000).	Beliefs are related to user perception of the value of the benefits that may accrue to them for conforming to network rules.	1) Users consider the value of benefits to themselves rather to the network controller in determining decision to continue to use the network. 2) The network must be perceived by the user as having the capacity to deliver desired benefits.
User attitudes and attitudinal beliefs (Chai, 2002; Davis, 1991-1993; Davis et al., 1991; Mathieson, 1991; Pavlou and Venkates and Davis, 1994).	Utility (U) takes precedence over Ease of Use (EOS)	1) Network users take EOS for granted and perceive it as a facilitator of U. 2) Network designers must ensure U matches user expectations
Normative beliefs and motivation to comply (Boyd and Ellison, 2007; Granovetter, 1983; Hersberger et al., 2007; Smith, 2005; Snowden, 2005).	The role of bonding and bridging capital in sustaining network membership.	Users restrict influence over themselves to trusted friends and other significant people known to them in 'real life' rather than to network members generally.
Normative beliefs and motivation to comply (Fishbein and Ajzen, 1975; Groot and Steg, 2007; Hersberger et al., 2007; Seok-Jae and Ji-Hyun (2006).	Subjective norms are established by network members on each other and by the network itself on all members.	1) Network members only permit themselves to be influenced by those who conform to their perception of 'belonging'. 2) This may extend to allowing themselves to be influenced towards purchasing actions through the network.
Normative beliefs and motivation to comply (Al-Jabari et al., 2012; Fygenson (2006; Li, 2011; Pavlou and Zhou, 2011; Tajfel, 1972).	Sharing information is part of the process of compliance.	There is a continuum centred on the member's perceived need to control their personal data which ranges from a very strong sense of need for control to one of little need for control. This affects trust, motivation and willingness to comply.
Normative beliefs and motivation to comply (Boyd and Ellison, 2007; Lin and Chang, 2011; Xu et al., 2012)	User profiles are an integral part of online social networking	Network members are averse to the network creating 'assumed profiles' on them and using these to 'target' them, including sending them information on goods and services based on this 'assumed profile'.
Control beliefs and perceived facilitation (Ajzen, 2002; Ajzen and Fishbein, 1969 – 2006; Kozcerga and Anna, 2012).	Perception of control is an important influence on user behavioural control.	User perception of the usefulness of available information through the network may establish an ongoing 2-way cycle of information /behaviour exchange.
Control beliefs and perceived facilitation (Ajzen, 2006; Chiang, 2013; Comerford, 2012; George, 2004; Hsiu-Fen, 2007; Lutters and Ackerman, 2003; Yi et al., 2006; Zhou, et al., 2007).	Perceived facilitation may affect user engagement in control behaviours.	1) Ultimate Control (UC) and Program Control (PC) affect motivation to engage in controlling behaviours, including those centred on purchasing actions. 2) Individual difference may influence how the user balances UC and PC in governing motivation and user sense of facilitation in taking control actions.
Control beliefs and perceived facilitation (Agarwal and Karahanna, 2000; Hsiu-Fen, 2007; Lin and Chang, 2011).	User emotional bonding with the network and sense of 'belonging' facilitate control	Network designers need to foster trust through empowering users to take control of network tools and facilities. These will enable users to receive welcome information on products and services and the tools and facilities to purchase them through the network.
Control beliefs and perceived facilitation (Al-Debei, et al., 2013; Hsua, et al., 2006; Patch et. al., 2005; Katz and Shapiro, 1985; Lee et al., 2011).	Modification of user behaviour over time	The concept of conscious, participatory self-behaviour modification in a positive symbiotic relationship between user and network is introduced.

Table 5. 1 - Summary of contribution to theory

5.4 Contribution to Professional Practice

While the findings may not be generalisable they contribute to professional practice with guidance on how to engage more online social network users with enjoyable purchasing experiences through their network. Instead of 'targeting' members Facebook, for example, could incorporate filters and tools for members to show what they are interested in buying. The entire customer experience needs to be really good for the member if they are to be influenced to make repeated purchases through Facebook. Enhancing how users feel about Facebook as a purchasing channel could include exclusive or restricted access to desirable goods and services for Facebook members only. Other approaches could include 'one-click' direct access to the vendor's shopping cart instead of the member having to leave Facebook first to complete a purchase. The sort of online shopping facilities which members take for granted, such as payment protection, special delivery arrangements and discounts and coupons, could also be provided. Facebook should learn from its ongoing interaction with members as they make purchases and continually improve its shopping facilities based on this feedback. All networks could engage with members who already perceive them as trusted purchasing channels and seek their advice as 'referent' members on how other members may become more aware and engaged in purchasing through the network.

