MULTIDIMENSIONALITY OF ACTORS IN BUSINESS NETWORKS

THE INFLUENCE OF SOCIAL ACTION IN PHARMACY NETWORKS IN FINLAND

Helsinki 2009
Multidimensionality of actors in business networks: The influence of social action in pharmacy networks in Finland

Key words: Emerging business networks, social networks, social action, business actors, pharmacy networks, actorship, network identification, actor’s multidimensionality, identity

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1 INTRODUCTION

During the past 20 years, pharmaceutical retailing in Finland has undergone a dramatic, if perhaps silent change. What was once a sector dominated by individual pharmacists operating their own pharmacies in designated areas and in relative isolation from other pharmacies, has been transformed into a sector where retail chains have captured an increasing share of the business. Today, although the sector remains fragmented, two pharmacy chains have managed to take leading positions in the market: an integrated chain, University Pharmacy, and a voluntary chain, Hyvän Mielen Apteekit. Together, these two chains have gradually grown their market share and accounted for 20% of the retail sales of pharmaceuticals in Finland in 2007.

In the 1990s, University Pharmacy started to expand its operations and integrate its separate pharmacy units to become a unified pharmacy chain. Based on an old privilege University Pharmacy could own pharmacies close to large hospitals all over the country and the separate pharmacy units gradually became centrally and strategically managed business units. In reaction to this expansion, a number of individual apothecaries started to co-operate with each other and by doing so developed a form of business network hitherto unknown in Finnish pharmacy retailing: a voluntary chain. How did this development come about? What led the apothecaries to start co-operating? How did the personal relationships that they developed with each other affect the transformation of Finnish pharmacy retailing? Did their role differ from that of their colleagues working within the integrated chain? These were some of the questions that caught my attention when I started to investigate the pharmacy business in Finland.

In particular, I was struck by the fact that it was very difficult in many situations to make a clear distinction between the pharmacy entity and the individual apothecary when trying to understand what was happening in pharmacy retailing. Apothecaries acted differently in different situations. Sometimes they seemed to act “as themselves”, that is as individuals. At other times, they were clearly acting as apothecaries, i.e. as professionals. In yet other situations yet, they acted on behalf of their pharmacy, prioritising their firm over their personal and professional selves. What intrigued me was that their actions seemed to affect the ongoing development towards retail chains, irrespective of which capacity they acted in. A business actor, it seemed, was a multivalent or multidimensional entity.
1.1. Research area – the multidimensionality of actors

The gradual insight that business actors, or actors for short, comprise multiple dimensions became particularly interesting when contrasted with the way in which actors are regularly handled as part of the dominant theoretical perspective on B2B marketing in Scandinavia; the markets-as-networks perspective. Within this approach, business networks are conceived as dynamic actor structures, suggesting that actors have a considerable impact on the development and dynamics of emerging networks (Johanson & Mattsson 1992; Mattsson 2004). Actors can be individuals, groups of individuals or parts of firms, but they are generally defined as those who perform activities and/or control resources in business networks (Håkansson & Johanson 1992). Through their exchange relationships with others, actors are embedded or connected in business networks, which both constrain and enable them (Easton 1992; Johanson & Mattsson 1992; Mattsson 2003). Still these networks are the result of actions undertaken by actors, some of which could be said to be strategic, i.e. having a clear goal of altering existing relationships (Johanson & Mattsson 1992). Thus, actors form, try to control and to co-ordinate networks based on their intentions and their perceptions of the context and conditions in which they find themselves. They do this through various activities which they perform by employing resources of various kind, economic, technical and social, to mention a few (Anderson et al. 1994; Ford and Redwood 2005; Håkansson & Snehota 1995; Johanson & Mattsson 1992; Mattsson 2004).

A closer look at how actors are presented in the business network literature reveals that most of the discussions about actors concern firms, although actors are usually defined...
in a way that allows them to be much more than firms. For instance, it has been suggested that actors become actors by being recognized by others (Håkansson & Snehota 1995:195; Snehota 1990). This places no particular restriction on the make-up of the actor, which consequently can be a firm or some other organisation, a group or federation of such firms or organisations, an individual (human being) or a group of such individuals. Some researchers have viewed both firms and individuals as business actors, whereby firms and individuals are seen as equally important and engaged in business activities (Halinen & Törnroos 1998). Studies where business actors have been specifically defined as individuals are quite exceptional in the business network tradition. These studies have, however, emphasised the relevance of individuals’ ability to influence other actors in business networks, the import of individual networks in the development of long-term exchange relationships, as well as the importance of different forms of the information exchange that takes place between individuals in networks (Ahrne 1994; Hamfelt & Lindberg 1987; Liljegren 1988). It can thus be argued that most empirical studies in the business network tradition have focused on actors at a particular level of aggregation, most often on networks of firms and relationships between firms (Anderson, Havila, Andersen & Halinen 1998; Araujo & Easton 1996; Ford 1980; Havila 1996; Håkansson 1982; Håkansson & Ford 2000; Håkansson & Snehota 1995; Johanson & Mattsson 1992; Turnbull et al. 1996).

It is easy to understand how allowing for multidimensionality of actors could open a Pandora’s box, leading only to confusion over the great variety of actors involved in business processes. An individual may act as a private person, as a professional, or as a representative of a firm. Thus, individuals can simultaneously possess several identities, which the person enacts in different situations. Individuals may be part of some collective actor, e.g. a family, a group, a firm, which implies an organisational identity or a collective identity that an individual has. A firm, on the other hand, can take on

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2 The network metaphor for describing the structures of relationships formed by actors has become increasingly popular over the years, as has been stated by Anderson, Havila, Andersen & Halinen (1998), who have studied the network dynamics in business networks. As their study represents the common path for business network research, they have focused on firms as actors in business networks. Other network approaches have, however, been focused on actor dimensions other than firms (see Araujo & Easton 1996). Researchers in the social networks approach have focused on individuals, as has been the case with entrepreneurship studies as well. Some researchers within markets-as-networks tradition have also focused on individuals (e.g. Ahrne 1994; Hamfelt & Lindberg 1987; Liljegren 1988) but they have not applied social network researchers’ methodology in their studies. The actor-network approach, or Actor-Network Theory (ANT), takes the actor discussion to a more abstract level, emphasising the processes in networks rather than the structures, where an actor can be of any kind of material and of both human and nonhuman forms.
many shapes, as it can be represented by an individual, but can also be understood as a retail store, or a head office. Thus, business actors can be either individuals or a group of actors in many different shapes and forms. In a sense, then, it is not surprising that studies of business networks have tended to avoid mixing several actor dimensions and have instead settled for a conception of actors as firms and/or organisations. To some extent it can be argued that this relation between firms/organisations and the concept of actors have become institutionalised in business network studies. Researchers seem to take the definition of actors for granted in business networks in a similar manner to the way in which we all take for granted the world we live in. As a consequence, most of the actor-related concepts in business studies are defined to best fit the purpose of analysing firms rather than individuals or other forms of actors in business networks.

1.1.1. Some drawbacks of the current actor concept

Although convenient, this solution has some potential drawbacks. Primarily, there is a risk that we are systematically downplaying, or even missing, important aspects concerning for instance the role of individuals in the development of business networks and in network dynamics. Research on network dynamics has concentrated on describing and explaining how and why business networks emerge, develop and change (Anderson et al. 1998; Halinen & Törnroos 1998; Havila 1996; Hertz & Mattsson 2004; Johanson & Mattsson 1985). Researchers have most often analysed network dynamics as incremental processes where relationships between business actors evolve over time (Easton 1992; Ford 1980; Halinen & Törnroos 1995; Håkansson & Snehota 1995; Johanson & Mattsson 1985; Turnbull et al. 1996) enabling exchange of resources and even technological innovations (cf. Håkansson & Waluszewski 2003; Waluszewski 1989). Thus, researchers have agreed upon the idea that change in industrial networks depends on the relationships and networks themselves (Andersson, Blankenburg & Johanson 2007). Network dynamics have also been analysed as interplay between stable and volatile concepts of actors’ positions and roles. Thus, actors can manipulate their roles and positions in business networks and thereby influence others as well (Anderson et al. 1998; Anderson, Andersson, Havila & Salmi 2000; Havila 1996; Henders 1992) Therefore, researchers have shared an understanding that action by actors’ is crucial for the development of business networks. However, when speaking of actors, researchers have, in most cases, merely studied firms and excluded individuals. This presents a dilemma in the sense that despite the increase in knowledge of network dynamics and actors’ influence on business networks, the analysis regarding actors has
remained at the level of the firm. Consequently, we know very little about other actors, e.g. individuals’ behaviour in the business network context, although firms’ behaviour and action have been thoroughly studied. The present understanding of actors needs to be refreshed if we want to change the way in which the concept is used and include individuals in the research and thereby take seriously the role of individuals in business networks.

Secondly, institutionalising the actor concept by focusing on firms as business actors has faded research on areas that touch upon intangible resources and human capabilities linked to business networks, e.g. social exchange in social networks between individuals, being overlooked. Exchange can be categorised on a behavioural basis (Bagozzi 1975), that is divided into utilitarian and symbolic exchange or categorised as a mix of both. Sociologists speak in a similar way of economic versus social action when portraying behaviour in social processes (Krippner et al. 2004). According to business network researchers the nature of exchange can be categorised based on the content of a relationship and consequently, exchange in relationships can be divided into four elements: product or service exchange, information exchange, financial exchange, and social exchange. (See Emerson 1981, 1962; IMP Group 1982) These categories have also steered the main research streams in the field of network studies, where exchange of products or services has most typically created the basis of many business network studies together with financial exchange. Both information and social exchange are less tangible in their character than the other elements and are thus more difficult to define or measure. Information exchange or communication is characterised by technical, economic and organisational substance between actors in a network and it can be either formal or informal in its nature. The importance of information exchange has been noted especially in research on technology development, where information exchange and knowledge transfer are relevant to innovation and product development (Andersson et al. 2007).

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3 Bagozzi (1975) uses the term utilitarian exchange when referring to economic exchange. Referring to Bagozzi (1975: 36) a utilitarian exchange is an interaction whereby goods are given in return for money or other goods and the motivation behind the action lies in the anticipated use or tangible characteristics commonly associated with the objects in the exchange. This definition is based in the utilitarian exchange theory and thus, built on the foundation of economic man. Most of the earlier research has relied upon this conceptualisation and assumption when analysing exchange.

4 The quantity of money exchanged in a relationship is often regarded as a sign of the economic importance of a relationship and, thus, measures the importance of the relationship itself.
Information exchange is related to the social exchange, which has been recognised to reduce uncertainties between parties and help to diminish spatial and cultural distance between actors. Economic and social action go hand-in-hand in business networks; still, we actually know little about the social exchange, the context of it, or actors’ social action in business networks. Researchers have agreed that social exchange creates continuity in relationships as it develops trust and commitment, which is why it can be argued that relationships in business networks are to a large extent built on social exchange (see e.g. Andersson, Blankenburg & Johanson 2005, 2007; Håkansson & Östberg 1975; IMP Group 1982). The influence of social action in business networks and thereby the impact of social networks that exist between individuals have been touched upon in the current business network research, but only a few attempts have been made to improve our understanding regarding the roles of social action and social networks. The notion that social and information exchange between individuals actually create the spine for relationships, supporting them, and giving business networks a structure, stresses the need to focus on these forgotten areas.

1.1.2. Social networks in business networks

Thus, focusing on actors boosts the roles of social action and social networks in the business network context as an intriguing area of research. We do not know much about social exchange between actors and there is, therefore, a need to investigate this. Granovetter (1985) has stated that the attraction in studying social networks through actors and action lies in two assumptions. First, actors, whether they are people or organisations, are embedded in a myriad of social relationships, and it is impossible to understand their behaviour without understanding the relational context in which they function, (Granovetter 1985; in Galaskiewicz 1996:20) implying the business network to which an actor belongs. Second, it can be assumed that actors, and their actions are, interdependent, not isolated, and actors can affect each other and the network they are part of (see Berger & Luckmann 1967; Berger, Berger & Kellner 1974; Schutz 1962). An actor cannot act alone but depends on the support of other actors. Thus, social networks between individuals are where actors are embedded in the patterns of social relationships and where the social action takes place in business networks (Araujo & Easton 1996). It can be assumed that social networks influence the development of the whole business network, as the actors in a network are mutually dependent and capable of organising their activities.
Social networks are also about social structures, which are so often downplayed by the business network scholars. Social structures provide information about how actors are connected to each other in different contexts, i.e. who is connected to whom in various situations, and may as such explain human actors’ activities and social exchanges, and thereby be useful when exploring the dynamic processes on the individual dimension in business networks. They can provide information about the strength of relationships between individuals and the different character of change agents in the network. Central actors in social networks can be described as those individuals who are well connected to other actors and have therefore better access to information in the network. Central actors in social networks are probably also those who make change happen, meaning that they are active and also activate others through their action (Wasserman & Faust 1994). Through social networks individuals seek partnership and social companionship, build their identities, seek support and acceptance from other individuals, and exchange ideas and information (Granovetter 1985; Mainela 2002; Scott 2000; Wasserman & Faust 1994).

1.1.3. Understanding multidimensionality of actors and human action

There are several important concepts in the previous research that have sought to explain actors’ behaviour, and individuals’ and firms’ action and influence in business networks. One of the concepts often applied in sociology is actorship, which explains actors’ activity, the character of human activity and individual behaviour (Schutz 1962). Thus, the concept can be applied to capture the character of human activity and individual behaviour in business networks, implying that actors’ resources can be constructed, activated and managed by the actors themselves. For some reason, the concept of actorship is rarely used by business network scholars, although it has been frequently applied by sociologists. Other important concepts linked to the human activity are actors’ varying perceptions and views on business networks, actors’ identities, network identification, and the concept of embeddedness (see Granovetter 1985, 2002; Hertz & Mattsson 2004; Huemer, Becerra & Lunnan 2004).

Actors’ own desires to shape and change business networks and network structures can be described in terms of individuals’ willpower, which is related to the intentionality of action of actors and thus, actorship. (See Johannisson 1987; Kjellberg 2001.) Actors have been identified as having different perceptions of networks, meaning that
individuals view the business network from their perspective as human beings, whereas firms take a collective perspective (Hertz & Mattsson 2004; Welch & Wilkinson 2002). Individuals and firms have also been identified as having different goals that drive their action, decision-making and general behaviour in business networks (see Håkansson & Johanson 1992 – actors’ goals; Hertz 1992 - decision integration). These goals are, however, linked as individuals understand their identities and behaviour as part of a broader system of meaning (Fiol 1992; Huemer et al. 2004). There is a synchronisation of identities, the individual’s ‘me’ is synchronized with the organisational ‘me’ as well as with the network ‘we’, whereby there develops a synchronised and shared sense of purpose and destiny between the actors (Huemer et al. 2004). It can be argued that in the same way as an actor is embedded in relationships and business networks, an actor and actor’s action are embedded in different actor dimensions: as an individual, a firm or a network. Business actors can be analysed in several actor dimensions that are embedded in each other. This assumption is linked to heterogeneity and diversity in business networks, the heterogeneity of actors as well as actor dimensions an actor possesses. Heterogeneity is regarded as a strength for a business network, keeping it dynamic and even affecting the change in business networks (Andersson et al. 2007).

This means that actors have several identities in business networks and that actors in the same business network may have different network perspectives. Nevertheless, despite the amount of varying identities and network perspectives, actors share a common perspective or goal which makes them members in the network. Actors identify themselves and each other in the networks, which creates both a comprehensive sense of belonging between them and the perceived boundaries. The individuals, organisation, or network identities in different actor dimensions are linked through identification processes. “Network identification represents a continuous process whereby actors simultaneously imagine, visualize and experience identities in light of the boundaries that are drawn, the meanings that are understood and the set of relationships that becomes acted upon.” (Huemer et al. 2004:63) Actors share a sense of purpose in being in the network and feel belonging to the group or network (Fiol 1991; Huemer at al. 2004). As actors’ action in business networks is related to the actors’ intentions and perceptions of the networks, actors’ identities become an important dimension to analyse. Identity is a key element of subjective reality and, like all subjective reality, it stands in a dialectical relationship with society (Berger & Luckmann 1967). Thus, not only shared ideas and common goals between actors but also diversity of actor dimensions and heterogeneity of actors can be regarded as driving forces in business networks (Andersson et al. 2007).
So, how could the conceptualisation of actors be modified in order to account for the possibility that an actor can have more than one “actor dimension”? To begin with, one can ask why it should be modified. It is actually quite surprising that business actors in business networks have been taken for granted at the same time as research has been developed in other business network subjects in recent years. Thus, the answer to why it should be modified is that the current view of network dynamics fails to appreciate the richness of business actors, the human character of behaviour in business networks, the intentionality of action, individuals’ identities in connection to the inter-subjective reality and the social action in business networks. I introduce the concept of multidimensional actor in order to conceptualise actors’ multidimensionality in business networks and in order to understand how actors are embedded on different organisational levels. I prefer to use the term “actor dimension” here in the sense of describing the different actors identified in a business network: an individual, a firm, an organisation, a group or an entity, and also for focusing on actors multiple roles, positions and identities in business networks.

The concept of embeddedness is suggested as most fitting for describing and explaining multidimensional actors. Embeddedness is here defined as interdependencies between actors’ action, social relations and various kinds of network structures in business networks. Thus, embeddedness is a concept for portraying social processes and the mix of ‘economic’ and ‘non-economic’ factors in business networks (see Polanyi 1957; in Krippner et al. 2004). Embeddedness is a key concept for understanding how economic and social activities are interlinked in business networks (Granovetter 1985; Krippner et al. 2004). It is also the concept which can be used to analyse the evolution of networks as well as the different actor dimensions in business networks (see Halinen & Törnroos 1998). Thus, embeddedness is like an umbrella that covers many of the critical issues related to the current study. Based on the current view of business networks:

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5 Håkansson & Johanson (1992) have acknowledged that actors can exist on different organisational levels, but the notion alone does not unravel the problem that has been raised.

6 There is a similarity here with the way in which actors have been conceived within actor-network theory, i.e. the proposition that actors have variable geometry (cf. Callon 1986 and Latour 1986). The form of actors may vary and actors in one form may face different situations where they need to take on different roles. Thus, an individual usually has several roles and positions in every day life and the same applies to business networks, where individuals are actors and representatives of different business entities.

7 Halinen & Törnroos (1998) have argued for the usefulness of the concept of embeddedness in exploring and describing network dynamics. Embeddedness is according to them seen as an explanation of change and development in business networks.
networks, actors are embedded in relationships, which in turn are embedded in business networks. Moreover, there can exist several kind of networks within business networks, e.g. social networks, professional networks, educational networks etc., which are most often overlapping. It implies that actors are active in several kinds of networks.

In order to develop our understanding of actors’ multidimensionality in business networks we need to understand how actors are connected to each other, implying the social action in social networks. This study thus focuses on social embeddedness, but also reflects the embedded relationships and moral embeddedness, implying interdependencies of actors and action in business networks and the main components of embedded relationships (Andersson et al. 2007; Granovetter 1985; Halinen & Törnroos 1998; Uzzi 1997). Consequently, by increasing our understanding of actors, actor dimensions, and the influence of multidimensional actors on business networks, we are able to gain further insight into network dynamics from an actor perspective. By strengthening the actor perspective in business networks by applying the multidimensional view of actors, we can observe actors’ multidimensionality and multidimensional actors’ ability to act in business networks, and analyse the social networks embedded in business networks.

1.1.4. **Empirical area of research**

The empirical field of pharmaceutical retailing in Finland provides a rare research field, where an industry can be associated with multidimensionality of actors. Individuals are strongly present in pharmaceutical retailing influencing the emergence and development of pharmacy networks. The pharmacy chains studied in this thesis represent two types of ownership and management structure: in the integrated chain University Pharmacy, the ownership is centralised and, therefore, pharmacists are responsible for their business entities but they do not own the business. In the voluntarily built chain Hyvän Mielen Apteekit, apothecaries own their own business entities, and thus manage and make all the decisions for the business as private owners. Consequently, actors can be studied in a context in which individuals simultaneously represent themselves as human beings and as professionals representing the pharmacy they either own or are responsible for, and as members of the pharmacy networks they are part of.
The phenomenon of emerging pharmacy networks is, in itself, an interesting object of study, as the dynamics or forces driving the changes in the structure of the business are coming in the form of both external pressure from governmental authorities and actors’ own motives for developing the business. An apparent external threat to the future of the present pharmacy business in Finland is the prospect of de-regulation of the license based business, something which has occurred in many European countries. The motives of actors within pharmaceutical profession have been mobilised in order to face the future challenges. This has taken shape in the voluntary network establishment among privately owned pharmacies.

1.2. The aim of the study

This study follows three key themes: the change in business networks, actors multidimensionality and social exchange through social networks. **Firstly**, the study is grounded in the empirical phenomenon of the emergence of pharmacy chains. The study explores the change that has taken place in pharmaceutical retailing and, therefore, it makes an effort to reach an understanding of how the evolution and emergence of pharmacy networks have come about and what kind of networks the pharmacy networks that have been the subject of research are in terms of structure and management. **Second**, the study aims to increase our understanding of actors’ multidimensionality in terms of simultaneously being individuals and firms in business networks, and actors’ multiple identities in dynamic business networks. Thus, the actor discussion is linked to multidimensionality of actors and the action driven by intentionality of human beings in business networks, i.e. human characteristics related to the concept of actorship. By broadening the concept of actors in business networks to include individuals, the study aims to raise the issue of actors in different actor dimensions as well as their multiple roles, positions and identities in business networks. **Third**, the study focuses on understanding the influence of social action in business networks assuming that economic and social action in business networks are inseparable, an idea which is linked to the concept of embeddedness.

Accordingly, the main purpose of this study is to **increase our understanding of multidimensionality of actors in business networks and the role of social networks in emerging pharmacy networks, with an emphasis on individual human action.**
Actors’ multidimensionality is related to actors’ multiple roles, positions and identities in business networks. Thus, it is a concept exploring how actors can choose to act or enact in different situations and moreover, how an actor can manage the different actor dimensions: individual, firm, and network dimensions. The individual dimension is crucial to understanding the multidimensionality of actors, as actors’ behaviour is linked to human behaviour. Thus, the multidimensionality becomes possible due to individuals’ capabilities to act.

Individuals are acknowledged as being important in network development processes, especially via social exchange, but their influence and effect on network emergence in the business context has, nevertheless, not been thoroughly studied (see Easton 1992; Håkansson & Snehota 1995). In general, it has been rather difficult to study individuals in business networks as they are well embedded in networks (see Hamfelt & Lindberg 1987; Agndal & Axelsson 2002a). Embeddedness is, however, the characteristic that explains multidimensionality of actors, i.e. how actors can be both individuals and firms in business networks. The multidimensionality becomes possible due to individuals’ capabilities of assuming several identities simultaneously without it being contradictory. Hamfelt & Lindberg (1987) studied individuals in business networks and stated that direct contact between individuals is especially important for the forms of information exchange, which often occur in relation to technological development. Quoting the IMP Group: “Economic exchange cannot alone explain industrial relationships... The content in networks is much broader and therefore, the research has to capture elements of social exchange, interaction, and the variation in the content and duration of business relationships” (IMP Group 1982). Consequently, the current focus on technological and economic exchange does not alone explain dynamics in business networks, and both social exchange and individuals can be seen as essential for other types of exchange and interactions in business networks.

Social exchange is clearly a less tangible attribute in its character than economic and technological attributes and is, therefore, more complex to capture. The social exchange dimension reflects the question of social structures in business networks (Granovetter 1985; Wellman & Berkowitz 1988) referring to differences of formal / organisational structures and informal / social structures in a network. The social
structures in business networks have remained less explored not only due to their complexity and the difficulty of grasping them\textsuperscript{8}, but also as a result of difficulties in gaining access to primary data. Actors’ interactions have an impact on how overall relationships between firms are built up, where the social dimensions of trust, commitment and influence / power can develop, which again lead to long-term relationships.\textsuperscript{9} Thus, the role, level, and function of central persons in the interaction affect the chances of future development occurring in the relationship between organisations (see e.g. IMP Group 1982).

1.2.1. Eliciting the research questions

As the studied phenomenon and relating research interests in this thesis are both broad and complex, a broad view taken of the research area is demanded. Thus, studying complex social phenomena requires a certain amount of eclecticism from the researcher. In order to avoid unnecessary complexity in the study, however, the research questions can be categorised as being related to the theoretical research interest of multidimensionality of actors and to the empirical phenomenon of emerging networks and network structures.

An important general question in this study is how to determine who is an actor and what the network is like in which this actor is embedded. Actors in business network studies can be anything from individuals to major firms, but in most of the studies actors are defined as firms, (see Agndal & Axelsson 2002a, b; Anderson et al. 1998; Håkansson & Snehota 1989; Turnbull et al. 1996). In the social network studies an actor is usually defined as an individual but nevertheless, an actor can also be a group of individuals or a firm. The term actor has in other words become institutionalised in both approaches, as actors have become taken-for-granted and defined based on the conventional understanding of actors within both research traditions.

\textsuperscript{8} Although the impact of social networks and social exchange has been found to play an important role in shaping organisations in recent business network studies (Mainela 2002; Easton 1992), most of the network studies have emphasised processes of change induced by economic and technological exchange. (Cf. Håkansson & Waluszewski 2003; Waluszewski 1989.)

\textsuperscript{9} Interaction in relationships – the relationship elements of behaviour are rather general and long-term in nature. They represent the day-to-day exchanges of a business, social or informational nature that occur between firms (Easton 1992). Relationships are the cornerstone for all business networks. Interaction represent the here and now of inter-firm behaviour and ‘constitute the dynamic aspects of relationships’ (Johanson & Mattsson 1987; in Easton 1992).
In this study the focus is on modifying the actor concept from the firm level to include human actors in business networks, implying that individuals are embedded in the actor concept in a similar way as actors are embedded in business networks. Thus, the assumption of multidimensional actors in business networks implies overlapping and aggregated actor levels in business networks. The impact of social networks becomes significant when the actor concept is brought into focus in business networks. This study exploits the research and observations made by social network scholars (Granovetter 1985; Scott 2000; Wellman & Berkowitz 1988) as the social networks approach can be utilised to increase our understanding of actors in business networks as well as of social networks and social structures as key elements for explaining network dynamics. Viewing social network structures hand in hand with processes indicates that business networks both constrain action but also enable action to take place. Thus, the central assumption in this study is the following:

*That business actors are multidimensional and that their specific constitution in any given situation is determined by human interaction in social networks.*

1.2.1.1. Multidimensional actors

It can be argued that the action and interaction originating from actors is a fairly untouched area of research. A multidimensional actor perspective opens up new possibilities for analysing the dynamic aspects of business networks. When actors are viewed as multidimensional actors, we can include the human competences in our conception of business actors and also view actors as individuals with their own wills and identities, own needs and wants, implying that no position or role remains given or static but becomes taken by the actors. Individuals’ flexibility and the agility with which they can move on and influence their roles and positions also makes it possible for individuals to simultaneously possess several identities. The different identities overlap significantly (Huemer et al. 2004), and in some cases the lines between individual, firm and network identities are almost impossible to define. Thus, it is questionable whether it is even relevant to try to make the distinction between different actor dimensions, firms and individuals, as the interaction in business networks takes place across the different actor dimensions and identities. Actors’ capabilities to assume multiple identities can be regarded as an important source of network dynamics. It can be argued that the dynamics in networks are derived from the human characteristics in
actors, which indicates the need to analyse in more detail how actors (acting both as individuals and firms) can influence business networks. Thus, human action in business networks needs to be further explored.

The research questions related to the main research interest of **multidimensionality of actors in business networks and the role of social networks in emerging pharmacy networks** are the following: How do human action and human actors contribute to the emergence and development of business networks? What is the role of social networks in emerging networks? What kind social structures are there and what is the substance in the social networks that connects the actors to each other? Thus, the research questions related to social network analysis place emphasis upon a thorough analysis of connections and interactions among the business actors.

1.2.1.2. Emerging pharmacy networks and the relevance of network structures in understanding empirical phenomena

Researchers have shown that change is an on-going process in all business networks, implying that even if a firm aims to stabilise the situation within its network or even resist change, the network itself is continuously evolving and changing. Network dynamics have been analysed as an interplay between change and stability in business networks, and as an interplay between roles and positions of the actors in these networks. Thus, it can be argued that understanding network dynamics is relevant to an increased understanding of the emergence of different kinds of business networks and to a strengthened view of networks as on-going processes. (See Anderson et al. 1998, 2000; Ford & Redwood 2005; Henders 1992; Mattsson 1985.)

The empirical phenomenon of emerging pharmacy networks provides a practical basis for the present research interests outlined above. Pharmacies’ and apothecaries’ increased cooperation has been recognised by practitioners and the media, which have emphasised the phenomenon of emerging pharmacy chains, on which there is little academic research available. Chain development in the retailing sector in general has become a prerequisite for success where companies with strong chain concepts and chain models have been able to increase their revenues and beat their competitors. The term “chain” is well acknowledged within several other industries, e.g. FMCG, and also within the pharmaceutical retailing sector abroad, e.g. Alliance Boots Pharmacies in the UK. Moreover, pharmacy chains and their development in other EU countries have
been analysed as a response to the market dominance by other actors (see Vogler, Arts & Habl 2006). Chain development has not been well documented in Finland although the traditional retailing business in many industries has rapidly adapted to the chain development. A striking characteristic in the chain development phenomenon is the wide amount of issues that all seem to be linked to the subject, but where the linkage between them remains vague, resulting in a very fragmented picture of chain development in general (Kautto & Lindblom 2004). Thus, it can be argued that chain development as a concept is widely applied but its meaning has remained unclear, as the term has many interpretations. It seems as if firms are acting before thinking, which has lead to a situation in which the change itself has become more important than identifying goals for the chain development and analysing its long-term impact on business. In its exploration of the phenomenon, the present study focuses on the following questions: What has triggered the change towards retail chains in the traditional and well established pharmacy business? What is the phenomenon of pharmacies’ chain development about and how did this development come about?

In the markets-as-networks perspective the industrial market is viewed as consisting of networks of dynamic, multi-dimensional, exchange relationships between economic actors, who in turn control interdependent resources and carry out interlinked activities (Ford 2002; Hertz & Mattsson 2004; Johanson & Mattsson 1992; Mattsson 2004). Thus, based on this view, networks are processes driven by interaction between actors in the industrial market who voluntarily, for their own perceived benefit, engage in exchange relationships and in competitive behaviour (Mattsson 2004). Thus, business networks can be seen as open and continuously constructed by actors. However, it should be emphasised that network structures and network processes are simultaneously equally important to understand and thus the view of networks as dynamic processes does not reduce the importance of analysing network structures. The network structure is what appears as an integration of exchange and interaction between actors. Thus, the network structure reveals the subjectively perceived and dynamic contexts of the action. Consequently, it can be argued that both the network structure and network process influence each other, but not in a deterministic way (Araujo & Easton 1996; Hertz & Mattsson 2004). It implies that the network structure is continuously being reproduced by the actors and their interaction. Network structures both constrain action and offer action opportunities, and reveal connectedness between actors in business networks. Exploring the phenomenon is
therefore also related to questions about the network structures: *What kind of network structures are pharmacies embedded in? Are the pharmacy networks different in their structure? How have they developed and how, if at all, are they managed?*

**1.3. Positioning the study**

Business network literature (e.g. Håkansson & Snehota 1995; Johanson & Mattsson 1992; Mattsson 1985) and social network literature (e.g. Cook & Emerson 1984; Granovetter 1985; Scott 2000; Wellman & Berkowitz 1988) are in the centre of the theoretical framework of the thesis. The complexity which the social dimension and multidimensionality of actors bring into business networks gives a reason for considering the possibilities of integrating knowledge from the social networks approach, where the research on social exchange and social networks has been extensive, and where the level of actor aggregation has included individuals in the network analysis.

As we can observe in table 1, there are several examples of joint orientation and research interests in the approaches. By studying theories from related fields of research we can improve the conceptual base on which we build our research, if it is conducted in a coherent way. The common goal for both business network and social network scholars has become to explain network structures and their content as well as their context. Earlier research describing structures and focusing on dyadic relationships has resulted in the need for a broader perspective of networks, and thereby the application of a more holistic picture of interdependent relationships. Within the social networks approach there has also been demand for a more dynamic approach in which social networks are seen as avenues through which actors influence the behaviour of others (Galaskiewicz & Wasserman 1993). Within the business network approach there is a similar desire to learn more about network dynamics as part of the interdependency processes that have been studied.
Table 1  Comparison of network approaches

<table>
<thead>
<tr>
<th>Dimensions Characterising Each Approach</th>
<th>Social Networks</th>
<th>Business Networks</th>
</tr>
</thead>
</table>
| **Exemplary works**                     | Wellman & Berkowitz (1988)  
                  Alba (1982)  
                  Burt (1992)  
                  Cook & Emerson (1984)  
                  Scott (2000)  
                  Granovetter (1985)  
                                  Håkansson (1987, 1989)  
                                  Axelsson & Easton (1992)  
                                  Håkansson & Snehota (1995)  
                                  Johanson & Mattsson (1992)  
                                  Turnbull et al. (1996) |
| **Research goals**                       | Uncover form and pattern of social relationships | Use of network metaphors and methods to explain industrial / organisational market structures |
| **Nature of actors**                     | Mainly individuals, but also organisations | Mainly organisations |
| **Nature of links**                      | Friendship, information sources, power | Resources, information |
| **Disciplinary background**              | Sociology | Marketing and purchasing |
| **Methodological orientation**           | Sociometric techniques | Mainly case studies |
| **Orientation**                         | Structure | Structure and process |
| **Structure / process**                  |           |                              |
| **Cross references**                     | Virtually none, some references to institutional theory | Social networks, mainly social exchange theory |
| **Key Concepts**                         | Social networks, nodes and ties | Exchange relationships, change and stability, role & position |

Source: Adapted from Araujo & Easton 1996.
Business network research has been developed in parallel with other network approaches giving richness to its content and allowing it to adapt ideas from other paradigms. Business network research has been influenced by the research in the social networks approach, especially because of its ability to describe and explain patterns of social relations between social entities, as has been seen in studies of organising international joint ventures (see Mainela 2002), or in entrepreneurship studies (e.g. Johannisson 1988) where the focus has been on interpersonal contacts and where researchers have been able to apply social network methods. Business network research and social network research have both been strongly influenced by the field of social exchange theory and social anthropology (Bagozzi 1975; Easton & Araujo 1996). The social networks approach has focused on social exchanges embedded in networks of ongoing social relationships. Consequently, it has been viewed as a branch of structural sociology often focusing on structural embeddedness (Krippner et al. 2004; Wellman 1988, in Araujo & Easton 1996). The social networks approach encompasses theories, models and applications that are expressed in terms of relational concepts or processes, where relational ties and linkages between actors are channels for transfer or “flow” of resources (either material or non-material) (Wasserman & Faust 1994). The social networks approach focuses on individuals and in their egocentric views of networks. Therefore, it focuses on the patterns of social relations among individuals rather than on economic exchange between organisations and firms.

Recent research has indicated an increased need for alignment of the business network research with sociology in order to better understand the dynamic processes in networks.10 As research on individuals and social exchange is the strength of the social networks approach, it can support and complement the business network research by increasing our understanding of multidimensional actors, improving our knowledge of individuals’ capabilities to influence emerging business networks, as well as by providing information on social interaction and social networks as part of business networks. In this study the actor-network perspective on embeddedness is applied. Thus, the actor-network perspective on social embeddedness highlights “the reality of personal views of human beings, of the way they see and perceive business” (Halinen & Törnroos 1998). Therefore, the level of analysis is taken to the most detailed level of

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10 Research on embeddedness, connectedness of exchange relationships, and actor interdependency. (For references, see Andersson et al. 2007; Araujo & Easton 1996; Hertz & Mattson 2004)
individuals, as the actor-network perspective stresses how individuals view networks from their own perspectives, and through social action and relations with other actors.

1.4. The outline of the thesis

The structure of the thesis is presented in the following model (see figure 1). The thesis consists of three main sections: the section in which theoretical arguments are presented; the empirical section, where the methodology and studied phenomenon are discussed; and the third section, where the empirical material is analysed and the connection between the results of the analysis and theoretical framework is discussed.

The thesis starts with a comprehensive introduction to the research area and the studied phenomenon. The aim of the study and the research questions are presented, followed by a discussion of the positioning of the study where the uniqueness and the usefulness of the social networks approach are discussed. The theoretical discussion is built on two chapters: chapter 2, which focuses on the current understanding of business network processes and business actors, continuing with chapter 3, which extends the existing theory for understanding the multidimensional actors and social networks in emerging business networks. The purpose of the theoretical part of the thesis is to present to the readers the theoretical foundation on which the thesis is built, as well as to provide a structure for the flow of ideas that has been generated in the abductive research process. In the end of chapter 3 a tentative model of multidimensional actors is presented.

The empirical part of the thesis focuses on methodological concerns and choices in chapter 4, where after the thesis offers a historical review of the evolution of pharmaceutical retailing in Finland in chapter 5. The historical account links the current phenomenon to its past and clarifies how the pharmacist profession and industry have become what they are today. The historical account is linked to the contemporary phenomenon and offers a window onto the world of pharmacies and apothecaries in Finland. In chapter 6, the pharmacy networks chosen for the case study are discussed and their development is described in detail. The presentation and interpretation of data is continued in chapters 7 and 8, with the former focusing on the phenomenon of chain development, network emergence and integration processes, as well as social network structures. Chapter 8 focuses on the human actors and social action in the studied networks. In chapter 9, the theoretical findings and empirical
findings are discussed, whereby the conceptual and empirical understanding of multidimensional actors and social exchange in business networks is extended. Chapter 9 concludes the main contributions of the study, presents managerial implications of the research and proposes ideas for future research.

Figure 1  The structure of the thesis
2 CURRENT UNDERSTANDING OF BUSINESS NETWORKS AS DYNAMIC PROCESSES

This chapter focuses on presenting the literature on which the current understanding of business networks as dynamic processes is built. It consists of a review of the network characteristics that have been identified to describe network dynamics and business actors in evolving business networks. Thus, the chapter has been designated for reviewing the key elements that make up network dynamics, i.e. integration processes and interdependencies between actors that have been identified to take place in evolving networks, the relation between change and stability as a pre-requisite for the dynamic nature of development processes, the meaning of long-term relationships and ingredients of cooperation in business networks. The purpose of this chapter is thereby to clarify the current view of network dynamics and how actors have been analysed in relation to network dynamics. The chapter highlights the need to understand the variety of actors when studying network dynamics in business networks. The literature review is based on a conceptual model called “networks as dynamic actor structures”, which emphasises a dynamic view of actors within the previous markets-as-networks research.
2.1. Networks as dynamic actor structures

In the markets-as-networks approach business networks are viewed as dynamic, multi-dimensional, exchange relationships between actors, who in turn control interdependent resources and carry out interlinked activities (Ford 2002; Hertz & Mattsson 2004; Johanson & Mattsson 1992).11 Relationships reflect how actors are connected in networks and thereby, represent a combination and identification of resources and competencies in business networks (Håkansson & Snehota 2000). Business networks are regarded as being stable and dynamic at the same time, meaning that a network has a dynamic nature (Andersson et al. 2007; Mattsson 2004).12 Business networks are in other words active, driving, energetic, enthusiastic and forceful, if we want to use the definition of the term dynamic in the Oxford Dictionary.

Network dynamics can also be defined as forces (see Oxford Dictionary) that affect networks in different ways: internal forces within each actor, forces originating from actors within the defined network, and external forces from actors outside the network detected by the actors. Internal forces within each actor are resources, e.g. individuals’ will power and social resources that are managed by the individuals and activated by individuals. Forces originating from actors refers to actors’ various intentions and activities, which again influence the network dynamics. External forces are most typically rules and regulations, actions that are part of the market of which the business network is part of. Network dynamics in business networks have often been analysed.

11 The network perspective on industrial markets started to evolve in the early 1970’s when both American and European research began increasingly to focus on industrial marketing. Research within the business networks was initially focused on studying interaction in individual dyadic relationships in industrial markets (Araujo & Easton 1996; Easton 1992; Mattsson 2004; Wilson & Möller 1995). These early studies argued for the stable and long-term relationships between suppliers and buyers that could be found within industrial markets. Already at this first stage of research the dynamic nature of individual relationships was observed (e.g. Ford 1980; Mattsson 2004), as interaction was identified as a typical phenomenon in industrial markets. Thus, researchers distanced themselves from the action-reaction thinking that had been dominant within marketing. Researchers soon realized also that the defining attribute of the network perspective goes beyond dyadic interaction and individual exchange relationships (Mattsson 2004) as major relationships were found to be connected, indicating that what is happening in one relationship is affecting the interaction in others (Blankenburg & Johanson 1992; Håkansson & Snehota 1995). As a result there was a move of the research focus from dyadic business relationship to business networks (Anderson et al. 1994; Havila 1996). Thus, several models and frameworks have been presented through which relationships in networks have been analysed (see e.g. Bengtsson & Kock 2000; Turnbull et al. 1996), and studies since the beginning in the 1970’s have contributed significantly to our understanding of working relationships between firms and business markets and business networks (Anderson & Narus 1990; Anderson et al. 1994; Dwyer, Schurr & Oh 1987).

12 This implies that change in some aspects might be conditioned on stability in others and vice versa (Mattsson 2004; Homans 1951).
through actors’ relationships with each other, through actors’ varying positions and roles in networks, and how these change and evolve over time (see Anderson et al. 1998; Havila 1996; Henders 1992). Referring to Hertz and Mattsson’s study (2004) network dynamics are also closely related to interdependency processes and integration variables, where the development of business networks and evolving networks are in focus. Network dynamics can thus be described as a combination of relationships between various actors, firms and individuals in business networks. Actors and relationships are embedded in business networks and are therefore affected and influenced by any change that occurs in the network (Anderson et al. 2000; Axelsson & Easton 1992; Johanson & Mattsson 1994, 1992). Actors can also influence the networks they are embedded in via other actors, which is why Hertz & Mattsson (2004) have argued that a single strategic action does not necessarily succeed in altering the connectivity structure of a network. An actor is obviously dependent on the strategic actions and reactions of others as well.

Consequently, the base assumption is that actors affect business networks through their intentions, perceptions and action. Hertz & Mattsson (2004) have emphasised how the present structure of a business networks is often the outcome of earlier reconfiguration processes, and serve also as a base for future reconfigurations. Actors’ action leaves a mark on the business network, in its structure and dynamics, and thus, actors influence the past and future structure and dynamics through their action. It can be argued that actors’ strategic action and decisions reconstruct and develop networks. Based on interpretation of the situation, actors take action which may reinforce or change the network. Hence, as change can be argued to originate from the actors, the term dynamics can be used to describe the different actions and forces taken on and used by actors in networks.

“Networks as dynamic actor structures” is a conceptual model (see figure 2) 13, where the business network is defined in terms of actors and how actors are connected

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13 This model has been developed in parallel with the activity-resource model by Håkansson & Snehota (1995), in which they have described business relationships in two dimensions, substance and function. In this ARA model (activity-resource-actor model) substance refers to the various contents of relationships and function refers to the effects a relationship has on different actors. Accordingly, there are three different layers of substance that can be identified in business relationships: activity layer, resource layer and actor layer. The activity layer connects the internal activities of the parties in the relationship and vice versa, relationships also link activities. The second layer, the resource layer, connects various resource
through exchange relationships and competitive interdependencies (Johanson & Mattsson 1992; Mattsson 2004). This model has an added focus on actors’ capabilities to control and co-ordinate networks, which is in line with the research interest of understanding the dynamic processes in networks and actors’ multidimensionality and influence in business networks.

According to Johanson & Mattsson (1994) the role of exchange within the network approach is to co-ordinate the activities and resources controlled by one actor with the activities and resources controlled by another actor. Exchange relationships provide access to resources controlled by other actors, and further, make it possible to co-ordinate the activities and combine the resources of several actors (Ibid.), which is an indication of the dynamic nature of exchange and interaction.

elements needed and controlled by relationship parties. As the relationship develops actors become more and more connected, which refers to the third substance layer of actors (Håkansson & Snehota 1995). Substance in relationships may however vary depending on other aspects, which refers to the complexity in relationships. Hence, relationships can further be analysed in terms of activity links, resource ties and actor bonds. The second dimension of function in the ARA model makes a distinction between three different functions on business relationships: single actors, dyads, and networks. The three functions are closely interwoven.
2.1.1. Relationships – the building blocks in business networks

Long-term relationships have for a long time been cornerstones in business network research (Håkansson & Snehota 1995; Mattsson 2004; Turnbull et al. 1996, Wilson & Möller 1995). Relationships are built on interaction between actors in networks, which has traditionally referred to situations in which parties are connected, work together to achieve mutual goals and where parties are looking for synergies. Thus, relationships are necessary for any integration process to take place and thus, for the development of business networks. As long as partners see their goals being met by joint action, they are motivated to maintain the relationships, which in turn creates a synergy between the actors in business relationships (Anderson & Narus 1990; Axelsson & Easton 1992; Håkansson & Snehota 1995; IMP 1982; Mattsson 2004; Morgan & Hunt 1994; Turnbull et al. 1996; Wilson & Möller 1995).

The definition of relationships in business networks requires a finely detailed distinction to be made between the terms relationship and interaction (Easton 1992; Johanson & Mattsson 1987; Håkansson & Snehota 1995). The elements of relationships are according to Johanson & Mattsson (1987) rather general and long-term in nature, whereas interaction represents the dynamic aspects of relationships in business networks. Thus, interaction between seller and buyer can also be referred to as connectedness, implying that indirect relationships influence the behaviour of actors in business networks and thus have an effect on co-operation. “Connectedness of the ties among the actors is a consequence of the multiple involvement of the parties.”

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14 The concept of relationship has been defined by Håkansson & Snehota (1995) as “mutually oriented interaction between two reciprocally committed parties that involves mutual orientation and commitment over time”.

15 Connectedness (Anderson et al. 1994; Araujo & Easton 1996; Cook & Emerson 1978; Cook & Emerson 1984; Easton 1992; Emerson 1981; Halinen & Törnroos 1998; Håkansson & Snehota 1995; Snehota 1990) is a concept that allows us to understand the impact of indirect relationships and system-wide effects on individual relationships. Blau (1964; Ford 1980; Mattsson 2004) Referring to Emerson (1981:70-72), pairs of actors within a network form exchange relationships that are connected to form specific network structures. The chain of connectedness is without limits and can span several relationships that are indirectly connected (Håkansson & Snehota 1995). Relationships are dependent on the broader network through different activities, e.g. exchange of resources. Connectedness can also be viewed from a power-dependence perspective, meaning that two exchange relations are connected to the extent that exchange in one relation is contingent, positively or negatively, upon exchange in the other relation (Cook & Emerson 1984).

16 Competition is the opposite of co-operation. It has been described as the direct rivalry that develops between firms as a result of the dependency that structural conditions within the industry give rise to (Bengtsson & Kock 2000). Cook & Emerson (1984) use also the terms “constraints” and “opportunities”, when referring to power-dependence, which will lead to network emergence.
Generalised, connectedness of business relationships implies existence of an aggregated structure, a form of an organisation (Håkansson & Snehota 1995), i.e. what we can call a network.\(^\text{17}\)

Gulati (1998) has argued that the firms usually ally themselves with firms with whom they share the greatest interdependence, e.g. in the form of production, marketing, distribution or regulatory approval. Within the business network approach, selecting a co-operation partner is often viewed as a choice for the firm based on an evaluation of the potential co-operation partner’s resources, power, position and complementary activities (Persson & Steinby 2006). Hence, a relationship can be seen as one of the resources (Håkansson 1987; Ritter et al. 2004) that a company can exploit for different purposes and, through connectedness, it can also have effects on other companies that are not directly involved in it (Håkansson & Snehota 1995; Wilson & Möller 1995).

2.1.1.1. Formality of business relationships

Relationships exist in a variety of forms, from co-operative arrangements, e.g. strategic alliances to the strongest and closest collaborations of partnerships (see e.g. Hertz & Mattsson 2004:32; Gulati 1998; Kanter 1994; Varadarajan & Cunningham 1995).\(^\text{18}\) The degree of formality in the relationships can vary tremendously and it has been reported to change over time (Ford 1980; Turnbull et al. 1996).\(^\text{19}\) Co-operation in business

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\(^{17}\) Connectedness in networks and, thus, interdependencies and exchange in the form of network structures can be illustrated through graphic presentation which has been used widely within the social networks approach.

\(^{18}\) According to Wilson & Möller (1995) there are both close relationships and strategic relationships in business networks. Close relationships develop based on individuals who build relationships. Through the trust in the personal relationships, they will develop into investments that again create structural bonds between the firms (Wilson & Möller 1995:53). Moreover, close relationships strengthen the structural bonds, which go beyond personal friendship. It has, however, also been argued that not all relationships have developed in the same slow manner in which close relationships develop. Thus, relationships can be of a strategic nature and developed at a rapid rate, if needed.

\(^{19}\) Research within the business networks has traditionally been empirically oriented (Håkansson & Snehota 2000), and the main goal in the research has been to explain industrial and organisational market structures, where organisations are the active actors (Araujo & Easton 1996). Network settings and structures have been defined in various ways: as loosely or tightly structured, more or less dense, hierarchical or non-hierarchical, clustered in specific patterns or homogeneously dispersed, more or less concentrated, and heavy and light (see, e.g. Agnudal & Axelsson 2002; Mattsson 2004). The network structure and the formality of the relations in a network are important aspects to observe, as they create the context and the setting for the actors to act in. Structural thinking of networks has dominated the research and analysis and thus, actors in a network have often been analysed in relation to the network structure and its formality, e.g. through positions and roles in networks. The main focus in most of the business network studies has according to Easton (1992:2) been the network, not the firm or the individual relationship, although firms and relationships must be studied if networks are to be understood.
networks can be based on both formal and informal action. Formal action often refers to formal relationships built on formal contracts, whereas informal action reflects informal relationships initiated by individuals. Whether formality in business relationships has a positive or negative impact on the relationship outcome has been widely discussed. The negative effects of formality have been emphasised in many studies, implying that only a few managers believe in the importance of formal agreements. Thus, business relationships often show a low degree of formalisation as formal contracts are often ineffective in taking care of the uncertainties, conflicts and crises that business relationships are bound to experience over time (Håkansson & Snehota 1995). Trust and commitment are identified as far more important attributes for the business relationships than formal agreements. The importance of informal co-operation tends to increase as the business networks evolve since informal co-operation is built on social exchange processes over time and are thereby developed by the people in the process.

2.1.1.2. Social elements of trust and commitment

Commitment and trust have been identified as being of great importance to the continuity and outcome of relationships (Dwyer, Schurr & Oh 1987; Easton 1992; Håkansson & Snehota 1995; Kumar 1996; Mentzer et al. 2001; Morgan & Hunt 1994; Wilson & Möller 1995). These qualities are vital for relationships as they hold the relationships together. Referring to Morgan & Hunt (1994) they lead to co-operative behaviours that are conducive to success in relationships between companies as well as between individuals.

Although trust and commitment are significantly overlapping and intertwined concepts, they are analysed separately in order to understand the subtle differences they make. According to Moorman, Zaltman and Deshpande (1992) trust is defined as a willingness to rely on an exchange partner in whom one has confidence. Referring to

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20 Relationships have also been shown to include characteristics of power and dependence (e.g. Dwyer et al. 1987; Wilson & Möller 1995) and thus, many of the relationship models that have been presented in network research are based on power and dependence literature (cf. Cook & Emerson 1978). The focus in this study is not, however, on power-dependence dynamics, which is why the subject is not discussed in this chapter.

21 Sociologists suggest that trust is a socially constructed reality that exists at the relational level and is characterized by reciprocity (trust develops) (Wilson & Möller 1995).
Wilson & Möller (1995) trust is critically related to the perceptions held by one party of another party’s abilities, expertise, and knowledge, as well as to the individual’s perceptions of the other party’s motives and intentions. It has been argued that trust has both a direct and an indirect relationship with cooperation (Mentzer et al. 2001) and trust can overcome both tangible problems, e.g. low profitability in hard economic periods, and intangible problems, e.g. use of power in relationships.

Both trust and commitment are essential for cooperation to work, but trust is the major determinant of relationship commitment (Achrol 1991; Mentzer 2001:15). Commitment is related to trust but with a specific content – commitment has to do with priorities and can be built up between two parties over time, if they have demonstrated that they give each other a certain level of priority (Håkanson & Snehota 2000). Commitment can be defined as an implicit or explicit pledge of relational continuity between exchange partners (Dwyer et al. 1987). Thus, commitment is based on feelings and has been used as a measure of relationship strength (Han 1992; Wilson & Möller 1995). Within the business network approach the adaptation processes between partners as well as network development processes refer to key elements of commitment. By that is meant that a mutual adaptation process and a willingness to adjust to each others’ needs are crucial in networks. Through adaptation the parties signal that they perceive their mutual relations as stable and lasting, and not governed by opportunities for short-term profit (Skjøtt-Larsen 1999).

2.1.1.3. Paradox

Paradoxically, it can be stated that most extensive, long-term relationships are likely to be informal in nature. These relationships consist of many different elements that have been accumulated over time as a result of the trust and commitment that the relationship has engendered. It is not surprising that people seem to work best when their business relationships are more like family relationships and less business-like than we would assume (Kanter 1994:100). Consequently, it can be argued that controlling relationships does not nurture them, it mainly restricts their development. Research has shown that many companies fail to develop their collaborative advantage because they control relationships and thereby they also ignore a key resource from themselves (Kanter 1994:96). However, it should be emphasised that very often business networks have a multidimensional character, implying that they are
simultaneously formal and informal to some degree, i.e. both formal and informal cooperation can be found in them. (See Ford 1990:464; Håkansson & Johanson 1993; Skjøtt-Larsen 1999.)

2.1.2. Integration and interdependency processes in emerging business networks

Integration and interdependencies explain both the emergence of networks as well as development of networks. Integration is about ‘forming a whole’ out of separate components, elements, or, for that matter, firms in a system (Hertz 1992) whereas, interdependence refers to the actor’s need to have and maintain a relationship with the partner to achieve its goals (Frazier 1983; Mentzer et al. 2001).

Quoting Hertz (1992:106): “The network perspective offers a basis for understanding how the effects of integration in one relationship spread, as a result of interdependence, to other actors within an industry”. Earlier studies have revealed that an increased level of integration in business networks, and integration of actors in the form of increased co-operation are phenomena that have spread from one industry to another industry crossing over possible industry boundaries (Hertz 1992; Hertz & Mattsson 2004). Thus, integration and interdependence together have an effect on how business networks develop and are therefore concepts that enable an analysis of evolving business networks. The level of integration and interdependence may vary radically in business networks depending on the depth of co-operation between actors and the type of interdependence processes.

In the markets-as-networks view the market is being continuously reconstructed as a result of its actors’ strategic actions. Firms are increasingly seeking to integrate spatially dispersed activities, that is, develop “supply chain” strategies to co-ordinate internal and external activities more effectively. As competitors are nowadays more and more involved in direct relationships with each other, in many industries, marketing co-operation and new marketing ventures are being established by potential competitors in order to improve their respective competitive positions (Andersson & Nyberg 1998). Thus, we can further argue that markets and networks are increasingly characterised by “collective competition”, i.e. each individual firm is increasingly dependent on co-operation with other firms in order to be able to effectively compete
on the market (Hertz & Mattsson 2004). As a result, vertical and horizontal integration processes between actors in a supply chain have become more and more common. Vertical and horizontal integration differ in the sense of whether the integration concentrates mainly on one level of the supply chain, as in horizontal integration, or on the whole supply chain, as in vertical integration.

2.1.2.1. Three types of integration

The basic characteristics in both vertical and horizontal integration processes can be divided into three main types of integration process: institutional integration, decision integration and execution integration (Mattsson 1969; Hertz 1992). The institutional or formal integration refers to the legal power of the institutional relations between components, e.g. ownership structures. It concerns the amount of power over another actor, e.g. to what extent an organisation is bound to the network and how strict the network structure is. Decision integration is a measure of the “centralisation” of the decision-making processes in a network. Thus, it defines the degree of centralisation in a network and who is empowered to make the decisions. The third dimension, execution integration, refers to the way in which any kind of activities are executed and of the flows related to these activities (Mattsson 1969; Hertz 1992; Andersson, Hertz & Sweet 2005). The different integration types enable us to create the basis for an understanding of the dynamics in evolving networks and to identify the degree of integration in the business networks we are studying.

2.1.2.2. Chain development as a form of horizontal integration

According to the classic definition of horizontal integration, its main goal is to combine resources between not only the interdependent actors, but also between competitors, on the same horizontal level in the supply chain. The perceived competitive pressure is, thus, the driving force of integration, as defined in inter-organisational terms.

Chain development as a phenomenon is usually associated with supply chains and vertical integration. However, in recent years, the concept has been extended to cover even larger areas of business development than merely the vertical supply chain functions (Kautto & Lindblom 2004). Chain development can be described as a form of...
of horizontal integration, where the generally defined goals are increased efficiency and improved customer satisfaction through which the chain can differentiate itself from its competitors (Kautto & Lindblom 2004). In chain development the horizontal processes are integrated through operational processes. These processes have the purpose of coordinating operations and thus, they are linked to operations of various types, i.e. product and category management, marketing activities, purchasing activities, and ordering and delivery functions (ibid.). The increased efficiency can be measured from two different perspectives: as an internal efficiency, which implies the level of integration of activities and operations, and as an external efficiency, indicating whether customers have perceived the chain activities in a positive way or not.

Academic research of chain development on the horizontal level is restricted to only a few studies, of which Kautto & Lindblom’s (2004) study has made an effort to explain the content of a chain: “(A chain is) an organisation or cluster of companies that has a joint name and customer strategy, a brand or a label that is identified to represent the chain, e.g. graphic design, that is used both in internal and external marketing and communication.” (Kautto & Lindblom 2004:12) Based on the definition, a chain represents formal integration. Chain development is a strategic choice, and when taking the decision to embark upon chain development actors must decide the structure of the chain on which the activities are built. Decision-making refers to the second aspect in integration processes, decision integration. The retailing industry provides examples of three different types of chain development and management structures in chains: centralised chains, voluntarily chains, and franchising chains. They reflect different types of ownership and management structures, and also varying levels of decision and execution integration. Chains that have emerged by expanding the store
concept and by establishing new sales units represent the centralised form of chain development. Centralised chain structures imply centralised ownership and decision-making, where subsidiaries are established and located as the headquarters prefer and where the centralised chain management sees new market opportunities. Voluntary chains involve several privately owned units where owners of the business enterprises combine their resources. The decision-making is usually centralised to a certain level, but the main principle regarding the strategic development of the chain is based on democratic standards. The third form of retail chain development is franchising, which is based on license based activity and a mix of privately owned business units and centralised management. Thus, franchising is about practising the established store concept as defined by the centralised chain concept.25

Business actors who drive processes of horizontal integration see the processes as strategic, which is why the degree of interdependencies is dependent on business actors strategic decisions. This is a typical for characteristic of strategic networks (Gulati et al. 2000). In strategic networks interdependencies have strategic significance for the actors and relationships are established because they have strategic importance, providing benefits for the actors and access to information and resources (Huemer et al. 2004). Typical of the strategic networks is also that there is usually a strategic centre within the networks that conducts the strategic planning and co-ordination of activities (Huemer et al. 2004). Thus, a certain level of governance is characteristic of the chain development and the level of governance is dependent on how centralised the network structure is.

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25 Chain management is, in its ideal form, built on a centralised structure, where the structure and the common logic are the guidelines from which one cannot be detached. These are the basic definitions on which the chain vision, mission and strategy are defined. Therefore, a key issue in chain management is how to involve all individuals in the process so that they are committed to the chain development. Joint values have to be the same for all members regardless of their position in the network. When people in the network are committed to the strategy and understand the common values and goals in the chain development, both external and internal efficiency increase. If someone starts questioning the common values or the defined strategies, it is a reflection of a failure in creating a committed environment for actors. Actors and activities must, according to the chain ideology, be unified and there is no room for individualistic action. Educating employees and communicating the chain strategy to them is crucial for the development of the chain. The challenge in informing people is in a way the same, regardless of the network structure, whether it is centralised or voluntary. It can nevertheless be more demanding to lead the chain development in a voluntary network, where independent individuals want to decide the direction of their own business and the common goals and the individual goals may not always match. (Kautto & Lindblom 2004)
2.1.2.3. **Internal development in business networks**

According to Hertz (1992) the degree of interdependence in business networks has a tendency to vary with the content, intensity and symmetry of relationships influencing the network development. Studies on business network development have highlighted that there is usually one group of actors that establishes the network based on cooperation and social attributes, e.g. trust and commitment. After a network has been established some actors may later leave the group and other actors may join it (Hertz & Mattsson 2004). Thus, no business network has a closed structure.

Hertz & Mattsson (2004) have described three different interdependent processes that are interrelated with the internal development in business networks: processes of developing a new network, joining an existing network or “competing freight-forwarder” processes.26 There can be many competing networks in the same market that are fighting for actors at the same time as new networks are being established between actors and actors may be joining existing networks.

Processes for developing a new network or joining an existing one are the most common types of interdependence in business networks and reflect a high level of interdependence and commitment to the internal development by the actors. Ford and Redwood (2005) have supported this view by observing how new companies tend to become members of already existing networks, which they want to join, rather than establishing completely new networks. However, not all interdependency processes consist of a high level of commitment between actors. Network processes where actors’ interdependence is built on a “competing freight-forwarder” basis imply processes where firms are part of networks or have a network of subsidiaries, where the level of integration in the network may be rather low. Firms are less committed to the network and can easily switch from one network to another, if they want to, and thereby transfer knowledge between competitors. Firms are, thus, interested in short term solutions, and gaining advantage in specific situations. An industry that is in an extreme competitive situation can easily be dominated by competing networks, which will try to be more competitive. Strategies are made or even copied from other networks, in competing for the opportunities for strategic action and for actors (Hertz & Mattsson 2004). Such interdependent processes do not however resemble the long-term

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26 Within this study especially those interdependent processes that are linked to the horizontal integration are given particular emphasis. As customers’ network related processes are not the focus of this study, these processes are not presented, although they are part of Hertz and Mattsson’s (2004) research.
relationships, which have been shown to be important for the development and outcome of business networks.

2.1.3. The mix of change and stability

In the current view of business networks, the concepts of change and stability are constantly present and are regarded as co-existing and inseparable features of the dynamic networking processes (see, e.g. IMP Group 1982). Thereby, the interdependence between the concepts has become acknowledged as an important part of network dynamics (Håkansson & Snehota 1995; Kjellberg & Andersson 2005). Change has often been described as a prerequisite for dynamics in business networks, thus it can be stated that change aims at achieving a certain degree of stability (Mattsson 1978; in Kjellberg & Andersson 2005). The complex relation between change and stability is interesting in the sense that stable relationships do not necessarily imply stability. Change is often required in order to reach a certain point of stability, but nevertheless, change usually occurs gradually. Thus, the term continuity has been suggested for describing the stability in networks (Dubois et al. 2003; in Kjellberg & Andersson 2005). An example of the relation between change and stability and thus continuity is a business network that has started as a co-operation project between a small group of entrepreneurs. Over time the number of members has grown so that the small group has become a large scale business enterprise. The number of members has however increased at a modest tempo meaning that the change has been gradual. The number and type of joint projects have also increased more or less as planned. The original business network has however changed and become something else compared to what it was earlier. It is thereby difficult to measure or pinpoint change, although actors can usually identify the effects of change. Networks are in a continuous state of change as they look for stability, where the long term interpersonal relationships between individuals and firms gain a central role. Relationship development depends, however, upon how parties act and react within the networks (Anderson et al. 2000). Consequently, defining change and stability has proved to be difficult as all relationships and networks are in a continuous state of aggregated change and stability (Kjellberg & Andersson 2005). Nevertheless, these concepts explain the nature of business networks as continuous dynamic processes.
2.2. The relation between actors and network dynamics

As actors are the focus of this study it is relevant to ask how actors are related to network dynamics. The current research on actors’ influence on business networks and network dynamics in business networks has highlighted actors’ positions and roles in networks (Anderson et al. 1998, 2000; Havila 1996; Henders 1992; Johansson & Mattsson 1992; Mattsson 1985). Thus, actor’s roles and positions have been used to define and explain the dynamic nature of business networks – how actors are connected and embedded in networks. Researchers have also pondered the role of different types of business actors in business network, as actors have been shown to have a prominent role in driving processes of change and stability in business networks. These studies have often recognised individuals among other business actors as being highly influential, but also very complex actors to analyse compared to collective actors, i.e. firms and organisations (see Halinen & Törnroos 1998).
2.2.1. A critical view of actors’ positions and roles

The concepts of role and position in business networks are bound to the actors, and they have been used to explain the dynamic features of change and stability in business networks27 (see Anderson et al. 1998, 2000; Henders 1992; Johanson & Mattsson 1992). Each actor can be viewed as having a position in a specific network and the position of a firm has been defined in relation to the other firms in the network (Johanson & Mattsson 1992; Mattsson 1985; Nadel 1957; Parson 1951). Researchers have argued that actors aim to affect their own and other actors’ network positions (Henders 1992; Johanson & Mattsson 1992; Mattsson 2004). Roles have been defined through positions assuming they explain change at one point of time. Researchers have, thus, often claimed that there is interplay between a position as a static structural component and a role as a processual component (Turner 1962, 1985; in Anderson et al. 1998). Anderson et al. (1998, 2000) have stated that the interplay between role and position, the structural and processual differences between the concepts, can be explained through change that occurs through the activities that actors perform given their positions and roles within a network structure. Quoting Anderson et al. (2000:4): “The role dimension represents the subjective and creative character of the actors; an actor has a position but acts in a role. Role could be seen as a concept for describing what the actors intend, how they construct meaning in their situation and how they want to change it.” Hitherto, researchers have argued that there are no positions

27 Position and role are concepts that have appeared in behavioural sciences since the 1930’s (Nadel 1957; in Anderson et al. 1998; Havila 1996) and most researchers have defined role in relation to a position (Thomas & Biddle 1966:28; in Anderson et al. 1998). In behavioural sciences position has been defined as a “collective recognised category of persons for whom the basis for such differentiation is their common attribute, their common behaviour, or common reactions of others toward them.” (Thomas & Biddle 1966:28; Anderson et al. 1998:170) Within the business network studies, the position of a firm has been defined in relation to the other firms in the network (Johanson & Mattsson 1992; Mattsson 1985; Nadel 1957; Parsons 1951). The concept of position has often been used to describe how an actor (e.g. profit making company, a governmental body, or an individual) fits into an industrial system (Henders 1992:1). As each actor can be viewed as having a position in a specific network (Anderson et al. 2000; Henders 1992; Johanson & Mattsson 1992; Mattsson 2004), actors aim to affect their own and other actors’ network positions (Anderson et al. 2000; Henders 1992; Mattsson 2004). Position can be used for characterizing network structure, as an important “measure” for the structure of a network and network distance between actors, where the position of a firm defines the roles that it has in relation to the other firms in the network (Johanson & Mattsson 1992:211; Mattsson 1985). Quoting Mattsson (1985) position is defined in relation to various attributes: “...in relation to functions performed by the organisation, in relation to the identity of the organisational units that the firm is linked to and also in terms of the relative importance of the firm in the network studied.” (Mattsson 1985:270) Thus, role is often seen as the more dynamic element of position, referring to functions and process and even acting (see Anderson et al. 1998), where the position is linked to the static picture of a network.
without roles and no roles without positions – and therefore they have to be defined in relation to each other (Anderson et al. 1998). This implies that if one actor’s position is changed it also influences the other actors’ position in the network and thus, the definitions of position and role are closely related to interdependencies in networks, as position and role are used in relative sense to the other actors in the network.

The recent research on position and role has enabled a more critical view of these concepts to develop (see Araujo & Easton 2005). In this thesis the criticism can be divided into two main issues: actors’ abilities to act and the practice of delimiting business actors to merely one actor dimension, i.e. firms. Based on the current understanding, both concepts of role and position are more or less given attributes in networks and are related to interaction at the firm level, where the influence of social interaction and intangible resources is kept in the background.

Actor’s position describes how the focal actor is connected to other actors, i.e. through the relationships to other actors (Anderson et al. 2000) and thus, to what external resources an actor has access and with which actors she competes. The position also reflects, however, the actor’s internal resources (Mattsson 2003) and actor’s identity, which become essential in the social content of relationships. The focus on multidimensional actors in business networks leads to an essential question; how does an actor view her position and role in a network in relation to the other actors in the network?

Although it is well known that actors, firms and individuals tend to influence others and also their own positions and roles in business networks, the research into business networks has mostly overlooked the influence of human behaviour in business networks. This is despite the early notions of individual’s capabilities to utilise the network and thereby actively build up position and take the desired role in it. Anderson et al. (1998) have analysed network dynamics through two kinds of actor activities: the taken-on–activities originated from the actors’ expectations regarding their positions and the made-up-activities that emanate from actors’ intentions. When actors are viewed as multidimensional, including both firm and human being dimensions, it is difficult to believe that individuals would take any positions as given. Referring to Hamfelt and Lindberg (1987) individuals are capable of taking strategic action in relation to their own needs in the network within which they exist. Quoting Hamfelt and Lindberg (1987:180) an individual’s capabilities as a human being permit her to
“build up a contact network for the position one finds oneself in and also, to utilize the network in order to jump from position to position.” Therefore, positions in business networks may essentially be understood as conjectures that actors make about the roles they claim for themselves, as Araujo and Easton have stated (2005:35). It can also be argued that it becomes essential to understand individuals’ perceptions of their own positions and roles in business networks, as it seems more likely that individuals will try to influence them and change them whenever needed. Individuals create their perceptions in relation to their individual identities. Consequently, understanding actors’ multiple identities can be regarded as an important aspect for explaining network dynamics. Position and role concepts seem to be limited to the structural dimension of describing how position and role are interrelated and influencing the whole network but these concepts do not describe how individuals’ perceptions influence their behaviour, how they view their own role and position in relation to others, or how individuals’ perceptions have been shaped and developed in individuals’ minds. Thus, actors’ identities and perceptions guide actors’ strategic action, which is discussed in the following section.

### 2.2.2. Actors’ strategic action influences the network structures

When networks are seen as dynamic actor structures, the strategic action of actors’ becomes essential for the network dynamics. Actors decide their strategic action in all situations and actors’ strategic actions are according to Mattsson (2004), most often intended to stabilise the network they belong to, not to change it. However, although actors themselves aim to stabilise their network positions, their actions can be regarded as a change by the other actors in the network. It is therefore argued that change in business networks is most often initiated by the changing activities and resources of actors present in the network (e.g. Anderson et al. 1998, 2000; Henders 1992). Thus, an actors’ intention to influence her network position in a network has been emphasised as being significant for the network dynamics.

Mattsson (1985) has stated that the degree of structuring in a network is closely linked to actors’ positions and actors’ abilities to change their positions and roles. In highly structured business networks actors’ positions and roles are well defined. In loosely structured business networks roles and positions are less defined and this allows for greater flexibility for actors to shape the structure. According to Mattsson (2004) all actors will try to change network structures, but it is more difficult if the network is
highly structured rather than loosely structured. Thus, network structures are closely linked to the question of to what extent an actor will adapt in one respect and change in another (Mattsson 2004).

Actors’ action and network structures are connected and the interdependence between actors’ abilities to adapt to a network and their relation to network structures provides an example of a circular causal relation between network attributes. If network structures are related to horizontal integration, highly structured networks can be described as integrated and centralised networks, where positions and roles of actors are well known and clearly defined by the actors. As the roles and positions are in a sense predetermined and given in centralised networks, it can be easier for actors to adapt to the given roles and positions in the network than change their positions and roles. Clear role definitions and given positions leave much less room for the actors to shape their own roles and positions in a network. Loosely structured networks are best described as the informal, voluntarily built networks, where actors’ roles and positions are not given and, therefore, the structure is always shaped by the actors. The structure is also more flexible as actors have more “space” around them. Thus, it can be argued that if the degree of structuring in a network is low, positions are less fixed and they can be influenced more freely by the actors than in highly structured networks. In a loosely structured network it can be easier for actors to influence other actors and to shape their own positions and roles in the network. A loosely structured network can thereby change its form and structure more easily than a highly structured network. Nevertheless, it should be emphasised that all interdependencies between actors in business networks are interrelated and thus, they all affect the internal reconfiguration and the internal processes of a network. Consequently, interdependent processes illustrate the central question related to integration in networks and how network structures change through actors’ activities.
2.2.3. Recognising the variety of actors in business networks

Kjellberg and Andersson (2005) have discussed business actors as having a prominent role in driving the processes of change and stability and creating network dynamics. Among the recognised, influential types of actors is the individual (Kjellberg & Andersson 2005; Håkansson & Snehota 1995).

“It is individuals who endow business networks with life. What happens in a network stems from the behaviour of individuals who bring into the relationship between companies their interactions and interpretations upon which they act. But, the individuals are not acting in isolation, they interact and their action becomes organised. Companies, as all organisations, are units of interlocking behaviours.” (Håkansson & Snehota 1995:192; in Kjellberg & Andersson 2005:60)

The quote above leads us back to the issue of the conceptualisation of actors in business networks that has been raised in this study. Researchers (e.g. Håkansson & Snehota 1995) use most often the term actor in the general context in business networks. As we have noted, the terms describing network dynamics, e.g. change and stability, role and position, are anchored to “the common business networks proceedings” where actors are defined as collective actors. Kjellberg and Andersson (2005:61) have emphasised the problem with such a practice: “Despite the recognition of different types of actors in principle, empirical studies of business networks tend to be relatively flat, in the sense that they recognise actors only at a specific pre-defined level, e.g. individuals or firms.” In other words, the pre-defined levels in research may hinder the researcher’s attempts to explore the whole scale of actors and network dynamics in business networks. The difference in actors’ characterisation, i.e. whether they are characterised as a human being or a collective actor, reflects the difference in their behaviour, which is another important issue to emphasise when actors’ relation to network dynamics is analysed.

In an aggregated, multidimensional view of actors, where business actors are defined both as individuals and firms, the multidimensionality in actors’ behaviour must be stressed. Examples of multidimensional actors can be found in all professional networks and among entrepreneurs, where individuals can be regarded as being equal to the firm / enterprise they represent or own. Thus, as multidimensional actors, business actors evaluate their own position in relation to the value of others from both individual and firm perspective (March & Simon 1958:65). An example of what is
implied by multidimensionality is an individual who acts simultaneously as a private person and as a professional and as a firm representative and as a business network member. Multidimensionality describes thus the different identities or shapes one actor can have simultaneously. The complexity of defining the position of one actor in relation to other actors lies in the multidimensionality of actors as actors have several positions and roles because they have several identities.

Re-evaluating the actor concept in business networks and taking into account the multidimensionality of actors in business networks clearly brings the actors’ strategic action and influence in business networks to central stage. Interaction and strategic choices made by human actors are based to a great extent on intangible criteria, e.g. professional knowledge, social characteristics, and trustworthiness as perceived by the individuals. It is also commonly acknowledged that individuals’ action is not always rational. In the markets-as-networks literature, the same aspect has been underlined in relation to business actors. Consequently, actors’ action is seldom rational, whether referring to firms as collective actors or individuals as human actors.

The nature of linkages between individuals representing firms is based on a broader base of strategic choices than that which the traditional business attributes, i.e. economic or technological attributes, constitute. The strategic choices are logically made based on economic criteria or other tangible criteria, but they are nevertheless made on social and intangible criteria as well. It is well documented that individuals as firm representatives create the embedded business relationships between firms in business networks. It is therefore to be assumed that individuals are likely to also create relationships and networks within business networks, i.e. in the form of social networks. Individuals can choose with whom they prefer to co-operate and with whom they wish to have relationships. Informal relationships between individuals are most often built on social and professional attributes that are closely related to human characteristics.

Thus, business actors influence each other on different dimensions, on the firm level via business networks and on the individual level via social networks (Cyert, March & Trow 1956; March & Simon 1958; Johanson & Mattsson 1992). The social dimension in business networks enables, but also constrains, the possibilities for relationships and limits and extends the number of possible co-operation partners. Social networks
existing between individuals can be viewed as being based on the exchange of intangible resources and information in business networks. Sharing information is regarded as one of the strengths of social networks empowering individuals in networks and giving them a central role and position. Thus, focusing on multidimensionality of actors in business networks provides an opportunity for an in depth analysis of actors' influence on network development.

2.3. Summary

The literature review of the current understanding of network dynamics has emphasised the importance of dynamic interdependencies affecting the internal reconfiguration and the internal processes of a network. The current understanding of network dynamics is comprehensive and has analysed the relation of different dynamic elements in business networks – the continuous state of change and stability in business processes, the importance of long-term relationships involving trust and commitment as nurturing characteristics for business networks, the roles and positions of actors as changing variables influencing network structures, interdependencies and integration as the building blocks for network development; as well as actors' influence as a force and source for creating network dynamics. Thus, the current view considers actors to be influential, but the conceptualisation does not, however, completely consider differences in different actor types, their behaviour, and how the interdependency between different actor types is built. It lacks the depth of comprehending actors in different elements of action in the varying actor dimensions (as an individual, a firm, a firm representative, a professional, a politician, a network member, etc.), failing to include the rich context of actors' capabilities and the great diversity of actors that originates from the individual dimension reflecting human behaviour.

Thus the literature review has revealed an increased need to unravel and explore the actor concept as an important element of interaction in business networks, influencing the network dynamics and network development in many ways. It has been argued that actors are increasingly dependent on co-operation with other actors in the competitive environment that most businesses are facing today, and therefore interdependencies and integration become even more significant for future action. Actors' human behaviour, thus, individuals' perceptions and connections to other individuals, creates processes that lead to strategic action of business actors. It all indicates a need for
increased understanding of the social dimension in business networks, which can be described as one source of action and reasoning explaining actors’ behaviour, especially their human behaviour. Hence, it can be argued that, to a great extent, actors act and make their strategic decisions on a social basis.
3 SOCIAL NETWORKS AS A SOURCE OF CONCEPTUAL DEVELOPMENT

As the literature review in the previous chapter has indicated, there is a need to improve our understanding of business actors’ importance in business networks and of how social exchange and social networks influence network dynamics and network development. Researchers within the markets-as-networks tradition have emphasised actors’ capabilities to control and co-ordinate networks, but nevertheless the markets-as-networks approach, as it has been constructed, has not been able to quite capture the complexity of social dimensions and multidimensional actors in business networks. As research on human beings as actors and research on social exchange are the strengths of the social network research tradition, I argue that the social networks approach can support and complement the markets-as-networks approach with these aspects. Business networks and social networks researchers share many similar research interests, e.g. relational embeddedness in networks. This suggests that the application of embeddedness may be beneficial for our understanding of multidimensional actors in business networks, as well as for understanding how social networks are part of the emerging business networks. In order to understand actors in varying dimensions and the human behaviour steering actors’ multidimensionality, we need to include individuals in the analysis and take individuals’ behaviour as the starting point. Concepts that enable us to understand and conceptualise multidimensional actors and social networks in business networks are social exchange, embeddedness and individuals’ intentional action, actorship, which are discussed in detail in this chapter. How actors perceive networks, create network identities and share their views with each other are essential issues for us to understand, as actors build social ties that create the structure of social networks. At the end of the chapter a model of multidimensional actors is presented. The model comprises actors’ multidimensionality and the relation between the social world and human action in business networks.
3.1. **What is the social networks approach about?**

"The social network perspective focuses on relationships among social entities; it encompasses theories, models and applications that are expressed in terms of relational concepts or processes, where relational ties and linkages between actors are channels for transfer or “flow” of resources (either material or non-material)." (Wasserman & Faust 1994)

Social networks consist of social relations, where actors are embedded in the patterns of ongoing social relationships (Granovetter 1985). The development of the social networks approach has been attributed to social anthropology and social psychology and it can be regarded as a branch of structural sociology (Araujo & Easton 1996; Emerson 1962; Galaskiewicz & Wasserman 1993; Simmel 1959; Wellman 1988).28 The development can be traced to the 1970’s when sociologists started to develop ideas about how individuals are linked to one another and how these bonds of affiliation serve as both a lubricant for getting things done and a glue that provides order and meaning (Powell & Smith-Doerr 1994). 29 The advanced tools and methods of social network analysis have been used to study a variety of topics (see, e.g. Wasserman & Faust 1994; Galaskiewicz 1996; Araujo & Easton 1996). However, it is a misinterpretation to think of social network analysis as a sophisticated toolbox for mapping networks. "Social Network Analysis is not ‘a method’ but a paradigm. It is a way of looking at the social world and analysing it. To see it as only a method is to miss the whole point of SNA.” (Barry Wellman, INSNA founder, 2006)

The social networks approach has been on a long journey, where the focus of research has varied between actors, dyads, and network structures. The importance of role

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28 Referring to Araujo & Easton (1996) the social networks approach is the precursor to all other network approaches and the most prolific in terms of development of data analysis tools and their application to a range of social sciences.

29 Simultaneously, new mathematical tools for modelling networks offered a new path for network analysis. Before that, most of the research was conducted by statistical analysis based on random samples, which degenerated into an analysis of social structures by categories, whether individual or collective such as social class, society, or government (Alba 1982; in Araujo & Easton 1996; Freeman 2004). The new network approach provided rich, detailed, and provocative descriptions of the structure and differentiation within networks using quantitative methods based on either relational analysis relying on graph theoretical techniques, or positional analysis, relying on block modelling techniques (at Harvard University, White and his students and colleagues developed positional studies, while Burt again studied structurally equivalent positions in networks; see Araujo & Easton 1996; Freeman 2004; Galaskiewicz 1996). Thus, the new tools enabled an analysis of underlying social relationships and patterns of relations among actors that embodied and transcended the earlier social categories (Wasserman & Faust 1994).
centrality to patterns of social interaction between organisations has been emphasised in several studies (see Galaskiewicz 1996; Krackhardt 1992) where the focus has been on determining the power and centrality of actors in exchange networks (Emerson 1981). Cook and Emerson (1984) concentrated on understanding power dependence structures and extended the dyadic exchange approach to the network level via the concept of connectedness. Thus, there has been a movement from merely measuring or describing dyads and networks towards understanding what keeps the networks together and moves them “forward”, i.e. network dynamics has become central for social network analysis. Consequently, Galaskiewicz (1996) has argued that studying all three levels of actors, dyads and networks is part of conducting social network analysis, as well as studying interrelationships as part of it. 30

The most remarkable development in the field of social network analysis has, nevertheless, been the shift from viewing social networks as informal social structures, hidden from the rest of the world, to understanding social networks as governance structures which are as legitimate as the bureaucratic hierarchies before them (Galaskiewicz 1996). 31 As social networks produce both specific opportunities and constraints for actors, actors’ behaviour can be understood only in relation to the social structures (Araujo & Easton 1996). Social structures are therefore an important part of all networks as they tell us how actors are connected to each other in different contexts. Social structures provide information about the flow of intangible social resources in networks, explaining actors’ activity and illustrating the dynamic processes in networks. The increase in the number of business networks that are based on horizontal integration and patterns of change that go beyond the formal structures and

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30 Social network researchers have been annoyed at the narrow general understanding of social network research, which has been dominating network research field. ‘Structural methods’ is only one research path within social network research, which can be called as the formal network approach (Galaskiewicz 1996). Structural analysis cannot answer questions underneath the descriptive framework and social network analysts became aware of this false impression and focused on other research fields where the relational aspects were influential. In the 1980’s and 1990’s, there was a shift within the social network analysis from viewing networks as constraints towards understanding them as enabling structures, i.e. opportunity structures for actors within. Consequently, we can find linkages between other research traditions, e.g. small group research, power theories, and social exchange theory (Simmel 1959, see Emerson 1962, 1981 and Blau 1964).

31 Social and behavioural scientists have changed the view of networks as hindering constraints to viewing them as enabling structures for actors’ action. “Previous work framed social networks as “informal social structures” that operated “in the shadow” of formal bureaucratic structures. Now networks are looked at as alternative governance structures.” (Galaskiewicz 1996:20) Thus, social networks have gained a stronger and legitimate position in the network research.
hierarchies has provided a reason for researchers to change their view of social networks (cf. Nohria 1992; Powell 1990; Galaskiewicz 1996). Social networks have gained legitimacy in explaining how different networks, i.e. business networks, work. Informal relationships between actors form a network where actors support and give access to each others resources and information, and share tacit knowledge. Thus, actors can be regarded as being embedded in social networks. Consequently, social networks are nowadays analysed as vital for enabling organisations to share knowledge and information and use information from within their own organisation in order to reach strategic goals.

3.2. The concept of exchange - where business networks and social networks meet

Co-operation in networks is based on exchange of different resources and it is generally acknowledged that business can be improved by, for example, exchange of technological, economical and social resources (Håkansson & Snehota 1995; Håkansson & Snehota 2000). Quoting Bagozzi (1975) exchange forms the core phenomenon for all business activities: “A modern economy is a coordination of activities through exchanges where firms pursue their own self-interest... Exchanges involve conscious systems of social and economic relationships and there is an overt coordination of activities and expectations, which Alderson called an organised behaviour system.” (Bagozzi 1975: 35) The value of items received in exchange defines outcomes for exchange partners, and thus are the main consequence of exchange (Shawn 2002).

Exchange in networks and exchange relationships between actors may vary in their nature but nevertheless they are still basic elements in all kind of networks (see, e.g. exchange networks by Cook & Emerson 1984; Araujo and Easton 1996; Håkansson & Johanson 1993) Social exchange theory has been central for both the markets-as-networks and the social networks approaches, where the distinguishing factors are what is exchanged, who is exchanging it and from whose perspective we are observing the network (see table 2). (See Araujo & Easton 1996; Bagozzi 1975; Emerson 1962.)
Social exchange theory aims to explain the emergence of various forms of social structures, including networks and corporate groups, and thereby distancing itself from the conceptualisation of dyadic exchange relationships, which has dominated both business and social network research for a long time. In accordance with the exchange paradigm suggested by Bagozzi (1975), both markets-as-networks and social networks approaches have broadened their views towards exchange taking place in broader networks where exchange relationships become interdependent and connected and where “exchange is often indirect, it may involve intangible and symbolic aspects, and more than two parties may participate” as Bagozzi (1975:32) has stated. Exchange analysis beyond the dyads has, in both network approaches, led to a view of transactions as embedded in systems or networks (Cook & Emerson 1984). It can be argued that both network approaches share the view that networks consist of connected exchange relationships between actors, and that variance in the research interests merely reflects the type of exchange and the type of resources that are emphasised by researchers in each tradition. In business networks the technical dependence between

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**Table 2 Exchange in social networks and business networks**

<table>
<thead>
<tr>
<th>Social Content and Exchange</th>
<th>Markets-as-networks approach</th>
<th>Social Networks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Through the social exchange the parties in dyads gradually build up trust, secondary research object</td>
<td>The essence of the networks, primary research object, viewed as complex exchange</td>
<td></td>
</tr>
<tr>
<td>Prioritized in the research, tangible resources and activities are seen as the base for all relationships and networks</td>
<td>Are acknowledged but are not in the focus, exchange of intangible resources at the social level in relationships are regarded as key-resources</td>
<td></td>
</tr>
</tbody>
</table>

| Studied networks | Business networks | Social networks |
actors and exchange related to technical support may provide a clearer structure for the network than social exchange in social networks. Technical exchange is clearly more tangible in its nature than, for example, information exchange in social networks.

3.2.1. How social exchange allows us to understand social change

It is a challenge for researchers to capture the dynamic nature of relationships, interdependencies and exchange in a network, a challenge which is shared by all network researchers. It can be argued that social exchange theory and social relations in general have expanded the business network approach from buyer-seller dyads to include for example time and resource perspectives in larger network contexts as well as actors’ impact on network dynamics (see Araujo & Easton 1996; Johanson & Mattsson 1994). Some of the recent business network studies have shown a movement closer to the social networks approach, as researchers have aimed to understand the dynamic processes on a level closer to actors’ interdependency (Hertz & Mattsson 2004) and how knowledge is exchanged in business networks (Andersson et al. 2007), to mention a few.

It may seem ironic that at the same time as researchers have become even more interested in social exchange and social aspects in business networks, sociologists have actually argued that business relationships are social in a very literal sense. This argument is based on the nature of social relations and how they traditionally differ from business relations. Social relations involve ties of friendship and even elicit intense feelings of loyalty that are enacted through social engagements which extend beyond spatial and temporal confines of the business day, as argued by Krippner et al. (2004). Thus, social exchange in social relations between actors is built over a long period of time, during which trust and commitment are gradually developed. One may ask why social exchange is so essential for us to understand in business networks if it differs so much from the exchange in business relationships? The reason lies in what sociologists have found in their research, i.e. that an increasing share of exchange in networks is enacted through social relationships (Krippner et al. 2004). Krippner et al. (2004) have pointed out that every exchange process, whether it is economic or social in its nature, has a certain set of social rules that the actors understand and utilise in order to steer the exchange. Thus, it can be argued that every exchange process is social
in the broader sense of the term, which is why it can be stated that social action is so influential and thus important for us to grasp.

This notion still leaves us with the key concern of how social networks should be understood in business networks? For one reason, social networks in business networks can be seen as vital for understanding how change comes into being (MacKenzie & Millo 2003; Krippner et al. 2004). Change that sweeps through an industry has varying effects on businesses, networks, relationships and actors. Change is an on-going process in a society, initiated by different forces and taking place for different reasons and as a result of different mechanisms in the society, as business network researchers have observed. Granovetter, Krippner and other sociologists have recently debated the essence of social activities in networks, where Granovetter highlighted a fact that may have been forgotten by many researchers: social networks cannot and should not be analysed out of their contexts (see Krippner et al. 2004). Sociologists and researchers taking the social networks approach have emphasised that it is very seldom that we can completely isolate the phenomenon we wish to study. Thus, what Granovetter has implied in his recent review of social action (2002; in Krippner et al. 2004) is that social networks are always part of a picture that is larger and more complex than one might assume: “The (social) networks analysis is informal, and is embedded in a much larger structure and discussion about the politics and the economy and the culture and the history of systems. ... in my view, networks are only interesting because they are where cooperation and trust and domination and compliance are actually produced, and those are crucial parts of every socio-economic system. But if you only look at the level of networks rather than at the more macroscopic or the more microscopic levels then you have no clue about how or why this production takes place.” (Granovetter 2002; Krippner et al. 2004)

Thus, social networks provide a way of interpreting the world, the whole picture of a socio-economic system. Social networks enable analysis of the phenomenon we are interested in or the processes essential for change and development both on the macro-level and the micro-level.

Based on Zelizer's research (1979; in Krippner et al. 2004) understanding a phenomena is built on macro-level analysis, how something in the society changed and became something else, something we understand today, but which we did not notice earlier. It
can be argued that phenomena of different sorts, for example, cultural or political phenomena, are seldom purely cultural or political, although they can give that impression. These phenomena are also social network phenomena, implying that all phenomena are aggregated in social action. Therefore, in order to analyse any kind of phenomena on a macro-level, we still need to understand the actors in the process: to find out and understand who the key actors were, how the people involved influenced each other and how that influence travelled through social networks. Granovetter (2002) has consequently emphasised the importance of understanding both macro-level and micro-level elements in analysing different phenomena. Social networks are according to him the ‘meso-level’ between the macro and micro levels, between business networks and individuals, or between society and market, in which actors and their behaviour is embedded. Thus, a social network can be understood as a meso-level element and essential for understanding the relation of different levels of action as part of comprehending the larger picture of elements influencing business networks.32

Social networks and social exchange processes can be approached via structural analysis of social networks, which has for a long time dominated the research on social action. It is the field of research that has developed the most sophisticated tools for analysing and measuring the social structures. The key elements of structural analysis are presented in the following section.

3.2.2. Structural analysis of social networks

Social structures have been identified as existing in a dualistic relation, each constraining and empowering the other (Blau 1964; Emerson 1962; Homans 1951; Scott 2001). Network structures describe relationships and as we know from earlier research, the structure of social relations affects their content (Simmel 1950; in Mitzruchi 1994:330). Social structures thus describe the multiple involvement of actors and different structures create very different forms of interaction among network members (Mitzruchi 1994). Social exchange processes have traditionally been divided into formal and informal social structures. Formal structures are included in the realised and enacted environment of a person as they are more or less forced by the

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32 Social phenomena are, by their nature, complex and it is therefore very harmful to narrow down the research focus and systematically downplay aspects that are interrelated merely because they have been left outside the focus of the research by the current consensus. The narrow mindset leads researchers to take for granted some concepts as defined by the paradigm. Neglecting the whole picture when studying social phenomena has another negative effect – it easily sets boundaries for the vision of the world, ultimately leading to separate realms of research.
organisation or hierarchy. Thus, formal structures are the map of relationships based on the organisational chart, i.e. actors’ given roles and positions. According to researchers, formal social structures can, however, also be reactions to environmental demands and outcomes of organisational choices, implying the chosen strategic network structure (Meyer & Rowan 1977: in Johannisson 1987). Informal structures are voluntarily created by organisation members, which is why these social structures are different in their character from formal structures. Quoting Johannisson (1987): “Informal, social structures represent the sedimentary organising capacity of a collectivity, whether quiescent or activated.” It can be argued that actors’ resources, i.e. will power, emotions and enthusiasm, can be mobilised through the informal structures in networks. The interplay between the formal and informal structures is very similar to that which we have seen in business networks referring to the degree of formality of business relationships, “the chain of authority represented in the organisational chart vs. the soft underbelly of friendship cliques and tacit workplace norms” (Powell & Smith-Doerr 1994).

It has been stated that an individual needs to collect support from other members in the network in order to reach her individual goals in the network. Individuals are linked to each other through social networks and the social network provides therefore the extended network of relations and contacts needed for the personal goals to be reached. Moreover, business network researchers have acknowledged how the personal interaction between companies has several functional areas. “Several individuals from different functional areas, at different levels in the hierarchy and fulfilling different roles, become involved in inter-company personal interactions. They exchange information, develop relationships and build up strong social bonds which influence the decisions of each company in the business relationships. The varied personalities, experience, and motivations of each company’s representatives will mean that they will take part in the social exchange differently. Their reactions in individual episodes could condition the ways in which the overall relationship builds up. Further, the role, level, and function of central persons in the interaction affect the changes of future development.” (IMP Group 1982) In this statement the IMP Group has touched upon several elements relevant to social networks in business networks. First, they emphasise individuals at different organisational levels as being central in the interaction. Second, they state that individuals can influence the decision-making in organisations through their social contacts, and third, they stress diversity of
relationships and people in networks influencing the overall network and the
development of the network. In addition, they underline the fact that central persons in
the network have more influence over other individuals than less central individuals
(see McCarthy 2003; Scott 2001). In the following sections the essential elements of
structural analysis are presented: the common measures for analysing centrality of
actors, the strength of ties and patterns of relationships, as well as the boundary
definition in social networks.

3.2.2.1. Centrality of actors

Centrality is one of the most common measures used within the social networks
studies for measuring social networks structures. Actors’ centrality, ego-centric and
socio-centric networks (McCarthy 2003), where actors and nodes are in focus, have
been analysed from different perspectives. For example, when actors are analysed on
the horizontal level some actors are more central than others in the same way that some
actors are more peripheral than others (Anderson et al. 2000). Centrality of an actor is
a relative measure as it is defined in relation to other actors in the network (Emerson
1981). Centrality can be measured in different ways, but the most frequently used
centrality measures are degrees, betweenness, and closeness. The concept of
degree measures the social network of an actor, i.e. the number of direct connections
the actor has in the network, thus it measures the number of relationships an actors
has. Betweenness can be explained as a position in the social network in between two
important actors, implying that an actor has an influential position in connecting
actors. Closeness of an actor implies access to other actors in the network, and it
implies the direct and indirect connections in the social network giving the actor the
shortest paths to all others in the social network structure. Thus, measures of centrality
can be applied to illustrate social networks, understanding how the actors are
connected to each other in social networks.