LinkedIn, for example, could offer its members in-network purchasing of job interview preparation training courses, useful information on potential employers, and reports on developments in employment markets. These are all closely related to its existing services and if offered at a special rate for members, and based on very good research, could be highly valued by members. Twitter could take advantage of its potential to present targeted, 'gist'-type information to members on products and services. With dedicated personalised wording framed to get the attention of the member Twitter could capitalise on its unique communications style. Other networks may have their own unique member base, network design, tools and facilities which could facilitate purchasing if their

providers and vendors applied some of the practical approaches outlined in this section.

5.5 Limitations

There were some limitations which were methodological in nature, including:

(a) Access to potential respondents was more difficult and took longer than anticipated. Initial purposive sampling was followed by snowball sampling with interviews taking place over the summer of 2014, in a schedule to accommodate respondent vacations. Given more time more respondents may have been included. However the material gathered from the respondents was rich and insightful, which helped to compensate for the frustrations of waiting and gaining access;

(b) The interviews were completed with respondents in Ireland. Ireland is only one context and the original aim was then to include participants from different, but similar contexts, where use of online social networks is similar. As time was limited it was not possible to interview respondents from the United Kingdom (UK) or other countries. At Document No 2 (Collins-Hughes, p47) social network use in Australia, New Zealand, Canada, Ireland, UK and the United States of America had been reviewed in anticipation of interviewing some users from these countries;

(c) On reflection completing the interviews required careful ‘listening’ for issues which some respondents had difficulty articulating. Some of them perhaps lacked the skills to fully express themselves. Establishing rapport put these respondents at their ease (Rabionet, 2011) and using laddering techniques helped them to make greater meaning of the questions (Jarratt, 1996). The interviews were a bit daunting and ‘artificial’ for some respondents, given the expectation on them to answer unexpected questions (Myers and Newman, 2007). However the completion of pilot interviews beforehand helped the researcher to prepare for these eventualities.

5.6 Further Research

Additional research which could be carried out related to this thesis includes research with respondents from the countries referred to in Section 5.5 (b), as this could explore the possible effects of local cultures on intentions and buying behaviours. As purchasing through online social networks is a new phenomenon, after some time has passed another extension of this research could be with users who by then would all have actually made purchases through their network. Another interesting area into which to extend this research could be with vendors who facilitate user ‘in-network’ purchasing. At present vendors provide links from networks to their websites or they ‘harvest’ potential customers who ‘like’ them. In future network providers may offer more seamless purchases where users do not need to leave the network to make a purchase. For example, LinkedIn recently took over Lynda.com, an online education provider, and aims to sell their courses in this more seamless way. The research could be extended to initiatives such as this.

Online social networks are now well-established and are likely to remain for the foreseeable future as contributors to the social life of people around the world. It is hope that this thesis may go some way to exploring how they may also make a contribution to the commercial development of society.

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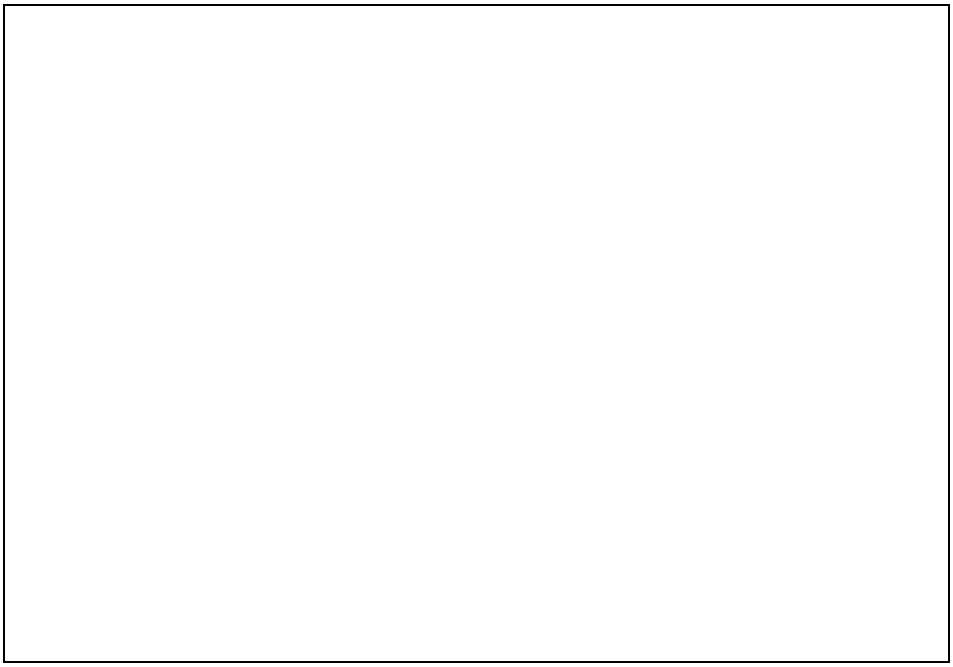
APPENDIX 1 - ONLINE SOCIAL NETWORKS