3.2.2.2. Patterns of relationships in social networks

Granovetter’s (1973) classic study analysed the relationship structures in social
networks in terms of strong and weak ties between the individuals in the networks.
According to Granovetter (1973) the strength of a tie in interpersonal networks (social
networks) depends on the amount of time spend in it, its emotional intensity, and the
reciprocal nature of it. Stronger ties can be regarded as friendship relations, with strong
emotional connectedness and commitment. Weak ties have their strength in their ability to link actors with several other actors and groups of actors (Granovetter 1973), as weak ties are not based on close commitment or connectedness. The professional ties can be seen as an example of weak ties. Negative ties in social networks represent the most sensitive type of social network data yet. Negative ties mean relationships in which there are clear problems and disagreements between individuals and the individuals perceive the relationships as difficult and demanding to handle. Negative ties can have a destructive effect on the whole network, as problems in personal relationships start to damage the overall relationships, referring to the effect of connectedness spreading mistrust between the actors. Thus, problems at the individual level are likely to become visible at the network level as well. Negative ties are not only built on an individual’s personal perceptions of others, but also on the individual’s own feelings, aggressions and frustration as well. Very often people will hide these feelings from each other, as complaining about a colleague is regarded as unnecessary and unprofessional in a business context.

Social ties, both strong and weak, occur at all levels of an organisation and everywhere that exchange takes place (see Granovetter 1985; Iacobucci 1996). Since the early study in 1973 Granovetter (1973, 1985) has together with Coleman (1988), argued that social networks should be viewed as a kind of social capital that the ego, i.e. the individual, can use to further her own interests (in Galaskiewicz 1996:25). Thereby, Granovetter is saying that an actor’s weak ties enable her to gain more information about the network and other actors in the network. “The more weak ties in the ego’s personal network, the more information the ego has; and the more information the ego has, the more likely the ego will achieve his or her goals.” (Granovetter 1985; in Galaskiewicz 1996:25) Thus, the reference to social capital suggests how individuals can use their social network in order to gain support for decision-making as well as in order to enhance their own position and role by strategically choosing their action in a network, e.g. by bridging individuals through weak ties and thereby being able to influence others.

3.2.2.3. Professional networks

Professional networks often resemble a ´clan´ type of structure (e.g. Hamfelt & Lindberg 1987; Håkansson & Snehota 1995) as researchers have emphasised. Professional networks are thus bound to a certain industry, where individuals are
connected to each other through their profession. Professional networks in the earlier studies have witnessed of low degree of embeddedness and a significant number of the weak ties between members. Thus, weak ties have been regarded as an important asset for an individual in a professional context, in order to gain new knowledge and remain up to date with the developments in the profession. The professional network creates therefore a wide arena for individuals to act within and connects a large number of people (Granovetter 1973, 1985).

Individuals that are part of business networks are often professionals who have professional contacts with people regardless of whether they are directly connected to the business network or not. Consequently, professional and social networks are extremely embedded and overlap considerable. Thus, **professional networks present a form of social network**, as individuals seek support for their professional opinions and need other professional knowledge to enable them to solve problems. Håkansson and Snehota (1995) have argued that it may be difficult for a person lacking the right background and connections to become accepted and to perform effectively in a professional network. Professional networks are selective and have some boundaries. Thus, trust between the members is built on professional knowledge and professional capabilities together with individual characteristics. The weak professional ties in the social networks are essential for an individual to become connected in the professional context. Weak ties can further develop to strong ties as the strength of a tie in interpersonal networks develops through the time spent on it, and is also based on other human and emotional qualities. The strongest professional ties are thereby the reciprocal friendship relations, with strong emotional connectedness and commitment across organisation and network boundaries, which indicates a high degree of embeddedness.

3.2.2.4. *Defining the network boundaries or defining the actors for social network analysis*

According to the markets-as-networks approach networks are open systems, because of the connectedness between actors and relationships, meaning that there are always some

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33 Individuals’ social networks can be broader than the actual focal business network. Social networks can stretch outside an individual’s own professional network to include friends, family and acquaintances. Therefore, boundaries are important to define in order to know how wide a social network one is aiming at. In this study the social networks are primarily limited to the social networks of the individuals within the studied networks, delimiting them to actors defined as network members, based on actor attributes.
connections and potential connections with other networks (see e.g. Hertz & Mattsson 2004; Håkansson & Snehota 1995; Kjellberg 2001). Therefore, defining the boundaries of a business network is an issue, which has been recorded as causing difficulties for researchers.

In social networks, the boundaries of a network can, according to Laumann, Marsden and Prensky (1982), be defined on the basis of actor attributes, relations, and participation in specified events or activities. Actor attributes are in fact the most often used criteria for boundary definition. It is a positional approach based on characteristics of objects or formal membership criteria, of which employment by an organisation is an example of a positional criterion of objects (Laumann et al. 1982; Marsden 2005). Therefore, one of the most central concepts in social network analysis is the notion of position (Borgatti & Everett 1992), which also implies that defining boundaries for the studied network is necessary. In order to analyse an actor’s position (or a node, a term used by sociologists) we have to select the actors and nodes we aim to study, and choose the types of social relationships in the network we are interested in. In other words, we have to define the boundaries for the network, which indicates an isolated system.

The views of how and where the boundaries of a network can be drawn, or whether there can be any boundaries at all, separate the markets-as-networks approach and social networks approach from each other. It also clearly emphasises the fact that the question of boundary definition is actually a matter of how actors are defined or pre-defined for the network analysis. Network boundaries can be drawn based on the actors’ or the researcher’s perceptions of the boundaries (Huemer et al. 2004). Drawing boundaries is thus a strategic action. Despite the “openness-by-definition”, there are researchers within the business networks (e.g. Andersson et al. 2007; Hertz & Mattsson 2004) who state that some boundary-setting for a network is needed in order to make actions and analyses possible. Any delimitation depends on how actors or analysts perceive relevant interdependencies. That is, network boundaries depend on actors’ own views on the network (Hertz & Mattsson 2004). Perceived delimitations may be based on spatial, institutional and / or technological (e.g. industry, product and / or value-chain) criteria and thus, if we study a particular actor, the set of directly connected other actors can be seen as that actor’s “focal” network, which is a network embedded in a wider network context. (Andersson et al. 2007; Hertz & Mattsson 2004)
3.2.3. **Summarising social networks**

Concluding the review on social networks and social structures it must be emphasized that social networks illustrate the different forms of informal interaction between actors in business networks. Social network research has a strong tradition in applying mathematical tools for modelling networks or measuring the strength of ties. Social structures describe the involvement of actors and the interaction among network members. Through social structures, actors’ action can be analysed and the central actors can be identified. The structures reveal the nature and strength of social ties in business networks. There are weak and strong ties, reflecting professional or social / personal ties between individuals as well as negative ties between members who cannot co-operate with each other nevertheless they are members of the same business network. This emphasises the need for an understanding of both formal social structures and informal social structures. Moreover, social networks should not be understood only as structures although the structural analysis is important for the research. The content of the social action and the structure of social relations are interlinked and critical for understanding why individuals are connected through social exchange. Therefore, the content of the social relations cannot be distilled from the social structures. Actor attributes are criteria for boundary definitions based on formal membership criteria for the studied pharmacy networks. Actors however define each other in different social relationships and in different situations. Thereby actors define who is a member and who is not in different social networks, where the central actors may vary depending on the social content and also depending on the applied centrality measures. Social networks are in other words, a key for us to understand what kind of forms human action takes in business networks and what the substance of social networks is that connects the actors to each other.

3.3. **The umbrella of embeddedness**

Economic sociology is built on the idea of embeddedness, meaning that all economic action is socially embedded (Galaskiewicz & Wasserman 1993; Granovetter 2002, 1985; Krippner et al. 2004). The concept of embeddedness was originally introduced by Polanyi in 1957 for portraying social processes in terms of a fluid mix of ‘economic’ and ‘non-economic’ factors (Krippner et al. 2004). This implies that social and economic action are both aggregated elements of embeddedness, just as Bagozzi (1975) later argued for exchange being conscious systems of social and economic relationships. Referring to Granovetter (2002, in Krippner et al. 2004) embeddedness emphasises
“the connections between economic and social activity, but also the political, institutional, historical and cultural elements that economic activity is mixed up with.” This has important implications for the analysis of business networks as economic action and social action in business networks can be viewed as inseparable. Consequently, it can be argued that embeddedness is a conceptual umbrella (Granovetter 2002, 1985; Krippner et al. 2004) allowing us to view the whole picture of complex reality, where economic action is embedded in structures of social relations.

The concept of embeddedness is, however, problematic as its meaning has divided researchers’ opinions. Since the era when Polanyi (1957) introduced the concept of embeddedness, the concept has become flawed as economic and social action have become increasingly unconnected subjects in research. “The once porous boundaries have hardened into impermeable divisions”, as Krippner has stated (Krippner et al. 2004).34 Under- and oversocialised views of social action have come to represent theoretical extremes and interpretations of embeddedness have accordingly become extremely polarised. Granovetter (1985, 2002) has steered an intermediate course between under- and oversocialised views of human action by stating that a meaningful analysis of human action and embeddedness requires us to distance ourselves from atomisation. Thus, Granovetter (1985, 2002) has argued against both an under- and an oversocialised view of networks by stating “how both of the extremes seem to neglect the ongoing social structures of social relations and how a sophisticated account of economic action must consider its embeddedness in such structures”.35 Thus

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34 The heritage of atomisation lies in a battle between under- and oversocialised views of social action. The former refers to neo-classical economics, in which social outcomes are analysed as resulting from the aggregation of actions made by isolated rational decision makers. The latter refers to the tendency in sociology (Parsonian sociology) to portray individuals as compelled to act by norms and values that are thoroughly internalised (see Krippner et al. 2004). Many researchers have claimed that the division is due to Parsonian sociology, which “separates the economic and social action as though they would occupy entirely disjoint positions in an abstract topography.” (Krippner et al. 2004) However, the elimination of social relations from economic studies in classical and neoclassical economics has been a clear attempt to disallow any impact of social structure and social relations on economic activities (Granovetter 1985). In a way, social activity has been regarded as useless in the idealised market view, where exchange under perfect competition is regarded as independent from any social influence (see Hirschman 1982; in Granovetter 1985). Excluding social action from economic action has also been one way to simplify the research and economic analysis.

35 Many scholars in sociology have however criticised Granovetter for either forgetting or misinterpreting the original content of embeddedness by Polanyi (1957), which was explicitly intended to undermine incipient disciplinary boundaries by portraying social processes in terms of a fluid mix of ‘economic’ and ‘non-economic’ factors. (See, e.g. Block, Biggart, Krippner, in Krippner et al. 2004). They claim that he has attempted to avoid atomisation and has thus overlooked the social atomisation. Parsonian sociology and neoclassical economics have in common actors’ atomism and also a vision of the social world as sharply
Granovetter is emphasizing the bounded rationality of actors and that rational economic behaviour is limited by a person’s socially embedded context (Andersson et al. 2007). Hence, according to Granovetter (1985) economic relations have to be understood by reference to the social networks that underpin economic activity.

Embeddedness has been seen as an explanation for change and development in business networks, or evolution of business networks, and thus, it has been used to describe and explain network dynamics (Halinen & Törnroos 1998; Mattsson 2004; Andersson et al. 2007). The concept has been used to describe interdependent relationships between companies as well as dependence between various types of networks, i.e. technological, social and business networks. Quoting Halinen and Törnroos (1998) embeddedness in business networks highlights following aspects: “…First, how companies are embedded in networks of interpersonal relationships and larger social structures... and second, how these social relationships form ongoing structures which have their own histories. Embeddedness, thus, implies that business firms, and the networks which they form, are both socially and historically constructed.”(Halinen & Törnroos 1998:189)

The emphasis on embeddedness has many consequences for how business networks can be analysed. It implies that economic and social action cannot and should not be separated, but also that actors’ actions in the social context is a critical area of research. The term social embeddedness has been used to emphasise the role of individual actors in business networks. However, individuals have not historically been demarcated into neatly bounded and essentially separate realms. The paradox in Granovetter’s usage of embeddedness is thus related to how Polanyi’s original concept of embeddedness has been interpreted.

36 Embeddedness presents a paradox in the sense that what is good for a relationship may not be good for the business. The notion that economic action is embedded in social structure has revived debates about the positive and negative effects of social relations on economic behaviour (Uzzi 1997). Researchers have thus argued that there is a risk of over-embeddedness, where relationships can become inefficient and isomorphism within the network decreases diversity, thus leading to a situation where actors become more and more homogeneous and information and access to new opportunities diminish (Burt 1992; Uzzi 1997). Consequently, some researchers have been arguing for the benefits of arm’s-length ties facilitating better performance (Hirschman 1970; in Granovetter 1985) and that actors, for the simple reason that human beings are selfish in nature, do not prefer co-operation (see e.g. agency theory and game theory). That would however in a sense violate the whole meaning of embeddedness, according to which economic and social exchange should not be seen as separate activities, and thus promoting atomism, which has ruled the research for many years. It can be argued that heterogeneity of actors and action is a way for business networks to avoid the risk of becoming over-embedded. Polanyi’s embeddedness explains business behaviour and the social processes in relation to the phenomena we are studying. Thus, it is a concept that considers the complexity of business networks but offers also a way to reduce complexity as it can deal with the different type of action and exchange. Hence, economic and social action and human behaviour should not be separated in our research of evolving business networks as they go hand in hand in social processes.
given centre stage in business networks research. Embeddedness clearly breaks with this tradition as the acknowledgement of social embeddedness has recognised individuals as influential actors in business networks. As all economic action can be viewed as social (Krippner et al. 2004), it underlines the importance of knowing the history of relationships and interdependencies. Thus, the dependence of individual actors on each other, and the emergence and development of business networks should be seen as a social phenomenon on a broader contextual level, where history becomes part of the present, which in turn will influence the future (see Halinen & Törnroos 1998). Embeddedness is in this study defined as interdependencies between actors’ action, social relations and various kinds of network structures in business networks. Thus, embeddedness is a concept for portraying social processes and the mix of ‘economic’ and ‘non-economic’ factors in business networks (see Polanyi 1957; in Krippner et al. 2004).

3.3.1. Degree of embeddedness in relationships

Business network researchers have referred to embedded relationships as relational embeddedness. Referring to Andersson et.al (2005): “The point of departure for relational embeddedness is that a relationship between actors has several dimensions and that several types of activities are simultaneously performed. Embeddedness as a concept implies that these dimensions and activities are interdependent. Consequently, strong interdependence between these dimensions means a high degree of embeddedness.” (Andersson et al. 2005:31) Relational embeddedness is thus seen as “the interdependence between social relations, exchange of resources, and combination of resources in relationships” (Andersson et al. 2007), meaning that it fits well into the common approach of exchange of resources in business networks. However, the novelty in relational embeddedness lies in the notion that the exchange of resources is dependent on the social relations between people, not merely companies or organisations, and that exchange of resources cannot be conducted independent of the social relations (Andersson et al. 2007). Thus, it has been argued that a degree of embeddedness leads to long-term relationships. Relationships with high degrees of relational embeddedness typically reflect a high level of trust and commitment and are where identifying problems and finding solutions are the main activities between the actors. Thus, actors are likely to share common values and an understanding of each others capabilities and simply know each other well in relationships with high degree of embeddedness (Andersson et al. 2007).
Uzzi (1997:61) has referred to embeddedness as “a unique logic of exchange that results from the distinct social structure of organization networks and the microbehavioural decision-making processes they promote”. Thus, embeddedness is positively related to problem-solving, decision-making, and integration of activities in business networks. According to Uzzi embedded relationships have three main components that are all independent but nevertheless elements of social structure, which regulate the expectations and behaviours of exchange partners (Uzzi 1997:42). These components are: trust, fine-grained information transfer, and joint problem-solving arrangements. Trust is according to Uzzi (1997), an explicit and primary feature of embeddedness and it is given and reciprocated voluntarily. Trust can therefore be referred to as ‘favours’ that are being exchanged by actors. Moreover, trust can be described as “a governance structure that resides in the social relationships between and among individuals and cognitively is based on heuristic rather than calculative processing” (Uzzi 1997:45). Thus, trust is a purely social attribute, fundamentally a social process and an irreplaceable component in exchange relationships. Researchers have also argued that there is an advantage in having a high degree of relational embeddedness as it enhances the flow of fine-grained knowledge between firms in relationships and likewise the disadvantage of a low degree of relational embeddedness causing problems in information flow (Andersson et al. 2007; Uzzi 1997). According to Uzzi (1997) and Andersson et al. (2005, 2007) embeddedness improves the information exchange in business networks, especially the tacit knowledge exchange. Thus, embeddedness enhances the access to fine-grained knowledge and provides the opportunity for problem-solving and development of tacit knowledge in business networks. Embedded relationships have an inbuilt problem-solving mechanism, if we can call it that, meaning that problem-solving is part of coordinating the common functions and working out problems as they arise. In solving problems firms combine existing knowledge and gather new knowledge, which can again be recombined resulting in a valuable tacit knowledge.

It can be argued that all three components provide a competitive advantage for a business network, as they have a profound effect on a firm’s performance (Uzzi 1997). Relationships with low degrees of embeddedness will not have the same advantage and actors will thus be forced to rely on arm’s length relationships and short-term opportunities gained by exploiting their exchange partners. The three interdependent
components of trust, fine-grained information transfer, and joint problem-solving arrangements are all social attributes and thereby they also explain actors’ behaviour and how actors understand the behaviour of their exchange partners.

### 3.3.2. Moral embeddedness

Embeddedness has the ability to capture the complexity of aggregated factors linked to actors’ moral behaviour and, thus, moral understanding of action (Block 2004; in Krippner et al 2004; Granovetter 1985; Uzzi 1997). Block uses the term moral embeddedness implying that trust is based on shared moral understanding. Legal rules and regulations are guidelines for action, but moral understanding is even more essential for business networks as it is required for trust, which is needed in all action between the members (Andersson et al. 2007; Uzzi 1997). Quoting Block (in Krippner et al. 2004): “Trust is the lubricant for all market transactions, and when moral violations are always present, that trust evaporates and the market lacks lubrication.”

Very often actors in a business network develop a code of trust for action regarding what kind of actions are allowed and which are not. It could be referred to as ‘a gentleman’s agreement’ or ‘honour among thieves’ as Granovetter (1985) has proposed. A code of trust can also be developed within a profession, where it is linked to the generally accepted ethics and moral guidelines within the profession, which the professionals acknowledge. It means that the commonly agreed code represents the embedded morality and, in the case it is being broken by an actor, other actors are likely react accordingly. As trust is produced in social relations, violating the code of trust can have severe effects. Thus, lack of trust is a consequence of moral violation of the shared code, which will leave traces in the business network and influence its future development. It will influence actors and their behaviour, which in the worst case can escalate to a situation where all exchange eventually dilutes as a result of mistrust. It can lead to vendetta action or endless feuds, as Uzzi (1997) has stated.

Trust between business network members has also been argued to have a positive influence on the development of shared understanding and the shared sense of purpose that the network members experience (Huemer et al. 2004). Therefore actors’ moral behaviour and moral understanding of action are important for the network
identification processes of actors, whereby they become committed to the network and the network identity is created. Different understandings of what is moral can become a problem for creating a network identity as individuals do not always share the same understanding of moral behaviour. Actors in different networks can have different perceptions of what is acceptable and aggregated business actors are connected in still other networks, which is why we have numerous potential conflicts between these. A common reason for actors perceiving that the code of trust has been broken in a network is being betrayed in a network or being exploited by other actors.

3.3.3. Research perspectives on embeddedness

Based on the Halinen & Törnroos (1998) study, embeddedness can be approached from three different angles: that of the actor-network, the dyad-network and micronet-macronet. Actor-network embeddedness refers to the perspective in which a business network is viewed from the perspective of an actor, i.e. a company or an individual (or both) (Halinen & Törnroos 1998). The dyad-network perspective takes a dyad into focus as part of a wider business network and the micronet-macronet perspective takes a step above the two other perspectives by reflecting the relation between micronetworks, equal to several business actors in a business network (triad or more), and macronetworks representing wider national and/or institutional networks including non-business actors, e.g. political and institutional actors (Halinen & Törnroos 1998).

Actors in social networks are regarded as embedded in concrete patterns of social relationships, in egos’ (individuals’) social relations (Granovetter 1985), which produce opportunities and constraints and their behaviour can only be understood in relation to these structures (Araujo & Easton 1996). Thus, through the actor-network perspective it is possible to analyse multiple dimensions of business actors, as it takes into consideration the human action in business networks by going to the level of interdependencies between individuals. By applying actor-network embeddedness the aim is thereby to use the perspectives of specific persons as a framework for understanding and analysing the business networks as on-going social process, consisting of individuals and their perceptions.
Taking special notice of individuals as change agents we must remember how networks of social actors or sets of connected exchange relations (Cook & Emerson 1978; Håkansson & Johanson 1993) have also been recognised as being more tacit in information exchange and how tacit knowledge is easily absorbed in embedded social networks (Andersson et al. 2007; Uzzi 1997). Thus, social networks are well known to be the best channels for information exchange and sharing the tacit knowledge in networks. Galaskiewicz & Wasserman (1993) have summarised the opportunities of actor-network embeddedness in the following way: “Embeddedness provides us the opportunity to incorporate in our analysis much more than the skeleton of social relations that surround ego (individual). The focus is in context. This opens the door to analyse not only the formal properties of ego’s network position but the norms governing relations with others and the meanings attached to interactions as well”. The actor-network perspective enables us to explore the social embeddedness of actors and how it is connected to the shared moral understanding of action explaining actors’ social action and motives for action.

3.4. Human action and influence in business networks

This section of the theoretical framework aims to merge theoretical elements which together can help us to comprehend multidimensional actors in business networks. The theoretical elements are applied in a model of multidimensional actors at the end of the section. Multidimensional actors’ action and human behaviour as such are important elements to understand, together with the motives or triggers which are needed for overt and covert action of multidimensional actors. It has been noted on several occasions how individuals can activate the networks through the social dimension. Weick (1979:68) emphasised the role of human actors in organisational development as early as the 1970’s: “The human actor does not react to an environment, he enacts it.” And so too did Bagozzi (1975) who studied the human behaviour to be more than the outward responses or reactions of people to stimuli: “Man not only reacts to events or the actions of others but he self-generates his own acts. His behaviour is purposeful, intentional. It is motivated. Man is an information seeker and a generator as well as an information processor. In short, human behaviour is a conjunction of meaning and reaction.” (Bagozzi 1975:36) Moreover, recent research has strengthened the picture of human actors’, individuals’ capabilities to look for partnership and social companionship, through which networks are activated and created (Mainela 2002:9). Actors’ own involvement and activity in networks implies that the exchange on the
social level is influential for the network development. Networks are thus an outcome
of a number of individual choices made by the actors in the network in interaction with
each other.\textsuperscript{37} Thus, it can be argued that dynamics in business networks are generated
by the actors within the networks (Snehota 1990:123).

It can be argued that individuals’ motives for activities in networks are built on a
different base compared to the motives which drive collective actors’, firms’ and other
larger entities’ activities. Individuals are socially constructed and their behaviour has
many different dimensions (Berger & Luckmann 1967; Schutz 1962). Every actor has
her own history and quoting Schutz (1962), the actor’s actual situation also has a
history; “... it is the sedimentation of all his previous subjective experiences. They are
not experienced by the actor as being anonymous but as unique and subjectively given
to him alone.” (Schutz 1962:77) Therefore, each and every individual actor has her own
personal understanding and perception of different places and situations depending on
her own situation, position, and history.

Moving the focus to human actors’ ability to influence business networks, I would like
to elaborate on what is meant by actors’ activity and human action in networks.
Actorship is a concept describing \textit{actor’s activity, the character of human activity and
individual behaviour in networks}, as has been defined by Schutz (1962). According to
the traditional view of actorship, actors (humans) derive their actorship from some
form of intentionality (see Kjellberg 2001:555). Schutz (1962) has defined human
action as action that human actors conduct self-consciously where the term “act”
designates accomplished action (Natanson 1962:XXXIV; in Schutz 1962). Action has its
source in the consciousness of the actors (Schutz 1962:XXXIV) and, thus, all social
reality has an essential component of consciousness, guiding individuals in their action
(Berger et al. 1974). Anderson et al. (1998:172) have also argued for the actors’ activities
in business networks are actively and subjectively formed. This implies that actors’
activities within a network are not only an expression of expectations. On the contrary,
actors’ action has to have a meaning for them, which is part of the subjective
interpretation of individuals.

\textsuperscript{37} Snehota (1990:123) has argued that the multiple involvement and connectedness of actors and
relationship creates a dynamic process through which networks evolve. Network structure is an outcome of
individual choices and, thereby, formal structures in business networks can also be regarded as the result
of a number of choice that actors have made.
Individuals need a **motive** or a trigger for their action, either a subjective motive or an objective motive. Different motives explain the individuals' behaviour and intentional action. Subjective motive refers to projecting action, thus, the state of affairs, which the action has been undertaken, and objective motive, refers to what motivates the project of the action itself (Schutz 1962). The decisions to act can be positive or negative, overt (activated) or covert (quiescent) (Johannisson 1987; Schutz 1962). The overt action implies the activated dynamic resources of an individual, which can be seen as both projected and purposive action. The covert action consists of all forms of negative decisions an individual makes, choosing thereby to refrain from certain activities. Based on the research of individuals’ action and behaviour, it can be argued that it is the relationship between the social world and the human character of actors that constitutes the activities in networks. Thus, actors have control over their actions, either overt or covert, while simultaneously constructing their social reality though interaction with other actors. Through this interaction, actors are not only influencing others, but also being influenced by them, whereby they receive the motives for their action.

### 3.4.1. Actors’ multidimensionality

In business networks the diversity of actors implies multiple **actor dimensions**. Actors in business networks become actors by being recognised by others (Håkansson & Snehota 1995:195; Snehota 1990), which is why an actor can be defined as an individual (human being), or a group of such individuals, a firm or some other organisation, a group or federation of such firms or organisations. There is multiple involvement of different actors (Snehota 1990:123) and connections between these actors on different dimensions create the dynamic processes in networks. In general, actor dimensions in business networks can be categorised according to three main dimensions: the individual (human being), the firm or organisation, and the network of actors. The multidimensionality of actors is therefore linked to the multiple actor dimensions that exist simultaneously in a business network, creating the structure of the network and the components for interdependence and interaction among the actors. It can, however, be argued that in the same way as an actor is embedded in relationships and business networks, an actor and actor’s action is embedded in the different actor dimensions: as an individual, a firm or a network. Thus, business actors can be analysed in several actor dimensions that are embedded in each other and that overlap. This assumption is linked to heterogeneity of actors and diversity in business
networks. In business networks the multidimensionality of actors has been touched upon observing how actors assume several roles and positions in a network (Snehota 1990). The multidimensionality of actors implies consequently that actors can simultaneously take part in different actor dimensions. An actor is not limited to only one actor dimension, she can act in all three actor dimensions. The best way to exemplify this is probably through individuals’ multidimensionality.

Ahrne (1994; in Halinen & Törnroos 1998) has recognised individuals’ multidimensionality by referring to individuals as organisational “centaurs”. He proposes that individuals can act either on behalf of their organisation and/or on their own behalf as human beings. Individuals can choose and manage the way they see and view the business network and their interactions. Therefore they can choose whether they decide to act as an individual or as a representative of an organisation. The individual relates all decisions to her own view of the network, and, therefore, each actor has a subjective view of the network. It is, however, important to observe that although every individual defines her world from her own perspective, she is nevertheless a social being, rooted in an inter-subjective reality, as stated by Natanson (1962:XXX; Schutz 1962). Therefore, an individual may look for certain behavioural patterns among the other actors in the network. Moreover, diversity of individuals also implies a diversity of personalities in the network. The diversity of personalities in a network can probably be categorised to some extent, based on similarities between the behaviour of actors in the network. Some individuals are impulsive and overt in their actions, some are more covert and restrained, and so it can be argued that each network has a mix of personalities.

Individuals’ multidimensionality in the business context is built on their ability to react differently in different settings as their perceptions vary depending on different situations. The situation is defined by each actor and, by defining the situation, an actor decides how to act in it (Natanson 1962:XXXVI; Schutz 1962). Hence, interpreting the world is a prime mode of acting in it (Schutz 1962). Interpreting the world and other actors is also linked to individuals’ capabilities to create social networks across the defined network boundaries, implying that social networks are created and shaped through social action and social exchange between individuals (Ahrne 1994; in Halinen & Törnroos 1998). Based on the understanding of embeddedness, where social and
economic exchange are inseparable, business networks can be viewed as continuously constructed, not only as social constructions. Referring to Callon (1992): "Networks are no longer simple associations between relatively stable and unproblematic entities, allowing researchers to comfortable concentrate on the nature of the links between these entities, but the entities themselves have variable content and geometry."

According to Callon (1992), actors define one another in interaction and thus, create the network. Networks are therefore seen as heterogeneous and people within them are active actors who create the social content in networks. Consequently, by moving away from atomisation between economic and social action, we can apply the social constructivist view on networks and thereby come closer to the social resources of networks. The social context of every individual is an enabling factor for “alter egos”, several “I”s or egos, referring to actors’ multiple identities. Thus, one key to understanding what is meant by actors’ multidimensionality is related to understanding actors’ different and varying identities in the different actor dimensions, i.e. the identity of entities such as individuals, organisations, or networks (Huemer et al. 2004:54) and how the different identities are linked to each other.

3.4.2. Actors’ identity

Actors’ identities and the interplay and reciprocity of them are what define the perceptions of actor’s individual ‘self’ against other actors as well as the perceived collective actor ‘we’ against the other collective actors. Thus, actor’s identity is defined in terms of its relationships and actor’s identity defines who is perceived as ‘Me’ and who as ‘We’, as well as who are ‘We’ in a network and who are the others, those outside the network. Identity has been seen as creating powerful motivations for co-operations between organisations (Kogut & Zander 1996) and organisational identities have been argued to have an important role in steering organisations behaviour in interaction with other actors and affecting the strategic choices and actions they make (Huemer et al. 2004; Rindova & Fombrun 1998). The collective identities of an organisation or a network are different from individual identities, but nevertheless they are interlinked and reciprocal. It has been argued that organisational identities can influence individuals’ behaviour, and vice versa, that is individuals’ behaviour can influence organisational identities (Huemer et al. 2004:55; Pratt & Foreman 2000).

Organisational identity can be defined as “the property of a collective (Gioia 1998; Huemer et al. 2004), which defines the shared and collective sense of who we are.”
Organisational identity includes all the attributes that are perceived as being central, distinctive and enduring for an organisation by the actors in it (Albert & Whetten 1985; Huemer et al. 2004). The identity of an organisation is thereby defined through boundaries, which define who are members in the organisation and who are not. For the members, the organisational identity implies shared goals and values, which underpin the membership. It has been argued that interactions between individuals in an organisation create a shared understanding between the members of the common language and common framework for action (Huemer et al. 2004; MacDuffie & Helper 1997). Network identity is very similar to organisational identity as it is about creating an identity for a collective. It is dependent on the same premise of members experiencing a shared sense of purpose and commitment. Network identity is built through interaction between the members in a network as it defines the shared values and goals of the members in a similar way as in organisations. Thus, network identity defines the shared and collective sense of who ‘we’ are. It has been argued that if a network can create a strong network identity and establish shared understanding of purpose and moral action, the network identity will to some extent overtake the organisational identities and also the individual identities. (Huemer et al. 2004)

In business networks, business actors (individuals and firms) have, according to researchers, varying views and perceptions of markets and networks. Actors’ views of networks have been referred to as the actors’ network horizons (Anderson et al. 1994), actors’ network pictures (Ford & Redwood 2005; Ford et al. 2003), and the actors’ network theories (Hertz & Mattsson 2004; Johanson & Mattsson 1992; Mattsson 2004). Actors’ views of networks steer their behaviour in many ways and thereby actors’ views of a network are directly linked to interaction and the strategic choices actors make. 38 As Huemer et al. (2004) has argued, actors’ perception is a terminology, which business network researchers have applied for identity issues. The concept of network identity has been explained as shared network perceptions, which describe perceptions held by several actors.

38 Hertz and Mattsson (2004) have placed particular emphasis on the interdependence between competition and co-operation being completely dependent on the “network theories” of the actors concerned, steering actors’ behaviour and strategic actions. Actors’ network views also have a tendency to change, both among actors and over time, which has an affect on strategic actions in development processes, i.e. in business networks. How extended an actor’s view of a network is has thereby been recognised as an important determinant of actor behaviour in networks.
From individuals’ perspective actors’ multidimensionality is a phenomenon that emerges from the close connection between individual social context and society. Identity is a key element of individuals’ subjective reality and, like all subjective reality, stands in a dialectical relationship with society (Berger & Luckmann 1967). Referring to (Abbott 1988) individuals’ identities may vary depending on the other actors they are in contact with. Individuals’ identities are therefore formed by social processes (Berger & Luckmann 1967) and influenced by different relations and circumstances. Identities are also reflections of different settings and situations and, thus, of how much distance actors have from the situations (Ornstein 1988). Therefore, it can be argued that individuals can have different identities that they switch between when they are in contact with different actors and in different situations (Steinby & Lilja 2004).

Individuals’ identities can also be assumed to be linked to the professions of the actors. Thus, individuals are influenced by different incidents and experiences in the professional network (see Ornstein 1988; Abbott 1988). The professional context affects individuals and their behaviour as a group of actors and forms the professional identity of individuals. If we elaborate further on the dialectical nature of identity, either the individual or the professional, the identity always exists in a relationship with society. In the relationship, both parties, or if we like, all parties, aim to interact and through the interaction they will influence each other, either intentionally or in an embedded manner.

Different identities as such explain the behaviour of actors in different dimensions and the different motives for action, but it is through identification processes that identities between the different dimensions are interlinked, which explains the multidimensionality of actors. Identification processes are important for actors as through them they build commitment and a sense of belonging to a network. Through identification individuals feel that the network provides a cognitive and emotional foundation on which they can build their relationships with other members (Huemer et al. 2004). Thus, according to Huemer et al. (2004) identification processes provide links between identities in different actor dimensions. Individuals feel identification with an organisation or a network when their own identities and network identity overlap and their own values overlap with the network values (Huemer et al. 2004). How different identities are linked to each other and how individuals’ multiple identities overlap on different actor dimensions explain how human actors can simultaneously act as both individuals and as representatives of a firm or a network.
3.4.3. Network identification

Identification has been defined as “a person’s sense of oneness of belongingness with an organisation” (Huemer et al. 2004; Mael & Ashforth 1992). Identification is also about legitimacy, the legitimisation of the network among the actors (Huemer et al. 2004). Through identification, actors create a shared and “generalised perception that the action, activities, and structure of a network are desirable and appropriate”, as Human and Provan (2000) have stated. Thus, identification and legitimisation of a network are related to the moral embeddedness in a network and it can be argued that trust and commitment are essential ingredients in network identification processes, linking identities of different actor dimensions and actors’ multiple identities, as well as in creating a strong network identity. Network identification comprises therefore several identification processes that actors go through, such as the sense of belonging, the need for affiliation, acceptance, pride, involvement, goal congruence, feeling of trust, support for problem-solving and information sharing (Huemer et al. 2004; Hatch & Schultz 2000). Thus, it can be argued that through network identification actors different identities are combined, creating the shared understanding of purpose, as has been defined by Hummer et al. (2004), or the shared network logic as business network scholars have proposed (e.g. Håkanson & Snehota 1995; Welch & Wilkinson 2002).

The shared meaning and understanding of purpose between individuals, which is created through network identification, provides “an umbrella” for the action in networks, for example for decision-making by the actors. It also depicts the common consensus in the network, whereby individuals’ varying network views and identities are combined. Referring to Cyert et al. (1956), decision-making is not a simple programmed process for organisations to execute. As situations change and because of human nature, human beings make different choices in different situations, which is also why decision-making is most often a non-programmed process (Cyert et al. 1956). The rationality of a human being is, thus, more a rationality related to some specified frame of reference, e.g. shared meaning and understanding of common values (March & Simon 1958). The shared meaning between individuals can consequently be argued

39 Firms’ decision-making is not a rational action where actors choose a course of action from several alternatives given to them. Neither is the decision made in order to find an appropriate solution to a new problem posed by a changing world (Cyert et al. 1956). On the contrary, the informal processes such as information seeking, and gathering and processing information are incorporated in the decision-making, where the overall strategic action provides a guideline for action, but cannot program the decisions to be made in a similar manner in all situations. The human behaviour in decision-making processes
to be more than decision-making, i.e. choosing one course of action rather than another
or finding an appropriate solution to a new problem. Shared meaning between the
actors has been argued to have a positive effect on knowledge sharing and integration
of activities in networks. Shared knowledge and adapted activities have again been
argued to influence not only the content and structure of relationships and networks,
but also influence the integration processes in general. Thus, the shared meaning in a
business network provides an insight into how the actors together view their network.

Actors can, through their connections, both create, and be dependent upon, shared
meanings, perceptions and norms (Welch & Wilkinson 2002). Network logic is
therefore closely related to individuals' identities in networks, which, according to
Welch and Wilkinson (2002), is a shared cognition and thereby important in the
development of networks.40 As the social cognition in business network theories derives
from the actors, it also helps to explain the social networks and voluntary cooperation
action is based on existing preconceptions derived from an individual's social world;
at the same time, as individuals act according to their preconceptions they induce
changes to the world around them. Individual cognition and the social world
therefore constitute each other.” Welch and Wilkinson’s research (2002) supports the
base assumption that identities and network logic are critically important, providing an
insight into the human action in business networks. They state that the ideas and
shared network logic are part of business networks in all possible dimensions.41

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40 Earlier research has used several terms to describe network logic: shared cognition among the actors
(IMP researchers), shared meaning (Håkansson & Snehota 1995), industrial wisdom (Hellgren et al. 1993),
and idea logic (Welch & Wilkinson 2002). In addition Kauto & Lindblom (2004:12) have emphasised the
importance of common logic shared by the actors as being a pre-requisite for any chain concept to become
successful.

41 Ideas and common network logic that are shared by the actors can be seen as a force for development in
networks. “…Ideas can contribute to our understanding of network development and behaviour. Ideas
encompass the perceptions individuals and organisations have about self and others, their beliefs or
“theories” about how the world functions, norms about appropriate behaviour, attitudes toward particular
issues as well as values concerning what is desirable…” (Welch & Wilkinson 2002). Ideas are socially
constructed, as are actors’ identities. Focusing on the role of ideas in networks, as Welch and Wilkinson
(2002) express it, is connected to a larger trend in social sciences labelled “the cognitive revolution”. It is
related to the research into how individuals define their worlds from their own perspectives, as part of the
social world which they construct through their own action and activities (see, e.g. Berger & Luckmann
1967; Berger et al. 1974; Natanson 1962; Schutz 1962) and also to actors’ sense-making in organisations
(Ford & Redwood 2005; Weick 1995). The idea of and a desire for “a social revolution” in business
It can be argued that through network identification an identity becomes real. Through the identification processes individuals can link their own identities to the broader system of meaning (Fiol 1991; Huemer et al. 2004). Linking the different identities is the synchronisation of identities, as Huemer et al. (2004) have stated. This implies that individuals identify themselves with the network identity and there is a clear acceptance of ‘Me-We’, characterised by a shared sense of purpose and destiny. In the same way, members in a network identify themselves through the network identity as ‘We-Us’ against other actors in other networks. Quoting Huemer et al. (2004:63): “Network identification is a continuous process whereby actors simultaneously imagine, visualise and experience identities in light of boundaries that are drawn, the meanings that are understood and the set of relationships that becomes acted upon.” Thus, through network identification, individuals can identify who they are in relation to the network. It is an identification process of ‘Me-We’ based on individuals’ sense of belonging to a network, being representatives of an organisation, and striving for a shared sense of purpose (Huemer et al. 2004). Through the network identity that is defined jointly by the members in the network, they define ‘who we are’ and define the central, distinctive and enduring traits of the network (Huemer et al. 2004). As individual, organisational and network identities are joined and engaged in network identification processes, multidimensional actors establish a shared understanding and a shared sense of purpose. What seems to glue the identities and network identification together is, consequently, commitment, as commitment is dependent on both the network identification and actors’ identities. Through commitment actors define each other, identify themselves with one another, trust each other, and perform activities according to the shared understanding. Thus, identities include actors’ abilities or inabilities to shape the meanings that define actors’ commitments and forms of belonging (Huemer et al. 2004; Wenger 1998).

3.4.3.1. Membership in a network

Network identification can clearly be observed in actors’ desire to belong to a group and thereby be part of a larger structure. Membership identification in a network is about a clear sense of membership and a form of organisational identification, which defines the boundaries for a network as the actors define it (Huemer et al. 2004). Perceptions networks have been supported by recent research by Helgesson et al. (2004) and Kjellberg & Helgesson (2004) into the market practices constituting markets.
of boundaries are therefore closely linked to actors’ identities and network identification. Membership is built on actors’ sense of belonging and their need to find affiliates and feel accepted by others. Actors seek support from other actors and shared understanding on varying issues. Thus, membership implies dynamic and embedded processes built on the human actors’ decisions to act, i.e. establishing a network together with other actors, becoming a member in an existing network of actors, being a member in a network of actors, and leaving a network of actors.

Joining a pharmacy network implies that one can be invited and recruited or one might apply to become a member (Hertz & Mattson 2004:44). After becoming a member the individual has to decide whether she will commit to the relationships and network or not. Being recruited into a network to a given position and role does not imply that all actors are equally committed to the network. Therefore, being a member in a network does not mean that all individuals have the same role and position in the network. After becoming a member of a network, an individual can, through her own activity, influence her position and role in the overall network. Quoting March and Simon (1958): “... it can be stated that individuals come to a network with a prior structure of preferences - a personality, if you like - on the basis of which they make decisions while in the organisation. Thus, individual goals are not “given” for the organisation, but can be varied both through recruitment procedures and through organisational practices.” (March & Simon 1958:65) A critical related question is thus to what extent an individual is influencing others or being influenced by others? It is relevant to understand as individuals can activate networks through social structures.

The dynamics involved in becoming a member and being a member in a network are closely related to the escalating effect of “group pressure” as defined by March and Simon (1958). Very few individuals are lone-wolfs, without connections to networks of any kind. Individuals seek acceptance and identification within a group. March and Simon (1958) have stated that individuals are easily influenced by pressure from the professional group individual belongs to, and also from subgroups as well as extra-organisational groups. Thus, professional networks could have a great influence on an individual’s identity and role in business networks and, as Abbott (1988:11), has argued a central process of professionalisation is the coalescence into a group. According to March and Simon (1958:59-60): “... the stronger the identification with the group, the greater strength of group pressure... The strength of group pressures increases the uniformity of group opinion... The strength of group pressure increases as the range
of group control over the environment increases... and finally, the more interaction within the group, the greater the uniformity of opinion within the group.” The interaction and amount of communication between actors in a network is consequently important for the development of a network, as interaction and communication create the cohesiveness of the group. Actors develop shared meanings by sharing information and through interaction, which will have an effect on the overall uniformity of the group opinion and, thus, have an influence on the shared network logic (March & Simon 1958; Uzzi 1997). This is naturally linked to the shared moral embeddedness in the network and commitment and trust among the members.

Being a member of a network can be seen as part of the adaptation process that an individual needs to go through as part of the network identification. Building on the earlier discussion of roles and positions being influenced by individuals themselves, it can be argued that the adaptation to a network can occur in different ways. This implies that an actor always has her own identity and, thus, a prior structure of preferences to start with. These preferences should be in line with the network’s preferences. Due to the reciprocal relationship between the individual and network identities, the individual’s preferences and the network preferences are likely to become overlapping. Another way to put this is to analyse it through actor’s network view. In the beginning, an individual’s network perspective has to fit into the overall network’s perception of the network. Thereby, it can be argued that an individual can become a member in a network by adapting her own identity and perceptions to the given role and position and by adapting to the network logic. However, after the individual has been accepted as a member by the other members, the individual’s role and position are influenced by the individual’s ego, which leads to the central point in actorship, i.e. an actor’s ability to act when she prefers to take action. An individual’s desire for membership is thereby closely linked to the individual’s identity. Individual’s ability to steer her own choices results in an overt or covert action. Becoming a member of a network is an overt action that the individual strives for. Through the membership of a network, the individual wants to influence the others and participate in the network, which will release the will power of individuals but she is also willing to be influenced by others. (See, e.g. Johannisson 1987.)

It can be argued that in order to be able to influence others in the network, individuals need to be well integrated into the network. They need other members’ support for their action, and for this purpose they need social networks. Social networks and social
relations are created through trust and commitment, which have to be earned through interaction with other actors. Thus, the level of member identification and commitment are interlinked. The level of identification and commitment can, however, vary between the actors. Failing to identify oneself with the network is possible, whereby an actor is less committed to the network and is not motivated to remain as a member (Huemer et al. 2004). The decision to leave a network is consequently based on issues related to trust and level of commitment, but it can also be anchored to economic commitment and investments. If an actor is not economically committed, she is not willing to invest in the network or commit to the network through economic action.

To conclude, it can be argued that individuals have a sense of belonging, a desire for membership, which they can fulfill by establishing new networks together with other actors or by joining existing networks. Consequently, it can be argued that individuals can intentionally create and re-create networks as they look for partnership and social companionship both as representatives of organisations as well as representatives of themselves.

3.4.4. A tentative model of multidimensional actors

At the beginning of chapter 1, I stated that the central assumption of the thesis is that business actors are multidimensional and that their specific constitution in any given situation is determined by human interaction in social networks. In order to understand human action in social networks as part of the business networks, I argue that the multidimensionality of actors and human action in networks can be arranged and analysed through a tentative model of multidimensional actors (see figure 3).
The tentative model of multidimensional actors depicts the relation between the social world and the human action of multidimensional actors in business networks. As the literature review has shown, it can be difficult to draw lines between different actor dimensions, business actors being firms, entities or individuals, or all of them, as they can overlap significantly. Thereby interaction in business networks seems to take place between actors on different actor dimensions and between actors with multidimensional natures. If we take the problem to the social dimension in business networks, it can be solved by focusing on what is essential in the social exchange between actors and, thus, the content in social networks. The central substances in social networks seem to be trust and commitment, which enable the relationships between actors to develop and exchange to take place. As the social world comprises a diversity of actors, having several views, identities, roles and positions, each of them defines the world in related but still individual ways (Schutz 1962). Consequently, we can take multiplicity as the starting-point for defining actors. Moreover, we have to include also the multidimensionality of actors in the definition.
As Schutz (1962) has noted, all action is linked to the social world of actors, and thus individuals are social beings, rooted in an inter-subjective reality. Human actors act from their own personal perspective most of the time but they can also take a broader perspective, the firm’s or the network’s perspective. This can be explained through individuals’ identities and how actors can identify themselves in the network through the identification processes. Individuals need to define each situation as it arises, relating different situations to their own perceptions and history at different times. Actors’ activity is also related to the action of other actors, and the social and moral embeddedness in networks.

The model has three main components: first, the actor dimensions linked to actors’ identities, second, the network identification processes in the middle which join the different actor dimensions and identities, and third, the reciprocal arrows of actorship emphasising the human action of actors and the motives for action. The dynamics in the model are based on the assumption that an actor can simultaneously have several identities and act in different dimensions. Thereby, the identities and actors’ action become overlapping. Thus, being an individual, a professional, a firm representative, an owner of a business entity, a member of a business network are aggregated dimensions of a multidimensional actor. Human actors have several identities or egos: the ego “here” and “there”, depending on the actor dimension. In the model, different identities are equal to how individuals perceive their identity in relation to the actor dimensions and identify themselves in the network through the network identification processes and thus, they describe the multidimensional nature business actors can have.

Actor dimensions based on identities in the model are “Individual self”, “Me-We” and “We-Us”. The individual identity is a theory of ‘me’. It is the starting point for all action and defines the attributes that are important for the individual as a human being. Organisational identity and professional identity are closely interrelated and support each other. They describe the theory of ‘me’ as a professional as well as a representative of a firm. It combines the individual identity with a collective identity of an organisation or a firm or a profession, creating the ‘we’ for an actor. Network identity is ‘a theory of us’ in the network of individuals, professionals and representatives of an organisation or a firm. Network identity includes all the attributes that are perceived as being central, distinctive and enduring for a network (see Huemer et al. 2004). It also defines ‘who we are’ against ‘others’. Thus, it identifies the setting of
'we' against ‘them’, for example identifying members in another network as competitors. Network identity thereby defines the membership and the boundaries for the network. All the different identities influence each other and are interrelated. Individuals feel identification with an organisation or a network when their own identity and network identity overlap and their own values overlap with the network values (see Huemer et al. 2004). How different identities are linked to each other and how individuals’ multiple identities overlap on different actor dimensions explain how human actors can simultaneously act as both individuals and as representatives of a firm or a network.

Linking the different identities is a synchronisation of identities (Huemer et al. 2004). This implies that individuals identify themselves with the organisational identity as well as the professional identity and there is a clear acceptance of “Me-We”, characterised by a shared sense of purpose and destiny. Through the network identification processes individuals can identify themselves as members in the network and create the network identity. This implies that individuals identify the ‘theory of us’ referring to acceptance of “We-Us”. The network identification consists of several processes through which different identities meet. To start with, human actors have a sense of belonging and a need to be affiliated to a group of actors. Thereby actors seek acceptance, advice, and shared values. Through the network identification processes actors different identities are combined creating the shared understanding of purpose and meaning, which has often been called the shared network logic. Network identification also concerns legitimisation of the network and the creation of a generalised moral understanding and perception among the actors that the action, activities, and structure of a network are desirable and acceptable (Huemer et al. 2004). Therefore, both commitment and trust are critical attributes in the network identification processes.

Individuals need a motive or a trigger for their action. Different motives explain individuals’ behaviour and intentional action. Motives trigger human actors to engage in overt and covert action in networks, i.e. wanting to become a member, becoming a member, or acting as a member in a network. Actorship, therefore, includes the motives and triggers for, and intentions of, action, which describe how human actors move between actor dimensions and act according to perceptions in each actor dimension. Actors’ action is embedded in social networks, and network logic originating from the
human actors provides a shared cognition of the network, combining actors’ perceptions of the network and embedding the individualistic behaviour into the network. Hence, the model comprises actors’ multidimensionality and how human actors can create and activate business networks through their identities and network identification processes in the social dimension.

3.5. Summary

In this chapter I have examined the social networks approach as a source of the conceptual development in business networks studies. The basic argument of this thesis is the need for increased understanding of multidimensionality of actors in business networks and the role of social networks in emerging pharmacy networks, with an emphasis on individual human action.

Social exchange theory has been found to create a joint theoretical base for both social network and business network approaches. Social exchange, together with trust and commitment, has been viewed as essential for the development of business networks. Social networks have been seen as critical for an understanding of changes taking place in society and business networks. Social networks provide a meso-level perspective of actors and relationships, where an analysis of the whole-picture of the phenomenon is possible. In this study social networks are analysed via the concept of embeddedness. The classic view of embeddedness is emphasised, whereby social processes are a mix of economic action and social action. Thus, embeddedness provides a conceptual umbrella for understanding how relationships and actors in business networks are embedded in social networks and structures. It can be argued that relational embeddedness is positively related to long-term relationships, and to the main components essential for social networks: trust, problem-solving abilities, information sharing, decision-making and integration of activities. Trust is also closely related to moral embeddedness in networks, implying shared moral understanding between the actors.

In this chapter the concept of actorship has been presented as a tool for understanding multidimensional actors and social networks in business networks. Actorship is a concept that has been developed for studying actors and human behaviour in networks. Thus, it refers to activity as something that the actor has the potential to do as an individual. It takes into account how human behaviour and social interaction meet and,
hence, how an actor can construct, activate, control and manage her resources as well as influence other actors. Thus, the impact of human behaviour in business networks is discussed as a matter of social action, actors’ intentional action derived from the human character, and as individuals’ identities in connection to the inter-subjective reality creating shared meaning and understanding between actors, all this enabling the multidimensionality of actors. Thus, it is argued that human actors act from their own personal perspective, based on their individual identity, but they can apply a broader perspective, the firms’ or the networks’ perspective, whenever needed. The tentative model of multidimensional actors has been presented at the end of the chapter, illustrating a holistic picture of how actors’ multidimensionality can be interpreted as an interplay between several identities on different actor dimensions.
4 METHODOLOGICAL CONCERNS

This chapter focuses on the methodological concerns in the thesis. The chapter starts with a discussion of the research philosophy, the perspectives and assumptions of the world and knowledge that have shaped the whole research process. In this chapter the research process is described in detail, i.e. the choices that I have made and the criteria that I have applied in order to gain answers to the research questions stated in chapter 1. By describing the research process that I have experienced while studying the chosen research topic of multidimensional actors in business networks, I also aim to illustrate the different data collection and data analysis phases that have been included in the process. At the end of the chapter I will evaluate the whole research process and its ethics, validity, and reliability.

4.1. Research philosophy

Epistemology, or the theory of knowledge, concerns assumptions about how knowledge is created and what the sources of knowledge are. It is, thus, a question of what is (or should be) regarded as acceptable knowledge in a discipline (Bryman & Bell 2007; Lindholm 2001). Researchers have often debated the similarities of epistemological issues in social sciences vs. natural sciences, where arguments have been thrown back and forth regarding the fundamental question of whether social worlds, e.g. the business world, can be studied according to the same principles and procedures as those we use to study natural sciences or whether we should make a distinction between them (Bryman & Bell 2007). Epistemological views can be divided into two main categories, positivism and interpretivism (or hermeneutics, von Wright 1971), which represent contradicting perspectives of epistemological positions. Referring to Bryman and Bell (2007:16): "Positivism is an epistemological position that advocates the application of the natural sciences to the study of social reality and beyond,..., where the knowledge is arrived at through the gathering of facts that provide the basis for law." (Bryman & Bell 2007) Positivism positions theory and research accordingly in a way where the role of research is to test theories in order to support laws as in natural science. Interpretivism represents the opposite epistemological position to positivism. It is built on a critical view of applying natural science procedures to social world studies, in which people and their institutions are highlighted, which makes social sciences fundamentally different from natural sciences. Where natural sciences have laws to create and follow, social sciences have human
behaviour to observe, where no scientific laws seem appropriate. Interpretivism, or hermeneutics, is, according to von Wright (1971), concerned with the theory and method of the interpretation of human action, which clearly indicates a need for very different research logic and, thus, research procedures, from those the positivistic perspective indicates (Bryman & Bell 2007).

The epistemological discussion is often polarised, positioning researcher either to positivism at the one end or to interpretivism at the other end. Thus, the researcher must choose which epistemological position she feels to be closest to her own assumptions. The researcher should be clear as to whether she wants to explain a phenomenon, which refers to positivism, or whether she wants to understand a phenomenon, which indicates an interpretive view of social science. Phenomenology, proposed by Alfred Schutz, represents the anti-positivist perspective in the research philosophy which actually focuses on how individuals interpret the social world around them and emphasises how researchers should bracket out their own preconceptions of the world (Bryman & Bell 2007; Schutz 1967). Thus, it captures the fundamental difference between the subject matter of natural science and that of social science, which crystallises the grounds for epistemological arguments and is why an epistemology is required that reflects and capitalises on differences based on different assumptions and perceptions of human behaviour and social worlds.

Discussion of the fundamental element of phenomenology touches upon another important aspect of research philosophy, namely the ontological stance assumed by the researcher, i.e. what assumptions the researcher makes about reality and the nature of social entities. If positivism and phenomenology represent the opposing epistemological positions, then in between them there is a continuum of core ontological assumptions (Collis & Hussey 2003), where objectivism relates to the positivist perspective of reality and constructionism reflects the phenomenological view of reality (Bryman & Bell 2007).
Objectivism implies that reality is regarded as external to social actors, where everything is defined in advance and a given for the actors, which is why they regard the reality as beyond their reach or influence (Bryman & Bell 2007). An illustrative anecdote of objectivism is presented by Bryman and Bell (2007), when they refer to our conceptualisation of organisations as a form of objective reality. We tend to think of organisations as consisting of formalities, hierarchies and structures, where individuals follow standardised procedures to fit into the system. The organisation represents a social order, where the individual is expected to learn and work as he is told. Thus, the organisation is something external for an individual, it is almost a tangible reality with its own rules and regulations, according to which actors act and are forced to act. Constructionism (also called constructivism) opposes the objectivistic view by stating that social phenomena and their meaning are continuously being created by social actors (Bryman & Bell 2007:23). In this perspective on reality an organisation is viewed as a social reality that is in a continuous state of change. This implies that the reality emerges through actors’ interaction, where interaction constructs and reconstructs the procedures and processes. Thus, constructionism reflects a subjective reality.

The world is, however, seldom black and white, and this holds true when the researcher’s assumptions about both epistemology and ontology are evaluated. For this reason, it is very useful to analyse the continuum between ontological core assumptions presented by Collis and Hussey (2003). If we look at the continuum (see figure 4)
starting from the objective reality and moving towards the other end, we can notice a shift from the concrete, structured way of thinking changing to process thinking, moving on to a view of reality as a social construction and, finally, at the extreme end of the continuum, a view of reality as pure human projection (see Collis & Hussey 2003).

Before I position my view of the world and describe my assumptions about the epistemological and ontological continuum, I think it is essential to analyse the underlying philosophical assumptions in the theoretical approaches I have applied in this thesis: the markets-as-networks approach and the social networks approach.

Henders (1992), who has analysed the philosophical grounds of business network studies extensively, has argued that most network studies are consistent with interpretive beliefs about reality, people, and knowledge, positioning the markets-as-networks approach closely to the interpretive paradigm. Business network studies have a tendency to be close to the empirical world they study and, thus, the interpretive research has tried to open up new areas of knowledge in network research. The close connection to the empirical field has made it possible to generate and develop new theories and, thus, rather than testing existing theories with hypotheses, network researchers have been able to contribute to the development of network theories. However, as Henders (1992) has pointed out, not all marketing research supports the interpretive paradigm, which is why it is worth emphasising the close connection between the business network approach and social sciences. In social sciences the view of actors in an interpretive reality is essential. Actors are seen as active participants in constructing their own environments (Weick 1979; in Henders 1992). Sociological research and studies of social networks are often ethnographic in their nature as they require closeness to the studied phenomenon (see e.g. Freeman 2004). How involved the researcher is in observing or actually interpreting the phenomenon defines the level of inductiveness. It does not change the fact that epistemologically the social networks approach is extremely interpretive. Thus, it can be argued that the interpretive paradigm is shared by both network approaches, although the degree of the interpretive philosophy may vary.

Based on the review of philosophical assumptions, I would say that my research philosophy is best described by the term phenomenology, where individuals and I as a researcher interpret the world around us. Thus, I assume that reality and knowledge about reality are interpreted by individuals, who create their social reality through interaction. The reality is socially constructed and, consequently, I believe that the
social reality is enacted by the actors. My assumptions and interests in understanding networks and actors’ interaction as a social phenomenon are close to the interpretive / phenomenological epistemology as I am interested in knowing more about actors in a network, thus focusing on multidimensionality of actors. As the interpretive paradigm indicates, my study is concerned with understanding human behaviour and actors’ interaction as a phenomenon rather than measuring a phenomenon and seeking facts or cause and effects in a studied object. Thus, I believe in multiple social realities that are constructed in the interaction.42

My thesis is empirically close and context bound, and therefore I do not seek to generalise the results – I seek to contribute to the development of our theoretical understanding. The social realities show that tremendous dynamic processes take place in networks, where interaction creates connections between people and generates social networks. Relationships between people in a network have various forms and they together construct reality. Personal and professional relationships exist side by side and are embedded in a network of relationships and actors, where every relationship is a unique combination of relationship ingredients – communication, trust and commitment. Therefore, it is critical to emphasise the underlying assumption of viewing the world as a construction of different social processes rather than a well-defined system as in a positivistic world. The process thinking is visible in the study in the theoretical pre-conceptualisation that has emerged side by side with the research process.

42 Social realities are continuously changing and we can only try to capture one tiny piece of the ongoing processes. Reality is constructed through action and actors’ behaviour. Action can be defined as “human conduct self-consciously projected by the actor” (Schutz 1962). Based on Schutz’ (1962) definition it can be stated that action is purposive and its source is in the consciousness of the actor. Social action is a micro process that is interactive and symbolic. Actors’ ideas, beliefs, concepts and knowledge are all part of the society and social action, which need to be understood in order to comprehend the context in each social phenomenon, e.g. dynamics and network development (Sayer 1992:30). According to von Wright (1971:86): “action normally presents two aspects: an ‘inner’ and an ‘outer’”. “Inner” action is defined as the intentionality of the action, the intention or will “behind” its outer manifestations. The “outer” action can be defined as consisting of two parts: immediate and remote outer aspects of action. Both “inner” and “outer” action are needed to understand the meaning of action. “Act” again is the outcome of the ongoing process of action, which designates accomplished action (Schutz 1962). The distinction between action and act is that action is viewed as an ongoing process, whereas an act is a performed action that can be grasped. It is, however, worthwhile noting that not everything that is ordinarilly called an act or action has both the inner and outer aspects. Only action-like behaviour has both inner and outer aspects, meaning intentionality of action together with result of action, which von Wright refers to as intrinsically (conceptually, logically) connected with the action itself (von Wright 1971: 87-88).
In my view the philosophical assumptions in the thesis are based on a belief in dynamism, the heterogeneous nature of the actors and networks, and the absence of one truth (see Henders 1992). The reality we are studying is changing all the time, as all social phenomena are. Thus, the world that we observe is the “social reality” (von Wright 1971; Schutz 1962). It is “the sum total of objects and occurrences within the socio-cultural world as experienced by the common-sense thinking of men living their daily lives among other fellow-men, connected with them in manifold relations of interaction” (Schutz 1962). The reality can be regarded as actors’ subjective construction (Berger & Luckmann 1967). Obtaining organised knowledge of social reality can be regarded as the primary goal of the social sciences and, thus, the actors that we are studying are constructing their own reality (Weick 1979; Sayer 1992; Schutz 1962). Reality and knowledge are related to a specific social context as the reality consists of several realities (Berger & Luckmann 1967). Hence, there is no one reality or truth of reality. On the contrary, there are several social realities, where the crucial aspect of the social relations between subjects is the sharing of meaning (Sayer 1992:26-32).

Individuals’ beliefs and opinions, roles and personal identities, are all examples of socially constituted phenomena, which are defined through inter-subjectivity. Individuals or subjects and social relations between them are part of the social context, where individuals interact on the basis of shared understandings, which again can be changed as a result of the interaction. Therefore, it is of importance to recognise the difference between a socially produced phenomenon and a socially defined phenomenon, the latter of which does not include action or interaction, or the dimension of change.

4.2. Research process – case study strategy and abductive approach

How do human action and human actors contribute to the emergence and development of business networks? What is the role of social networks in emerging networks? What is the phenomenon of pharmacies’ chain development about? How should we understand, explain and describe multidimensional actors and social action in the pharmacy networks and comprehend the studied phenomenon of emerging pharmacy networks? In order to be able to handle these broad questions, among others, I have chosen to apply case study research in the study. The arguments that speak for this choice are many. First, the case study approach is appropriate when investigators either
desire or are forced by circumstances, (a) to define research topics broadly and not narrowly, (b) to cover contextual or complex multivariate conditions and not just isolated variables, and (c) to rely on multiple and not singular sources of evidence (Yin 2003). Second, the case study approach also offers the possibility of discovering new aspects into research and developing and creating new theories while remaining close to the empirical world (Alvesson & Sköldberg 1994; Dubois & Gadde 2002; Eisenhardt 1989). Case studies can involve either single or multiple cases, and numerous levels of analysis (Eisenhardt 1989; Yin 1984). Moreover, case studies can employ an embedded design meaning that the level of analysis is conducted on multiple levels in a single case study. (Yin 1984; Eisenhardt 1989)

The case study approach can be defined more as a research strategy than a method (Yin 1984, 2003), which focuses on understanding dynamics present within single settings (Eisenhardt 1989). Case studies can therefore be used in various situations and to accomplish various aims. Case studies are often bound to the specific situations (Dubois & Gadde 2002; Weick 1969; Weick 1979; Yin 1994) and are not appropriate for generalisation. Thus, case study research is clearly different from statistical research methods as it lacks the main statistical features, i.e. replication and the potential for scientific generalisation. However, all the disadvantages and weaknesses can, in most cases, be turned into advantages. Case studies cannot build on statistical inference, but instead rely on analytical inference (Dubois & Gadde 2002:559). The level of generalisation in case study research is raised to the analytical level where terms we create through our research can be generalised and thus, they can be applied and compared to other studies. As argued by Dubois and Gadde (2002) the interaction between a phenomenon and its context is best understood through in-depth case studies. Thus, being close to the studied phenomenon and the empirical world is a great advantage that enables learning from specific cases, which compensates for the weak replication features of case study research.43

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43 The closeness to the empirical world is characteristic of the approach and also one of the reasons why case study research has divided opinion among researchers. Case study research has not always been recognised as a proper scientific method (Dubois & Gadde 2002; Eisenhardt 1989; Weick 1979; Yin 1994), which has led to critical discussion around the subject. Critics have highlighted different types of weaknesses of case study research (see Dubois & Gadde 2002; Easton 1995; Eisenhardt 1989). An example of a common criticism is directed at researchers. According to Yin (1994) researchers are too sloppy and allow equivocal evidence based on biased views to influence the direction of the findings and conclusions (Yin 1994; in Dubois & Gadde 2002). Criticism has also been directed at research, which simply and broadly describe events without leading the reader to the focus of the study (Easton 1995; Dubois & Gadde 2002; Weick 1979).
Acknowledging the challenges and risks in the case study approach it is a very useful method to apply, as it enables researchers to describe phenomena, test theories and / or generate theories (Eisenhardt 1989). The flexibility and many-sidedness of case study research are also the reasons why I have applied it in my research. As some network researchers have argued, using surveys and case studies together enables a multimethod approach, which gives greater insight into multilayered networks (see Bryman & Bell 2007; Collis & Hussey 2003; Patton 1987; Spekman 1996; in Iacobucci 1996; Yin 2003). It can be argued that the use of multiple methods has been necessary for enabling the study of multidimensionality of actors and for approaching the social networks within the pharmacy networks. Therefore, I have chosen to utilise several data collection methods in the study, i.e. including documents and other printed material for the historical account, interviews and observations for understanding actors’ behaviour and relationships, and as mentioned above, the surveys for collecting the data of social networks.

4.2.1. Matching

In case study research, matching between reality and theoretical constructs – also called sampling - becomes a continuous process rather than being a separate stage in the study (Dubois & Gadde 2002). This continuous process of matching involves going back and forth between framework, data sources, and analysis, where the framework, theory, the case and the empirical world are continuously part of the abductive research process (see figure 5). It means that the theory confronts the empirical world throughout the research process, which is argued to be critical for the actual theory development. Hence, theory cannot be understood without empirical observations and vice versa (Dubois & Gadde 2002). The research process in this study can be described as an abductive one (Alvesson & Sköldberg 1994; Dubois & Gadde 2002, 2005; Peirce 1931), which implies that the research is based on matching of theory and empirical material. Thus, it can be described as a process where theoretical framework, empirical fieldwork, and case analysis simultaneously evolve (see figure 5).
A qualitative research process, of which the abductive research process is an example, can be described as a combination of testing and rejecting ideas, applying different methods, and continuously developing the process of analysis. Qualitative research offers flexibility to the research process and enables a continuous investigation of data and interpretation of the data. Thus, analysis proceeds throughout the development of the qualitative research (Coffey & Atkinson 1996:192) where different research methods can be applied.

Figure 5  Abductive research process (modified from Dubois & Gadde 2002, 2005).

Figure 6  The research journey in the study
The abductive research process in this study can be described as a continuous journey back and forth between the theoretical and empirical worlds. The analytical framework is not predetermined, but a “preliminary” framework functions as a guide for the researcher in the process (Dubois & Gadde 2005). The tentative model presented in chapter 3 provides an example of such a framework. The model has been developed in conjunction with the research process. The abductive approach enables the research to evolve during the process as it becomes possible to move between the theory and the empirical world, from one research activity to another (Dubois & Gadde 2005).

4.2.2. Social network analysis – gaining access to the social networks

Social network analysis is based on the intuitive notion that relationships, interdependencies and patterns are important features of the lives of the individuals who enact them. As organisational studies have shown, the success or failure of societies and organisations often depends on the patterning of their internal structure (Gulati 1995). Social network analysis focuses on relationships among social entities and the patterns and implications of these relationships. The social environment can, thus, be expressed as patterns or regularities in relationships among interacting units (Wasserman & Faust 1994). The regular patterns in relationships are referred to in the literature as structure, and, thereby, SNA (Social Network Analysis) purports to describe the social network structures in a network. 44

In SNA, network data is defined by individuals and by relations or "nodes" and "edges", if we use the terms used in SNA research (Hanneman & Riddle 2005). Social network analysis is often regarded as a sociological toolbox, while it has developed many mathematical methods for measuring networks. This is, however, an illusion which has been heavily criticised in recent years in social network research communities, e.g.

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44 “Social networks research is a distinct research perspective within the social and behavioural sciences; distinct because social network analysis is based on an assumption of the importance of relationships among interacting units.” (Wasserman & Faust 1994:5) Organisations can be seen as collections of people interacting with each other to achieve (or sometimes to avoid) something in their work (Parker, Cross & Walsh 2001). In a similar way, social network analysis (SNA) views a network’s structural environment as providing opportunities for / or constraints on individual action and conceptualises structure as lasting patterns of relations among actors (Wasserman & Faust 1994). The way people are related and linked to each other within an organisation does not necessarily reflect the formal organisation structure, and thus, there is a difference in the formal organisational and informal social structures.
INSNA. Although very advanced methods for the mathematical analysis of social networks have been developed within SNA research, one should emphasise that SNA is a research approach that is easily applied in different fields of research. SNA has an advantage in its applicability to a wide range of empirical phenomena, which can be explored in terms of their structural patterning of people’s interaction (Freeman 2004; Scott 2000). Therefore, SNA is in its character close to the empirical world and the case study approach. SNA can make the invisible set of relations in an organisation visible which in turn makes it possible to explore the social networks and resources of an organisation.

There has been criticism of applying the social network methods in research within the “markets-as-networks” approach (see e.g. Kjellberg 1994). Researchers have questioned the contribution of SNA methods in developing our understanding of inter-organisational networks. The main thrust of the critique has been directed towards the structural analysis of social networks, claiming that it has no interest in understanding the context of the networks and how and why relationships and networks develop. Moreover, part of the criticism has been directed at researchers’ inability to use SNA: first, researchers who have used the methods have lacked a framework for interpreting the results of structural analysis in an inter-organisational setting and, thus, the data collection for these studies has not fulfilled the requirements of SNA methods. Second, the theoretical framework has not supported the method and thereby the match between the theory and method has been a disappointment (see Kjellberg 1994). Kjellberg (1994) has, however, also emphasised that the “markets-as-networks” approach could be a dedicated framework to be used in SNA as the research interests in network structure and network position are shared by both approaches. The greatest challenge seems to be to apply the SNA method in a way whereby every part of the research process fits together: the research issue, the theoretical framework, the data collection and the interpretation of the results in relation to the dedicated framework (Kjellberg 1994).

This thesis analyses the social networks within pharmacy networks in order to see how actors are linked and positioned in relation to each other in different network patterns. The purpose of the structural analysis conducted using the SNA method is, thus, to

45 For more information, please see www.INSNA.org
structure the social networks in pharmacy networks and to see how actors are located or "embedded" in the overall networks. Thereby actors' interaction and different identities can be analysed in the social structures and the social context, which are compared to the organisational network structures. The focus with SNA is, thus, on individuals in the studied social networks, on the varying social structures and on the substance of the structures, and most importantly on the role of social networks in the emerging networks.

4.2.3. Centrality measures

Social structures describe actors' multiple involvement in various types of relationship. In SNA terminology, individuals' interaction and social structures can be studied as degrees of network activity and centrality 46, indicating that central actors have an active role in the networks, connecting and activating or inactivating people. The centrality measure is thus useful as it reveals the influential actors in relation to all the other actors in the analysed social networks. Centrality is regarded as an important structural attribute of social networks as it is related to a high degree to other important group properties and processes (Freeman 1978/1979:217). Centrality of an actor is a relational measure and it implies the importance, or prominence, of an actor in a network. The problem with the term centrality is that there is no consensus regarding the meaning of centrality or the conceptual foundation of the term, even though structural centrality is one of the most commonly used measures of social exchange within social networks studies. (See e.g. Freeman 1978/1979.) Centrality can be measured in different ways, but the most frequently used centrality measures are degrees, betweenness, and closeness. The concepts used in centrality studies are specific and they differ somewhat from the terms applied in markets-as-networks studies. Therefore, I will briefly explain the commonly applied terms and concepts in the SNA research.

The concept of degree measures the network activity of an actor, i.e. the number of direct connections the actor has in the network which make this person an active actor in the studied pharmacy networks. Therefore, it can be stated that "the more connections, the better", which emphasises the relevance of connectedness in social networks. However, quantity is not necessarily always better than quality. This means

46 Other commonly used centrality measures, e.g. betweenness over power positions, and closeness for access of information are not included in the study. (See Emerson 1981)
that it is sometimes more useful to be connected to actors that would otherwise be unconnected to the network than to actors that everyone else is connected to. This philosophy is related to the concept of betweenness.

Betweenness can be explained as being between two important actors. An actor who has a strong betweenness does not necessarily have fewer direct connections to other actors than the average actor, but he or she has a good position in connecting actors. SNA also uses the terms “broker” or “boundary spanner” when describing such actors. Closeness of an actor implies access to other actors in the network. These actors have fewer connections, but the pattern of their direct and indirect connections gives them the shortest paths to all others. An individual’s degree of network centrality provides insight into his or her position in the social network and the relationships between him or her and the other individuals, illustrating the social network structure. Just as we can define the centrality of an individual actor we can, through the SNA method, define network centralisation. Network centralisation is a measure for descriptive statistics through which we can compare the centralisation of different networks. It measures the differences between the centrality scores of the most central point and those of all other points in the network (Scott 1991:90). Thus, centralisation is theoretically defined as: "The ratio of the actual sum of differences to the maximum possible sum of differences." (Scott 1991:90-91) It reveals the general compactness of a network and the extent to which the structure of the network is organised around particular individuals. The larger the general centralisation index is, the more likely it is that a single actor is quite central, and the less central actors can be regarded as residing on the periphery of a centralised system (Wasserman & Faust 1994:176). Thus, centralisation also measures how heterogeneous the actor centralities in the studied networks are. It has been argued that in centralised networks where the number of central actors is low, the central actors are critical for the network. If they leave the network the network structure will be broken. Therefore, central actors can be seen as an asset from a social network perspective but they can also be “point of failure” for the business network. When the centrality is more evenly divided between several actors, then if one of the central actors leaves the network, the structural breach is less dramatic.

A typical characteristic of centrality studies is the use of graphs to illustrate centrality measures in networks and, thus, graph theory is the building block for these studies. Quoting Freeman (1978/1979:217 – 218) the most significant terms and their meaning in graph theory can be summarised in a following way: “To start with, a graph consists
of a set of points (actors) and a set of lines or edges (relationships) connecting pairs of points. When two points are directly connected by an edge they are adjacent. The number of points to which a given point is adjacent is called the degree of that point. A path is a sequence of one or more edges beginning at $p_i$, perhaps passing through intermediate linking points, and ending at $p_j$. A path that begins and ends at the same point is called a cycle. When every point is reachable from any other point the graph is called connected. Distance is the number of edges in a path. The shortest path is called geodesic. Points falling on the only geodesic or on all geodesics linking a given pair of points are said to stand between the end points.” (Freeman 1978/1979)

According to Freeman, point centrality is clearly the dominating theme in studies within social networks. It is based on a very intuitive concept: the point at the centre of a star (see figure 7) or the hub of a wheel is the most central position in the network.

**Figure 7  A star or wheel of five points**

![Figure 7 A star or wheel of five points](image)

The actor in the centre ($P_3$) is more central than any other individual or position in the graph and is therefore unique. It can, however, be problematic to determine the way in which such a position is structurally unique. Thus, it is important to understand that there is no single measure of network positions. To solve the problem the centrality concepts presented earlier can be used: the centre of a star has the maximum possible degree of centrality as it is connected to all other individuals ($P_1$, $P_2$, $P_4$ and $P_5$). What the star does not illustrate is the direction of relationships, which can also be analysed. The number of nodes / points adjacent to a given node can be measured along with the direction of the tie. In-degree implies that an individual has received and out-degree implies the ties initiated by an individual. This measure tells us not only about the activity of an individual in a network but also about the reciprocity of their ties. Reciprocal ties can be regarded as very strong ties, whereas one directional ties can be
regarded as weak ties. The direction of ties indicates also the level of centralisation in a network. It reveals to what extent a network is structured around one individual more than others.

If we analyse the star even further, we can see that the centre falls on the geodesics between the largest possible number of other points and, thus, the betweenness of $P_3$ is high. Since the centre is also located at the minimum distance from all other individuals, it is maximally close to them, indicating high closeness to all other points. Individuals can also create cliques in a network, meaning areas of high cohesion within a network. In such structures there is probably a great deal going on socially as individuals are connected to each other in different matters. This is why these cliques become sociologically important and revealing. In real world cliques individuals are seldom directly connected to each other as in a theoretically defined clique. Instead, a more pragmatic view is to treat social networks as consisting of overlapping cliques where connections are either direct or indirect ties. Individuals create cliques through action and, thus, create cliques that are interlinked with other cliques in a network. This makes the clique density significant and points out social circles in networks that are built on short chains of indirect ties between individuals. Moreover, social circles reveal brokers between cliques. Brokers are usually highly valued individuals in a network, who connect people, and distribute and share information between individuals. Thus, information sharing in networks takes place in social circles, creating the platform for sharing the intangible resources in networks.

4.2.3.1. Summary

The social networks in this study are analysed through centrality of actors and network centralisation. A central actor is an individual with many ties and, therefore, an actor with a high centrality level, as measured by its degree, is “where the action takes place” in the network (Wasserman & Faust 1994:173,179). Thus, I want to emphasise that the most essential element in the analysis is the interaction between individuals in the social dimension in a network. Network centralisation shows the general compactness and density of a social network. Thus, the compact social networks illustrate the informal networks through which individuals can act and where the social exchange within the studied pharmacy networks takes place. Sociograms are used for visualising connectedness between individuals and the centrality structures in the pharmacy networks.
4.3. Research design

The main purpose of the thesis has been stated to be to increase our understanding of multidimensionality of actors in business networks and the role of social networks in emerging pharmacy networks, with an emphasis on individual human action. Thus, the purpose of the thesis and the defined research questions have guided the process of designing the study, selecting the cases for the case study, conducting the data collection by combining qualitative and quantitative methods and, finally, analysing the data. In this chapter I will present how and why I have made my choices.

4.3.1. Selecting the case

The phenomenon of the emerging pharmacy networks has formed the basis for my research and therefore identifying the pharmacy networks that were included in the study was the first step in the research process. Choosing the population or selecting the appropriate base for a case study is a crucial phase in every research process and this should be made in an early phase of the process. Population defines the set of entities from which the research sample is to be drawn (Eisenhardt 1989). Thus, referring to Eisenhardt’s criterion of selecting the population, my goal was to choose cases which were likely to extend and support the theoretical discussion and strengthen the overall framework.

As I was to define the studied pharmacy networks, I could see how defining the population was simultaneously a matter of defining the boundaries for the case study and, thus, defining the boundaries for the networks I would be studying.47 As I investigated the pharmacy retailing business in general, the first criterion for finding pharmacy networks was based on natural boundaries (see, e.g. Hanneman & Riddle 2005). Natural boundaries are defined by Hanneman and Riddle (2005) “as the boundaries that the actors in networks themselves create and define”. In other words, natural boundaries are the first and perhaps most obvious identified boundaries of a network. In pharmacy networks the natural boundaries have been identified in terms of pharmacies being members of a business network and by using the brand name of the

47 As I have discussed in the theoretical framework, social networks and business networks have somewhat different views of the boundaries of a network and how they can be defined. However, it is commonly agreed that the boundaries for the studied networks must be specified in order to capture the processes and dynamics we aim to study. The defined network boundaries naturally setting the limits for the case study and data collection.
pharmacy chains. By searching for information about pharmacy networks from different sources, e.g. media and marketing material, newspapers and websites, I could soon find activities linked to certain pharmacy networks with brand names. I could identify in total four pharmacy networks in Finland in the period 2002-2006, with several joint activities and qualities, e.g. loyal customer programmes, loyal customer newsletters and magazines, and several internal activities, that emphasised their efforts to combine individual pharmacies’ resources.

Thus, the second criterion I used for defining a pharmacy network was the existence of joint operations under the brand names, e.g. finding documentary evidence of joint purchasing operations. All pharmacy networks had joint operations to some extent, at least in the form of limited co-operation in combined purchasing deals. The third criterion was the existence of strategic networks, meaning that there were signs of business development through networking. The fourth criterion was that the pharmacy network had started to take on a new shape, i.e. the network thinking would have started to create new organisational structures and shared practices. An example of this was that the members had started to organise themselves by creating rules for managing the network and employing administrative staff. The fifth and final criterion was closely linked to the third criterion of business development. I looked for tangible operational and financial efforts made by the pharmacies and whether there could be found a shared vision and strategy for the development of the organisation. This included marketing activities and communication of the network image both internally and externally. It also encompassed activities to develop the internal structure and functions linked to the network strategy, e.g. internal education programmes to improve personnel’s professional knowledge and also, education regarding the network and its strategies.

Of the four candidates only two were found to fulfil all five criteria, University Pharmacy (YA) and Hyvän Mielen Apteekit (HYMA). Both pharmacy networks had a settled network strategy about which they communicated inside and outside the network, i.e. to other actors in the market, including end consumers. These pharmacy networks could also be identified as the largest players within the pharmaceutical retailing business in Finland. They held the largest market shares of ca 10% each of the total number of prescriptions processed annually, thereby being the main competitors within the field. The pharmacy networks were quite different in their organisational structures, management and ownership (see table 3).
Table 3  Comparison of some key functions in the studied pharmacy networks

<table>
<thead>
<tr>
<th></th>
<th>YA</th>
<th>HYMA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ownership</td>
<td>Owned by the University of Helsinki</td>
<td>Privately owned pharmacies</td>
</tr>
<tr>
<td>Organisation</td>
<td>Centralised management</td>
<td>Owners of the pharmacies are the managers, Entrepreneurs</td>
</tr>
<tr>
<td>Hierarchy</td>
<td>Exists between the entities, individuals have clear positions in the organisation</td>
<td>Does not exist in the same sense</td>
</tr>
<tr>
<td>Integration of activities (on a scale of 1 – 7, 1=undeveloped, 7= fully developed)</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>Economy</td>
<td>Corporate economy</td>
<td>Mainly separate, membership fee is collected every year to cover the joint costs within the chain</td>
</tr>
<tr>
<td>Size</td>
<td>17 pharmacy units (maximum number of units provided by the governmental authorities)</td>
<td>31 pharmacy units (24 main pharmacies and 7 subsidiaries)</td>
</tr>
<tr>
<td>Turnover</td>
<td>250.9 Million € (in 2006)</td>
<td>110 Million € (in 2005)</td>
</tr>
<tr>
<td>Own education</td>
<td>Own education for personnel</td>
<td>Own education for personnel</td>
</tr>
<tr>
<td>Resources</td>
<td>Corporate</td>
<td>Purely based on members' own resources and activity</td>
</tr>
<tr>
<td>Strategy</td>
<td>Same organisational strategy through the whole organisation</td>
<td>Some joint strategic decisions, otherwise apothecaries make the decisions about their own entities</td>
</tr>
<tr>
<td>Membership</td>
<td>Individuals become members of the network through employment</td>
<td>Pharmacies / apothecaries become partners and remain owners of their businesses</td>
</tr>
</tbody>
</table>

It is natural to ask why I included two pharmacy networks in the study when also one could probably have provided sufficient in-depth data about individuals and the dynamic aspects of pharmacy networks. The reason lies in the twofold nature of the research interest of the thesis. The conceptual framework of the study aims to develop the understanding of actors’ multidimensionality and the role of social networks and, thus, analyse the aggregated actor identities in creating dynamics in business networks. On the other hand, the purpose of the thesis is to explore the phenomenon of evolving pharmacy networks from the network perspective. The differences in the pharmacy network structures lead to the differences of formal vs. informal structures in networks. A very simple way of illustrating the formal structures is to look at the secondary data, e.g. organisational charts and information, where people are positioned according to their tasks in an existing scheme. The differences in the formal structures cause the differences in networks’ organisational hierarchies, and in many other functions as
well. YA and HYMA differ both in size and management structure, which implies different settings for their development in general. YA is centralised and owned and managed by an organisation and HYMA is built and managed on a voluntary basis by individuals. The distinguished formal network structures, different management policies and ideologies in the pharmacy networks, provide the possibility of studying pharmacy networks and individuals in networks based on very different, if not opposite premises. Thus, the studied pharmacy networks can provide information about the multidimensional actors and social networks in different contexts and illustrate the phenomenon from two different perspectives.

4.3.2. Data collection

The data in my thesis comes from a combination of different sources and methods. The data collection process in the thesis stretches from the end of 2001 to the end of 2006. By combining qualitative methods (e.g. interviews, field notes and observations) with quantitative methods (surveys) the study has aimed to exploit synergies between different data sets.\(^{48}\) (See Eisenhardt 1989.) I have been able to study both the social structures and the social content in the social networks by applying different methods for data collection. As this study consists of several phases of data collection, where several methods have been applied and combined, it has been very fruitful to use matching of theory and empirical material. Different stages of the study have highlighted a need to redefine the theoretical framing in order to better understand the empirical findings, which again has influenced the continuous analysis of the data. I have been able to redefine and reflect on the collected material, which has provided me with the opportunity to add new elements to the study while it has been progressing. Referring to Eisenhardt (1989), such a process provides stronger substantiation of constructs and hypotheses. The chosen design can be referred to as methodological triangulation, implying the use of multiple methods to study the same phenomenon (see Patton 1987:60-61). Through triangulation the strengths of different methods can be combined. Triangulation is recommended in case studies as it provides a rich base of material and diminishes problems related to one single method. Thus, the surveys for structural analysis of social networks have been conducted to support the overall

\(^{48}\) Researchers have argued that quantitative methods can support qualitative research by opening up a new dimension to the analysis. Referring to Alvesson and Sköldberg (1994:11) quantifying data can be useful for clarifying material and providing the background material for an adequate qualitative research. Thus, it can be stated that it is more beneficial to be able to combine quantitative and qualitative research than to view them as mutually exclusive methodologies.
framework, not as a separate experiment, but to gain holistic understanding of social networks. In addition an extensive amount of secondary data has been collected from various sources, e.g. journals and professional association magazines, annual reports, national and EU legislation, professional association union reports and newspapers. Hence, it can be argued that combining qualitative and quantitative modes of inquiry is viewed as desirable and ideal (Patton 1987).

The data collection process can be divided into two main strands: the data collection using a range of qualitative methods and the data collection using surveys, as illustrated in figure 8.

**Figure 8 The data collection process**

![The data collection process in the thesis](image)

While the qualitative data collection has been continuous since the beginning of the research process, the surveys for collecting the quantitative data for the structural social network analysis have been conducted as two separate projects. The flexible schedule for data collection has enabled a combination of different sources of evidence to be used, while shifting between analysis and interpretation (Dubois & Gadde 2002; Yin 1991). An example of this is the time lag between the first survey and the second survey. As I have been able to analyse the results from the first survey and simultaneously develop the theoretical framework, I was able to add new, relevant questions to the second survey that were crucial for the analysis of individuals’ perceptions of networks. The flexibility has also made it possible to discover unique
characteristics and processes in the case study, which has enabled new themes to arise which have in turn enhanced the analysis and theory development, as for example the relevance of membership identification among the network members and the importance of moral understanding in the pharmacy networks. I have also kept in contact with the pharmacy networks and the interviewees throughout the whole research process, which has given me the opportunity to have a dialogue with the respondents and also observe the development within the networks as well as the general development of the whole pharmacy business.

4.3.2.1. Field notes and interviews

In the early stages of my research process I had an opportunity to work at a pharmacy belonging to one the studied pharmacy networks and, thus, the data collection for the study began with field notes and observations. Working as a pharmacist gave me the opportunity to observe and listen to employees’ experiences of the network development, their network perspectives and opinions on the general development of the pharmacy business in the past and in the future. From the observations I made during my pharmacy practice, several interesting research questions started to arise. The phenomenon of pharmacies’ increased co-operation was “a hot topic” and chain development in the pharmacy context was widely discussed in the media at the time. Concepts such as chain development and chain strategy were also phrases used in the internal education and communication programmes in the pharmacy where I worked. The pharmacy network gave the impression of being professionally and business driven, having long historical roots and traditions supporting its development. However, the meaning of both the increased co-operation and the chain development as a concept seemed to be blurry and actors perceived them in very different ways. Moreover, on several occasions the ethical and moral issues related to the pharmacist’s profession were brought up in the discussions. Some pharmacists suggested that the new development went against a pharmacist’s morals and ethics. Some pharmacists did not pay any attention to the contemporary discussion about chain development trends within the business, let alone engaged in the network / chain strategy that was part of the internal education at their own places of work. Other pharmacists again were committed to the network idea and wanted to understand its meaning and therefore discussed the topic and its meaning for them with their colleagues. The first observations related to the fieldwork, have been summarised in appendix A. Based on these observations the preliminary research questions could be defined, through which
the level of integration in the networks and individuals’ role in networks were evaluated. The observations inspired the decision to study pharmacies’ network development as a phenomenon. They also provided the idea of studying dynamics in the emerging networks from an actor perspective, and, thus, viewing dynamics as dependent on individuals and their ability to simultaneously have several identities which create and give meaning to the activities in a network. Based on these findings the current research questions were then formulated as the research process continued.

In addition to the observations and field notes, I conducted 14 in-depth interviews between February 2002 and August 2006. I chose respondents based on their experience of the pharmacy business and network development therein, meaning that I considered the respondents to possess insightful and credible information about the studied phenomenon. Thus, the selection of respondents was made through a purposeful sampling aimed at finding the information-rich and credible respondents (Patton 1987). Respondents were apothecaries, head pharmacists, or managers in the studied networks. Their roles and positions entitled them to act and participate in the decision-making processes in the studied networks and they were experienced professionals with several years of experience from pharmacy work. An additional two respondents outside the pharmacy networks were interviewed in light of their eminent roles and insight into the pharmacy business in general. They had worked as apothecaries or at the management level for several years and they had gained knowledge as well as experience-based insight into the Finnish pharmacy industry.

All interviews were conducted on a confidential basis and they took place with the consent of the respondent, who knew that the material was being collected for the purpose of being analysed in the dissertation. Respondents were mostly very willing to be interviewed, but it was quite hard to persuade some of them into a dialogue. The reason for their reluctance was that they were afraid that someone might take advantage of any commercial sensitive they divulged. Some respondents were particularly keen to keep their identity secret, and therefore I respected their wishes and decided to handle all respondents anonymously. Interviews were arranged either as face-to-face meetings or discussions over the phone. As I wanted to cover the main areas and themes of the theoretical framework in the interviews, the open-ended questions were designed accordingly, giving the freedom to modify and broaden them if needed. The interview guide was useful in seeing to it that all important areas were covered during the interviews. The open interview structure made it possible to adapt
to each interview situation. Although eventually all respondents were willing to be interviewed, their willingness to provide detailed information varied, which made the interviews very different from each other both in length and in the amount of personal, detailed information that was provided. One interview could take one hour and another from three to four hours. Interviews were conducted in Finnish or Swedish and they were transcribed based on notes made during the interviews.

In addition to the field notes and interviews I have used an extensive amount of secondary data, e.g. annual reports (from 1989 to 2006), historical reviews, pharmacies’ own marketing and corporate material, Finnish authorities’ research reports, EU directives, press releases, journals and articles. External sources, e.g. newspapers, have also been included as supporting material. The secondary data has been especially useful when describing the development of the pharmacy industry and the Finnish pharmacy system. The historical review provides the basic understanding for the case study and for the network development I studied. The secondary data has also helped in structuring the primary data I have collected and, referring to Yin (1989), multiple sources and crosschecking have been useful in order to achieve internal structure as well as external validity.

4.3.2.2. Sampling for the surveys

The main reason for conducting the surveys was of course to capture the social structures found in the pharmacy networks: individuals’ preferences for working with other people, communication with colleagues in different situations, individuals’ roles and positions in the network, the strength of relations between managers and connectedness to other network members. A crucial task for all network studies is, however, to decide which actors should be included in a survey and which should not. Researchers highlight the damage and biased valuation that follow by careless boundary specification, especially when conducting a survey in network studies, as careless design can fundamentally misrepresent a network (Kjellberg 1994:56; Laumann et al. 1982:19). A careful sampling strategy should begin with an evaluation of three critical issues linked to defining a network and its boundaries (as discussed earlier in relation to selecting the pharmacy networks for the study): actor attributes, relations, and participation in specified events or activities (Laumann et al. 1982:18; Kjellberg 1994:56).
Actor attributes are most commonly used for defining a network and its boundaries. Actor attributes can per definition be divided into two groups: positional definition and reputational definition. Quoting Kjellberg (1994:56): “Either, an actor is included due to membership in a group which displays a certain attribute, referred to as a positional definition, or it is included on the basis of reputation characteristic, i.e. a knowledgeable informant may judge the actor to be a member.” In many respects it is more convenient to apply boundary definition based on actor attribute: it does not, for example, limit the possibilities of analysing the network from other perspectives, such as delimitations and boundaries based on relations or specific events. Thus, choosing actor attributes enables us to study the nature of relations and the participation in events in networks to the full extent, as they are free to vary (Kjellberg 1994:56).

Individuals’ interaction within a business unit and business units’ interaction in an activity chain, together create the network I am studying. Choosing the sampling unit for the actual data collection in the selected population indicates the smallest possible units of analysis in network studies. Referring to Knoke and Kuklinski (1982:14; Kjellberg 1994:55): “A network study should be designed to include one or more lower level in addition to the higher level system where the network to be investigated is found. The lower level units are actors of the network under study.” The main research interest in this study is at the actor-network level, investigating relations and interaction between actors. In order to study actors on a socio-centric level in networks, we need to study the relationship patterns between individuals in the networks. As we are keen to learn more about actors’ perceptions and identities, we cannot overlook the relevance of individuals’ egocentric networks. Therefore, our interest is also to learn about how individuals' behaviour in networks enables actors' multidimensionality.

Definition of the network boundaries based on actor attributes is also related to the approach we choose when studying networks: whether we choose the ego-centric approach, which focuses on specific actors, or the socio-centric approach, which focuses on the larger context of which actors are part (Kjellberg 1994:61). In the ego-centric approach the focus is on individual actors, where the definition of a network begins from an actor’s perception and description of the context. In the socio-centric approach the focus is on the structure and the context, which is defined by the researcher, whereafter the context can be “opened-up” to define the individual actor’s position in the network.
It can be argued that most actors will consider themselves as the centre of their network, and also act accordingly (Kjellberg 1994:59). Individuals can, therefore, easily identify relationships they have with other individuals, and individuals’ ego-centric networks represent an important analytical level when studying the behaviour of actors (Kjellberg 1994:59). Thus, the lowest sampling unit in the study is built on individuals’ ego-centric networks, which create the base for the network data. I have applied a systematic sampling procedure within the defined networks, where all members at the managerial level have been included as respondents in the surveys. The procedure could be defined as non-sampling, as I have delimited the networks prior to the data collection, as described above, and collected relationship data including all actors and units at the managerial level. Thus the information in the ego-networks describes the social networks of the individuals and thereby reveals actors’ behaviour in the networks through the relationship patterns.