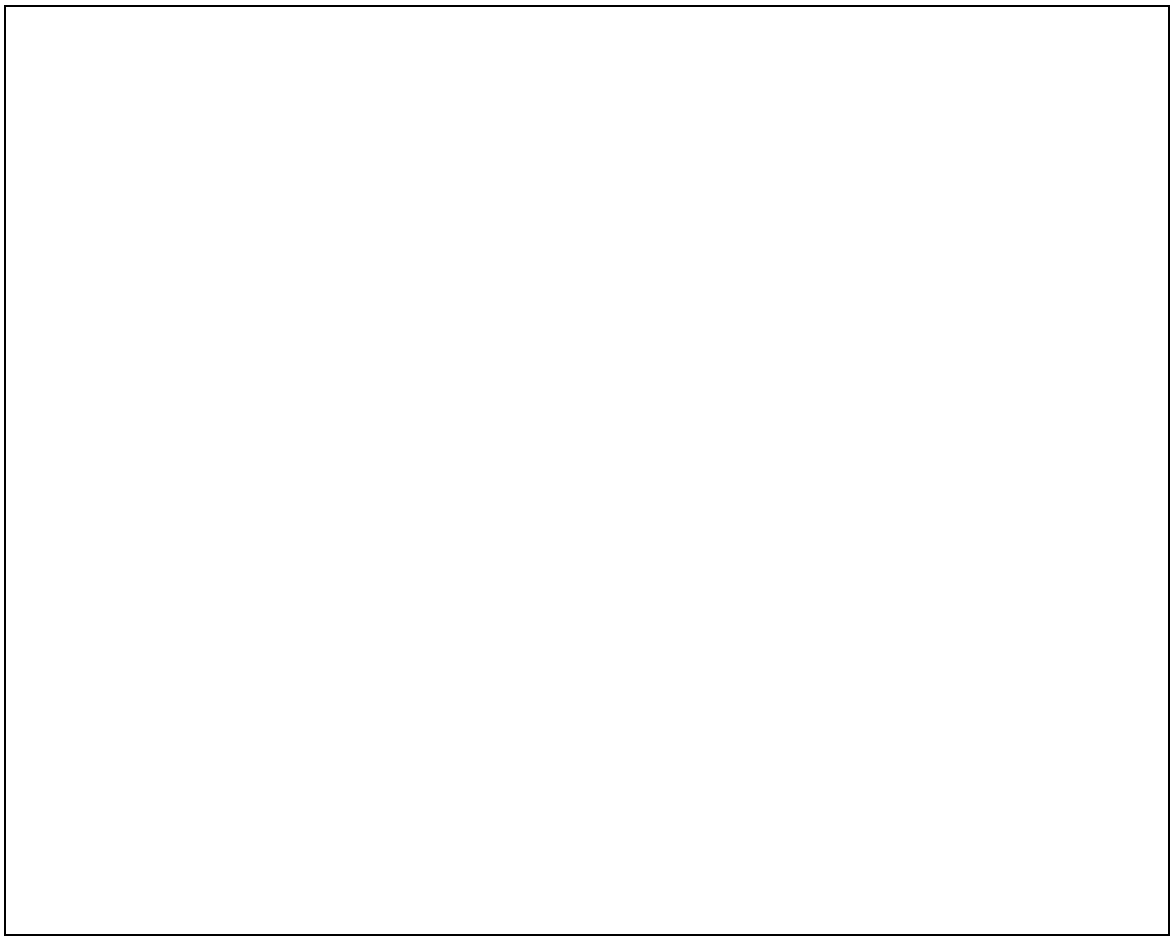
Technology-assisted online social networks sites such as Facebook, MySpace and Linked have a number of features according to Boyd and Ellison (2007, p211) who have developed a definition often used by researchers as follows:

> "We define social network sites as web-based services that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system".

In the United Kingdom (UK) there were 33 million Facebook users as well as 15 million LinkedIn users by early 2014, (Mintel, 2013). Ofqual the UK Government's telecommunications regulator published the following table in September 2013.



eMarketer predicts that global access to online social networks will have increased from 1.47 billion people in 2012 to 2.55 billion by 2017, with nearly one in four people on the planet using these networks in 2013 at least one a month.