4.3.2.3. Surveys

The survey design was adapted from a model for SNA research designed by SNA researchers (see for examples Burt 1992/ INSNA group). As noted above, the survey was conducted as a whole-network study (see Marsden 2005), indicating that all individuals who were members of the networks were included. With the intention of defining the whole network, a roster of the actors in the pharmacy networks was compiled before data collection was started. Thus, the roster technique for defining network boundaries was applied when designing the surveys. Through the roster it was possible to create a complete list of all the actors in the actor set (Wasserman & Faust 1994:46). After the list of all actors in the defined networks had been collected, and prior to the data gathering, the survey was sent to each of the defined actors. Thus, when the respondents were asked to name people with whom they communicated about different matters, they were free to name people they perceived to be important. Respondents were asked to name people in different contexts, within their own unit and/or in the network, with whom they would discuss about confidential matters or about general work related matters. Respondents did not choose names from a list of actors that would have been given to them. Instead, respondents generated the lists of

49 The surveys are attached in the appendices B & C.
50 Further information and details of INSNA and different survey designs and instruments can be found at www.insna.org.
51 The criteria defined by actor attributes.
52 Network delimitations are based on actors’ membership, i.e. actor attributes, in the studied networks.
names themselves. This design is called “free recall” design (see Wasserman & Faust 1994:46) and the questions were, thus, designed by applying the name generator instrument (Marsden 2005:11). As the structure of the questions was open, respondents could name those people that they felt to be important. Thus, the respondent’s own choice of other individuals created the natural boundary for the individual social network at the ego-centric level.

In order to conduct the social network analysis in both studied networks, surveys were sent at separate times to both pharmacy networks. The general structure and questions in both surveys have been the same, although questionnaires have needed some modifications based on the special characteristics of each network. The questionnaire structure can be divided into five main areas, which combined provide a picture of the individuals’ social networks, i.e. the ego-centric networks. The first part of the questionnaire concentrates on the respondent’s background information. The second part (in the HYMA questionnaire, questions 10-21) aims to illustrate the personal characteristics of an individual, who has become a member of the network and the social grounds for the process. Question 22 (number 6 in the YA survey) provides a picture of the personal characteristics of an individual as a social being prior to network thinking by asking about the personal way of working. The third part maps the social network of an individual, where the actual names are generated. The fourth part focuses on the relations, as the individual perceives them, with actors he/she has named. The questions focus on the key issues of centrality - measuring the relationships and their nature and structure. The fifth part of the survey focuses on the strength of the relationships as well on how an individual perceives him / herself as part of the network.

The first survey was distributed to the pharmacy network of YA in August 2002 (see appendix B). Preceding the actual survey a pilot study was conducted in spring 2002. After some improvements were made, the survey was sent to the top management (head pharmacists and administrative personnel and managers) and to the middle management (pharmacists referred to as customer service managers) in 17 pharmacy units and in YA administration. In total, 66 employees at the management level received the questionnaire. After receiving the questionnaire all respondents were

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53 Head pharmacists are in their position as managers equal to apothecaries in privately owned pharmacies. They cannot, however, be called apothecaries as they do not posses a personal pharmacy license. They are responsible for their own pharmacy unit in the network.
contacted by the leadership team to remind and urge them to participate in the survey and, thus, the first phase of the social network data collection went very swiftly.

The second survey was conducted in spring 2005 in HYMA (see appendix C). A pilot questionnaire, which was built on the same format as the first survey, was sent out in December 2004. As the second network of HYMA was different from YA in its structure and organisation, the pilot study revealed that the questionnaire had to be adapted to better fit the network. Moreover, the research process had indicated a need to collect more information regarding the network development processes at the individual level in voluntary networks. The questionnaire was adjusted accordingly and new questions were added to the final version of the questionnaire. The new questions at the beginning of the survey were directed to apothecaries to find out apothecaries’ reasons for becoming members of a voluntary network and their perceptions of being members of a pharmacy network. These questions referred to the apothecaries’ individual capabilities and characteristics.

The final questionnaire was mailed to 19 pharmacy units (the main pharmacies) all over Finland in February 2005. The total number of respondents was 47 and they covered all apothecaries (top management level), pharmacists at the middle management level, as well as the newly recruited administrative personnel. The data collection process in the second survey was slower than it had been in the first survey. Differences in centralised and voluntary networks became apparent through individuals’ attitudes towards the survey. Gaining access to the voluntary pharmacy network HYMA required more preparatory work before the study could be conducted. Several discussions with the management and apothecaries were necessary in order to convince everybody of the confidentiality of the study. When the actual data collection began, all respondents were contacted by the CEO of HYMA and asked to participate in the study. Despite all the preparations I still had to personally persuade some respondents to participate. It also turned out that some respondents preferred to be interviewed over the phone rather than fill in the survey. Hence, to guarantee that as many respondents as possible participated in the survey, my role as a researcher became more of a coach when I “talked through” the survey with the respondents.
4.3.3. Unit of analysis

This study applies an actor-network perspective, where business networks are viewed from the actor perspective. Referring to Halinen and Törnroos (1998) the actor-network perspective is the most suitable perspective when the case study approach and/or personal interviews are applied. Through the actor-network perspective individuals’ views of networks and human action can be analysed and thereby individuals’ perspectives of a network are linked to the wider network. Thus, it can be argued that the actor-network perspective recognises the special characteristics of human actors in business networks. Quoting Halinen and Törnroos (1998): “Personal dispositions and characteristics count: individuals are part of the network and are in fact its organisers and change agents.” The thesis focuses on individuals’ different identities in different actor dimensions in the pharmacy networks: 1) as human beings 2) as professionals, 3) as representatives of their pharmacies and 4) as representatives of the pharmacy networks. In order to analyse the multidimensionality of actors, the data has been collected at the individual level (ego-centric, primary data) and at the organisational level in the network (socio-centric, secondary data). Through the data from the individual level (interviews and surveys) we have been able to analyse how individuals perceive the network of which they are members, the development processes, and how and why they are interacting with other individuals. Individuals have been the source of primary information, but it is important to emphasise that the unit of analysis is not limited to the individual actor. The main unit of analysis in the actor-network dimension is the entity consisting of a collection of individuals and the linkages between them (Wasserman & Faust 1994:5), i.e. the networks we are studying. Although individuals in the study have provided information about their ego-centric networks we are not analysing individuals’ personal social networks as such. Instead, the research interest lies in the patterns of relationships between the members of a network that describe the social networks between the members of a network, i.e. the social structures and substance in the social networks as has been stated in the research questions. Through the ego-centric data, individuals’ connections to other individuals have been analysed, and I have been able to construct a picture of the network at the social level where individuals are connected and embedded in the network context. As the individuals in pharmacies are either owners of their business unit or in charge of the operations possessing a managerial position, the individual and the firm level become interrelated and in many cases difficult to separate. Through the
analysis it is important to gain an understanding of how individuals can simultaneously have several identities.

4.4. Data analysis

The multiple methods that I have applied in the data collection process have had an affect on the data analysis as well. The analysis of different types of data, i.e. qualitative and quantitative data, requires different approaches. The main difference between the analysis of qualitative data and quantitative data is that there is no clear and accepted set of conventions for analysis of qualitative data while there is for analysis of quantitative data.

The qualitative method for data collection and methods of qualitative analysis are often intertwined and it can be difficult to distinguish between them, as Collis & Hussey (2003:252-253) have argued. Although there are certain challenges in qualitative data analysis, it is still manageable, and managing the data highlights two tasks in particular that need to be conducted properly to facilitate a successful qualitative analysis: reducing the data and structuring the data in a coherent way. Data reduction “is a form of analysis that sharpens, sorts, focuses, discards and reorganises data in such a way that “final” conclusions can be drawn and verified” (Miles & Huberman 1994:11; in Collis & Hussey 2003:253). Data reduction is thus a way of putting together data from different sources - field notes, interviews, and documents - as I have done, and summarise the data in a systematic way, i.e. by using a coding system. Structuring the data implies that the researcher will create a structure for the data and devise categories into which data can be fitted (Collis & Hussey 2003:253). The categories can be taken from the theoretical framework prior to data collection or they can emerge during the actual data collection and while the research process continues.

The way I have conducted the data analysis and managed the qualitative data is described by referring to the main elements of qualitative analysis defined by Lindlof (1995; in Collis & Hussey 2003:261). First, the abductive research approach has enabled analysis to take place continuously throughout the study. I have been able to conduct tentative analysis at different stages of the study, for example between making field notes and conducting the first interviews. Ideas have arisen from the already collected data, and the analysis has been modified when new data has been collected. Second, the data reduction has involved sorting, categorising, prioritising and
interrelating data from different sources. As the broad theoretical framework shows, the data can be categorised and analysed from several different angles. Large amounts of data have been collected for the study. The surveys in particular include an extensive amount of data, and I have not utilised all of it in the study. The decision to exclude some parts of the data from the analysis has been based on prioritising the data that has supported the main purpose of the study. Inter-relating the quantitative data from the surveys with the qualitative data has been essential for complementing the analysed social structures with an analysis of their content. By coding the data and also by using matrices and flow charts to illustrate the data, the amount of data has been significantly compressed and reduced. Third, I have strived to create an understanding of how the respondents in the network make sense of their own action and reasoning in order to link the empirical material to the theoretical framework. In the following sections I will explain in more detail how the analysis has evolved since I conducted the first field notes.

4.4.1. Pre-analysis

While working as a pharmacist I was able to observe what took place within the pharmacy chain of YA, in which I was practising. Based on my observations and discussions with the people I was working with, I kept a written record of what happened in different situations. The rule of thumb was to write the field notes as often as possible and complete them where necessary as soon as possible to maintain a high quality of observations (Patton 1987). As I was working for the pharmacy for nearly six months, I did not keep a research diary for the whole period of time. The field notes concentrate mostly on the first two months of my practice, whereafter I was able to define the areas of interest that I would continue to focus on. The beginning of the research process and the first evaluation of the field notes and observations were consequently conducted with an open mind and my purpose was to observe what would emerge from the data. I did not have any fixed theoretical framework at that point and, thus, the field notes were important inputs when formulating the topic of my research.

I believe that the fieldwork conducted at the beginning of the research process has strengthened the foundation of the subsequent study by revealing aspects that I presume would otherwise have been missed. All social systems / organisations seem to involve routines that participants in those routines take for granted. Routines would not be mentioned in an interview situation, as they are not registered as meaningful
(Patton 1987:73). However, it is exactly these nuances that become important and interesting issues that the researcher desires to find. If I had only conducted interviews with randomly chosen respondents, I would probably have been given a vivid picture of the network, but it would have restricted my view to the respondents’ own views of what the important issues were. As an observer and participant in the network I could make notes on tacit issues that I found to be important, i.e. how actors perceived their profession in different work situations and how the network development became visible in the actors’ action and stories. In addition to my observations I could also interview people and get closer the subject I was interested in. Because I was one of the pharmacy staff I was regarded as “one of them”, although my colleagues knew that my intention was to collect data for my research.

The field notes provided me with an understanding of what actions took place within the pharmacy network and helped me to understand what I had seen (Patton 1987:73). My closeness to the field gave me valuable information about sensitive matters and extent to which people were willing to discuss these matters. One thing that the YA employees I worked with would not openly discuss was any criticism of the chain structure and management. Thus, I learned about issues that pharmacists would not like to be interviewed about. Above all, the fieldwork gave me the first hand contact with, information about, and direct experience of my research field, which has helped me to describe the context in which the studied action took place, to design the further research process and interpret the data. An important lesson from the very early stages of the research and pre-analysis of the field notes was to recognise the meaning of the historical background of the pharmacist’s profession. The historical analysis in the thesis has been conducted based on document analysis, i.e. analysis of historical reviews of the development of the pharmacy business and profession, which have generated the pre-understanding of the development of the profession. Through the pre-analysis I have been able to identify several of the key characteristics of the studied field and the contemporary phenomenon.

Based on my observer insight I was able to identify central individuals in the network, i.e. key informants, implying those actors possessing relevant information. Key informants are people who are particularly knowledgeable, people whose insights can prove particularly useful in collecting and interpreting the data (Patton 1987:95). The key respondents I first identified helped me further on the road to finding other persons who could be important informants and so forth. Thus, while looking for
valuable respondents I found one of the indications of the importance of social contacts among the pharmacists. I was given recommendations from one person to contact other persons as a personal favour. Through these connections I was able to find new respondents, who were willing to see me as I was accepted by the community and not regarded as an intruder. Without this social network, finding respondents who would be willing to be interviewed without my being referred to them by one of their contacts was not easy. I experienced a great deal of prejudice among the apothecaries and pharmacists against all kind of studies and research. I could also sense that the development of pharmacy networks or pharmacy chains’ strategies was a sensitive topic. Raising the subject never failed to provoke a response and respondents could either be straightforward in articulating their views or become reserved. Discussing the development aspects almost always led to a discussion of the threat to the pharmacies’ future position and the possible effects of de-regulation of the pharmacy privileges.

As I was interested in learning more about individuals’ social networks, I was touching upon another very sensitive and personal matter. Several respondents initially refused to discuss their social contacts and one of the apothecaries stated: "I don't see the point in asking about my personal contacts. I don’t want to discuss them with anyone, as they do not influence the way I work.” Therefore, I had to persuade several respondents to participate in the study, and to discuss sensitive issues, which required me to gain their confidence.

Due to the sensitivity from the respondents’ side and my promise of confidentiality, I did not record the interviews. Instead, I documented them by taking extremely detailed notes during the interviews. I never conducted more than one interview on the same day and in fact would leave at least one day between interviews so that I did not risk mixing up the information I had received. After the interviews I immediately looked through my notes and expanded them with details that I had marked to be filled in later on. As I went through my notes after each interview, I also made the pre-analysis of them and interpreted the data as part of the abductive research approach. This naturally included an evaluation of the quality of the material. Had I gained the information I was looking for? Did we discuss all the topics in the interview guide? What special observations could be made during the interview? For the purpose of analysis, all respondents were given codes based on their title or position, and their identities cannot be established from the text. I have applied the same practice in the treatment of the quotes and citations and respondents are referred to either as
apothecaries, pharmacists or managers. In this way the respondents have remained anonymous throughout the research. The only exception from the privacy policy has been made in the quotes taken from documented and printed material, e.g. newspaper articles, historical reviews and annual reviews, where names of some apothecaries may have been published.

4.4.2. Analysing the surveys

Surveys consist of different types of questions that require different approaches depending on their nature. Most of the data has been analysed as social network data, but the open ended questions regarding personal perceptions and social grounds for network membership have been analysed as the qualitative data in the study, based on defined themes and categories.

For the social network analysis the data has been analysed as a one-mode network using one set of actors per network. The relational dataset consists of five different relationship types, which have been identified as critical elements in the development of long-term relationships in the theoretical framework: professional knowledge, trust regarding personal matters, advice, friendship / liking and trust regarding work-related matters. Moreover the dataset includes attribute data of respondents’ education, location and position in the network and also data measuring the time respondents have known each other, how well they know each other, and how often they communicate with each other. The data program UCINET 6.0 by Borgatti, Everett and Freeman (1999) has been applied for performing the social network analysis and the program NetDraw 2.24 within UCINET for visualizing the relationships in sociograms (directed graphs).

All social data has been transformed into a data matrix, which is the framework in which the raw or coded data can be organised in a more or less efficient way (Scott 1991:38). All the raw data from the surveys has first been transcribed to Excel. In Excel I have given a numerical code to each variable as required for the matrix format UCINET runs the analysis in. The data has been combined and coded for each relation separately. Thus, each relation has been given its own matrix. The non-numeric data, i.e. personal background information and other social characteristics, has been given numeric codes, whereafter it has been transcribed as social attributes. Once data has
been coded, the Excel spreadsheets have been converted to UCINET spreadsheets for the analysis. 54

4.4.2.1. Further delimitations

The surveys have been very extensive and, therefore, it has not been possible to include all the collected data in the study. The continuous analysis and refinement of the study's focus during the research process have shown that all the data could not be included and analysed in depth. Thus, data reduction has been conducted based on the same criteria as in qualitative data analysis, i.e. reducing the data in a structured way based on the key issues identified in the theoretical framework. When possible, I have used the same themes and categories for data reduction and categorisation as have been applied in the qualitative analysis. The reduction of data has also included the decision to exclude the data related to middle management from the analysis. The decision has been made partly due to the large amount of data and the need to keep the study focused, but also because of the poor quality of the data from the middle management group. The response rate in the surveys from both studied pharmacy networks was relatively high. In the first survey the average percentage of response was 87% in the higher management group and 71% in the middle management group. In the second data survey the average percentage of response was 96% in the whole survey among the higher management group, but only 79% in the social network analysis part of the survey. This difference is due to the earlier reported incidents where some apothecaries refrained from answering questions regarding their social contacts in the

54 UCINET 6.0 provides a variety of network-theoretic techniques (matrix algebraic techniques, see Mizruchi 1994) for researchers to apply. For presenting the social network structures and thereby actors’ centrality in the networks and connectedness to each other, I have used sociomatrixes and sociograms. (Scott 1991:41; Wasserman & Faust 1994:77) A sociomatrix is a two-way matrix where relations and attributes can be quantified. I have used both adjacency and affiliation matrices in the study to analyse the actual relations or ties between individuals and the affiliations highlighting the socially important aspects. Adjacency matrices are also called square matrices, actor-by-actor matrices, or two dimensional matrices, and their structure is very simple. The rows and columns represent the actors involved and the individual cells show the presence or absence of a tie between the actors. If there is a tie, the cell is marked with ‘1’, if there is not it is marked with ‘0’. The relations can also be valued in an adjacency matrix for measuring the strength of a relation between individuals. In affiliation matrices actors are related to affiliations, where the rows represent actors and columns attributes. In matrices relations can be linked to actors’ social attributes, revealing social networks based on different attributes and / or combination of attributes. In the social network analysis language nodes mean individuals in the network and lines represent the ties or relationships between individuals. The social network analysis is conducted by applying the socio-centric approach, where the sampling units have been defined by the actor attributes related to the formal structure of the networks (boundary setting), and where the smallest sampling units are the individuals’ ego-centric networks, stressing the internal validity of the network data.
network but nevertheless, agreed to answer questions regarding network development. In the middle management group the response rate in the whole survey was 61%, which is a fairly low rate. Due to the lower rate of response in the middle management group in both surveys, these respondents have been excluded from the analysis. The structural analysis has been conducted only among top management, i.e. apothecaries, head pharmacists and managers in the networks’ administration.

The reduction of the data has provided a narrowed focus on the relations between individuals in top management in the networks. Therefore, all relations to people in the individuals’ own pharmacy units or to family members and friends have likewise been excluded from the structural analysis. The information regarding contacts to excluded actors, i.e. employees in the individuals’ own units, friends and family members, has been included as an extension to the analysis and as an explaining variable in the main analysis.

4.4.3. Combining the qualitative and quantitative data analysis

While collecting the data from different sources and by using different methods, it has been fascinating to find some issues repeatedly thrown up by both of the data sets. I have been able to find patterns of behaviour and issues that have been highlighted by both the qualitative and the quantitative data and by several respondents, such as the outliers in the social networks and the focus on professional matters in communication between network members. Nonetheless, I have also found material that has at some points contradicted the issues raised and created new angles to the analysis, such as how trust is developed between the network members and how little friendship seems to influence professional communication. Several issues that I have acknowledged even before the analysis began have arisen and, thus, they have clarified some of my pre-existing assumptions. On the other hand, the richness of the data has also provided me with many surprises and plenty of new understanding. Thus, the continuous analysis and evaluation has helped me to find and identify new aspects for analysis.

The amount of secondary data that I have analysed has been extensive, but it has broadened my understanding of the phenomenon of pharmacies’ network development and the breadth of the issues and traditions related to the pharmacy industry and the profession of pharmacist. It has provided me the ground knowledge on which the research process has been structured. When I first began the preliminary analysis, I
started coding the material based on themes in the qualitative data that I had identified as being interesting. As I see it, there are two lines of analysis in the study that have been developing together with the theoretical framework. One is focused on the phenomenon of the networks developing in a field where they have not previously existed and the other is focused on multidimensional actors and social action in pharmacy networks. Thus, the analysis has focused on two larger themes based on which the data has been managed and coded – quotations and citations regarding the phenomenon of the emergence of pharmacy networks and quotations, citations and relational graphs regarding the networks as a construct of human behaviour, i.e. individuals as generators of action in these networks. Within the used main themes, I have continued to deepen the analysis and focused on areas that have gained a more significant role. I have grouped the coded data into smaller categories according to the themes and patterns that have emerged.

Patton (1987:62) has stated that the extent to which a qualitative approach is inductive or deductive varies along a continuum. I have presented a tentative model at the end of the section in the thesis which outlines the theoretical framework, which is a result of the continuous analysis, coding and categorising that has been ongoing since the beginning of the research process. The research process has initially been an inductive process, in terms of how it was started and how the research questions have been created. However, my approach in the later analysis has become more deductive as I have further explored and developed the model against the combined qualitative and quantitative data with the aim of filling in the gaps in the model with new empirical findings.
4.5. The validity and reliability of the study

“The problem of defining the data sought is not only one of communicating with the respondent, i.e. making the study reliable, it is also a question of communicating with oneself, i.e. of making the study valid. What information should I be interested in?” (Kjellberg 1994:60) Validity and reliability are concepts most commonly used to measure the quality of research. Validity is used to analyse whether the data captures the research issues in focus. It also questions whether the used measure of a concept really measures what we want to be measured. Reliability refers to consistency in the research, thus, can we rely on the data and the stability of the data, which has to hold throughout the analysis. These are, therefore, the key criteria for any researcher to consider when establishing and assessing the quality of their research (Bryman & Bell 2007). In qualitative studies, i.e. in case study research, validity and reliability do not necessarily have the same meaning that they do in quantitative research and, thus, the concepts of validity and reliability need to be adapted to the need to assess the quality of qualitative research. There are several suggestions as to how to approach the problem. One is to assimilate reliability and validity into qualitative research (see Bryman & Bell 2007:410; Collis & Hussey 2003:278) by adapting concepts of external and internal reliability and external and internal validity. External reliability concerns the replicability of a study and internal reliability the internal consensus of the observations. Internal validity refers to the match between the observations and the developed theory and external validity implies whether the empirical findings can be moved beyond the actual study to another social setting (Bryman & Bell 2007:419).

I find these concepts very useful for comprehending the different aspects of the research process and evaluating them from different angles. However, I feel that validity and reliability as such are not well adapted to the evaluation of the research I have conducted, except from the survey study of social structures. I view the world as a social reality and thus, I feel more comfortable with the assessment criteria proposed by Lincoln and Guba (1994) (see also Bryman & Bell 2007). The main criteria they propose are: credibility, transferability, dependability and confirmability, which are all related to the main issue of trustworthiness.

The methodological choices in the study have supported the abductive research approach. It has not always been easy to analyse several quite different sources and to
learn to use different methods for collecting the data. However, triangulation has become acknowledged as one of the best ways to obtain high credibility in a qualitative research process. Different methods and material compensate and support each other and together they strengthen the analysis and results. Another factor that will increase the credibility of a study is the time spent studying the subject. I have been studying the pharmacy field since the beginning of the research process and have been developing an in-depth understanding of the field and the subject ever since. The time I spent working at the YA pharmacy has provided me with the pre-understanding utilised in the later research, in understanding pharmacists’ world and business. Based on the critical aspects mentioned above I would like to argue that my study is characterised by high credibility and trustworthiness.

I acknowledge that the qualitative findings in my study are bound to the context and specific for the social world to which they are related, implying low generalisation or replication. However, it has not been my purpose either to generalise the findings or to replicate them. Not all data needs to be transferable as such, but through rich accounts of detailed data and respondent citations also qualitative data becomes transferable. I would like to argue for the importance of theory development through empirical findings in my study. At the analytical level the models and findings can be applied and compared to other studies. Thus, I believe that my findings regarding pharmacy networks’ development and multidimensionality of actors will hold in other contexts. If the model would be applied in some other context at some other time, the identified key issues and findings would most likely be similar.

If one were to audit my study and the research process, and based on that replicate my study, I still believe that the findings would be similar. A good record of all phases of the research process is an asset that can be useful when the dependability of a study is discussed. I have documented and filed an extensive amount of data describing the research process and the different phases of the process. There has been so much information available and several data collection processes going on simultaneously that, intuitively, I started keeping a research databank, where all the versions of preliminary analysis, theory constructions, discussions with respondents, supervisors and colleagues have been documented, and which describes why and how I have decided to choose one path instead of another. Whilst looking back my choices appear to have been rational, I must admit that at some stages the goals of the research journey have been less clear. In such situations my responsibility as a researcher has been to
interpret the data and decide how to continue. Therefore, it is important to emphasise that although I have been influencing the research process by being subjective at certain points, I have still strived for a high standard of ethics in research. Thus, I have aimed to view the world through the spectacles I have developed during the research journey.

4.5.1. A quality assessment of the social network study

Validity and reliability of a research process require a careful evaluation. There are several aspects that influence the validity and reliability of a network study and social networks in particular have several characteristics that have to be considered. The critical issues related to quantitative social network data are rate of response and how to deal with missing data. The evaluations of qualitative data the evaluation is less straightforward, but a good combination of different methods can lower the risks of invalidity to some extent.

The response rate in both surveys has been above 80% in the higher management groups, which can be regarded in general as a very high rate of response. However, in network studies, and especially in social network analysis, it is a sufficient rate but not very high. The responding percentages in the middle management group were on average lower than in the top management group. As the validity of the data is affected by the level of response, i.e. to what extent individuals have responded to the questionnaire, some delimitations have been made after the data collection in the second phase was finished in 2005. The structural analysis of social networks has been delimited to the material collected from the top management level in order to minimise the risks originating from missing data in the middle management group, where the response rate has remained beneath 80%.

There are numerous potential reasons for the low response rate among middle managers, but I have identified the following as being most relevant. In the middle management group the mobility of personnel is quite high and the rapid personnel changes have made it difficult to reach all the pharmacists at the middle management level. Pharmacists who work as middle managers are often young and they are keen to

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55 In the literature, network researchers report network response rates between 90% and 65%. Thus, incomplete data sets are a common problem, and require certain decisions to be made about how to handle and analyse incomplete data (see Stork & Richards 1992:195).
gain their own pharmacy licenses and become apothecaries. Therefore, younger pharmacists often leave the big pharmacies in order to start their own businesses in small cities that are less attractive for the more experienced apothecaries. Young pharmacists are less likely to be committed to one pharmacy and will often change their place of work in order to gain experience from many different pharmacies. The movement of personnel in the top management group is not as fast and continuous as in the middle management group, and therefore, top management is critically important for the analysis of emerging networks and of the structure of social networks in the pharmacy networks.

As neither the survey respondents nor the interview respondents have been randomly chosen from a population, there is naturally a risk of selective bias. However, all respondents have met the criteria given by the delimitations, according to which all respondents in interviews and surveys have been identified as members of the networks being studied either based on positional definition, or on reputational definition, i.e. actors have been identified by other actors as being relevant. Thus, it can be argued that actors have been included based on actor attributes and involvement in relationships that construct the studied network. By defining networks based on actor attributes there is nothing to prevent the inclusion of other types of relationship in the analysis, which implies that issues such as alignments between formal and informal relationships may be analysed in a network defined as firms which have formal relationships with each other (Kjellberg 1994:63). Consequently, the described boundary specifications and the arguments for the delimitations used in the study imply that the possibility of bias regarding respondents can be considered to be very low which improves the validity of the study.

Choosing clear boundaries for a network and deciding on the population to be included are especially necessary when we are interested in social networks. By delimiting the number of respondents and defining the networks it becomes possible to better meet the goals of conducting a social network study. Quoting the sociologist Allen Barton: “Using random sampling of individuals, the survey is a sociological meat grinder, tearing the individual from his social context and guaranteeing that nobody in the study interacts with anyone else in it ...If our aim is to understand people’s behaviour rather than simply record it, we want to know about primary groups, neighbourhoods, organisations, social circles, and communities; about interaction, communication, role expectations, and social control.” (Barton 1968; in Freeman
2004) As this study focuses on individuals in social networks, i.e. actors’ identities, roles and positions, it can be argued that if the respondents had not been chosen carefully and the networks had not been well defined, both the validity and reliability of the social network analysis would be poor.

How to deal with missing responses is also closely related to vulnerability of social network analysis. As the average rate of response was 80%, an additional issue in a survey study of social networks is related to the reliability of the research and, thus, to the number of non-respondents. In social studies there is always a risk that not all persons will want to answer the survey, regardless of whether the researcher has been able to compile a roster of persons who are included in the network. It is, therefore, a typical characteristic of social studies, e.g. political studies, that some people refrain from participating in the study. Therefore, it can be difficult to obtain complete descriptions of relationships, which require information from both parties in the relationship (Stork & Richards 1992:194). In social sciences, missing data can be handled in three different ways: through complete-case analysis, available case analysis or imputation (Little & Rubin 1989/1990; Stork & Richards 1992). In complete-case analysis all incomplete data is discarded. In the available data approach both complete and incomplete data is used in full scale. Finally, in imputation, missing data is replaced by estimates produced by the researcher.

In practice most of the network data is incomplete and if we followed the strict guidelines of complete-case analysis, most of it would have to be discarded, which would affect and significantly weaken the analysis of such data. Therefore, the approach most commonly used to deal with non-respondents is the available-case approach. In this approach both fully described relationships and partially described relationships are treated as equally important. The equality is based on an assumption that if individual A mentions and describes a relationship with individual B, but B has not answered the question and thereby verified the relationship, we believe that there is a relationship between A and B, although the information about the relationship is not reciprocal. This approach is called reconstruction and, quoting to Stork and Richards (1992:197): “It does not add new links to the data set where there were none. It rather allows the description supplied by one person to be how the link between two people is described.”
Reconstruction of data is justified as long as the researcher bears in mind two main criteria for satisfactory reconstruction: first, respondents should not be systematically different from non-respondents and second, the data from the respondents must be reliable. The comparison of respondent and non-respondent similarity can be conducted based on variables at the individual level that have been shown to influence or constrain communication in a network, i.e. age, position, location, education, and on communication patterns. By this I imply that respondents and non-respondents should not vary very much as “link receivers”, although respondents are automatically defined as “link senders”. Referring to Stork and Richards (1992:198) receivers of links and ties in networks should include both respondents and non-respondents as respondents describe the relationships that they have with both non-respondents and respondents. Thus, the data in reconstructed networks allows a comparison of respondents and non-respondents based on the received links, where the variables or individual level attribute data among respondents and non-respondents can be compared together with the identified ties in the network. “If non-respondents are similar to respondents and the confirmation rate is high, the assumption is that a single linkage description can reliably characterize the link between a respondent and a non-respondent.” (Stork & Richards 1992:199) Consequently, it is possible to analyse reciprocal relationships even when there are non-respondents, when the communication between actors we study is undirected. Undirected communication implies that the way survey questions are designed and formulated indicates that communication is taking place between two individuals, i.e. “who do you converse with” or “who do you trust”. Hence, if two respondents both confirm and indicate that they communicate in certain matters with each other, it is regarded as a confirmation of the reliability of the overall data as well as an indication of a reciprocal relationship.

As Stork and Richards (1992) have stated, there are, however no hard and fast rules for deciding when rates of confirmation are sufficient enough or when respondents and non-respondents are similar enough. However, researchers should be aware of the confirmation rates and report on how similarity has been measured, as it will lessen the impact of missing data (Stork & Richards 1992:200). Based on T-tests conducted in SPSS 13.0, no significant difference could be found in the variables at the individual level between the respondents and non-respondents and, therefore, there is no significant difference between the two groups’ means (see table 4).
Table 4  T-test

Source: SPSS 13.0 for Windows

Also the correlations between the variables representing the two related groups within the same network were found to be fairly high and the significance value low (0.018, typically less than 0.05) (see table 5).

Table 5  T-test - correlation

Source: SPSS 13.0 for Windows

To conclude, as the studied networks can be defined as having natural boundaries, interpreting the results of structural analysis in an inter-organisational setting is not a problem. Non-respondents do not jeopardise the validity and reliability of a network study if we know the person is a member of a network and other members still have the opportunity to provide details of their networks, whereby the missing respondents can be identified. Thus, the risk with refusals is that we miss some interesting social data. Using surveys as part of a data collection process raises an important issue in case study research, i.e. increased validity of the study through triangulation. It is the solution to the problem of relying too much on any single data source or method and thereby undermining the validity and credibility of findings because of the weaknesses of any single method (Patton 1987:61). It also increases the richness of the data, which
results in a better interpretation (discussion) of results and, thus, better validity and reliability (Tashakkori & Teddlie 2003).

4.6. Summary

In this chapter I have discussed the methodological considerations that have guided me in the research process. The researcher is always expected to argue for the choices that have been made and thus it is important to evaluate from the researcher’s point of view which decisions have been made for purely methodological reasons or as a continuum to previous research, and which are based more on the researcher’s reflections on the studied phenomenon being influenced by personal opinions, convenience or other underlying assumptions. The pre-understanding of the pharmacy business and my own interests in the studied subject have influenced and steered the research process. My observations in the pharmacy networks have influenced the choice of the research topic, i.e. multidimensionality of actors in pharmacy networks, and thereby also the framing of the research questions, and how the actual data collection has been conducted. As I have been interested in describing the phenomenon of pharmacy networks’ development, the abductive research process has enabled me the flexibility to move and match between theoretical framework and empirical world, as well as to apply a combination of qualitative and quantitative methods and interpret the data during the research process. The amount of data that has been collected and analysed in the thesis is extensive. Access to primary data in the studied pharmacy networks has enabled entry to complete datasets needed for the social network analysis of the pharmacy networks, for exploring the emergence and evolution of pharmacy networks, and for analysing the multidimensionality of actors in the business networks. The historical account in the following chapter and the description of the pharmacy networks’ emergence and development in chapter 6 take us into the empirical part of the thesis, which aims to illustrate the phenomenon at the heart of the study.
5 REFLECTIONS ON THE PHARMACEUTICAL INDUSTRY AND THE PROFESSION

The aim of this chapter is to provide a historical account of the empirical field and the studied phenomenon. I will explicitly describe how pharmaceutical retailing is structured and I will explain the conditions for the development of the pharmacy business, as well as the rules and regulations concerning pharmaceutical retailing in Finland. The pharmaceutical sector has many special characteristics with strong historical boundaries, which is why the chapter includes several historical reviews which will provide the reader with an understanding of the premises that the industry stands on and has started from. The historical events linked to the pharmacy institution and to the development of the whole profession, have been shown to be very closely related to the world we are living in today. The historical development of the pharmacy business is a process that continues even today and provides therefore the framework for the contemporary profession of pharmacists. The process explains also the fundamental differences of the pharmacy networks compared to other types of business networks within other industries and the restrictions on the development of pharmacy networks.

5.1 Pharmacies and pharmaceutical retailing in Finland

The pharmaceutical industry and pharmaceutical retailing in Finland are controlled and governed by both European and national legislation and regulations. The strictly regulated business environment has steered the development of the whole industry. Although it might seem as if development within the pharmacy field would be impossible given the circumstances, this is not the case. On the contrary, there have been remarkable developments in the structures and forms of the pharmacy business in recent years. It is, though, important to remember that the development has had to take place within the given rules and regulations, which have also been changing as part of the development process.

Being part of the EU administration means that pharmaceutical distribution in Finland is affected by the common regulations for EU membership countries. The general guidelines for the pharmacy industry are summarised in the Guidelines for Good Manufacturing Practice (GMP), which were established for the first time in 1989. This guide has subsequently been revised and re-structured, resulting in the latest edition of
GMP, published in October 2005, which is based on two directives. These are the Commission Directive 2003/94/EC, from October 8th 2003, laying down the principles and guidelines of good manufacturing practice in respect of medicinal products for human use and investigational medicinal products for human use and the Directive 91/412/EEC for veterinary use. The purpose of the GMP is to ensure that the pharmaceutical industry of the EU will maintain high standards of quality assurance in the development, manufacturing and control of medicinal products. (Eudra Lex, The Rules Governing Medicinal Products in the European Union, Volume 4, EU Guidelines for Good Manufacturing Practice Medicinal Products for Human and Veterinary Use)

'A system of marketing authorisations ensures that all medicinal products are assessed by a competent authority to ensure compliance with contemporary requirements of safety, quality and efficacy. A system of manufacturing authorisations ensures that all products authorised on the European market are manufactured only by authorised manufacturers, whose activities are regularly inspected by the competent authorities. Manufacturing authorisations are required by all pharmaceutical manufacturers in the European Community whether the products are sold within or outside of the Community.' (Eudra Lex GMP 2005_10)

The whole pharmaceutical retailing sector within EU, not only research and production, is affected by several other laws and regulations stated in Eudra Lex. In addition to GMP, all EU- and EEA-countries have to follow the Good Distribution Practice (GDP), which functions as a guideline by defining the best practices for pharmaceutical distribution in Europe. The general GDP guidelines concern the whole distribution channel, from defining the purpose of wholesalers and pharmacies, their roles and responsibilities, distribution principles (single vs. multi-channel), pharmacies’ margins and pricing of medicines to cost-cutting measurements on prescription of pharmaceuticals. Pharmaceutical retailing is based on licenses that are acquired from the national authorities. Both wholesalers and pharmacies need licenses in order to operate within the national market. However, the practices in distribution principles vary between membership countries as the local distribution system is more or less controlled by the national authorities rather than the European authorities. National healthcare authorities usually decide the distribution praxis, as, for example, in Finland, where it is carried out in accordance with EU Parliament and Council Directive 2001/83/EY from November 6th 2001, which has overruled the earlier Council Directive 92/25/EEC from March 31st 1992. Thus, all EU countries have their own practice regarding the retailing of pharmaceuticals, although they are based on the
same legislation. Consequently, we must study the Finnish legislation and rules to be able to obtain a comprehensive picture of the pharmaceutical retailing market in Finland.

5.1.1. The Finnish legislation on pharmaceutical retailing

The distribution structure of pharmaceuticals in Finland is the so-called single channel distribution, which includes manufacturers, wholesalers and pharmacies. Figure 9 below describes the idea of a single distribution channel, in which the arrows illustrate the direction of product flow.56

**Figure 9 The idea of single channel distribution in Finland**

Single channel distribution could be described as manufacturer-oriented, owing to the fact that pharmaceutical manufacturers can choose which of the existing wholesalers they prefer to co-operate with when distributing their products. All drugs must be distributed via wholesalers, who will then deliver the products to pharmacies, who in turn have the right to sell medicines to the end users, consumers. The choice of a wholesaler is mainly based on economic criteria. Manufacturers usually negotiate with one of the wholesalers for their entire product assortment. Pharmacies, in turn, place orders at different wholesalers for different products. Pharmacies are not allowed to buy medicines directly from the manufacturers. In the past, pharmacies could negotiate

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56 The number of actors in figure 9 does not resemble the real market situation except for the wholesalers’ section. There were only two wholesalers operating in the Finnish market in 2008. Oriola bought KD (Kronans Handel) in 2004 whereafter Oriola and KD have operated under the name Oriola in Finland. KD’s operations are concentrated in Sweden. In July 2006 Oriola and KD became again separated and independent companies, concentrating on retailing and instrument supply. The pharmacies are illustrated as general types of pharmacies in Finland: the university owned University Pharmacy, the pharmacy chain HYMA, consisting of privately owned pharmacies, and the privately owned pharmacies that are not members of these pharmacy networks. As the purpose of this thesis is to study pharmacy networks they are emphasised in the figure.
special product campaigns and prices with manufacturers, i.e. larger orders resulted in reduced prices for pharmacies. This practice has, however, recently been changed as all product discounts and deals between manufacturers and pharmacies became illegal at the beginning of 2006. Therefore, manufacturers have had to find other ways of having contact with pharmacies, for example by organising seminars for pharmacy personnel.

The main characteristic of the single channel distribution system that differentiates it from multiple channel distribution is that products can be distributed only via the chosen wholesalers, not via all wholesalers. In a multiple channel system several wholesalers can distribute the same product, which presents an opportunity for increased competition in the distribution channel. An exception from the distribution structure above can be made when products are imported from abroad, i.e. when pharmacies import their own products. These products are not, however, classified as medicines but merely as health products or cosmetics. In such cases pharmacies can act as wholesalers within the market while they can distribute their products to other pharmacies. Wholesalers are, thus, actors who sit in between two powerful actors in the channel, manufacturers and pharmacies. The task of the wholesalers, as given in EU legislation (see EudraLex 2001/83/EY), is to control the quality of the products sold in a country, and stock and distribute the products further along the distribution channel to the pharmacies, which in turn will take care of the retailing to end consumers.

According to Finnish legislation, pharmacies have the sole right to distribute and sell medicines in Finland (see FINLEX). Due to the regulations on ownership, every community pharmacy is owned by an independent pharmacist, also called an apothecary. The strict legislation concerning the pharmacy system and the state-governed license system has created a very restricted environment for the Finnish pharmacies to develop within. The Finnish pharmacy license system was established in 1883 and the same system is still effective. The regulated market conditions mean that governmental authorities control the number of pharmacies, their locations, product stocks, social responsibilities, pharmacy fees and professional ethics. Authorities evaluate also the professional competence of a pharmacist, i.e. the minimum requirements for becoming a pharmacist and a pharmacy owner are given. The requirements concern education level, personal record and professional experience

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57 The same practice exists in the other regulated EU countries Austria and Spain.
within the field.\textsuperscript{58} The regulations also include price control systems for medicines, i.e. there is a flat fee for prescribed medicines in pharmacies all over Finland.

Traditionally pharmacies have been very independent units and there has hardly been any competition between them. The regulations have restricted the number of pharmacy licenses, and, therefore, competition in the market has been limited. In fact, competition between pharmacies and apothecaries was not acknowledged for a long time. Each pharmacy has functioned for the main purpose of providing pharmaceuticals to the customers within the given geographical area. However, as the license gives such an advantage in business, it brings with it duty and responsibilities. The pharmacy business is, in other words, very much under the control of governmental authorities, and there are several regulations that define pharmacies’ responsibilities in society, what they are allowed to sell, and how they have to conduct their business. As governmental authorities intervene at all stages of the distribution channel, the relationships in the distribution channel become mandated (Gebert & Steinby 2006). Actors are not free to act how they want and with whom they want. The structure and system in pharmaceutical distribution are given and actors must follow them. Actors need to apply for licenses from the governmental authorities in order to operate in the market. Figure 10 below illustrates the relationship structure within the pharmaceutical distribution network.

\textbf{Figure 10} \hspace{1em} The single distribution channel of pharmaceuticals in Finland (from Gebert & Steinby 2006)
5.1.2. Recent developments in pharmaceutical retailing

The current position of the pharmacies and the future of single channel distribution have been discussed ever since the end of the 1980’s. The information law (1983) and the new medical law (Lääkelaki) of 1987 changed the role of pharmacies in Finnish society and modernised the whole profession. The legislation strengthened pharmacies’ role as they became responsible for providing medical advice to end consumers, a duty which was previously restricted to physicians. This new responsibility sparked a development process within the industry as pharmacies had to become more customer oriented, instead of being medical professionals. It provided new business opportunities for pharmacies to develop their operations. Pharmacies were able to open pharmacy shops and, for the first time, they could offer self service for customers within the pharmacies. The development in pharmacy business since 1988 has been significant. In 2000 the regulations for strict geographical boundaries between pharmacies were abandoned. This made it possible for privately owned pharmacies to decide their location freely and to move to more attractive sites within their geographical area, e.g. shopping centres, where they could better compete for customers. Pharmacies can today be located on the opposite sides of a street and competition has become more intense. Owning a pharmacy does not anymore guarantee of a safe income for an apothecary.

The Finnish single channel distribution system has been compared to the multiple channel structure used in most European countries and it has been criticised by, e.g. the EU and the Finnish competition authority (Kilpailuvirasto), because it resembles a monopoly market with internal rules and regulations set by the actors themselves in the market. However, as mentioned earlier in the chapter, all European countries have created their own systems to cover the distribution sector, and it is possible to find examples of even more obviously monopolistic markets in Europe than the Finnish one. The geographically closest example can be found in Sweden, where a shift from a state monopoly to open competition in a reregulated market will be forced to take place in the near future, in 2009, based on the decision by the EU authorities in spring 2005. The pressure for deregulation in Finland is not as urgent as in Sweden and there is no direct pressure for liberalisation of the pharmacy sector. Examples of the deregulation of the pharmacy systems of other EU countries, e.g. Ireland, the Netherlands, and

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59 The discussion is an ongoing debate in the media between legislators, politicians, governmental authorities, wholesalers, pharmacies and pharmaceutical manufacturers.
Norway, have, however, created a certain level of awareness and uneasiness among Finnish apothecaries. The future threat of deregulation or reregulation can be seen in the fact that independent, privately owned pharmacies have started to co-operate with each other. By joining their resources, small, privately owned pharmacies are hoping to become competitive in the tougher economic climate and to defend themselves against competition. In pharmacy networks apothecaries are becoming more and more dependent on each other, and joint business activities in general have increased between pharmacies. The first step towards deregulation of pharmacies in Finland actually took place in 2008, when the non-prescription smoking cessation medicines became available in grocery stores. Thus, governmental authorities wish to move several non-prescription medicines from the pharmacies to grocery stores and gas stations in the future.

Between 1985 and 2002 the number of pharmacies increased from 710 to 801 and the number of prescriptions that were handled in the pharmacies increased from 27.4 Million to 38.2 Million. The total turnover in pharmacy retailing increased from 417.40 to 1743.10 Million €. (National Agency for Medicines 2003) As the population is ageing ‘there is an increasing natural demand for medicines from society. Governmental authorities have tightened their grip over the pharmaceutical industry during the past two years in order to reduce health care costs. With the introduction of generic substitution, pharmacies have been forced to recommend cheaper generic medicines, which have very low sales margins, to customers. This has naturally increased the sales volume of generics and decreased the market share of the original products. The introduction of generic substitution has influenced dramatically the revenues of all pharmacies, but it is the smaller ones in particular that have felt the economic pressure. New regulations have also reduced the possibilities of co-operating with manufacturers and negotiating the prices of the medicines. From January 2006 (1.1.2006) the medical law was changed and now forbids all forms of agreements between manufacturers and pharmacies concerning discounts and deals on purchasing prescribed medicines. It has also cut the wholesale prices of medicines by 5 %, which has affected the manufacturers’ revenues. Simultaneously it has also affected pharmacy margins, which have been cut by the same 5 %. Furthermore, the new regulations have obligated pharmacies to arrange re-education for their pharmaceutical staff, which pharmacies previously organised on a voluntary basis.
5.2. Special characteristics of the pharmacy business

In the following sections I will present the special characteristics of the pharmacy business and outline the historical background of their origin and development. The text is structured so that the reader will travel back and forth between the modern world and past. In this way the modern and historic worlds become one and the understanding of the pharmacy field increases. It is not the intention to bury the reader under a mountain of historical background information. The historical understanding is, nevertheless, very important as it provides a deeper insight into why and how special characteristics have developed and why we cannot afford to overlook them in this study.

5.2.1. The profession – being a pharmacist

The term pharmacist is full of nuances. Quoting the Oxford Dictionary, a pharmacist is “a person qualified to prepare and dispense medicinal drugs”. Pharmacist is a title for a profession but it also describes a whole group of professionals. The profession in itself is rich in details regarding what the professionals are bound to do in their profession. It also defines their role in society and their part in the medical support and distribution system. On the one hand, the profession is regulated at the level of operation and action, i.e. what the work as a pharmacist includes on a large scale, taking it to the general pharmacy perspective and further to the society perspective. On the other hand, the profession is regulated and controlled at the individual level, and many of the demands placed on pharmacists as professionals have to do with personal skills and qualities. Thus, the organisational and personal levels become intertwined.

Pharmacists are proud of their profession. Apothecaries have gained a strong position in Finland through their trade organisation, The Finnish Pharmacy Association (Apteekkariliitto), founded in 1897, which represents pharmacists' and pharmacies' common interests in society. The pharmacist degree is nowadays a university degree which includes studies in pharmacy, chemistry, biochemistry, microbiology, anatomy and pharmacology. The lower degree of B.Sc. gives the person a license and a right to work in a pharmacy and prepare and dispense medicines to customers. The higher degree (M.Sc.) is required in order to become an apothecary owning his/her own pharmacy. Being a pharmacy professional is an officially confirmed and acknowledged status, bestowing the right to work within the industry as a pharmacy professional. The
title pharmacist is bestowed by the national governmental authorities (The National Authority for Medicolegal Affairs / Terveydenhuollon oikeusturvakeskus) after graduation and all persons who have completed their pharmaceutical education are officially registered as pharmacy professionals, whereafter they are entitled to work within the field.

5.2.1.1. Background of the profession & pharmaceutical education

When consulting our past, we can observe that pharmacy is one of the oldest professions in the western world, together with physicians, barbers, smiths, etc. The first European pharmacies were established at the end of the 12th century in Salerno and Montpellier, which were the main medical education centres of the time. However, the different tasks and professions within the medical sector in Europe were not defined until the 13th century, when, in 1231-1240, Fredric II of Sicily established the first regulations concerning medical professions and medicine supply. The essential content in the regulation given at the time was that it was the first time that the roles of physician and pharmacist were separated. Pharmacists’ educational qualifications were also given and defined in the regulation, together with the professional oath. Furthermore, pharmacies’ establishment and location became a regulated activity, controlled by the authorities, and it is fair to say that this marked the start of the institutionalisation of pharmacies. Although the profession of pharmacist had been recognised since the 13th century as a legitimate profession, it was for many centuries regarded as a craftsman profession. The profession was taught by experienced pharmacists and apothecaries, who had apprentices working for them. The university-trained physicians in particular regarded themselves as being on a higher intellectual and educational level compared with the pharmacists, who were only craftsmen in their eyes. However, respect for the profession gradually increased and pharmacology became a university subject in the 16th century. Nevertheless, the rivalry between medical physicians and pharmacists remained in society, although the educational and intellectual requirements for the professions became more similar. (Muiluvuori 2005; Lilja 1991; Karsten 1939)

Receiving a pharmaceutical education has not always been as easy as it is nowadays. In Finland, the development of the pharmacy system and thereby of pharmaceutical education was slower than in Central Europe. Monasteries were the first documented institutions that prepared medicines based on ancient herbology and provided them to people. The development of pharmacies began when the general structure and standards of society were improved. Stable social conditions allowed the establishment of universities, where the subject of medicine could be taught and learned. The first university in the Nordic countries
was established in 1477 in Uppsala, but teaching of medicine did not start until 200 years later in 1655 when the medical faculty gained a more stable structure. The first university in Finland was established in 1640 in Turku\textsuperscript{60} and, according to the available records, teaching of medicine got off to a slow start there also. Not until 100 years after the establishment of the university did its structure stabilise and the first dissertation in medicine was presented. The slow development of educational standards in Finland can be explained by the status of the old European universities which were highly regarded by scholars. They were centres of knowledge and had the highest standards of all the European universities; most renowned was the University of Holland, which attracted students from the Nordic countries. (Muiluvuori 2005; Lilja 1991)

Due to the lack of local universities and low educational standards, the pharmacist’s profession was developed side by side with those of other healers, e.g. spice traders and barbers. The first pharmacies in Sweden were established in the 15th century but the phenomenon of the truly independent pharmacy started to develop in the 16th century when German and Dutch pharmacists entered the market and showed the local pharmacists how pharmacies should function. In Finland the first pharmacies date back to the 16th century and they were located by the castles in Turku and Wiborg. There were also craftsmen in the bigger cities who worked as pharmacists, although they undertook other work simultaneously. (Muiluvuori 2005; Lilja 1991; Karsten 1939)

5.2.2. Pharmacies’ obligations

Pharmacies’ obligations as set out in the law mostly concern the professional skills and experience required to be a pharmacist. When referring to pharmacies as entities, there are also other requirements, i.e. the social responsibilities that need to be fulfilled simultaneously as also being able to run the business. There are regulations relating to pharmacies’ margins, roles and responsibilities, relations between wholesalers and pharmacies and manufacturers and pharmacies, distribution principles (single vs. multi-channel), pricing of medicines and cost-cutting measurements on prescribed pharmaceuticals. Principally, most of the business is regulated and the regulations regarding pharmacies’ roles, privileges and responsibilities date back to the 17th century.

\textsuperscript{60} The Royal Academy in Turku; in Finnish, Turun Kuninkaallinen Akatemia.
5.2.2.1. The Collegium Medicum and the first pharmacy regulations

The first privileges concerning pharmacies in Sweden and Finland were granted in 1675 in Stockholm and gave the pharmacies the privilege to sell medicines and poisons in the city. They also gave pharmacists exemption from paying taxes. In 1683 these privileges were confirmed and implemented all over the country, including in Finland, which was then part of Sweden. At the time a newly established colloquy between four university-educated physicians from Stockholm (Collegium Medicum 1663), also wanted to ensure that no-one other than university-trained physicians could treat patients with internal medical diseases. The approved medical professionals were, thus, physicians, surgeons and pharmacists, and the Collegium Medicum wanted to control and reduce the number of unauthorised healers. Thereby, physician’s, surgeon’s and pharmacist’s professions were defined and simultaneously the general instructions and privileges for each profession were set out. As a result of this process, new medical regulations, including the first pharmacy regulations in Sweden and Finland, were proposed in 1688 and confirmed in 1698 by the Collegium Medicum. The regulations were strongly influenced by a pharmacy regulation introduced in Denmark-Norway in 1672, and the central content of the 1698 regulations was the following (Lilja 1989):

1) Pharmacies were given the sole right to sell medicines.
2) Pharmacies were required to have “large enough” stocks of medicines.
3) Pharmacies should sell medicines of “good quality”.
4) Pharmacies should be open 24 hours.
5) Pharmacies should price the medicines according to the list of medical rates.
6) Toxic medicines should be carefully prepared and stored.
7) Pharmacists and other personnel were bound by professional secrecy.
8) Only the king had the right to establish new pharmacies and grant pharmacy licenses.
9) In order to become a pharmacist and own a pharmacy the candidate had to work for many years for another pharmacist. After he had gained adequate experience, the pharmacist candidate had to be tested by Collegium Medicum. If he passed the pharmacist exam he also had to take the pharmacist oath in order to become a pharmacist and gain the privileges related to the profession.
10) Medical regulations made a clear distinction between doctors’ and pharmacists’ work and duties.
The medical regulations from 1688/1698 had a strong influence on the development of Swedish and Finnish pharmacies for several subsequent centuries. The most influential feature of the regulations was that the pharmacist’s profession eventually became officially recognised and acknowledged and, thus, a controlled and regulated privilege. The pharmacy system was given the status it has kept until today and pharmacies became institutionalised as they were kept under the control of governmental authorities. It was not until 1913 that the old medical regulations from 1688/1698 were replaced in Sweden. In Finland it was not until 1928 that the first Finnish pharmacy law was passed, and not until 1933 that the new pharmacy product law finally replaced the old regulations. (Muiluvuori 2005; Lilja 1989)

The modern directives follow closely the old medical regulations of Collegium Medicum (1688/1698) and thus, all pharmacies must always have a comprehensive basic stock of medicines. Basically, the assortment of pharmaceutical products can be divided into three categories: prescription medicines, non-prescription medicines and other pharmaceutical/health care supplies. Pharmacies are required by Finnish law to provide a comprehensive assortment of pharmaceuticals (lääkkeiden velvoitevarastointilaki [402/1984] / asetus lääkkeiden velvoitevarastoinnista [608/1984], see also lääkelaki [395/1987] and lääkeasetus [693/1987] at http://www.finlex.fi). This concerns prescription medicines and therefore, pharmacies use a measure called stock service level to measure how well they can respond to the consumption of medicines. For example, a 95% stock service level tells us that the pharmacy can, in response to 95% of requests, immediately deliver the product to a customer. The only problem with the stock regulations is that it is always very risky and unprofitable to have a large stock of medicines if the turnover is low and the business does not break even every month. The social security system in Finland is based on pharmacies’ social responsibility to provide medicines to society. Thus, regulations regarding prescription medicines are extremely strict as they must always be available. Non-prescription medicines are less regulated and apothecaries can decide for themselves the types and quantity of products they wish to stock and sell.

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61 At the time of the foundation of Collegium Medicum there were two pharmacies in Finland, one in Turku and one in Wiborg. There is, though, documentary evidence of there being a pharmacy in Turku since 1599.

Pharmacies are also naturally bound to follow the regulation concerning the pricing of medicines, based on the list of medical rates\textsuperscript{63}

The ethics of and the responsibility for good practice in medicine are strongly anchored to pharmaceutical retailing. There are common ethical rules for pharmacies, approved by the Association of Finnish Pharmacies and the Finnish Pharmacist Association, on which the pharmacy operations in Finland are built. Among the most important rules are those relating to professional confidentiality (pharmacists' oath) and the regulation concerning the amount of professional pharmacy staff at the pharmacy defining also the tasks between the apothecary, the leading pharmacists (with the higher qualification of the M.Sc.), the pharmacists (with the lower qualification of the B.Sc.) and medical workers and other assistants.\textsuperscript{64}

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5.2.2.2. \textit{The effect of the new regulations in the 17\textsuperscript{th} century} \\
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Although the Collegium Medicum had given very clear new regulations outlining appropriate conduct for pharmacies, the practice was more or less chaotic in the end of 17\textsuperscript{th} century in Finland. The first official pharmacy licenses were granted in 1689, whereafter two pharmacies were established, one in Turku and one in Wiborg\textsuperscript{65}. The only pharmacy in Turku (called the city pharmacy) at the end of the 17\textsuperscript{th} century was so badly managed that the Royal Academy in Turku and the court of appeal decided to establish their own pharmacy together. They made a request for their own pharmacy privileges to the Chamber Collegium in Stockholm, which had recently given pharmacy rights to the Academy of
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\textsuperscript{63} Valtioneuvoston asetus lääketaksasta (1087/2002)

\textsuperscript{64} There are also several other regulations regarding the pharmacies’ operations and duties, i.e. responsibility for long opening hours and availability of medicines 24 hours per day; prescription practice (all prescriptions must be checked twice, and medicine doses in the prescriptions must be checked); storage of preparations that are considered to be drugs (huumausainelaki (1289/1993) /huumausaineasetus (1603/1993)); keeping records of all the drugs that are sold; disposal of drugs (sosiaali- ja terveysministeriön päätös huumausaineita ja huumausaineen valmistuksessa käytettäviä aineita koskevasta kirjapito- ja tietojenantovelvollisuudesta sekä huumausaineiden käsitteleystä ja hävittämisestä (1708/1993)); and importing special products to Finland (valtioneuvoston asetus lääkevalmisteiden henkilökohtaisesta tuonnista Suomeen (1088/2002)). When comparing these responsibilities to the Collegium Medicum’s list from the 17\textsuperscript{th} century, one might ask how much the industry has actually changed during the past 400 years.

\textsuperscript{65} The pharmacy in Turku, Salutorgets apotek i Åbo, still exists today. The pharmacy in Wiborg operated until the Second World War when Wiborg was occupied by the Soviet Union.
Uppsala. The authorities in Stockholm decided that “it was more than fair to allow Turku to have the same rights as Uppsala had” (Muiļuvuori 2005). Consequently, new pharmacy rights were granted in 1671 but, for some reason, the new pharmacy was never established, most likely as a result of economic problems. (Muiļuvuori 2005)

Wars, years of starvation and plague at the end of the 17th century and the beginning of the 18th century made it very difficult for anyone to run a pharmacy business in Finland. The city of Turku and the Royal Academy tried to support the only pharmacy’s existence during the difficult years but it was very hard for any pharmacist to follow the guidelines and standards set by the regulations during these testing times. Consequently, the pharmacy business was not developing at all and pharmacists who dared to take on the responsibilities of the profession ended up in bankruptcy. The situation began to improve at the end of the 1720’s when the population in the city of Turku started to grow, society began to stabilise and the newly appointed pharmacist could actually concentrate on the pharmacy business.

Consequently, it can be argued that the new regulations of 1688/1698 had more governmental and institutional effects on the society (see, e.g. Karsten 1933; Lilja 2001) than effects on improving the pharmacy business in practice. Thus, the significant changes were that the number of pharmacies and the location of pharmacies in each city came under the control of the authorities (the King and the Collegium Medicum). As the pharmacy system became controlled by the governmental authorities they could officially control pharmacists’ professional competence and the quality of their work. The regulations did not, however, affect the ownership of the pharmacies. Pharmacies that had started to develop as privately owned enterprises remained privately owned entities even after the pharmacy regulations were introduced. One could even argue that the regulations strengthened the pharmacies’ position in society as they established the pharmacy privileges. (Lilja 2001; Muiļuvuori 2005)

5.2.2.3. 18th and 19th century development - when privileges become profitable

The development of the Finnish pharmacies was rapid after the 1750’s. As the population increased, the need for new pharmacies became evident. By 1799 the number of pharmacies in Finland had increased from 2 to 19 and this trend continued. An increased number of pharmacists received their education in Finland and the number of foreign apothecaries fell. Pharmacies turned into profitable business entities and apothecaries became influential and wealthy members of society. Apothecaries’ privileges gave them a very high
social position but they were left outside the political system and did not have the right to directly participate in politics. Apothecaries did not pay any taxes, which made it possible for them to develop their business. Many of them made fortunes by expanding their business focus and importing spices and other luxury items, or exporting herbal medicines. Many apothecaries also became ship owners or industrial entrepreneurs. Bottling mineral water and selling it to wealthy people was one of the great business ideas of the 19th century. (Lilja 2001; Muiluvuori 2005)

5.2.3. Controlled privileges: Pharmacy fees, licenses and subsidiaries

Rules regarding pharmacy fees, licenses and other related regulations can be traced back to the early development of the Finnish pharmacies, from which University Pharmacy’s early days can also be traced.

5.2.3.1. The Russian Period

During the Russian period 66 (1809 – 1917), the pharmacy and health care systems in Finland were developed and improved in various ways. Many aspects of those systems remain in place today and explain current pharmacy practices.

After Finland was separated from Sweden, a new Collegium Medicum for Finland was established in 1811 and located in Turku. When the capital of Finland was moved from Turku to Helsinki in 1812, the academy pharmacy rights also moved with the university and the re-established university pharmacy opened in 1828 in Helsinki. The examination of new apothecaries subsequently took place in the relocated university, which changed its name (today University of Helsinki) to better suit the new ruler, the Russian emperor.

5.2.3.2. New regulations in the 19th century

During the Russian period a number of new regulations for the pharmacy business were established in order to organise the pharmacy system and increase control over the pharmacy business. One of these was the pharmacy fee system, which was introduced in 1857. It meant that pharmacists had to pay a fee from their revenues to the state. The

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66 Finland was part of Sweden until 1809 when it became an autonomous part of the Russian empire. Although the Russian emperor was officially the ruler of Finland between 1809 and 1917, Finland maintained its sovereignty.
Pharmacy fee system has continued until today and it is used to balance the resources between pharmacies and, thus, to ensure that pharmacies exist throughout Finland, including in towns where the pharmacy businesses are unprofitable. In 1869 the pharmacy subsidiary legislation made it possible for pharmacists to establish subsidiary pharmacies in places which did not have their own pharmacies and where the business would otherwise have been economically unprofitable. In 1878 the era of the Collegium Medicum ended and the functions of controlling the medical field and pharmacies’ activities passed to a new authority, Medicinalstyrelsen i Finland, The Medical Board in Finland. One of the most remarkable developments within the pharmacy field came in 1883 when the pharmacy license system was created. It made it impossible to inherit the apothecary privilege. Thus, the Finnish pharmacy system became dependent on the personal skills and professional achievements of the pharmacists, on the basis of which pharmacy licenses were granted. The license system established then is more or less the same system that is used nowadays. Each pharmacy needs to have a pharmacy license, which is a personal privilege, in order to distribute and sell medicines. The license system represents one of the special characteristics of the industry, and has had an impact on the general ownership structure of pharmaceutical retailing. (Lilja 2001; Muiluvuori 2005)

5.2.3.3. Pharmacy licenses

According to Finnish legislation (see FINLEX) a pharmacy license in Finland can only be given to private persons. Section 40 of the Medicines Act, states that a license from the National Agency for Medicines is needed in order to operate a retail pharmacy. According to the provisions of section 43 of the Medicines Act, a pharmacy license may be granted to a citizen of any state belonging to the European Economic Area who is a licensed M.Sc. (Pharmacy), and who has not been declared bankrupt or incompetent to manage his or her affairs. Thus, in order to gain the license and become an apothecary, that person must have proper merits: a higher university degree in pharmacy and pharmacology and also several years of experience within the business. If there are several applicants for a pharmacy license, it will be granted to the applicant who is considered best qualified to operate the pharmacy. Applicants’ qualifications in this field are assessed by considering the competence and aptitude for the business that they have shown in their earlier work in pharmacies and other tasks relating to pharmaceutical services. (Lääkelaitos, National Agency for Medicines, 2005)
The pharmacy license is personal and valid for the working lifetime of the pharmacist (until the retirement age of 67), and nowadays it cannot be inherited. The National Agency for Medicines provides the pharmacy rights but it is also entitled to take them away from a person if the pharmacy is badly managed, if the apothecary goes bankrupt or if the apothecary is too ill to take care of the work. Hence, the apothecary must take care of the pharmacy him/herself. The responsibility can be given to another member of the pharmacy personnel only in the case of temporary illness. The number of pharmacies in Finland is limited and each pharmacy owner has to have a license in order to practice pharmaceutical retailing. (Lilja 2001; National Agency for Medicines 2004:11) The only exception to the common pharmacy license practice in Finland has been made in University Pharmacy, in which the license owner nowadays is the University of Helsinki.
5.2.3.4. University Pharmacy is established

In the 1750's the time was ripe for a new era in the history of the pharmacies. As the wars were over and the population started to grow, it became important politically to establish new pharmacies. Cities in particular started to grow and there was a new demand to develop the health care standards in society. The time was right for establishing new pharmacies, which meant also that there was a growing demand among the university community for another pharmacy in Turku. The Royal Academy in Turku 67 used the opportunity to start calling for the right to establish their own pharmacy in the city. They argued that there was a need for a new pharmacy, citing the lack of a teaching laboratory at the University for the chemistry and biology studies that were part of the medical education. Another argument was that the university-owned pharmacy could provide medicines of high quality and improve the general standard of health care in the city. Yet another argument was more or less political and based on the social structure of the city. Competition had developed between two political parties and there was much manoeuvring in order to gain political power. The merchants and the bourgeoisie supported the old apothecary in the city, whereas the university-educated and the bishop wanted to establish a new university-controlled pharmacy. The general development of the time supported increased competition, which would force the apothecaries to perform to their best ability and improve the level of health care. Politics, social networks and money were, thus, key elements behind the application for a pharmacy license for the Royal Academy in Turku. The privilege for establishing The Academy Pharmacy in Turku was granted in 1755 68. The privilege gave the academy the right to establish a pharmacy, control the pharmacy functions and appoint a pharmacist to manage the business. The pharmacy was opened in 1757 and it was officially owned by the newly appointed apothecary, not by the Royal Academy, although the pharmacy license was given to the Royal Academy.

From the beginning, University Pharmacy’s ownership structure was different from that of privately-owned pharmacies in the sense that the University possessed the pharmacy rights, while the pharmacy and the business entity itself was owned by an apothecary, who was appointed by the university. The special characteristics of University Pharmacy started to develop at a very early stage and the role of the university-controlled pharmacy became different from that of the other pharmacies. University Pharmacy was not an independent entity, but under the control of the centralised management system of the University. The apothecary participated in university teaching, especially in laboratory work, which was one

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67 Åbo Akademi, established in 1640.
68 The privilege was granted on the September 24th 1755.
of the obligations of the position. Being an apothecary at University Pharmacy also bestowed more privileges that an apothecary at a non-university-owned pharmacy had. Apothecaries in University Pharmacy became influential people in the research community. Moreover, the university provided a shelter under which the pharmacy could develop and offered a wide social network of contacts, which increased the status of University Pharmacy and thereby the status of the apothecary. (Lilja 2001; Muiluvuori 2005)

5.2.3.5. Privileges of University Pharmacy apothecary in the Russian period

During the Russian period the pharmacy ownership was changed and the license was frequently rotated owing to the practice of renting the pharmacy for periods of ten years at a time. The University’s role was to ensure that the apothecary took care of the pharmacy in a manner that the health care authorities thought was acceptable and appropriate. Although the ownership structure was different from that of the other pharmacies, the University apothecary could follow normal pharmacy routines and run the business rather independently. He was, nevertheless, supposed to take care of his duties at the university, which were also part of the original agreement which granted University Pharmacy’s special privileges and characteristics. The apothecary at University Pharmacy was obligated to provide medicines, medical supplies and chemicals for the University’s various purposes, including the university hospital. These products were also to be sold with a suitable discount and, hence, the pharmacy supported the University’s research operations by keeping material and supply costs down. (Muiluvuori 2005)

In 1951 the University of Helsinki took possession of University Pharmacy and as it took over the pharmacy’s operations it returned to the system before the Russian period. (See Muiluvuori 2005)

5.2.3.6. New pharmacy licenses and subsidiaries

When deciding if there is a need to establish a new pharmacy, the National Agency of Medicine will consider the following questions: Is there enough demand for a new pharmacy within the geographical area? Is the distance to the closest pharmacy so great that the pharmacy service should move closer to its customers? Are the pharmacies

69 University Pharmacy has served development and teaching purposes ever since it was established in 1755. Today it is known as the pharmacy chain called Yliopiston Apteekki (University Pharmacy).
within the area growing too large in terms of the number of prescriptions dispensed per year? A new pharmacy license is permitted only if the existing pharmacies cannot provide services for all the inhabitants within a certain area. The condition for a pharmacy to exist is, in other words, that it can serve a minimum number of customers within a certain district. 70

Usually when there is demand for new pharmacies, they are first established as subsidiaries. An apothecary usually suggests to the authorities that he/she would like to open a subsidiary to serve a certain area. The subsidiary is part of the main pharmacy and, thus, it is under the supervision of the same apothecary. One main pharmacy may simultaneously have three subsidiaries. When the number of prescriptions per year in the subsidiary exceeds 20 000 the National Agency for Medicines can consider giving the subsidiary a full pharmacy license. In such a situation a new pharmacy will be established and a new apothecary position is created. (National Agency for Medicines 2005)

70 In 1900 the number of pharmacies was 159. By 1930 there were already 400 pharmacies, and 70 years later, in 2004, there were a total of 801 pharmacies in Finland, of which 602 were privately owned, 181 were their subsidiaries with the remainder units of University Pharmacy. (Lilja 2001; Lääkelaitos 2004:11)
5.2.3.7. Establishment of University Pharmacy’s medical storehouses

A remarkable change in common pharmacy subsidiary practice took place in 1953 when University Pharmacy received the special right to establish medical storehouses in a number of Finnish cities where there was substantial demand from large hospitals for increased medicine distribution. (Lilja 2001; Muiluvuori 2005) The medical storehouses were needed to secure the supply of medicines and to offer customers throughout the country a wider array of medicines (Annual report 2005). Establishing medical storehouses was a strategy created by University Pharmacy’s management, including the apothecary. The goal of the new structure was to establish and generate a large scale business enterprise that would cover the whole vertical medicine distribution chain including traditional pharmacy operations, import and wholesale of medicines, as well as the research and control functions related to these tasks (MUILUVUORI 2005).

Figure 11  Picture from University Pharmacy’s laboratory in 1928

Source: Annual Report 2005

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71 A large hospital unit was defined as a hospital with more than 90 patient places (MUILUVUORI 2005:218).
5.2.3.8. A debate of the ownership of Finnish pharmacies

The merit of the license-based ownership structure of Finnish pharmacies has been debated on many occasions. In the pharmacy legislation from 1928 it was decided that pharmacies in Finland would remain privately owned entities, i.e. pharmacy licenses would continue to be granted to individuals and could not be sold on.

At the end of the 20th century there was, however, some debate about changing the pharmacy system and its structure in general. At the time there were seen to be four alternatives for structuring the business. An interesting aspect was that all the proposed alternatives were based on the idea that it was necessary to have pharmacy licenses in some form and, therefore, the discussion was in essence about different ownership structures. The different alternatives for organising pharmacies were the following (Lilja 1989; Lilja 1991; Turakka 1989):

1) a pharmacy system based on privileges that could be sold,
2) a pharmacy system based on personal / individual privileges,
3) a free pharmacy system, where pharmacists could establish pharmacies as they preferred (model from the UK),
4) a state-owned and governed system.

Thus, how the pharmacies in Finland should be structured and organised became a political debate, as it had become in the other Nordic countries. The development of the Nordic countries’ pharmacy regulations from the beginning of the 20th century reflected the political situation in the individual countries.

The latest decisions regarding the ownership structure of pharmacies, the main element in the pharmacy license system, were made in the 1960’s. However, in Sweden, the ownership structure was changed to a state-owned pharmacy system in 1971, which created debate in Finland about whether the pharmacy system should also be state-owned. Finland decided, however, that all pharmacies should remain as privately-owned entities, except for University Pharmacy which was kept separate from the general regulations. Hence, University Pharmacy continued to enjoy the benefits of the special arrangements and pharmacy rights dating from 1755 and the other privately owned pharmacies continued their work as before. It was also decided at the time that
pharmaceutical retailing should in the future remain controlled by professionals only. This decision enabled the long history of pharmacists as an independent group of professionals to continue.

5.2.3.9. Pharmacy fee

All pharmacies have to pay a yearly pharmacy fee of 0-11% of their turnover to the governmental authorities; the fees are then divided equally between smaller units with low revenues. This regulation dates from 1857, and the idea behind it was to support the development of pharmacy business in the whole country. Based on guidelines from governmental authorities, the distance to the nearest pharmacy should not be unnecessarily long. The pharmacy fee evens out the profitability between pharmacies and makes it possible for small pharmacies to exist in areas where the business otherwise would be unprofitable. Thus, the fee has supported society's requirements for a well-functioning pharmacy network in the country, as defined by the governmental authorities.

Although the concept of the fee puts all pharmacies on an equal footing, University Pharmacy does not have to pay its pharmacy fee to the governmental authorities. Instead it pays the equivalent of its fee to the University of Helsinki. In this way the money returns directly to the owner and is used to fulfil the original purpose of University Pharmacy - research into and teaching of pharmacy and medicine at the university. The privately-owned pharmacies object to this special privilege and, according to the Finnish Pharmacy Association, it gives a competitive advantage to University Pharmacy. Thus, the pharmacy fee has produced a lot of criticism within the profession. The pharmacy fee is added to the selling price of medicines and therefore it results in approximately 7% higher medicine prices. If the pharmacy fee were to be removed it would mean lower medicine prices. Thus, governmental authorities have suggested that the pharmacy fee regulation could eventually come to an end but that its withdrawal would be conducted gradually in several phases (Helsingin Sanomat 2.4.2004, 15.11.2004; National Agency for Medicines 2004).

72 Apteekkimaksulaki (148/1946)

73 Valtioneuvoston asetus kulttuurihistoriallisesti arvokkaiden apteekkien apteekkimaksusta (1180/2002)

74 The National Agency for Medicines has calculated that if the yearly fee were to be halved from its current level, 60 of the 800 privately-owned pharmacies currently operating would be unprofitable and they would
5.3. **Summarising the impact of the historical development on the current development of pharmacy networks**

In order to grasp the many special characteristics of the empirical field in the study, this chapter has aimed to give an insight into the empirical context and the historical background of the pharmacy business. To start with, pharmaceutical retailing is a very institutionalised and formalised industry in most of the EU countries. Thus, pharmaceutical retailing in Finland is a protected industry where laws and regulations have affected its form and structure for centuries. Due to its protected nature it has been able to preserve many old traditions, e.g. how the pharmacy system is structured and how pharmacies are managed. Finnish pharmacies are privately-owned, license-based units that are established and located based on the needs of a population within a certain geographical area. Thus, the pharmacy license is a personal privilege giving the apothecaries the rights to engage in pharmaceutical retailing. As a result of the pharmacies’ privileged status in society, the apothecaries’ position as a professional group has also been recognised and has been influential over past centuries. Consequently, the Finnish pharmacy institution has been able to develop in the hands of a very distinguished group of professionals, which has emphasised the individualistic and professional nature of the business.

The license system in Finland is very strict and the only exceptions have been made for the University of Helsinki and later for the University of Kuopio, based on centuries old teaching responsibilities and other obligations. The University of Helsinki is the owner of University Pharmacy and it is the only pharmacy in Finland entitled to establish subsidiaries without regard to the geographical regulations. University Pharmacy has been able to establish several subsidiaries since the 1950’s as a result of special privileges related to teaching purposes and providing medicines for large hospitals in Finland. These subsidiaries, which in the beginning were more medical stockrooms then pharmacies, were transformed in the 1990’s into pharmacy chain units and are part of the chain strategy of University Pharmacy. Compared to the privately-owned pharmacies, University Pharmacy has gained a superior position as a

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75 Apothecaries are pharmacists who have a pharmacy license through which they own a pharmacy.
76 The pharmacy license was originally owned by the University of Helsinki. It was given to the University of Kuopio in 1999 as the University of Helsinki was given rights to establish a new branch pharmacy in Helsinki.
result of being able to develop its business by establishing the first chain-like pharmacy structure in the otherwise strictly controlled business environment. Such a privilege has naturally created dissatisfaction among the privately-owned pharmacies, as the protective pharmacy license system has otherwise protected the market from the invasion of international pharmacy chains.

The debate and disagreements between University Pharmacy and privately-owned pharmacies have been going on for decades for different reasons, but the chain development added a new dimension to the discussion. University Pharmacy’s privileged status and superior market position have been questioned by the privately-owned pharmacies on several occasions and, in 2002, the conflict between the two groups became especially intense as University Pharmacy’s chain development started to show real results. University Pharmacy had gained over 10% market share and its large organisational size compared to its competitors had enabled it to develop operations that the smaller pharmacies could not afford and/or had no organisational structure for. University Pharmacy was able to make purchasing deals with pharmaceutical companies for lower purchasing prices on OTC products based on large volumes. It could develop a loyal customer programme with discounts for customers in order to enlarge its own customer base. It was also able to provide long opening and service hours for customers as the number of pharmaceutical employees had increased and the average number of staff per pharmacy unit was higher than in the privately-owned pharmacies. As a result, University Pharmacy’s increased competitive advantage had pushed the small privately-owned pharmacies into a very tight economic situation and to a turning point, where many of the traditional business practices were challenged and re-evaluated. Apothecaries from the privately-owned pharmacies even made a claim regarding the changed competitive situation within the business in the EU court. The criticism from within the pharmacy sector of University Pharmacy’s status was reported in several newspapers on numerous occasions in the end of 1990’s and in the beginning new millennium. The debate between the private apothecaries and University Pharmacy took place through the media, in which they accused each other or defended their views. The response from University Pharmacy to the criticism was that its vision was to be a pioneer within the Finnish pharmacy market; to provide an example to the others of the high standards that could be achieved and to identify future opportunities for development of the industry. Quoting the CEO of University Pharmacy: “University Pharmacy has created the needed dynamics in the pharmacy


As the worst conflict subsided and the common debate became milder, it became obvious that, although the privately-owned pharmacies had complained about the changes in the business, they had simultaneously been influenced by the incident. The beginning of the new millennium appears to have been a turning point for the whole pharmacy industry in Finland, when the development in the market radically changed the business conditions and influenced the business. An indicator of this change is the voluntarily established pharmacy networks, assembled by apothecaries from privately owned pharmacies. These voluntary based pharmacy networks are built on apothecaries’ own resources and efforts and they are managed by the individuals involved in the development process.

Pharmacies’ chain development / network development is, thus, a phenomenon that can be related to the new competitive demands that are shaping pharmaceutical retailing. Pharmacies are part of the Finnish welfare society, where they have an important role as authorised pharmaceutical distributors. The profession and the pharmacy system today show strong dependence on the past. Although pharmacies importance as a medicine provider in society has not been denied, the status and the future form of the pharmacy institution in general have been frequently debated in politics in recent years. Many of the rules and regulations, e.g. pharmacy fees, license structure, establishment of new pharmacies and subsidiaries, have been questioned.

The pressure to change the pharmacy institution comes from different directions in society, i.e. from the governmental authorities and legislators, who would eventually like to deregulate the medicine distribution system in Finland in order to lower public health care costs. It comes also from other industries and wholesalers, who hope to get their share of the pharmaceutical retailing in the future, and also from outside Finland from the EU governmental authorities, who want to have open competition for pharmaceutical distribution in Europe. The reorganisation of retailing has extended to
the whole pharmaceutical industry and pharmacies are facing a new era with new demands.
6 THE STUDIED PHARMACY NETWORKS

University Pharmacy has long traditions of being part of the academic world as has been described in the historical review. It is the leading pharmacy network in Finland and has been the pioneer of “chain development” within the field. Hyvän Mielen Apteekit, is the first voluntary pharmacy network in the market. It is competing with University Pharmacy for market share leadership in Finland and it has become the second largest pharmacy network after University Pharmacy.

6.1. Yliopiston Apteekki – University Pharmacy – the integrated pharmacy network

University Pharmacy (YA) is the leading pharmacy in Finland. It is owned by the University of Helsinki and it comprises the main pharmacy in Helsinki and 16 additional branch pharmacies, subsidiaries of the main pharmacy.77 (See figure 12.) In spring 2004 University Pharmacy entered the pharmaceutical retailing market in Estonia where it has eleven pharmacies by 2008. In spring 2006 they opened the first Russian subsidiary, YA Universitetskaja Apteka, in St. Petersburg, where there were three subsidiaries by 2007. Besides the pharmacy units, University Pharmacy Group consists of six affiliated companies: Oy Galena Ltd. (a contract manufacturer and packager of pharmaceuticals and herbal remedies serving both the domestic and foreign pharmaceutical and herbal industries), Receptum Oy (provides IT solutions for pharmacies, medical-, and dentist clinics), Ordior Oy (concentrated on importing, marketing and selling laboratory instruments and equipment), YA-Prevett Oy (focused on veterinary instruments and equipment), Yhteistyöapteekit Oy (no active operations at the moment, owns 10% of Receptum Oy), and Yliopistonapteekki Oy (the holding company for foreign operations in Estonia, Russia and also in Sweden).

77 YA- pharmacies are located across the country in 12 cities. The main cluster is in Helsinki, the capital of Finland, where six of the pharmacies are located. The main pharmacy in Helsinki includes two different pharmacy locations. The other pharmacy locations are Joensuu, Jyväskylä (two pharmacies), Kemi, Lappeenranta, Oulu, Pori, Salo, Savonlinna, Tampere and Turku.
6.1.1. Key numbers, mission and values

The turnover of YA in the year 2008 was 268.1 Million € (does not include the turnover of the affiliated companies), an increase of 4.7% from 2007. YA submits the pharmacy fee, direct taxes and a share of the profits to the University of Helsinki; in 2008 these amounted to 45 million €, of which the pharmacy fee was 25.3 Million € and the profit share was 14.2 Million €. The number of employees was 910, which was somewhat lower compared to the previous years. YA’s 11% market share in the number of
prescriptions has increased from the 10% market share it had between 2002 and 2006. In 2008 YA processed 4.7 Million prescriptions, an increase of 2.6 % from 2007. The number of loyal customers in 2008 was 750 000, showing a significant increase from 2006 when the number was 660 000 (in 2005 the number was 608 000 and in 2004 loyal customers totalled 515 000). (Annual reports 2004, 2005, 2006, 2008)

Figure 13 Key figures for YA

<table>
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<tr>
<td><strong>Net Sales</strong></td>
<td>268,093</td>
<td>255,475</td>
<td>250,860</td>
<td>250,294</td>
<td>229,924</td>
<td>205,783</td>
<td>184,966</td>
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<tr>
<td><strong>Pharmacy fee</strong></td>
<td>25,274</td>
<td>24,231</td>
<td>23,512</td>
<td>24,081</td>
<td>22,241</td>
<td>20,098</td>
<td>18,076</td>
</tr>
<tr>
<td><strong>Direct taxes</strong></td>
<td>5,513</td>
<td>5,812</td>
<td>5,753</td>
<td>5,419</td>
<td>5,257</td>
<td>3,665</td>
<td>3,358</td>
</tr>
<tr>
<td><strong>Net profit for the financial year</strong></td>
<td>14,169</td>
<td>15,087</td>
<td>15,391</td>
<td>13,416</td>
<td>12,071</td>
<td>8,179</td>
<td>7,443</td>
</tr>
<tr>
<td><strong>% of net sales</strong></td>
<td>5.3</td>
<td>5.9</td>
<td>6.1</td>
<td>5.4</td>
<td>5.3</td>
<td>4.0</td>
<td>4.0</td>
</tr>
<tr>
<td><strong>Pharmacy fee, taxes and profit: total</strong></td>
<td>44,956</td>
<td>45,131</td>
<td>44,656</td>
<td>42,916</td>
<td>39,569</td>
<td>31,942</td>
<td>28,877</td>
</tr>
<tr>
<td><strong>Submitted to the Univ. % of the total</strong></td>
<td>44,956</td>
<td>45,131</td>
<td>44,656</td>
<td>42,916</td>
<td>38,569</td>
<td>30,942</td>
<td>28,877</td>
</tr>
<tr>
<td><strong>Personnel</strong></td>
<td>910</td>
<td>940</td>
<td>945</td>
<td>961</td>
<td>955</td>
<td>945</td>
<td>871</td>
</tr>
</tbody>
</table>

Source: Annual reports 2006, 2008

All personnel, including managers and head pharmacists are employed by the same organisation, YA. The affiliated companies support YA’s functions and strategic goals in their operations. The administration in YA is organised in the following way: the board of directors is the highest authority consisting of rector of the University of Helsinki, apothecary, professors from the University of Helsinki and an external professional. At the operational level the management group is responsible for the pharmacy activities. The management group was previously a mix of managers and head pharmacists, but today consists only of appointed directors and managers. It meets twice a month and is responsible for taking care of finance, strategic planning, marketing and market issues. The CEO is the bridge between YA’s management group and the board of directors. The CEO reports directly to the board of directors and is also the head of the pharmacy.
functions and the only person with the title apothecary. Thus, the apothecary is also the CEO of YA. The administrative tasks have been centralised and there are people responsible for each area of activity, i.e. finance and administration, purchasing, manufacturing, quality control, IT systems, communication, HR, education and pharmaceutical issues, and marketing. (Annual reports 1990-2008) The formal ownership and management structures in YA are illustrated in figure 14.

Each pharmacy unit, including the subsidiaries in Estonia and Russia, has its own head pharmacist. The decisions taken by the management group are communicated to pharmacy units, meaning that decision making is centralised in a “top to bottom” manner. The head pharmacists for the individual pharmacies are in charge of the business performance of their unit and the implementation of the centralised decisions.
Under head pharmacists in the pharmacy hierarchy are customer managers who are trained to become head pharmacists\(^ {78}\). As the chart shows the whole organisation has a very clear structure with fully developed supportive functions. All personnel are employed by the same organisation and work for the shared and given goals. YA is also the largest employer of pharmaceutical professionals in Finland.

YA has stated that its main goal is to provide excellent customer service (Annual report 2005). Its ambition has been to increase customers’ general awareness of both pharmaceuticals and a healthy way of living. Therefore YA has invested in several projects that aim to improve the overall customer service level and thereby increase the number of customers. YA established a loyal customer programme for their customers in 1996. The loyal customer programme is called UNIIKKI and the key benefits for customers are the following: individualised medicine information, a free call-centre service line, discounts (percentage) on non-medical products when purchases are concentrated to YA, loyal customer newsletter, web-service with medical information, several online calculators for medical costs, renewal of prescriptions via phone without a service fee, a guarantee of medicine availability (free home delivery if YA is unable to deliver a medicine), and the follow-up system of yearly medical costs \(^ {79}\) (Apteekin hyllyltä 2006:1, the loyal customer newsletter). In addition to these loyal customer services, YA has launched two new services in 2005: an assessment service for medication and a personal support service for smoking cessation (Annual report 2005). A crucial challenge for 2007 was to promote chain-like business operations in both Estonia and Russia, as stated in YA’s 2006 annual review. In the end of 2008 YA has stated that it is examining the possibilities to expand to Sweden, where the pharmacy re-regulation in July 2009 will open the pharmaceutical retailing for foreign pharmacy chains (Annual report 2008).

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\(^{78}\) Both head pharmacists and customer managers have to have the higher degree in pharmacology and pharmacy, the Master of Science (M.Sc).

\(^{79}\) The personal liability limit for prescription medicines was 616,72 € in 2006, whereafter the customer is entitled to receive free medication during the rest of the calendar year.
6.2. **Hyvän Mielen Apteeikit – the voluntary pharmacy network**

Hyvän Mielen Apteeikit Oy (HYMA) is the first pharmacy network in Finland that has been established by privately owned pharmacies. It is a corporation owned by its members where members are partners and shareholders in the corporation.

**Figure 15** HYMA pharmacies in Finland

HYMA can be described as a pharmacy network developed on a voluntary basis. The number of members has grown since its establishment in 1996 and in 2006 HYMA was a pharmacy network consisting of 24 partners / apothecaries and 31 pharmacies including subsidiaries\(^{80}\). (See figure 15.)

\(^{80}\) The location of the pharmacies in HYMA is spread over the country in 20 cities. The main cluster is in Helsinki, where five of the pharmacies are located. Other pharmacies are located in Kemi, Kotka, Heinola, Hämeenlinna, Iisalmi, Kouvolan, Lahti, Oulu, Pietarsaari, Raasepori, Tampere, Joensuu, Jämsä, Järvensjö, Kangasniemi, Karhula, Turku, Valkeakoski, Vammala, Vantaa and Varkaus (in 2006).
6.2.1. Key numbers, mission and values

The turnover of HYMA was 110 Million € in 2005. HYMA’s pharmacies serve approximately 2.4 Million customers every year and employ a total of 400 pharmaceutical professionals. HYMA’s strategy is to improve the standard of customer service in pharmacies and to broaden and emphasise the pharmacies’ role as part of the national health care system (Hyvän Mielen Apteekki 3/2005; 4/2007, loyal customer newsletter).

In HYMA the apothecaries are the owners of the business units and together form the management group. HYMA is, however, led by a board of directors that consists of six members; five ordinary members from the management group and a chairman. The members of the board are chosen by the apothecaries in a yearly election, in which the chairman is also elected from among the members. At an operational level, HYMA has three employees who take care of the administration: a CEO, an education manager and a marketing manager. The pharmacists working in the member pharmacies are employed by the separate business units, not by HYMA.

Figure 16 Management and ownership structure in HYMA
In HYMA the membership / partnership in the network comes through the ownership and, thus, all apothecaries start from an equal position. All member pharmacies are privately owned, economically, formally and legally separate entities, and the only employees are the CEO and the Administration team. Before 2004 the organisation did not have a clear administration or organisational structure. Administrative and managerial tasks were taken care of by volunteers and both the CEO and the chairman of the board were elected from among the members. In 2004-2005 a re-organisation took place in the network and a central administration was established for the pharmacy network. The CEO, marketing manager and education organiser were appointed from outside the network and not elected from among the member apothecaries.

HYMA has stated that its goal is to improve its members' businesses, the professional knowledge of the personnel, and to homogenise the standard of customer service across the network. The network is thus focused on customer service in various forms and on the internal education of its personnel. High customer service standards can be linked to the central locations of all HYMA pharmacies and their long opening hours. The pharmacies have separate loyal customer registers, which include a total of 108,000 customers in Finland\(^\text{81}\) and the number of loyal customers is steadily increasing. By keeping a register of its loyal customers’ medical histories, HYMA aims to help customers to use medicines safely. \(^\text{82}\) Thus, HYMA pharmacies can follow up and ensure that possible double medication, cross-effects, or side-effects in the medical care are avoided. HYMA produces a monthly newsletter for its loyal customers, consisting of articles about contemporary health issues, health politics, interviews with health care professionals, information about product campaigns, and special offers on OTC and health care products. Today, HYMA’s business is not limited to pharmaceutical retailing. HYMA started importing its own line of health products (Rauch) to Finland in 2005 and it launched a herbal drug store concept in 2003, through which it aims to create a shop concept that will cover the whole of Finland. Members pay an annual membership fee, which is used to fund the network operations and activities. A significant part of the money is used for internal education, which is

\(^{81}\) In 2004 the number of loyal customers was 80,000.

\(^{82}\) Keeping records of customers’ medical histories further supports patients in that pharmacies can control when patients’ medical costs cross the limit whereafter they are covered by the national health care system.
clearly the core of all the joint activities. Although the members of HYMA have a defined business network and several joint activities, all units are independent pharmacies that decide to what degree they participate in the activities. New members are recruited only if the management group sees it as necessary and can agree that the candidate will fit in the network. Thus, an apothecary cannot join the network without having other members’ approval; however, a member is free to leave the network if he/she wants to.

6.3. How did the pharmacy chains come into existence?

Prior to the 1990’s, Finnish pharmacies had a relatively comfortable position from a business perspective. The old license system and other regulations secured and sheltered the business and there was an unwritten ‘gentlemen’s agreement’ that apothecaries would not threaten each other’s business. Thus, the only common threat for pharmacies was the governmental authorities’ continuous efforts to change the pharmacy system in the endless quest to make society more cost-effective and efficient. However, not all regulations were as harmful as one might imagine. The new pharmacy law had actually enabled pharmacies to develop their business, e.g. by allowing them to establish pharmacy stores and launch a self-service concept in the pharmacy business. However, the relatively peaceful market situation changed when YA gradually introduced its new strategy. YA started investing heavily in its branch pharmacies and the establishment of the pharmacy shop concept in all units was part of the chain strategy, from which followed the re-design of all branch pharmacies. In the extensive renovations each branch pharmacy was given unified interiors and exteriors. The corporate image was also unified and in the marketing material YA’s brand, logo, colours and layout were designed to signal a carefully planned message to customers. Thus, consumers would recognise YA from among all other pharmacies and, it was hoped, be aware of its services as a reliable, professional and customer-oriented pharmacy.

YA was able to utilise its exclusive privilege of having several subsidiaries under one pharmacy license as the starting point for developing the first pharmacy chain in Finland. Based on the descriptions of chain development activities that have taken place in the market, it can be argued that the chain development started in 1992-1993,
although the term chain was used for the first time in 1996 in YA’s annual review. Thus, YA’s new chain concept was not launched to a great fanfare – it was implemented gradually. Therefore, privately owned pharmacies were rather slow to become aware of YA’s future plans, as the chain structure and strategies started to materialise.

There are several examples of changes in business practices that illustrate the “chain development rally” within pharmacy retailing in the early 1990’s. In 1991-1994 YA started to experiment with various marketing activities in one of its branch pharmacies. The branch pharmacy’s head pharmacist wanted to increase the awareness of YA among local customers and started advertising in the local newspapers. The advertisements wanted to inform the community about YA’s newly launched pharmacy shops with longer opening hours through which they could offer better customer service. The message to customers was to “provide better service than in the other pharmacies”. When YA started advertising and launched other marketing campaigns in order to draw consumers’ attention, privately owned pharmacies reacted with disapproval. Advertising in general was not common practice in the field, and YA’s efforts to poach customers from other pharmacies were even less familiar.