Source: eMarketer report, “Worldwide Social Network Users: 2013 Forecast and Comparative Estimates,”

APPENDIX 2 - THEORY OF PLANNED BEHAVIOUR (TPB)

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APPENDIX 3 - RESEARCH STRATEGIES

Strategy	Quantitative or Qualitative?	Purpose	Overview

Research Strategies (Reproduced directly from Saunders et al., p.173)

Strategy	Quantitative or Qualitative?	Purpose	Overview

Research Strategies (Reproduced directly from Saunders et al., p.173) - Continued

APPENDIX 4 - PROFILES OF INTERVIEW RESPONDENTS

Ref	Principal Network	Secondary Network	M/F	Age Range	Occupation	Education Level
1	Facebook		M	30-49	Nurse	Graduate
2	Facebook	LinkedIn	M	18-29	Student	Postgraduate
3	Facebook		M	30-49	Unemployed	2nd Level/Vocational
4	Facebook		M	30-49	Teacher	Postgraduate
5	Facebook	LinkedIn	M	50 - Above	Manager	2nd Level/Vocational
6	Facebook	Twitter	M	30-49	Mechanic	2nd Level/Vocational
7	Facebook	LinkedIn	M	30-49	Teacher	Postgraduate
8	Facebook	Instagram	M	30-49	Student	2nd Level/Vocational
9	Facebook	LinkedIn	F	30-49	Manager	Graduate
10	Facebook		M	30-49	Administrator	Graduate
11	Facebook	WhatsApp	M	18-29	Student	2nd Level/Vocational
12	LinkedIn		M	30-49	Manager	2nd Level/Vocational
13	Facebook	Twitter	F	30-49	Teacher	Graduate
14	Facebook	WhatsApp	M	30-49	Salesperson	2nd Level/Vocational
15	Facebook	LinkedIn	F	30-49	Engineer	Graduate
16	Facebook	LinkedIn	M	30-49	Teacher	Graduate
17	LinkedIn		F	50 - Above	Engineer	Graduate
18	LinkedIn		F	30-49	Lawyer	Postgraduate
19	LinkedIn		F	50 - Above	Nurse	Postgraduate
20	LinkedIn	GrabOne	M	30-49	Administrator	2nd Level/Vocational
21	LinkedIn	Facebook	M	30-49	Administrator	2nd Level/Vocational
22	LinkedIn		M	30-49	Manager	Graduate
23	Facebook	MSN	M	18-29	Student	2nd Level/Vocational

PROFILES OF INTERVIEW RESPONDENTS

Ref	Principal Network	Secondary Network	M/F	Age Range	Occupation	Education Level
24	Facebook	Twitter	F	30-49	Manager	2nd Level/Vocational
25	Facebook	Instagram	F	18-29	Carer	2nd Level/Vocational
26	Facebook		M	50 - Above	Carer	2nd Level/Vocational
27	Facebook		M	50 - Above	Administrator	2nd Level/Vocational
28	LinkedIn		F	30-49	Unemployed	Graduate
29	Facebook		F	18-29	Student	2nd Level/Vocational
30	Facebook		F	50 - Above	Retired	Graduate

PROFILES OF INTERVIEW RESPONDENTS- Continued

APPENDIX 5 - INTERVIEW GUIDE

Note: The term 'network' means online social network. Answers can be given about a single network or about a number of networks used by the interviewee.

The interview is divided into three broad themes as follows:

Theme 1 – User behavioural beliefs in the context of evaluation of benefits from their network

Can you tell me how you become aware of your network?

When you first went on the network what did you intend to get from it?

How long did it take you to find out about the different tools and services you could use on your network?

How did you discover these?

What kinds of things do you get from your network that benefit you?
If I asked you to sum up your attitude to your network what would you say about it?

How has the way you feel about your network changed since you started using it?

What kind of changes about your network would you like to see for the future?

Theme 2 - user normative beliefs and subjective norms in the context of their information-sharing on their network

What kinds of information available through the network do you find useful?

How does this information make you feel about the network?

Why do you share information with other people on your network?

Why do you think they share information with you and other users?

How willing are you to stick with network rules and regulations in return for getting really useful information from it?

How are you influenced by the attitudes of other people on your network?

Theme 3 - extent to which user perceived behavioural control may be enhanced in the context of their purchasing behaviour on their network

Can you take me through the things you have to do to make a purchase through your network?

How much control do you feel you have over the way your network lets you use it?

Tell me the things that need to be changed or improved to make it easier to buy things you want while you are on your network?

When you successfully complete a purchase through your network how does that affect your attitude towards using it?

What thoughts do you have about making the network more responsive to your needs as a purchaser?