YA’s aggressive marketing activities were new to the pharmacy business and the message of the advertisements was quite straightforward, i.e. they recommended that consumers purchase OTC drugs. The following marketing slogans were used in the 1990’s to promote OTC painkillers: “To your aid in self-induced headaches” or “Improve your day with an Aspirin!” The authorities do not allow such slogans to be used any more and the marketing of both prescription and non-prescription medicines is very circumscribed. Thus, the direct style of the early advertisements was clearly part of the newly launch competition between the pharmacies. The privately owned pharmacies responded to YA’s challenge with their own advertisements. As a consequence, the marketing campaigns became even more aggressive. In addition to the advertisements, privately owned pharmacies followed YA’s example and started to provide discounts on medicines for their loyal customers and had special offers on OTC medicines and cosmetics. The competition between the privately owned pharmacies and YA at the beginning of the 1990’s created a “price war” in combination with the

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83 YA had been careful not to mention the term “chain” before 1996. Since the beginning of the 1990’s the activities were described as a strategy for striving for better customer service and continuous development of the pharmacy field in Finland.
advertising campaigns between the pharmacies. The National Agency for Medicines in Finland did not approve this and banned all forms of marketing activities by pharmacies. According to the new prohibition, pharmacy newsletters were also illegal. The authorities’ intervention upset both YA and the privately owned pharmacies. Apothecaries wanted a second opinion on the matter from legal experts and professors at the universities. They took the matter to the Chancellor of Law, who decided that the intervention by the National Agency for Medicines was illegal and against the constitution. This intervention from another authority in turn upset the manager of the National Agency for Medicines and a discussion about the purpose and meaningfulness of using discounts in pharmaceutical marketing followed. Thus, the competition between pharmacies and the pharmacies’ marketing activities had become national issues involving several actors.

An interesting characteristic of the price war was that it was initially concentrated in one city where intense and open competition between YA and a local apothecary had developed. The competition did not only exist at the business level, it was also a matter of social standing, with two individuals, both pharmacy professionals, challenging each others’ reputations. YA’s head pharmacist was an ambitious person who wanted to change the traditional business and modernise the pharmaceutical market (he happens to be the CEO of YA today). YA’s formidable opponent was an apothecary whose pharmacy was located very close to YA’s branch pharmacy. He was known to have strong opinions and was a highly respected pharmacy professional who himself had a vision for developing the pharmacy business in Finland. Thus, he supported YA’s development in general but disapproved of the way YA used its special privileges to threaten privately owned pharmacies’ business and to take customers from them. The apothecary was not alone in his efforts to stop YA’s business development.

Apothecaries from privately owned pharmacies throughout the country questioned whether YA’s actions were legal. YA’s marketing activities were investigated by the authorities but the conclusion was that they did not explicitly break any laws or regulations. Consequently, apothecaries tried to do what they could to put an end to YA’s actions. The Finnish Pharmacy Association, which represented the privately owned pharmacies, took the problem to court. The continued competition, legal claims from privately owned pharmacies, and constant accusations by the apothecaries made the situation untenable. Governmental authorities stepped in and reminded
pharmacies that they should dispense medicines at a flat price, as stated in the regulations. However, there was nothing in YA’s marketing campaigns that directly violated the law. Thus, the CEO of YA wanted to extend the advertising campaigns to generate even more publicity and take advantage of the fact that YA had been able to differentiate itself from the privately owned pharmacies. However, the price war ended as YA’s board of directors felt it was imperative that the situation was calmed down, as privately owned pharmacies had become very irritated with YA.

It is worth noting that these disputes between YA and the privately owned pharmacies largely triggered what we might call chain development in Finland. The events related to the new competitive situation in the market provided the starting signal for privately owned pharmacies to combine their resources and compete against YA. Thus, the private apothecaries’ position was clear: instead of doing nothing it was better to start changing their own businesses as well.

The competition between YA and “the neighbour apothecary” culminated in the establishment of HYMA in 1996. HYMA was created by independent apothecaries who wanted to be able to compete against YA’s strategy and thereby be part of the competition and even increase competition in the market. HYMA was, therefore, established as a result of individuals choosing to fight back as a group, one of the apothecaries being the catalyst for action, who then recruited others to join him. This catalyst was “the neighbour apothecary”, who gathered together a group of apothecaries, entrepreneurs in spirit, who wanted to make a difference. Thus, a competing pharmacy chain to YA was established on individuals’ initiative. By combining their resources in purchasing, marketing, and communication, HYMA apothecaries aimed to improve the efficiency of their businesses, and gain competitive advantage. Hence, YA’s price war had an impact on the overall market structure and marketing practices within the pharmacy business.

This story shows how apothecaries have often protested against changes to the existing system, not least when they have perceived that decisions made by governmental authorities have given YA unreasonable advantages. Thus, new rules and regulations have often been perceived by the privately owned pharmacies as strengthening YA’s position in the market while weakening their own. We saw in the historical review of 84 Introduction of “läketaks”, the flat price for medicines in all pharmacies for all customers, in 1990.
the Finnish pharmacy system that almost always when YA has extended its old privileges, there has been resistance and negative comments about YA’s actions. However, after some struggle and debates at varying levels, from opinion pieces in newspapers to court cases, apothecaries have tried to exploit the opportunities presented by the development.

6.4. Chain development in YA

The early days of YA were described in the previous chapter about the development of the pharmacy system in Finland. The historical background explains how and why YA was established and the origins of chain development. When YA was given the rights to establish medical storehouses next to large hospitals, it was part of a future strategy that has been refined in recent years. Thus, the story of YA’s chain development covers an extensive time period. It can be argued that the large scale business enterprise was created in the 1950’s and was the starting point for the later development of the pharmacy network. The medical storehouses officially became branch pharmacies in 1987, which can be seen as the starting point of YA’s chain development. Thus, all the activities that YA, with its leading apothecary, undertook before 1987 were in preparation for the development of the network, and all activities after that point have supported the chain development.

YA’s chain development is well documented in the annual reports and other official statements that it has published over the years. Thus, there is a continuum of events and activities that have been undertaken every year since the end of 1980’s. In the new medical law of 1987 the pharmacy personnel’s obligations were widened to cover medical advisory services to customers. When the role of the pharmacy personnel changed, many apothecaries realised the opportunity to change the whole pharmacy concept. YA also used the opportunity and established a large scale pharmacy shop concept. It gained public attention, even though it may not have been the first pharmacy to try the idea.85 After the new law had been passed YA launched its own reform programme86, which introduced self-service for OTC products in the newly established pharmacy shops. Another novelty in the reform programme was a

85 Privately owned pharmacies tried the same concept and implemented it even before YA. One of them was run by the apothecary who established HYMA.
86 The pharmacies’ similarity development programme (in Finnish, apteekkien yhdentymiskehitys), in 1989
computer-based system for prescription processing, which was faster than the old manual practice. It ensured that customers were served directly by a pharmacist over a special dispensary counter, allowing more privacy and faster service as customers’ prescriptions were made up while they waited. In its annual report from 1990 YA stated that “…we have strived and we will strive for developing pharmacies and finding new ways to operate, as well new areas where to operate in the future.” (Annual reports 1990-1992, 2005)

The pharmacy reform programme was the first official assertion linked to YA’s chain strategy. It directed the pharmacies’ strategic focus to developing pharmacy services and educating their own personnel in customer service. In 1993 YA launched a new operational strategy, which introduced the basic business ideas of chain development: developing the personnel’s professional knowledge and moving from medical advisory towards health care advisory with a focus on people’s well-being. In the same year a newly renovated branch pharmacy in Jyväskylä re-opened, introducing the new, unified design of YA branch pharmacies. The new shop concept was based on separate departments for prescription and non-prescription medicines, cosmetics, herbal products, and veterinary products in the pharmacy shop (Annual reports 1993-1994). The new branch pharmacy concept was gradually extended to all branch pharmacies and it implied unified operations in all pharmacy units, a unified image in the interiors and exteriors, and most important of all a customer oriented mindset in pharmaceutical retailing. In 1995 University Pharmacy continued the technical development of the internal computer systems and centralised the IT systems of the pharmacy functions in all branch pharmacies. Thus, YA took an additional step forward in the chain development process by centralising information systems, which were critical for the business development.

In 1996 YA stated for the first time that its new pharmacy concept was striving towards “chain like operational procedures and improved cost efficiency”(Annual report 1996). YA emphasised direct contact with customers and the front-line ideology was presented in a Quality Handbook that was delivered to all branch pharmacies. A loyal customer programme was launched the same year, as were some other new services, e.g. longer

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87 The handbook of guidelines for personnel strictly follows the chain development guidelines and practice, as the quality handbook and quality assessment are means by which the chain management can monitor and ensure that quality standards are at the same level throughout the network (Kautto & Lindblom 2004).
service hours, a drive-in pharmacy, and a call centre service. The YA-Academy, which developed the internal education concept, was established later that year (Annual review 1996). All these activities were enabled by the integrated IT systems, which were vital for the creation of a joint customer database. During the same year, the apothecary and CEO of YA resigned. He had worked at YA since 1982 and had been an important driving force behind the chain development. As YA’s apothecary he had been involved in defending YA’s old privileges against the authorities during the turbulent years of the price war and he had created the strategy which would make YA the front-runner within the pharmacy business. His resignation came as a result of differences of opinion between him and YA’s management during the time of the aggressive price war and marketing campaigns, which had irritated the whole pharmaceutical retailing sector. The new CEO, a professional from the pharmaceutical industry who had no previous experience of working for YA, was appointed at the beginning of 1996. He continued on the same path his predecessor had started and, thus, the goal was “to differentiate YA from other pharmacies and develop it to become a recognised specialist in the health care system” (see, e.g. Muiluvuori 2005).

Every year since 1997 YA has highlighted its continued efforts related to customer orientation and internal education of personnel as part of the chain strategy. In 1997-1998 the loyal customer card was introduced as the first pharmacy card in Finland. YA also states in its 1997 annual report that “the chainlike operations, e.g. in marketing, were eventually being adapted by other pharmacies in Finland”. Thus, YA was claiming responsibility for successfully changing the pharmacy business practices, referring probably to the first competing pharmacy chain (HYMA), which had been established during the previous year. The operational model YA had developed would extend throughout the pharmacy business. Chain development and cost efficiency became permanent goals for YA, as stated in their annual reports from 1997 to 2006. YA also continued to centralise operations gradually, as could be observed in the ever more homogeneous shop displays and customer service.

An interesting aspect of YA’s development is the co-operation with 8 privately owned pharmacies that was formed in 1998: the Co-Operate Pharmacies Finland Ltd (Yhteistöö Apteekit). The aim was to develop the Finnish community pharmacies’ operational procedures and distribute the operational models YA had developed for the private pharmacies. Co-Operate Pharmacies Finland Ltd operated between 2000 and
2005 but operations never really took off. The co-operation concentrated on importing cosmetics but the actual chain operations remained vague and consequently the co-operation was terminated in 2005.

Another interesting aspect is related to the apothecary's role in the development process. In 2001, the second CEO to lead YA during the chain development period resigned in order to become CEO of another company. The CEO that replaced him had gained considerable experience from various positions in YA. He had worked as a head pharmacist during the price war and was the pharmacist who had confronted HYMA's founder. After working for a couple of years in the pharmaceutical industry, he was persuaded to rejoin YA. Thus, he knew the organisation, the industry, the strategy, and, most importantly, he personally knew many of the people in leading positions within YA. Moreover, people in YA knew him. Not surprisingly, the chain efforts strengthened with the new apothecary and in 2002 YA redefined its organisational values as part of the centralised chain strategy. The newly defined core competencies were: to gain satisfied customers, knowledge, good team working, being open-minded, to be a forerunner in the pharmacy business, profitability of the business and social responsibility. At the same time YA presented ethical guidelines for pharmacy operations. In 2003 YA had finished renovating all the branch pharmacies so that they had the same unified chain image, and internal chain education was developed through the YA-Academy. In 2004 YA launched a service model in all the pharmacy units, based on improved personal medical advice, which was built on information from each loyal customer's own profile. Through the loyal customer programme YA had succeeded in communicating their chain concept to customers and had become the largest pharmacy chain in Finland. YA took the first step towards international operations in 2004, when the first subsidiary in Estonia was opened, although the expansion abroad had been on the agenda since the 1990’s. In 2005 YA celebrated its 250th anniversary and in 2006 it entered the Russian market. In 2006 YA also introduced a new web-based staff training scheme, the YA-channel, which offered opportunities for increased training and tailor-made programmes for personnel. (Muiluvuori 2005; Annual Reviews 2001-2007)

6.4.1. Summarising the milestones in YA’s development

To summarise YA’s development, five important milestones in the evolution of its current network can be identified:
1) 1987 - the existing medical storehouses become official branch pharmacies.
2) 1990 - pharmacy reform programme leading to the opening of the first branch pharmacy in 1993 in Jyväskylä with the new unified image-to-be.
3) 1994 - 1997 - a new operational strategy, including, e.g. differentiation of YA from other pharmacies in Finland, loyal customer programme and open communication of the chain strategy.
4) 2001 - the current CEO is appointed.
5) 2004 - internationalisation begins in Estonia

The critical milestones in YA that have influenced the network seem to be closely related to new laws and regulations, which have created new business opportunities. YA is a tightly structured network and the business reforms have been established through YA’s own activity and initiative as an organisation. Based on its size and capacity as well as its privileges, YA has, from the beginning, had resources that have made it possible for it to launch and develop new business concepts and activities. Furthermore, YA’s network is not limited to one market. It has established subsidiaries abroad just like any other company that has the potential and capacity to extend operations over national borders. The current CEO’s view of YA’s chain development is clear: “chain development is a sign of efficiency, which means and creates efficiency”. Chain development is the ultimate goal and strategic choice for YA. Thus, chain development is a strategic and structured development process of chain activities and chain image.
6.5. Development of HYMA

At the beginning of the 1990’s, the city of Turku became well known throughout Finland for the price war between the apothecaries from privately owned pharmacies and YA’s branch pharmacy in the city. YA’s considerable resources had made it possible for them to test different marketing efforts through its branch pharmacies, while other pharmacies were suffering as a result of YA’s superior position in the market. The privately owned pharmacy that was closest in location to YA’s branch pharmacy was the oldest pharmacy in Finland (it had existed since 1689) and the owner apothecary was highly respected among pharmacy professionals. He was known to be a strong character with a quick temper. He was also active in developing the pharmacy business in Finland and expressed his opinions among apothecaries in academia, politics and business. He was an influential character who had his supporters and his opponents, and therefore he could be described as a bit of a rebel among the apothecaries. He supported the idea of competition in general but he disapproved of the way YA used its special privileges to threaten other pharmacies. In the critical situation of the price war with YA, he wanted to act accordingly. As a response to YA’s activities he had started printing his own customer newsletter called HYMA together with another apothecary colleague. In doing so, he and his colleague wanted to show that pharmacies other than YA were capable of marketing and competing in pharmaceutical retailing in Finland. In a way he also wanted to challenge YA to an intense competition.

The apothecary started recruiting more apothecaries to join him in producing the HYMA newsletter. The first person he contacted was his old colleague from the university, who owned a large pharmacy in another city. They knew each other from the time they had studied at the university and they had also worked together on several development projects in the 1980’s. At some point, they had had some disagreements and differences in opinions about the projects, which led to over 10 years of conflict and silence. However, HYMA’s founding father contacted his old colleague in 1995 and asked her to join in the action. She had faced similar problems in marketing her own pharmacy and, therefore, she thought his idea for a newsletter was good and agreed to join him. She suggested, however, that their co-operation should involve something more than just publishing a newsletter. Together they realised that in order to compete with YA and other pharmacies, they needed to co-operate on more than just marketing initiatives. Thus, the founders started to plan the establishment of the first voluntary
pharmacy chain in Finland. They considered who else could be recruited as founding members. The founders called on their closest contacts, mostly old friends from their student days, and by the end of 1996 the HYMA Corporation was established, consisting of the pharmacies and subsidiaries belonging to the 7 founding members.

The HYMA apothecaries shared a vision of the future development of Finnish pharmacies and they wanted to focus their activities on joint marketing, internal education and customer newsletters. The main theses for HYMA were the following:

1) In order to initiate competition HYMA pharmacies will be located in the same cities where YA has its branch pharmacies.

2) HYMA recruits new members based on the pharmacy location, the size of the pharmacy and the apothecary’s individual characteristics.

3) HYMA apothecaries have to be “individuals”, open minded and innovative professionals, who do not want to keep to the old traditions.

4) Every new member needs to bring something new or some special knowledge to the network.

5) HYMA will expand in a moderate way.

The co-operation meant new possibilities and greater resources for the apothecaries to develop their businesses. In the beginning, HYMA’s network resembled a group of people in a democratic structure, where all apothecaries were equally involved in the various activities. The members chose from among themselves those apothecaries who would have administrative and management roles, i.e. who would be the CEO and the chairman. In other words, the apothecaries had several roles and positions in the pharmacy chain at the same time. In 1998 HYMA recruited a development manager to develop and plan HYMA’s business concept. The founding members knew him from his earlier work and thought that he would fit in well at HYMA. Simultaneously the network continued to grow and new members were recruited every year.

The original future growth plan was limited to 30 member apothecaries. HYMA founders regarded that as the maximum number of members if they were to maintain
the high level of commitment in the network. They indicated that all members must be willing to work for HYMA and commit their resources to HYMA, without any need for controlling each others’ activities and intentions. By 2003 HYMA already had 19 members and the management and development of HYMA were tightly organised around the members, who worked together for a common goal. The key activities had become focused on developing the core activities related to presenting a unified image to customers. Thereby, the network development was driven by the customer service approach and loyal customer programme.

When the founding father of HYMA died suddenly in 2003, it created a vacuum in the network. He had been a strong and respected character with passionate opinions, as a result of which he had also provoked mixed feelings among people. He had worked as the chairman since the establishment of HYMA and the empty space had to be filled. The HYMA apothecaries assumed responsibility for continuing the operations and a new chairman and CEO were appointed from among them. The sudden change in the network and the growing number of members were a preface to the next move that HYMA made in 2004. As the number of members increased, the number of tasks needing to be managed also multiplied. The network had to change some of its original ideas, e.g. the idea that everyone should be equally involved in decision-making. Consequently, 2004 saw important changes in the management of the HYMA-network. At the individual level, the former CEO took over as chairman and the former chairman returned to his pharmacy work. The development manager was appointed as the new CEO, and two new positions, education manager and marketing manager, were created within the administration at the beginning of 2005. Internal rules for general meeting practice and board meetings were re-written at the end of 2004. These days, board meetings are held six times a year and general meetings for all apothecaries are arranged four times per year. The minutes of the board meetings are distributed to all member apothecaries. Thus, decision-making processes in HYMA have become more centralised and, simultaneously, the new management structure has encouraged apothecaries to have contacts outside the meetings, emphasising the importance of social contacts and networks within the pharmacy chain.
6.5.1. **Summarising the milestones in HYMA’s development**

To summarise the development process of HYMA described above, there are five important milestones to observe:

1) 1990’s - YA’s experiment in Turku and response from “the neighbour”.
2) 1996 - decision to establish a voluntary pharmacy corporation, HYMA.
3) 1998 - development manager and current CEO, are recruited.
4) 2003 - the founding father of HYMA dies suddenly, prompting internal reorganisation.
5) 2004-2005 - restructuring the organisation and administration.

The critical milestones in HYMA’s development that have influenced the network are related to the development initiated by YA, whereafter HYMA’s own continuous internal development processes began. Thereby, HYMA’s important milestones are not directly related to new laws and regulations, but to the change in business environment and processes. HYMA’s chain development can be described more as an internal development starting from scratch, based on the apothecaries’ willingness to co-operate and built on shared goals and visions. Thus, HYMA’s chain development has been enabled by individuals. Its structure, size and capacity are not comparable with YA and, thus, HYMA’s actions and achievements have been more modest. HYMA is restricted to the Finnish market, and is focused on pharmaceutical retailing within the boundaries prescribed by the governmental authorities.

6.6. **Does history matter?**

The historical account has shown that many of the special characteristics of the contemporary pharmacy business are anchored in the historical development. The past has shaped the pharmacy institution and influenced the development of the whole profession. Therefore, it can be argued that the development of the pharmacy networks is a dynamic process, which takes on an essentially historical character (David 1985). It shows a path-dependent sequence of economic changes (David 1985), where different elements have influenced the development. The historical development of the pharmacy business is regarded as an ongoing process that provides a framework for the contemporary phenomenon of emerging pharmacy networks.
6.6.1. The historical process of change

The historical account of the pharmacy business in Finland is characterised by rules and regulations, continuously changing settings and pre-requisites for the business. Authorities have constantly intervened in the business practice and pharmacists, the professionals, have had to conduct their business in the middle of a jungle of policies, politics, and authorities. Change in the pharmaceutical business can be monitored via historical events, laws and regulations that have given the pharmacy business its structure and shaped the profession of pharmacists. Regulations from the 13th century concerning the medical professions and the supply of medicines defined for the first time the different medical professionals’ roles and obligations in society, whereafter physicians and pharmacists started to develop as professional groups. It can be argued that the regulations also defined the future pharmacy concept as the establishment and location of pharmacies became regulated. The medical regulations and pharmacy regulations from 1698 were built on previous regulations, strengthening the traditions that had been developed within the profession. The regulations concerning pharmacies and pharmacists became more precise and provided the foundations for modern-day pharmacies. The privilege of freedom from paying taxes strengthened the pharmacists’ professional status in society, but it also provided financial assets, which made it economically possible to develop the pharmacy system and business. Developing health care standards was, after all, one of the most critical goals in society in the 17th and 18th centuries. The regulations that were established in the 19th century concerning the pharmacy license system and ownership, the pharmacy fee, and pharmacy subsidiaries, are still in force today. The pharmacists’ profession is clearly anchored in historical events and traditions. The professional oath, defined morals and ethics, the professional secrecy, educational requirements and professional experience needed to gain a pharmacy license illustrate how the pharmacists’ profession is directly linked to personal skills and individuals, as defined in the regulations from 1698. These basic requirements have remained the same.

The historical account of the Finnish pharmacies offers a clear example of how a phenomenon is culturally, historically, politically and socially embedded. Change within the pharmacy business has reflected the cultural and political developments in society, based on which regulations and rules have been formulated. The change has thus taken place through concrete events or as a result of regulations that have aimed to stabilise the pharmacy business and support society’s need for improvements in
medicine supply. The actions taken in order to achieve stability, which has been the aim of the regulations, have thereby made possible the gradual change and development within the profession.

Figure 17  YA pharmacy in Helsinki in 1900-1928.

Since the establishment of YA in 1755, its development has been linked to historical events and the political and cultural efforts. The university was given pharmacy rights in order to create an example of how a pharmacy could provide high quality medicines and thereby improve the general health care standard in society. The establishment of YA was also bound to people and social phenomena. The general spirit of the time supported free competition and, according to historical sources, competition between two political parties had arisen, resulting in various intrigues intended to gain political power. The merchants and the bourgeoisie supported the old apothecary in the city, and did not want a university-governed pharmacy to take over their position of power. The university-educated and the bishop wanted to establish a new university-controlled pharmacy and change the patterns of political power. Thus, politics, social networks and economic reasons, rather than professional motives, were the key elements behind the application for a pharmacy license for the Royal Academy in Turku. This narrative highlights the people, different kinds of actors, in the economic changes and development processes, emphasising the importance of the willpower of individual, human actors, and groups of actors as change agents. Thus, social action of human actors can be said to be linked to the macro level elements of culture and politics as well
as to the micro level elements, i.e. individuals’ interaction. It can be argued that social phenomena and social activities should always be studied in their full context. Understanding the larger picture of elements influencing networks and different mechanisms in society are essential for understanding change processes and social phenomena in general.

6.6.2. How actors understand change through history

The more recent development of the pharmaceutical industry, on which primary data has been collected, shows how respondents, people who were interviewed and who participated in the surveys, identify new regulations as a means for generating change. Thus, change is related to governmental intervention, i.e. new rules and regulations, which have had an immediate effect on the business. Respondents mention for example the information law from 1983 and the medical law from 1987 when they describe change that has been remarkable for the pharmacy business (described in chapter 5.1.2). They refer to the new laws as ‘a pharmacy reform’ as they perceive the time of their introduction as a turning point for the whole profession. The new laws have required pharmacies and pharmacists to change their scope of business from medical professionals to customer service minded professionals. It has been a drastic change as providing medical advice was previously a role assumed by physicians only. The change in the traditional pharmacist’s role has been perceived strongly by pharmacy professionals. The new regulations have changed the professional roles and individuals have had to adapt to their new roles. Thus, it can be argued that a pharmacist’s professional identity is defined by given traditions and rules. This description implies that actors in the pharmacy business identify the effects of change linking them to new rules and regulations that have changed their traditional understanding of pharmacy business and the pharmacy professionals’ roles.

Another way in which the actors understand change is linked to activities that have come to exist as a result of new rules and regulations. Following the pharmacy reform, privately owned pharmacies and YA both started developing the traditional pharmacy concept and established pharmacy shops built on the idea of self-service, where OTC products could be purchased by customers. Another similar description of change is associated with the marketing campaigns, which respondents refer to when explaining the emergence of YA’s chain concept. Respondents describe the ‘price war’ between YA and privately owned pharmacies as something they have felt extremely strongly about,
and which has had an influence on the pharmacy business in general. All these activities are thus consequences of the changes which followed governmental interventions, which have enabled a new course of action for the actors in the field.

6.6.3. What has triggered the change?

One of the main interests in this study has been to analyse what has triggered the change towards retail chains in the traditional and well established pharmacy business. Descriptions of change are narratives describing network activities in the pharmacy business, where the activities can be linked to external forces from actors outside the network detected by the actors, forces originating from actors within the defined network and internal forces within each actor. The different forces are an inseparable part of network dynamics and they influence the actors and the network. The base assumption is, however, that all forms of change need to be interpreted by individuals, be they the result of external or internal forces. Thus, actors affect business networks through their intentions, perceptions and actions.

6.6.3.1. External forces

Rules and regulations and the intervention of authorities in various forms are external forces that have triggered changes in the pharmacy business. Respondents feel uneasy about the future, about their future role and about the future regulations that will influence the whole pharmacy system. The biggest threat in terms of governmental intervention is the deregulation of the pharmacy license system. Generic substitution in 2003 and the 5% cut in the margins in 2006 have already had a critical impact on the profitability of the business. For apothecaries, gradual deregulation of the existing system is just a matter of time.

“First they (authorities) remove the pharmacy fee, then they drop the prices, all the pharmacies at the small places will fall, and then they get the medicines to grocery stores.” Apothecary, HYMA

It can be argued that the first step in deregulation actually took place in 2008 when the nicotine products for smoking cessation were deregulated and became available in grocery stores.
“If the deregulation of the pharmacy system comes, when it comes, then at least 200 pharmacies will disappear. Many pharmacies will fall, either they will go bankrupt and fall for their bank loans or they will just give up their business.” Apothecary, HYMA

Based on their own scenarios of the future, pharmacists see pharmacy networks, i.e. pharmacy chains, as the strategy for survival. YA has communicated about its readiness to face the future development by acting in the front-line as the leader of the chain development and thereby being prepared for new competitive challenges. HYMA apothecaries see their strength against the external forces in the network they have. As a network, they can hypothetically protect their market share from the foreign pharmacy chains, if the pharmacy business is deregulated. They also feel that HYMA is a concept that improves their credibility as a group of professionals and gives them a stronger position as a collective actor in relation to either the Pharmacist Association, or politicians, or any other authority for that matter.

6.6.3.2. Forces originating from actors

Respondents cannot say exactly when the emergence of pharmacy chains began. They cannot spot any precise happening or incident that would be the starting point. Within HYMA, apothecaries view the chain development process in very personal terms in light of their own experiences. They do not link it directly to a regulatory change or specific action. Instead they relate the phenomenon to their own pharmacy business and the effects chain development has had on it. HYMA’s members link HYMA’s chain development to YA’s chain development and, naturally, to the establishment of HYMA. They describe the generally intense situation of the price war in the market as having been critical for HYMA’s establishment. Thus, respondents describe the chain development in terms of changed behaviour in the market following YA’s new activities, i.e. advertisements, the price war, competition (i.e. competition between pharmacies over customers in the price war), and marketing activities that have been introduced in association with the chain development. However, they also view the activities following the establishment of HYMA as critical for the development process for their own pharmacy network and these activities also describe and explain what chain development has meant for them. For respondents in YA, chain development is perceived more or less as a gradual process, which today they take for granted, as the chain development in YA has continued for a long time.
Interpreting what respondents have identified as being critical for chain development indicates that the change in the business resulting from YA’s introduction of the pharmacy shop concept and its marketing activities changed actors’ behaviour in the market. The new activities also changed the actors’ understanding of what was appropriate and what was not within the pharmacy business. Thus, after the gentlemen’s agreement not to compete with each other was broken, the embedded moral rules for behaviour were modified.

Changes in the moral rules for behaviour of actors can be seen in the pharmacy networks that have emerged and evolved. The altered behaviour has also influenced actors’ perceptions of the business. Private apothecaries, who previously were relatively disconnected business actors, have shifted focus from their own pharmacy businesses and pharmacy units to another level. Thus, pharmacy networks are the result of the actors’ action of taking their businesses to the network level. In both pharmacy networks actors, head pharmacists in YA and apothecaries in HYMA; view the business as a whole and ‘form a whole’ in the form of co-operation. This behaviour provides a clear example of collective competition. Apothecaries in privately owned pharmacies are even more dependent on co-operation with each other in the new situation they have identified: they believe that they need each other to compete effectively against YA’s dominance and compete against reforms.

6.6.3.3. Internal forces within each actor

Combining respondents’ stories with the historical data we can find a link between the emergence of pharmacy chains and the activities triggered by the pharmacy reform in 1987. The case study has shown that many of the changes were initiated by the pharmacists themselves. Change emanates from the internal resources of the actors, the willpower and social action, involved in the process. Thus, pharmacists can be described as innovative, leading activities not only in the turbulent times seen in recent years but also historically. Actors’ various ‘doings’ can in other words be analysed as actors’ strategic action, as internal forces, which lead to development in business networks. In YA we can argue that the present structure of the pharmacy network is an outcome of earlier reconfiguration activities of actors. By this I refer to the decision taken in the 1950’s when YA applied for permission to establish medical storehouses close to large hospitals. It was a strategic decision made by YA’s apothecary at the time,
which has enabled the present development of YA, and will allow its development in the future. Thus, actors, individuals in YA and YA as a network, have in many ways affected the development of the pharmacy business and left their fingerprints on the development process.

Internal forces within actors can be observed through the establishment of HYMA. HYMA’s apothecaries have had the courage to take action also during rough times. The entrepreneurial spirit is considered important for the actors in HYMA. This actor characteristic provides an example of an internal force of actors identified in HYMA. Entrepreneurship drives their action and brings the actors together. It is based on the actors’ will to make things happen. It is also a mindset for HYMA’s apothecaries as respondents have demonstrated.

“I’m an entrepreneur... if I do not sell medicines I could sell shoes. We are all entrepreneurs in HYMA. We feel close to each others thinking and mindset, which is why I think we are all reformists.” Apothecary, HYMA

In general HYMA’s apothecaries show a fairly reserved attitude towards YA and they feel strongly about that YA cannot dominate them or other apothecaries. It is a force that drives them in their actions and was also one of the reasons for establishing HYMA.

“HYMA consists of strong and spirited persons. We do not go to our neighbour if something needs to be done, we want to do something concrete.” Apothecary, HYMA

The network as a structure is not the driving force for HYMA, it is the substance that drives them. Strategic thinking is not enough for actors in HYMA. Their strategic thinking needs to become strategic action as they want to do something, they want to change things.

“Gathering together just to criticise authorities’ actions or YA’s doings or those (HYMA) members who are not at the meeting does not help anyone if it does not lead to anything substantial. It is really frustrating. In HYMA people are ready to do concrete things. They are ready to face social pressure. For Hannu (the founding father) HYMA was a forum, where he could bring up his own ideas. He was a radical and could not really speak openly about his thoughts and ideas. But we dare challenge each other and we can openly speak about matters.” Apothecary, HYMA

Actors in HYMA seem to have an internal force that drives them in their action. They derive the force from their own personality, entrepreneurial character, and from their personal strength as individuals. The social relations with like-minded people enable
the internal forces to take effect. Thus, actors derive strength and support for their action through HYMA. There is also a force that originates from them as a group of actors, as the pharmacy network, which also connects them with each other.

6.7. Summary

The pharmacy business in Finland is going through a development process, where one activity has led to the next, creating a chain of activities. The development of the pharmacy networks shows consequently a clear path-dependence where the change is an outcome of several change elements. Interdependencies between apothecaries and pharmacies have created pharmacy networks, which have been called pharmacy chains. Interdependencies between pharmacies have increased as a result of pressure for increased competition in the pharmacy business. The competitive pressure perceived by the actors, i.e. individuals and apothecaries, pharmacies and pharmacy networks, consists partly of demands of external nature from governmental authorities, but, above all, it results from actors’ own activities to improve their respective businesses, i.e. forces originating from actors within the pharmacy networks and internal forces within each actor. Pharmacy chains are, thus, about interdependencies between individuals and pharmacies, where activities and resources are combined and shared, and where actors closely monitor each others’ actions. Change in the pharmaceutical business is a continuous process and closely related to the historical development. It can be argued that emerging pharmacy networks is a phenomenon, which is well embedded in the cultural, historical, social and political contexts.
7 THE PHENOMENON OF THE EMERGING PHARMACY NETWORKS

As discussed in chapter 2, the trend of horizontal integration within the pharmacy business, which is our pre-understanding of the phenomenon of pharmacy networks, is referred to as chain development in the corporate world. Thus, the term pharmacy chain frequently appears in the empirical data as respondents have used it when describing the development of the pharmacy networks. What is it that practitioners actually imply when they use the term “chain” and when they refer to “chain activities”? Hence, in order to understand the phenomenon of pharmacy chains and chain development this chapter will seek to identify the various network processes and structures that constitute it.

This chapter is thus dedicated to the stated empirical research questions and to increasing our understanding of the studied phenomenon: What is the phenomenon of pharmacies’ chain development about? What kind of network structures are pharmacies embedded in? Are the studied pharmacy networks different in their structure and how are they managed? This chapter will also focus on the social structures in pharmacy networks and is directing our attention to the research questions regarding: What kind social structures are there and what is the substance in the social networks that connects the actors to each other?
7.1. Modern-day integration

The emergence of different kinds of networks has been described as change. It can be argued that pharmacies’ horizontal development is built on integration and growing interdependence between actors. In this section I will focus on the integration processes in the pharmacy networks by studying what the chain development has meant for both pharmacy networks. As discussed in chapter 2, there are three main types of integration process: institutional integration, decision integration and execution integration (Mattsson 1969; Hertz 1992). Institutional or formal integration refers to the formal power relations between actors within the network, e.g. ownership structures. It concerns the amount of power an actor has over other actors, to what extent an actor is bound to the network, and how strict the network structure is. Decision integration is a measure of the “centralisation” of the decision processes in a network. Thus, it defines the degree of centralisation in a network and who is empowered to make the decisions. The third dimension, execution integration, refers to the way in which any kind of joint activities are executed and of the processes related to these activities. (Andersson, Hertz & Sweet 2005; Hertz 1992; Mattsson 1969)

YA and HYMA represent different types of networks – YA is a formally integrated network and HYMA a voluntary network. YA’s chain structure has become very centralised, which provides continuity for the chain strategy and operations. The centralised structure is the ideal form for a chain, as discussed by Kautto and Lindblom (2004). The development of chain activities is very disciplined and strictly follows the path of centralised development, which respondents identify as essential for successful chain development. The network does not seem to have been dependent on the first CEO, who launched the chain development strategy. The CEOs after him have continued the chain development process and the resultant chain structure and decision-making structure are centralised. The role of the branch pharmacies in YA is to implement decisions that have been made by the management, i.e. the CEO and the management group.

HYMA, on the other hand, is built on voluntary co-operation between privately owned pharmacies. Crucially, it revolves around relationships, as one of the apothecaries in HYMA pointed out: “HYMA is about relationships! The business idea of HYMA is built
HYMA is dependent on the individuals in the networks and decisions are made by the individuals in a democratic structure. The chain development process is thus created and maintained by individuals, i.e. by the pharmacy professionals within the network. The created network and decision-making structures are not centralised and the pharmacies in HYMA are still very independent units. The loose structure emphasises the individuals' role in the development of the network. It also implies that the network activities have not been developed and implemented according to a strict chain management principle. Hence, chain development is a common goal and interest for HYMA apothecaries, but the development process is not built on a strict chain concept. I will analyse in more detail what the chain concept, chain development, and activities imply in both pharmacy networks in this chapter.

### 7.1.1. Identified chain development characteristics

Chain development processes can be analysed through various chain characteristics that are linked to the integration processes and joint activities. These characteristics tell us about the chain development process as a whole and also point out structural differences related to chain structures and management. In the following table (table 6), I have summarised the identified chain characteristics and activities that reflect the integration processes in both networks and describe the analysed pharmacy chains.
Table 6  Chain characteristics and activities

<table>
<thead>
<tr>
<th>Integration type</th>
<th>Pharmacy chain characteristics</th>
<th>YA</th>
<th>HYMA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formal</td>
<td>Concentrated price negotiation with the industry representatives and wholesalers</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Formal</td>
<td>Organised chain management</td>
<td>Centralised</td>
<td>Free structure, organised at some levels</td>
</tr>
<tr>
<td>Formal</td>
<td>Organisation structure as a chain</td>
<td>17 units in 10 cities One main unit with 16 subsidiaries</td>
<td>31 units in 20 cities 24 main units and 7 subsidiaries</td>
</tr>
<tr>
<td>Execution</td>
<td>Joint product campaigns</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Decision</td>
<td>Concentrated purchasing agreements</td>
<td>Yes, centralised contracts</td>
<td>Yes, joint decisions on contracts</td>
</tr>
<tr>
<td>Execution</td>
<td>Chain brand and logo</td>
<td>Unified usage of the brand and the logo</td>
<td>Yes, but not used consistently</td>
</tr>
<tr>
<td>Formal</td>
<td>Chain strategy</td>
<td>Is defined internally and externally</td>
<td>Is defined internally, and to some extent externally</td>
</tr>
<tr>
<td>Execution</td>
<td>Own products</td>
<td>Yes, own centralised production unit and own import</td>
<td>Yes, own import, no centralised production unit</td>
</tr>
<tr>
<td>Execution</td>
<td>Unified image in pharmacy stores (name and shop design)</td>
<td>Yes, all units are called University Pharmacy (YA) and the shop concept is unified, same materials and information brochures.</td>
<td>No, all units have their own names, HYMA is used as an additional subtitle, units have different designs and layouts. Each pharmacy decides upon what material it holds.</td>
</tr>
<tr>
<td>Execution</td>
<td>Unified work clothes</td>
<td>Yes</td>
<td>No, all units have their own</td>
</tr>
<tr>
<td>Execution</td>
<td>Intranet for internal communication</td>
<td>Yes, launched in 2002</td>
<td>Yes, launched in 2006</td>
</tr>
<tr>
<td>Execution</td>
<td>Loyal customer programme</td>
<td>Since 1996</td>
<td>Since 1996</td>
</tr>
<tr>
<td>Execution</td>
<td>Customer newsletter</td>
<td>For loyal customers only</td>
<td>For loyal customers and other customers as well</td>
</tr>
<tr>
<td>Decision</td>
<td>Discounts on drugs without prescription</td>
<td>Yes, loyal customer discounts in percentage and monthly product campaigns</td>
<td>Yes, monthly loyal customer product discounts and also unit specific campaigns</td>
</tr>
<tr>
<td>Decision</td>
<td>Discounts on drugs with prescription</td>
<td>Previously, they had percentage discounts based on the yearly consumption of medicines that were bought within the chain. Now discounts only on non-medical products.</td>
<td>No discounts.</td>
</tr>
<tr>
<td>Execution</td>
<td>Internal education for the employees in the chain</td>
<td>Yes, introduction to the YA chain concept and working habits in the chain as well as internal professional education within different therapeutic areas.</td>
<td>Yes, courses on the chain principles for new employees (mostly at the higher level of management), HYMA academy provides a special diploma for additional education to pharmacists.</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Decision</td>
<td>Same prescription handling database</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Decision</td>
<td>Concentrated database of customers' buying</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>
| Execution | Benefits for customers that the chain offers: | - good service availability  
- free renewal of prescriptions on the phone  
- the follow-up system for monitoring yearly medical costs  
- medication follow-up  
- broad product assortment  
- loyal customer monthly discounts | Additional services:  
- good service availability  
- free renewal of prescriptions on the phone  
- broad product assortment  
- the follow-up-system for monitoring yearly medical costs (in each unit)  
- medication follow-up  
- loyal customer newsletter |

In table 6 we can see that a large number of characteristics and activities can be found in both pharmacy chains. These chain characteristics can be categorised based on their links to the chain development processes, based on their influence on internal and external efficiency, and also based on the type of integration process they represent. The links to the chain development processes include product and category management, marketing processes, purchasing activities, and ordering and delivery functions that create the base for chain development. Most of the identified activities are related to marketing and a few to product/category management and purchasing. The area least focused on is clearly ordering and delivery, which is, however, an elementary process in most other chain development. There are no totally automated ordering functions between wholesalers and pharmacies and this is perceived as a weakness within both pharmacy networks. If the identified characteristics and activities
are analysed in relation to the main goals in chain development: customer satisfaction and external and internal efficiency, these goals are well represented in the activities.

The chain characteristics can also be categorised according to their relation to the external and internal activities in the networks. The greatest differences between the chains can be found in the internal activities for improving internal efficiency and also in the implementation of activities, implying how developed and integrated the activities actually are. Internal efficiency has an influence on customer satisfaction and therefore a low level of internal activities has a negative effect on the overall chain concept. If, for example, internal education is not prioritised, the level of customer service may vary across pharmacy units.

External efficiency can be viewed from the customers' perspective and implies those activities that customers can see and evaluate. In general, the marketing activities seem to be very similar in YA and HYMA. YA and HYMA have continuous product campaigns on non-prescription medicines, cosmetics and other medical self-care products. They have internet sites through which customers can find information about pharmacies and medicines. They both publish a loyal customer newsletter and they offer a range of additional services for customers. Customer loyalty programmes are central to the operations in both chains and have a double-edged effect on the chains. These programmes aim to produce satisfied customers and, through increased customer satisfaction, pharmacy chains aim to gain better financial results. The programmes make customers loyal to a particular pharmacy chain and customers concentrate their purchases to this chain. Customer loyalty programmes are also a strategic declarations and they are part of the chain strategy. Through different activities and services related to loyal customer programmes, pharmacy chains can communicate with their customers, create relationships with them, and serve their needs and wants. Through additional services customers become committed to the chains and their relationships with the chains are strengthened. Good service level is a characteristic closely related to laws regarding efficient medicine distribution in society. Laws and regulations require pharmacies to provide good service and long service hours to guarantee the availability of medicines.

When the chain characteristics are analysed from the perspective of how unified and integrated they are throughout the network, we can observe differences in the integration processes in the pharmacy chains. The formal integration processes are
linked to four key characteristics: organisation structure as a chain, organised chain management, concentrated price negotiation with industry representatives and wholesalers, and the chain strategy. These processes illustrate the differences between YA and HYMA in terms of ownership structures; the university-owned chain vs. a chain owned by its members. In YA the *formal integration* processes are well developed and thus it can be argued that the formal structure and management are stricter than in HYMA. In HYMA the formal integration is not at all as centralised and structured as in YA. The network structure is well defined but the structure is not as strict as in YA. The structure is continuously developing, as the number of members can grow or shrink. *Decision integration* shows the level of centralisation of the decision-making in the pharmacy chains, i.e. concentrated purchasing agreements, discounts on drugs with and without prescription, choice of prescription handling database, concentrated database of customers’ buying. These characteristics show how centralised decision-making has homogenised activities within YA. As the central decisions are implemented in the branch pharmacies, all pharmacies have, for example, the same prescription handling database. In HYMA each apothecary may choose what system they want to use and all forms of database development processes become more demanding as the decision-making is not centralised. Thus, the voluntary structure provides HYMA’s apothecaries with autonomy within the network, whereby the level of decision integration can vary.

The majority of the pharmacy chain characteristics are related to *execution integration* processes. These were referred to in the previous discussion of how unified and integrated the different activities are throughout the network and the way the chain activities, e.g. education or marketing activities, are executed. YA’s marketing activities have the same content regardless of the location of the pharmacy unit. YA’s brand image has been unified and all pharmacy shops have the same design and colours (see figure 18 for brand logo), and employees have unified work outfits.

*Figure 18* YA brand logo
YA has a joint, centralised database of loyal customers, which means that these customers’ details are available in all units. Thus, a customer does not have to go to the same pharmacy every time in order to receive the loyal customer service. In the customers’ eyes all YA pharmacies look the same and they provide the same concept for customers regardless of the location of the pharmacy unit. By showing the yellow loyal customer card, the Uniikki-card, YA’s integrated computer system will find all the customer’s details, which also speeds up the service of dispensing prescription medicines.

HYMA has not been able to integrate its marketing activities to the same extent as YA, largely due to the character of its formal and decision integration processes. HYMA pharmacies do not have a unified shop design, and they use the HYMA brand and logo (see figure 19) in various ways as an addition to their own names.

Figure 19 HYMA brand logo

Nor has HYMA implemented a shared brand design and colour scheme, which would unify the shop concept. In HYMA the loyal customer programme is more bound to each specific HYMA pharmacy, as the loyal customer data is not shared between the pharmacies. Thus, each pharmacy has its own customer database, through which they can serve customers in a personalised way but the information is not available in the other HYMA pharmacies. In this respect, HYMA’s chain concept is not as developed as YA’s, and HYMA pharmacies are more similar to regular privately owned pharmacies. This can be an issue in terms of gaining satisfied customers. If the loyal customer concept is not fully integrated in the chain, customers do not receive the same level of service in all HYMA pharmacies. Thus, HYMA cannot guarantee that the same customer promise will be kept in all units as the concept can vary between pharmacies. The differences between pharmacies’ service levels should not be significant, although in practice there can be marked differences. The HYMA chain concept is thus more
heterogeneous and the customer experience of HYMA can vary depending on individual apothecaries and how they implement the HYMA concept in their own pharmacies. However, the heterogeneity can also be regarded as a positive character from a customer’s point of view. As the chain concept is less integrated, pharmacies are more adaptable to local circumstances and differences. Very often customers want to go to the same local pharmacy when they purchase their medicines. HYMA pharmacies can, in other words, provide customised customer service in the local pharmacies.

Regarding efficiency within the networks, it is interesting to note how few of the joint activities are related to category management and purchasing functions, not to mention co-operation concerning ordering and delivery. The introduction of internal databases and intranet sites are examples of implemented IT processes and systems that have been part of YA’s chain development for several years now. One might still argue that the development could have been more efficient. YA’s centralised structure has enabled internal co-ordination of activities but relationships with wholesalers have remained undeveloped. Some years ago YA was still faxing in the daily orders to wholesalers, whereafter the orders were confirmed over the phone. The practice has changed but it is still not as automated as in the FMCG industry. Sharing data within the network is not, however, an issue in YA, but it is in HYMA. HYMA’s general problem is that apothecaries have not been willing to share any financial data within the chain, which has made it difficult to co-ordinate business-related activities. Apothecaries protect their own units and personal businesses at the same time as they say they trust each other and have an “open book policy” in their internal relations. It is obvious that both pharmacy chains are focusing more on their own centralised purchasing functions than on actual data management. Thus, an essential part of integrating activities and processes is related to the development of purchasing and ordering functions, as they create efficiency and an understanding of the routines.

It can be argued that YA has more integrated marketing activities than HYMA, through which it may be able to gain satisfied customers. HYMA’s integration in marketing activities and in creating a unified chain image for the customers is less developed than in YA. The level of centralisation and implementation of activities is directly linked to the level of formal integration, decision integration and execution integration in the studied networks. Based on the above notions, YA has a high level of formal, decision and execution integration, whereas HYMA has lower levels of all integration types.
Analysing chain characteristics in both chains shows that YA and HYMA have many similar chain concepts and goals. This is not surprising as they are competing within the same field of pharmaceutical retailing. Their strategies are also very similar: they both aim to provide excellent customer service, which is the primary goal in chain development. However, their secondary goals differ somewhat. YA has directed its focus to the end consumers by stating that it wants to increase consumers’ knowledge of pharmaceuticals and health care. It has also emphasised its eminent role in developing the whole pharmaceutical sector in Finland and in recent years it has highlighted the environmental aspects of medicine consumption, referring to pharmacies’ role in society in collecting and disposing of old medicines. HYMA as stated previously has paid more attention to highlighting the important role pharmacies play in the national health care system, and thereby protecting the current pharmacy institution in the political discussion about deregulating the pharmacy business.

7.1.1.1. Strategic action in chain development

A final aspect of the identified pharmacy network characteristics that I would like to emphasise concerns the importance of people. Improved customer satisfaction is identified as a reason for chain development; nevertheless, customer service orientation has proven to be difficult in both networks. Both YA and HYMA have invested in training pharmacists in customer service and providing medical advice. They have used external consultants in order to improve pharmacists’ performance and create a good standard of service. YA and HYMA have had similar training programmes for their personnel, where customer service has been analysed in terms of patterns of behaviour in customer confrontation situations. These patterns are easily recognised in real-life situations, face-to-face encounters with customers, making it easier for the pharmacists to know how to act in different situations when faced with different customers. In actual practice, however, customer orientation seems to be difficult.

“One of the really skilled, experienced pharmacists, one who has worked for over 20 years in this pharmacy, asked me “Do you really mean that I am supposed to choose the medicine for the customer?” If she would have worked here for two years I would have understood that total incompetence, but she is one of the most experienced pharmacists who has been through all the different educations and seminars.” Apothecary, HYMA
Although customer satisfaction and excellent customer service are well defined in both pharmacy chains’ strategies, their meaning as part of pharmacy work is less clear for the pharmacists. The chain concept seems to be difficult to relate to the profession and leads to a controversial situation, where the pharmacists start to question their professional role in relation to the customers. In order to avoid this confusion, actors may choose not to adapt to the chain strategy.

“I know about the chain strategies, but my work is here at the pharmacy. I take care of my work as a pharmacist.” Pharmacist, YA

If a person does not understand the meaning of the chain strategy, or some part of it, he or she cannot be fully committed to the activities and to “my work” either. It can be argued that individuals are in a central role in the integration of chain activities and implementing the chain strategies on the front line with customers. Without an understanding of, for example, the customer focus and how it is linked to the overall chain strategy, it is difficult to motivate individuals to work for the common goal. Chain development requires discipline from the individuals and does not allow any solo performance. Therefore, the level of internal integration of activities is dependent on how well actors understand the common goals of chain development.

Based on the above discussion, the level of internal integration is connected to the discussion of the level of decision integration. In a centralised structure such as in YA, sharing of information and organising internal education is relatively easy. If it is decided centrally that all actors will be educated in how to handle different customer service situations, then this is implemented accordingly in all units. If we take the same example of arranging internal education and apply it to HYMA, there the decision to organise the internal education is made by the management group, which consists of all apothecaries. After such a decision has been made it is still not guaranteed that all pharmacists will participate in the education programme. The decision regarding who will participate in the programme and who will not is taken by the individual members, who decide for their own units. In other words, strategic action in YA and HYMA to some extent takes place at different levels. In YA, strategic action clearly takes place at the network level, whereas in HYMA strategic action is formally taken for the network as a whole but actually takes place at the level of the individual pharmacies. Decision-making is thus a dual process, where decisions are first made at the network level whereafter the same decisions are made by the apothecaries in the pharmacies.
Therefore the implementation of various decisions is dependent on decisions made at the pharmacy level. The level of decision integration is consequently higher in YA than what it is in HYMA.

The indication that respondents from both pharmacy chains do not really understand the connection between the chain strategy and their everyday work at the pharmacy is linked to the integration processes. In YA, misunderstanding or poor understanding of the chain strategy can be improved by communicating about these issues using the integrated channels of communication. The internal education is integrated with the overall decision-making and execution processes. In HYMA the issue of improving pharmacists’ understanding is linked to apothecaries’ capacity and willingness to understand what the integration process requires and, thus, it is dependent on their willingness to adapt and their personal commitment to the network. Apothecaries in HYMA have stated that the idea of HYMA is not crystal clear for everyone. Chain development is perceived as difficult by HYMA apothecaries and it takes up a lot of their economic resources and time, which they are not necessarily comfortable with. Sharing economic information seems to be another difficult aspect in chain development for HYMA’s members. They are not willing to openly share their accounts and financial results with each other. Some apothecaries do not have any economic education, which can make them even more uncomfortable in economic discussions. These are issues clearly linked to the lower integration level in HYMA compared to YA. In YA, all integration types; formal, decision and execution, are clearly present, which indicates that actors and activities are well integrated. In HYMA, all integration types are present, but the general level of integration is lower in all of them.

### 7.1.2. Comparison of the network structures

In order to analyse how the integrated / centralised network (YA) and voluntary network (HYMA) differ from each other in structure, I have illustrated the formal structure of both networks at the pharmacy entity level.

#### 7.1.2.1. The formal structure of YA

In YA the main pharmacy is the leading pharmacy, below which all other entities are equally important. Thus, the main pharmacy is the only unit with an apothecary and the other pharmacy units can be regarded as its subsidiaries. The main pharmacy is
located in Helsinki and it is “the flagship store” for the other entities, where the new processes and activities are often tested before implementation in the whole network. The branch pharmacies are located in 11 university and hospital cities in Finland. (See figure 20)

All pharmacy units are supposed to follow the centrally issued guidelines for operations and, thus, they do not have to make any strategic decisions by themselves. Head pharmacists make decisions about the operative activities in their unit only. In a clearly centralised structure, where the information flow follows the top-down principle, the basic assumption is that the chain strategy in the network is well integrated and the information flow between units functions well. The role and position of the head pharmacist have therefore remained quite stable, although the network in itself has gone through remarkable changes and modernisation.

**Figure 20 Formal structure of YA pharmacies in Finland**

The management group has meetings twice a month, while the head pharmacists meet only 4-5 times per year. The head pharmacists thus largely work separately from each other, at least when we look at their formal position. Some of the pharmacy units are in
closer contact with each other, e.g. pharmacies in the Helsinki region, where pharmacy units rotate personnel between them when it is required. In such a geographical cluster, the integration of chain activities is in general higher. However, although the integration looks intense and the structure seems homogeneous from the outside, it does not reveal anything about individuals’ commitment to the chain. Based on the collected data it is quite obvious that the entities are not as homogeneous as one might assume. Some head pharmacists would like to be more independent than the current structure permits, while others are satisfied with their given position.

7.1.2.2. The formal structure of HYMA

As figure 21 below shows, all HYMA pharmacies are on the same horizontal level and equal in the hierarchy. Thus, there is no main pharmacy “above” the others. Some of the pharmacies in the network can have subsidiaries (marked with triangles). These subsidiaries are not separate members in the network, they just increase the number of pharmacy units. One pharmacy is not higher up than the other in the formal structure, and the organisational structure is flat and horizontal. This chart gives the impression of a democratic network. The only geographical cluster is a cluster of 5 pharmacies located in Helsinki. The other pharmacies operate in 20 cities all over Finland. The pharmacy units marked in grey illustrate the apothecaries who are members of the board of directors. Although there is a cluster of apothecaries in Helsinki, it cannot be assumed that they have more contact with each other than with any of the other pharmacies. Thus, in HYMA, the integration of chain activities between the geographically close pharmacies does not appear to be any greater, implying that the HYMA pharmacies work quite independently from each other.
The formal structures can be analysed in relation to the formal integration of the studied pharmacy networks (see Mattsson 1969). The charts highlight how homogeneous the horizontal structures in both pharmacies are, in YA especially at the pharmacy unit level. There is clearly a more developed formal hierarchy within YA as compared to HYMA, owing to there being several management layers above the actual pharmacy units. HYMA again has a very flat organisational structure. Thus, YA can be regarded as a network with high institutional integration compared to HYMA, which has rather low formal integration. It should be emphasised that the network structures are not only a result of the chosen chain strategy. The ownership structure of both pharmacy networks (which has been presented in chapter 6) is bound to the legal regulations. The current regulations prohibit privately owned pharmacies from cooperating freely and creating a pharmacy structure comparable to YA. That is the reason why they cannot centralise all functions to the same high integration level as YA.
7.1.3. Interpreting decision-making and decision integration

Centralised vs. voluntary formal structures indicate differences in the level of decision integration processes, as was observed above in the discussion about the strategic action in both networks. In YA the decision-making structure is centralised, which is commonly regarded as an ideal structure for chain development (see, e.g. Kautto & Lindblom 2004). It makes the chain management logical, simple, and consistent with the strategy and goals. Through centralised decision-making the common values can always be emphasised in all decisions and, thus, it is easier to avoid misinterpretations and to keep the focus in the integration of activities. Ideally, centralised decision-making secures the effectiveness of all processes and activities and thereby supports the integration. Thus, it can be argued that centralised chain development is more focused on leading the processes and via these processes, leading the people involved in them.

In HYMA, which has a voluntary structure, decision-making is built on a democratic principle, where decisions are made jointly by the members during the general meetings and where the board of directors is selected from among the members. Thereby, there are several individual members participating in the decision-making processes, where they influence the other members with their own opinions and perceptions and have an impact on the outcome. Democratic decision-making is not regarded as the best model for chain development, as it leaves more room for individual behaviour and influence. Chain development requires hard discipline in keeping to the stated strategies, values, and principles, and in a democratic structure all members are entitled to have their own opinions. Thus, decision-making in a democratic structure emphasises compromises and negotiation. It can be stated that democratic decision-making requires first an ability to lead people, through whom the processes can be led.

Although the level of decision integration seems to vary between YA and HYMA, we can nevertheless say that individuals are in a central position in both networks to influence the outcome of a decision-making process. Individuals both facilitate the decision-making and implement the decisions. When decisions are made centrally there is a formal leader, or a leading group, who makes all decisions. In YA, the CEO/apothecary and the management group make the decisions in the centralised network. Thus, these individuals together are the decision-making element leading the chain development. In YA the managers see their role as having strict control over processes and activities, where the CEO takes the lead and then delegates responsibility to each and everyone in
the organisation under him. According to respondents in YA, the current CEO has played his part by being decisive and implementing the decisions, but he has also been a leader in giving feedback to the managers and being supportive and motivating people. The structure emphasises the CEO as the key character, who is responsible for leading the development.

In HYMA decision-making is a shared responsibility. In the beginning, all members jointly decided on all matters regarding the chain. As the number of members increased, joint decision-making became difficult. Thus, from 2005 HYMA decided to integrate its decision-making system and nowadays the CEO, together with the elected board of directors, makes most of the operative decisions. In the past, the board of directors gathered whenever necessary; nowadays they have 6 scheduled meetings per year. There has been a gradual centralisation of decision-making, which has taken place as a result of members’ joint agreement to improve the management of the network. Today, the decision-making process is divided between two collective actors: the board of directors, which makes decisions on administrative and operational issues, and the general meeting, at which the strategic decisions and organisational issues are discussed. The board is authorised to make decisions about daily operative issues without hearing all the other members.

Although the decision-making process in HYMA has become more centralised, it is still deeply rooted in a democratic tradition. The CEO or chairman of HYMA does not have the same position as the CEO of YA as the leader of the rest of the organisation. Before any decisions can be tabled or made, the board members still need to listen to the members and share ideas and thoughts with them. Thus, it takes time and effort to reach a consensus on issues, which can be a challenge if things need to be handled quickly. If a regular member has something he / she wants to discuss in the general meeting, he / she has to contact a board member who will raise the issue in the meeting. This inevitably increases the bureaucracy in the pharmacy network.

Greater decision integration can, however, be perceived negatively by the actors. Respondents in HYMA say that they miss the old manner of decision-making, when they could discuss matters without a strict agenda.

“It was so much easier earlier when we could just gather around the coffee table and discuss whatever it was that needed to be done.” Apothecary, HYMA
The informal meetings and coffee table discussions are thus a sign of democracy in HYMA. The decision integration naturally has changed the traditional meeting culture, which can be perceived in different ways, either as a loss of old traditions and informality or something new and positive, although more bureaucratic. According to the CEO, the change has meant that the old voting “by shouting” procedure is gone as the board meetings are closed to other members. Thus it can be argued that it is more efficient to make decisions in a smaller group. Shared responsibility and taking into consideration individuals’ opinions slows down the decision-making process and may have a negative effect on efficiency, although, on the other hand, the increased bureaucracy may have a negative impact on members.

7.1.4. Interpreting execution integration

Decision-making is supposedly followed by the execution of the decisions. In YA’s centralised organisation, it seems to be easy to execute decisions as a result of the formal structure and hierarchy. However, execution processes are not necessarily processes without frictions. Individuals have a key role in implementing different decisions and activities and they evaluate orders and decisions from their own perspective. Reaching a high level of execution integration in a chain demands the right attitude from the actors and that they have a shared interest in following the orders and implementing the decisions. Individuals may have different opinions about the chosen strategies and their implementation and the centralised decision-making is not always respected by the personnel. In particular, pharmacists at the lower levels of the organisation do not always feel that all the decisions are relevant to their work. They also interpret the strategies in different ways from what the management intended. An example is how YA uses in its internal education programme the concept “pharmacy chain” and mentions in several instances the importance of understanding the purpose of “chain activities”. For the personnel in the pharmacy units, however, these concepts are not unambiguous.

Based on the interviews, some head pharmacists in YA would like to be more independent than the structure allows. In YA’s history there are several examples of pharmacists who have left the organisation because of differences of views and opinions. YA’s previous CEO left the organisation due to differences in opinion about YA’s future strategy. Decision-making is also related to committing people to the decisions that have been made. YA’s head pharmacists meet 4-5 times a year to discuss
common issues and to hear from management about the future development of the chain. These meetings are the forum for them to discuss issues, exchange opinions and learn from each other. However, one might question whether such meetings alone are enough to facilitate the exchange of ideas between pharmacists and management through which they become more committed to the centralised strategies. Centralisation may be an easier way to manage a network and it supports the ideal chain concept but it does not solve the issue of committing actors to the network. It can be difficult for an actor in a centralised organisation to obey orders if those orders are not aligned with the actor’s own ideas and perceptions. It can also be hard to be committed to the decisions when one has not been able to participate in the decision-making process. These are issues clearly linked to YA’s centralised structure and, to a lesser extent, to HYMA’s democratic structure.

In HYMA actors do not feel pressure to obey orders from the management. On the contrary, all HYMA’s members participate in decision-making processes and discuss jointly a variety of issues. Moreover, apothecaries have complete autonomy regarding decision-making and implementation of decisions in their own pharmacies. The problem with HYMA apothecaries’ autonomy is the double decision-making processes. Apothecaries decide jointly about different activities in HYMA, whereby each apothecary will decide to what extent he or she wants to implement the decisions. Thus, decisions regarding the same matter are often made twice, which is why execution processes may take a long time in HYMA and are less integrated. One might also assume that HYMA’s apothecaries would be keen to develop their activities and try new things, whereby the execution processes would be easier. Execution of new activities could therefore be seen as a relatively easy process as no-one has tried them before. However, HYMA’s apothecaries do not feel this way at all. According to them, it is difficult to try new things and implement new activities without having any pattern to follow.

7.1.5. Summary

YA and HYMA are quite different in their formal structures and management. YA is a formally integrated network and more hierarchical and pharmacists are part of the hierarchy in their given roles and positions. HYMA is a voluntary networks, lacking a formal hierarchy at the network level, but instead it has a somewhat hidden hierarchy at the pharmacy level. The strategic action in YA and HYMA takes thus place on
different levels: in YA it takes place at the network level whereas in HYMA it is formally taken at the network level and actually at the pharmacy level. The different formal structures influence the different integration processes in YA and HYMA. Although the structural differences are significant, the chain development characteristics and processes are, however, very similar in YA and HYMA. Consequently, it can be argued that there is a difference in degrees of integration rather than integration categories or chain development categories. It can be questioned whether the pharmacy networks are so different at the social level when the social connections of YA and HYMA are analysed.

7.2. Social connections in YA and HYMA

In this part of chapter 7, I will focus on the following research questions: *What kind social structures are there and what is the substance in the social networks that connects the actors to each other?* It has been argued that an increasing share of exchange in networks is enacted through social relationships (Krippner et al. 2004). Thus, the social structures describe the involvement of business actors in business networks. Social structures may take different forms as the interaction among network members may vary depending on different factors. It is important for actors to exchange information and develop relationships through which they can communicate. Communication usually takes place via informal co-operation, i.e. the social networks between individuals. In this section I will present the social structures in the pharmacy networks related to different types of social action in both pharmacy networks. Centrality is the most common measure for social action of actors. Social networks have been studied through Freeman’s degree, which measures the local centrality in networks and, thus, actor centrality. Highly central actors are individuals who are involved in many relationships and who are active in a network. Thus, central actors are identified as those who create network activity, who have ideas they want to share with others, and who want to implement these ideas. A central actor does not therefore have to be a person who is meaningful in the network hierarchy; he or she can be a person without formal power.

Central actors can be found throughout a network, but they cannot be identified without an analysis of the structural connections between the actors in the network. Therefore, actors’ centrality, the degree of centrality, is measured in different ways and in different contexts, as the interdependencies between individuals vary depending on
the situation and the nature of the relationship. The nature of relationships in the business networks refers to the social content in the embedded social networks. Hence, in a nutshell – the nature of relationships characterises what the social networks are built of in the studied pharmacy networks.

Table 7 below illustrates the defined degrees of actor centrality in YA and HYMA in different types of relationships.

<table>
<thead>
<tr>
<th>Degrees of Actor Centrality</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>YA</td>
<td>HYMA</td>
<td>YA</td>
</tr>
<tr>
<td>Professional knowledge</td>
<td>1</td>
<td>0</td>
<td>18</td>
</tr>
<tr>
<td>Trust regarding personal matters</td>
<td>0</td>
<td>0</td>
<td>11</td>
</tr>
<tr>
<td>Advice</td>
<td>1</td>
<td>0</td>
<td>10</td>
</tr>
<tr>
<td>Friendship</td>
<td>0</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>Trust regarding work-related matters</td>
<td>0</td>
<td>1</td>
<td>10</td>
</tr>
</tbody>
</table>

In YA actor centrality is highest in perceived professional knowledge\(^{88}\) (18) and in HYMA actor centrality is highest in seeking advice (13). However, if we look at the mean of the actor centrality, then the advice seeking gains the highest value in YA, whereas in HYMA trust regarding work-related matters receives the highest degree of actor centrality. Trust regarding personal matters and perceived friendships at work have lower degrees in both networks. A variance between the maximum degree of centrality of 18 in professional knowledge in relation to the minimum degree of 1 in YA, and 11 in relation to 0 in HYMA, tells us that within each pharmacy network there are quite large differences between individuals’ degrees of centrality. It means that an actor with a high degree of centrality is very central for other actors in the network and thereby well connected. An actor with a low degree of centrality (degree = 1) is connected to only one person in the network and actors with no degree at all (degree = 0) are not connected to anyone. In general, YA has higher degrees of actor centrality than HYMA. The degrees of actor centrality in YA are highest in advice, professional knowledge and trust at work, in that order. The degrees of actor centrality in HYMA are highest in trust at work and advice, but professional knowledge is clearly lower. Thus,

\(^{88}\) Professional knowledge refers to perceived professional knowledge in the network and about the network.
YA and HYMA emphasise the same social content in actor centrality, although they are prioritised differently.

### 7.2.1. Centralisation

Network centralisation describes the differences between the centrality scores of the most central actors and those of all other actors in the network (Scott 1991:90). Thus, it measures the general compactness of a network and the extent to which structure in the network is organised around particular central individuals.

**Table 8  Network centralisation**

<table>
<thead>
<tr>
<th>Network Centralisation</th>
<th>YA</th>
<th>HYMA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional knowledge</td>
<td>51.72%</td>
<td>43.87%</td>
</tr>
<tr>
<td>Trust regarding personal matters</td>
<td>34.14%</td>
<td>13.83%</td>
</tr>
<tr>
<td>Advice</td>
<td>20.69%</td>
<td>43.08%</td>
</tr>
<tr>
<td>Friendship</td>
<td>15.63%</td>
<td>15.42%</td>
</tr>
<tr>
<td>Trust regarding work-related matters</td>
<td>25.52%</td>
<td>38.10%</td>
</tr>
</tbody>
</table>

The high network centralisation in both YA and HYMA related to perceived professional knowledge indicates that the actor centrality is focused to a small number of individuals in the network (see table 8). These individuals gain central roles and positions compared to others and, thus, others perceive these individuals as being important. It implies that there are a few very central individuals in social networks built on professional aspects. A low centralisation index is a sign of a more evenly spread centrality among the network members. For example, friendship has a very low centralisation percentage in both pharmacy networks. This implies that either many individuals are mentioned as central actors or that the level of actor centrality degree is in general lower, which evens out the degree of actor centrality. An interesting difference between the network centralisation in YA and HYMA is the relations built on advice and those built on trust regarding personal matters, of which the former is much higher in HYMA than in YA and the latter, trust regarding personal matters, much higher in YA than in HYMA. It means that there are fewer trusted persons in YA but they are more central. In HYMA the social relations built on advice indicate that the
advice seeking is focused on a few individuals who are valued by several actors as central actors. Centralisation does not imply that the network centrality would be high or low, only the deviation of centrality among the individuals. It shows the central actors in the different social networks with different substance. As we can see, the degree of centralisation varies in different types of relationships. In some of them, only a few individuals are identified as central and in others there are several central individuals, whereby the centralisation among the actors is lower.

The measure of heterogeneity in the networks is linked to the discussion of centralisation in pharmacy networks. It tells us whether, when the individuals are brought into focus, the social network is varied and heterogeneous in its nature or whether it is more homogeneous. In some relationship types, HYMA has a higher heterogeneity index compared to YA; in other relationships the values are very even. On average, however, HYMA has a higher level of heterogeneity between actors than YA (see table 9).

### Table 9  Network heterogeneity

<table>
<thead>
<tr>
<th>Network heterogeneity</th>
<th>YA</th>
<th>HYMA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional knowledge</td>
<td>5.62%</td>
<td>12.02%</td>
</tr>
<tr>
<td>Trust</td>
<td>9.50%</td>
<td>8.58%</td>
</tr>
<tr>
<td>Advice</td>
<td>4.28%</td>
<td>7.04%</td>
</tr>
<tr>
<td>Friendship</td>
<td>6.40%</td>
<td>13.58%</td>
</tr>
<tr>
<td>Trust at work</td>
<td>5.29%</td>
<td>6.14%</td>
</tr>
</tbody>
</table>
7.2.2. Interpreting the centrality of YA and HYMA

The informal networks provide a reason to further explore the social structures in the pharmacy networks. By comparing the level of actor centrality and centralisation between the social networks, we can see that they vary depending on different contexts and also that they are very similar in some aspects. In YA, seeking advice from other professionals and professional knowledge in relationships are the key social characters driving individuals’ social exchange. In HYMA individuals prioritise trust at work related issues and advice seeking, which fits with the voluntary network. Thus, in both YA and HYMA, advice seeking is an important reason to have social contacts, although the business networks have different formal structures.

The basic ideas in social network analysis about the effects of centrality in social networks are the following: highly integrated and centralised networks have only few very central actors and nodes, whereas networks with low centralisation, e.g. voluntary networks, have several active and central actors. In general, it can be argued that the actor centrality degrees as well as the centralisation indexes are relatively low in both networks, with the exception being the degrees of professional knowledge (YA=18, HYMA=11, see table 7). However, the basic assumptions of the centrality, presented in the theoretical framework, seem to match with both networks. YA has fewer central persons and they are even more central in the social context. In HYMA, centrality is more equally distributed and, thus, there are several central persons in the network with fewer connections than the most central persons in YA. Nevertheless, the actor centrality is concentrated, to a certain amount, to a small number of individuals.

If business networks represent high centralisation, i.e. are dominated by a few central actors, the central actors can become critical points of failure. The less centralised networks do not have as high a risk of failure as they are not dependent on a single critical actor. Instead of having one or two highly central actors, they have a network of several active, but less central, actors, and thereby the risk is spread and the risk of failure is lower. However, when central actors are removed from their positions or decide to leave the network, they will always leave fragments behind them which will change the network structure. The centralised structure of a business network such as in YA seems to mitigate some of the risk by providing a business network structure where the roles and positions of actors are well defined and these can at least in
principle be relatively easily filled by a new actor. In HYMA, however, the effects of removing individuals are more dramatic, although the actor centrality is relatively low, as the business network is basically built on individuals and the relationships between them.

If one actor’s position is changed it will also influence the positions of the other actors as a result of the interdependencies in a network. Analysing social structures only as structures does not take into account the social content in the social networks and actors’ internal resources. Social networks are always personal and cannot be passed on. The loss of a central actor with important social characteristics and a large number of social connections will directly affect the social networks and actors’ action and, thus, influence the business network. Therefore, the loss of a central person may have severe effects on the overall network in both centralised and voluntary networks. An example of the loss of a central actor was the loss of HYMA’s founding father. His social networks were wide and in many ways they influenced the development of the HYMA pharmacy network.

7.2.3. Visualising the centrality structures

In this section I will illustrate the social networks built on professional knowledge in the pharmacy networks. The relationship and substance that is measured is the professional knowledge individuals perceive in the network. Thus, it can be argued that this substance measures the perceived professionalism in the chain development process. That is why social networks that are built on professional knowledge can be labelled as the professional social networks of YA and HYMA. By using Freeman’s equation, the degree, betweenness and closeness of actors in both YA’s and HYMA’s social networks have been calculated. The concept of degree measures the social network of an actor, i.e. the number of direct connections the actor has in the network. Betweenness shows the brokers in context, those who are important intermediaries between other actors. Actor closeness centrality reflects how close an actor, even one on the periphery, is to other actors in the network. Thereby, closeness also measures how reachable an actor is for another actor and how close he or she is to the central actors by degrees. Thus, closeness also tells us about the smallest maximum distance between actors, especially proximity to the central actors in a social network.
7.2.3.1. **Centrality structures in YA**

Professional networks usually depict a ‘clan’ type of structure, where individuals are connected to each other through their professional interests. Individuals seek support for their professional need and opinions. They need each other’s professional knowledge to solve problems in their profession. In the pharmacy networks the professional interests are a prerequisite for the existence of these networks. Professional networks typically consist of weak ties between actors and, thus, the relationships have low degrees of embeddedness. The weak ties have been identified as important for the development of the professional network. It has been argued that information exchange and the acquisition of new knowledge develop through weak ties, as the professional context provides a platform for professionals to act and connect to other professionals.

**Figure 22 Sociogram 1: YA’s professional network by degrees**
In YA, the most central person measured in **degrees** is A1 with 18 ties; the second most central person is A20 with 7 ties; and third in the centrality ranking is person A13 with 6 ties. The size of the circle illustrates the number of ties. Thus, A1 is represented by the largest circle. All three persons have different specific formal roles and positions in the network. A1 is in the management group, A20 in YA administration and A13 is a head pharmacist. Another observation is that A20 and A1 are not directly connected; they are connected via A26 and A13, both head pharmacists.

If we look at the sociogram as a structure and at how individuals are connected to each other, there are several clusters of individuals, whereby YA administration and head pharmacists are connected. To the left of the central actor, A1, there is a cluster of A13, A20, A22 and A30. This cluster consists of three individuals in YA administration and one head pharmacist, who has also been a member of the management team. More clusters exist between A13, A14, A12 and A18, who are all head pharmacists from different YA locations, as well as between A17, A16, A9, also head pharmacists. Above the centre (A1) we can find other structures, where head pharmacists (A29, A4, A3, A5, A11) are directly linked to A1, and there is a chain of ties linking some of them to each other, but they do not create a cluster. The most peculiar cluster can be found to the right of A1. The cluster consists of four individuals (A23, A28, A25 and A24) who are all connected to each other. In addition to these four people there is “a tail” of ties between two actors (A27 and A31), who are connected to A23. This whole cluster is connected to the central actor A1 via the most central persons in the cluster, A23 and A28. The cluster consists of individuals who work closely with each other in the production and trade unit of YA. The cluster therefore illustrates the practical everyday work within the production and trade unit. It is separate from the administration and head pharmacists and the cluster is linked only to A1.

On the right hand side of sociogram 1 we can see another interesting characteristic of this social network. We see that actor A2, a head pharmacist, is directly linked to A1 but not to any other actors. Thus, this head pharmacist is not connected to any other actor in the same position and stands alone in the social network.

Summarising the social structure of **degrees**, the centralisation index in YA’s professional network is high (52%). There are a few very central persons in the professional network, and one person clearly dominates this social network. The social network is still wide and there are several individuals with three or four ties to other
individuals. It speaks of a well connected social network with social activity between actors, where all actors are connected in the social dimension of professional knowledge. Thus, all actors have at least one tie. Some of the clusters are concentrated to the organisational level in the network and given formal positions. However, there are also examples of a mix of connections between individuals with different formal roles and positions. Some clusters have reciprocal ties, indicating strong ties between the actors, but most of the ties in this social network are weak ties, i.e. one directional ties.

In YA’s social network the central person, A1, also has the highest betweenness value, and A20 and A13 have the second highest betweenness values in the network. These three persons have also been identified as central persons by the degrees of centrality measure. They are valued persons for the professional knowledge in YA, but they are also brokers between actors. However, betweenness also highlights other central persons. To mention a few, persons A23\(^89\), A8, A29, and A22 also have broker roles in the social network, being in between individuals who have several ties to other actors in the network. The general level of betweenness is, however, rather low.

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\(^89\) The connections to A23 are not illustrated as these contacts on the periphery only have one tie to A23.
Actors who seem to be on the periphery of a social network can still have a high closeness value in the network (see sociogram 2). In the sociogram, the larger circles show the most central individuals by closeness. In closeness the central actors by degrees are less important. A central person as measured by degrees of centrality has several direct ties but the person does not necessarily know other central actors. As we can see, actor A1 is not as valued in this illustration as in the degrees of ties or in a broker role. However, if we take actor A6, for example, this person is directly connected to A20 and A22. A20 is defined as a central actor by degrees and, thus, A6 is close to a central actor. A20 is then connected to A13, who is also recognised as a central actor as measured by degrees and thereby A6 is connected to A13 via A20. A22 again is directly linked to A1, who the most central actor in degrees, which results in A6 being equally close to A13 and A1, not to mention the direct contact he has with A20. Thus, A6 is close to active actors and closeness means that he has access to the activities and information in the social network. The same pattern applies to A4 and A16.
7.2.3.2. Centrality structures in HYMA

In the sociogram below (sociogram 3) of the professional network of HYMA, there are fewer individuals in the social network and many individuals in HYMA (9 in total) are not included in this social network. They are outliers in social network terms and have no central role or position in relation to the other actors.

Figure 24 Sociogram 3: HYMA’s professional network by degrees

In HYMA the most central person measured in degrees is B22 with 11 ties and the second most central person is B20 with 6 ties. They are both members of the board of directors and they have a reciprocal connection with each other. There are two other persons with 3 ties each, sharing third place in the centrality ranking, persons B13 and B7. The size of the circle illustrates the number of ties in the sociogram. The social network among the individuals is rather centralised and resembles a star or a wheel model around two central persons, B22 and B20. Nevertheless, actors are also directly connected to each other and not only via the centre, i.e. B22 or B20, which makes the network more connected. We can identify two clusters in the social network. One is to the left of the centre and comprises apothecaries B7, B11 and B16, who are all directly linked to B22. Another interesting cluster is between B22 and B20, consisting of
apothecaries and administrative staff B3, B4, B13, and B23. These individuals are all linked to both B22 and B20, and perceive them both as central actors for the professional knowledge in the network. There is also a path of reciprocal ties starting from B22 and continuing to B20, B23 and B24. The reciprocal ties tell us that there is close co-operation between them.

The centralisation index in HYMA’s professional network is relatively high (43%) and, thus, it follows the same pattern as in YA. There are only two very central actors in the social network and the high centrality could be a critical issue for HYMA. As HYMA is a voluntary network and not very centralised in its formal structure, a small number of central individuals at critical points can become a point of failure for HYMA. Another critical aspect is the large number of outliers, members who are not part of the identified social network of professional knowledge. It is a sign that the HYMA pharmacies are less connected and it can be interpreted as actors not feeling that they need to be connected to others in the professional knowledge network of HYMA.

In HYMA’s social network based on professional knowledge (sociogram 3), there are only four people who have a broker’s role: B22, B20, B19 and B23. Person B19 is linked to B10 on the periphery, and thus connects him to the central person B22. B23 connects B20 and B24. The betweenness is concentrated on very few individuals in HYMA’s social network and the general level of betweenness is low.

In HYMA, persons B10, B2, and B6 have the greatest closeness value to other actors (sociogram 4). However, almost all actors in the social network have a direct tie to the central individuals B22 and B20. The paths between the actors are, therefore, short and the relevance of measuring closeness is not very high in this context.
7.2.4. Interpreting the centrality of the social structures to pharmacy networks

Illustrations of the social networks of professional knowledge in the pharmacy networks, YA and HYMA, show structures of relatively high actor centralisation. YA’s social network shows a well connected structure where all actors (pre-defined) have at least one tie to someone else in the network and most of the actors have more than one tie. Thus, YA’s social network structure reveals actors’ connectedness in relation to professional knowledge in the network, which can be interpreted as social action in the professional network. It should, however, be emphasised that professional knowledge is a pre-requisite in a centralised network, implying that everyone is formally connected to each other. The connected social network clearly shows a number of weak ties, which is a typical characteristic of professional networks (see Granovetter 1973; 1985). The centralisation around a few individuals is quite high. This finding supports the pre-understanding that centralised networks have only one or two very central actors.
HYMA’s professional social network illustrates a social network that is not as connected as YA’s. Not all pre-defined actors are included in this social network. The social structure shows two central actors in the professional context when measured by degree and betweenness. HYMA’s social network structure shows that fewer actors have relations with each other built on professional knowledge and therefore actors’ connectedness is lower. Those individuals who are part of the social network can be considered as being active in the professional network. The outliers do not value professional knowledge as highly as the active members in the social network. This finding can be linked to the lower integration level of activities in the voluntary pharmacy network. HYMA’s strategy and activities are not as integrated as they are in YA. The number of outliers indicates that HYMA apothecaries have a tradition of working alone instead of working in a group. Some actors feel strongly about the professional connectedness in the network and are more closely connected to the network and to other actors in the network. Others prioritise their own pharmacies and associate professional knowledge with the everyday work that goes on in their own pharmacies and relations between actors within their own units. Thus, outliers have named persons in their own pharmacies instead of other HYMA members in response to the question of professional knowledge.

### 7.2.5. Embedded social networks

Based on what we have learned from the pharmacy networks and actors’ connectedness, individuals’ informal, social networks are embedded in the formal networks and the formal structures of the centralised and voluntary pharmacy networks. Figure 26 illustrates the embedded social networks within the studied pharmacy networks, the relationships within and between the pharmacy networks through individuals’ social contacts.
Figure 26 Individuals and social networks are embedded in the pharmacy networks.

= Pharmacy / apothecary in the network
= relationships between pharmacies and individuals
= individuals outside the network, e.g. friends, family, apothecaries from private pharmacies

In figure 26 the large circles illustrate the two pharmacy networks, YA and HYMA, which have been singled out for the study by the definition of actor attributes. The smaller grey circles within the large circles represent business actors, individuals and pharmacies, and illustrate how several actor dimensions are aggregated within the circles. Some of the circles also partly cover other circles, which illustrates social action in the pharmacy networks and how actors and their action overlap. We could use a metaphor of a living cell under a microscope when looking at the social networks that are part of the pharmacy networks. The cell membrane protects the cell and creates a natural boundary for the pharmacy network. It defines who is a member and who is not based on actors’ own evaluations and criteria. Within the cell, both pharmacy networks have their own formal structure, either centralised or voluntarily built. Within the given structure there are countless possibilities for actors to be connected to each other via social contacts. The connections depend on the actors’ values and preferences. The cell
membrane is permeable and allows the cell’s contents to be exchanged with actors outside the cell. Thus, despite the boundaries given by the pharmacy networks, the social networks have an open character and there are connections across both boundaries (pharmacy network boundaries). Many apothecaries and pharmacists in YA and HYMA have known each other for a long time and several of them have regular contact with each other. Thus, the formal structures of pharmacy networks do not hinder individuals from communicating with each other within the pharmacy network or across the pharmacy networks.

There are simultaneously several social networks in the pharmacy networks. The content of social exchange may vary and therefore social relations have different substance and meaning. The structure of the social networks is dependent on the content of the relationship. I have analysed 5 different types of relationship in both pharmacy networks. The first relationship is related to perceived professional knowledge in the networks, which was discussed earlier in this chapter. The second relationship type is related to trust regarding personal matters, e.g. career development and career moves. The third relationship type is about persons giving advice to each other. The fourth relationship type measures friendship and liking and the fifth refers to trust regarding work-related matters, implying relationships in the network where individuals feel they can talk about work and network related matters that might be too sensitive for open discussion. Different social structures suggest that individuals are linked to each other based on different motives. Relationships show thereby the substance in the different social networks that connects the individuals. The degree of centrality is used to measure social structures, i.e. the same measure as for the social network structures of perceived professional knowledge discussed previously. The different social networks in YA and HYMA are presented in the following section.

7.2.5.1. Social networks in YA

Trust regarding personal matters shows an interesting centralisation around the management in the social network of YA. The social network resembles a wheel, with one central actor in the middle. The ‘spokes’ of the wheel include both head pharmacists and managers from the administration. Person A1 is the most trusted person regarding personal matters, such as discussing own career movements. This person is surrounded by individuals who are either directly or indirectly connected to
him. An interesting observation in the social network is the clique that is separate from the rest of the social network (A20, A17, A16 and A6). These four head pharmacists have created their own social network and trust each other. A16 and A17 have a reciprocal tie of trust. They have known each other for 6 years. A17 trusts A20 and has known him for 20 years. A6 trusts A16 and has known him for 5 years. Interestingly, A6 has known A20 for 15 years, but did not mention him as a trusted person, neither did A20 name A6 as a person he would trust regarding personal matters. Thus, the time individuals have known each other does not seem to influence who they trust regarding personal matters. There are three more reciprocal ties in the social network. These exist between persons A8 and A7, A14 and A12, and A13 and A19. A8 and A7 have known each other for 4 years, A14 and A12 for 7 years, and A13 and A19 for 7 years. These individuals have come to know each other via the pharmacy network and have known each other for a number of years. Thus, trust can develop over shorter time periods and individuals who trust each other do not need to be old friends.

Figure 27 Sociogram 5: YA - Trust regarding personal matters – degrees
To conclude, there are two separate social structures where trust connects the individuals. The main difference between them is that the larger social network has high actor centralisation and the smaller has lower centralisation. The larger social network is similar to the formal network structure of YA, as A1 is in the leading formal position compared to the other actors. Almost all persons who trust A1 are head pharmacists and only A28 and A23 represent YA administration. The smaller social network has only four actors, three head pharmacists and one person from administration.

The social structure based on advice on the following page (see sociogram 6) shows very high connectedness and low centralisation of actors. Seeking advice clearly is a dimension in which individuals activate themselves in the network and connect to each other. There are several central persons in the social network built on advice (A1, A16, A14 and A20) and they represent management, pharmacies and administration. The formal structure of the YA network and the hierarchy in the centralised network do not match this social structure. Individuals with different formal positions and roles in the pharmacy network are connected to each other. Advice seeking contrasts with the professional social network structure, where different units and functions could be identified as separate clusters. In relationships built on seeking advice, individuals and their relationships are truly embedded in the pharmacy network. Heterogeneity in the social network is needed for advice seeking. It implies that individuals ask about things they do not know. Thus, seeking and giving advice are more hands-on activities and closer to daily activities. It explains why head pharmacists, YA administration, management, production and trade, all different units, become interrelated. There is one exception in this dense social structure; the dyad in the right hand corner, where we can find a relationship between two individuals from YA’s production unit that is totally separate from the larger social network and other individuals (see sociogram 6).
The most interesting illustration of YA’s social network structures is probably the sociogram of friendship and liking (see sociogram 7). It is the only social structure where the formal network structure, hierarchy and centralised management truly seem to disappear. The social network based on friendship and liking does not include all the network members – 9 persons are missing – but it nevertheless covers most of the different roles and positions in the pharmacy network. Person A1, who is central in all other social networks, is on the periphery of the network based on friendship. The most central persons, A20, A28 and A22, are persons in the administration team, responsible for sales, financial aspects and IT systems. Thus, they are in contact with all head pharmacists on a daily basis and they support actors in their daily work. The social network of friendship seems to be organised around individuals who undertake administrative tasks, who are less visible in the pharmacies but who work with routine tasks and necessary activities. They are highly valued as friends and they are individuals that others like. Head pharmacists in the social network are visible on the paths of relations originating from the central persons. Thus, head pharmacists create a
very important network around the central persons and there are several brokers in the network (A18, A2, A16, A22 and A24). However, there is also an exception in this social network, a clique of three persons in the left hand corner. It is a geographical cluster of three head pharmacists from the Helsinki region, who work very closely with each other every day. The social network of friendship is less dense than the social network related to advice. Thus, advice is clearly important for all actors in YA as it is a practically oriented need that lies behind contact with other actors. Friendship is not necessary for the actors in their work.

Figure 29 Sociogram 7: YA Friendship and liking - degrees

Trust regarding work-related matters (see sociogram 8) emphasises two extremely central actors (A1 and A20) and two relatively central persons (A28 and A14). In addition there are several persons (e.g. A16, A22, A24 and A29) who are well connected in the network and are important brokers. This network structure shows a
relatively well connected network of actors. There are, nevertheless, quite a few persons who are connected to the network by only one tie. Therefore, the brokers who connect individuals on the periphery to the central network actors are very important in this network. The brokers are both head pharmacists and YA administrators and there are no clear clusters of pharmacists and administration. Thus, actors’ official roles or positions do not seem to influence the head pharmacists’ or other members’ judgement as to who they can rely on if they need to discuss sensitive matters regarding the network. The network centralisation is relatively low (26%) implying that although there are two clearly central individuals, there are several important actors who are trusted at work-related matters. There are five reciprocal ties in the social network, between A19 and A13, between A13 and A14, between A14 and A12, between A28 and A22, and between A7 and A8. As persons A19, A13 and A14 are all interdependent with reciprocal ties, this indicates extremely strong relationships between these actors. These pharmacists have known each other for 7-10 years, and they have all been members of the management team at some point. Thus, they have all been involved as managers in YA’s development and have participated in decision-making processes. Consequently, it can be argued that they share similar personal and professional interests in the network.
Figure 30 Sociogram 8: YA - Trust regarding work-related matters – degrees
The social network of trust regarding personal matters in HYMA is fragmented (sociogram 9). Instead of one social network based on trust, where actors are connected and embedded, there are four different cliques of individuals - one larger group of actors and three dyads / triads. The cliques are not connected to each other.

The largest social structure of interdependent individuals (8 persons) comprises four administrative persons and four apothecaries who trust each other. The structure emphasises the management, the CEO, chairman and the previous chairman of HYMA. Trust is, in other words, to some extent related to how the HYMA network is managed, as the management and administration are closely interlinked. However, the social
network of trust is built to an even greater extent on individuals’ personal perceptions of each other. An apothecary who seems to be most trusted by the other apothecaries in personal matters is person B7, who has also worked as the chairman. There are three founder members in this network (B3, B16 and B20), but not one of the founders of HYMA is connected to another founder in this social network.

Sociogram 9 shows that an apothecary, if she or he trusts anyone in the pharmacy network at all, seems to trust another apothecary in personal matters. The majority of the respondents have implied that they only trust their family and friends. Apothecaries in the larger network have known each other between 7 and 20 years. Apothecaries in the separate cliques have known each other for varying lengths of time. Apothecaries B10 and B8 have known each other for 28 years, since the time they studied at university together; B13 and B18 have known each other for 15 years; and B4 has known B5 for 20 years and B9 for only one year. Thus, some of the apothecaries have known each other for a very long time whereas others have met via HYMA. In general, apothecaries in HYMA have known each other for a long time, often over 20 years, which is a specific characteristic of HYMA and where it differs from YA. The varying length of the relationships is an interesting observation in the collected data, as this shows that individuals are able to trust each other even when they have known each other for a shorter time (illustrated in the contacts of apothecary B4). There is only one reciprocal tie in the network, which indicates that the majority of the relationships in this social network are weak. Another interesting finding is that only one apothecary, one of the founders, trusts the CEO in the personal matters. It is in a way natural, as new career path would in practice mean either establishment of a new HYMA pharmacy or apothecary’s decision to leave the network.

The sociogram of advice (sociogram 10) on the following page is interesting in the sense that it includes almost everyone in the pharmacy network, with the exception of one person who is not linked to the others. Thus, advisory relationships connect people in HYMA and create a dense social network between the members. It can be argued that seeking advice is an important attribute for the actors in a voluntary network. Advice is important as it generates contacts, communication and activities on a broad scale. The centralisation in the social network is high, 43%, and there are two equally central persons, B22 and B7. They both have 13 ties to members and between them exists a reciprocal tie. The third central person is B20 who has 9 ties and also reciprocal ties to both B22 and B7. Thus, it can be argued that these three individuals create a very
strong centre for the social network related to advice, and, thus, they are the experts and build “the informal advisory board” of the pharmacy network. Advice is an interesting social dimension to analyse as it forms the basis of many interdependencies in the network. One of the most common arguments for becoming a member of a voluntary network is the possibility of getting advice from other professionals who understand the challenges of the pharmacy business and who want to share their knowledge and ideas with each other. Advice is, in other words, a hands-on activity that is linked to the everyday business of pharmacies. Consequently, it is a substance in the relationship that is valued by the members of both HYMA and YA.

Figure 32 Sociogram 10: HYMA Advice –degrees

The social network built on **friendship and liking** is relatively small (see sociogram 11) compared to the one built on advice. The structure highlights a clear centre. B22 is the most central person and has reciprocal ties with B23 and B24. They form a strong triad reflecting their formal positions as these persons work in HYMA administration. The social network of friendship highlights the role of two brokers in the structure, B7
and B20, who connect apothecaries at the end of both relationship paths to the centre of the network (B22, B23 and B24). An interesting observation is that B20, B16 and B11 are all founders of HYMA, but only B11 and B16 are directly connected through friendship. B7 has again been a member of HYMA almost from the beginning and has gained a central role and position as a friend.

Figure 33 Sociogram 11: HYMA Friendship and liking – centrality degrees

The small number of actors who are identified as friends in the social structure mirrors the development process of HYMA and how independent apothecaries have created a voluntary network. Most of the members of HYMA are able to identify several people who they like working with and perceive as their friends. However, these persons work in the members’ own pharmacies. Many of the apothecaries have not named any of the apothecaries from other HYMA pharmacies in this context. In other words, they seem to restrict friendship relations to their own pharmacy units. In that sense, the social structure of friendship illustrates the multidimensionality in the networks, where individuals have simultaneously several roles to act according to. In situations similar to friendship, they think about their own business units and not about the network of which they are members. However, some apothecaries refer to other apothecaries as
their friends, people they like working with, which indicates their ability to “think from the network perspective” as well. These apothecaries, who in this case create the social network of friendship, clearly see their work as being part of the pharmacy network and they do not limit their actions to running their own pharmacies.

**Trust regarding work-related matters** is perceived as being much more important than trust regarding personal matters (see sociogram 12). If persons do not trust each other in personal matters in HYMA, trust concerning the professional role and network related issues creates a high level of connectedness between the actors in HYMA. The network centralisation is 37%, which is much lower than in the professional knowledge and advice networks. Thus, there are several central persons who are trusted. The central actors, B22 and B7, management and apothecary, are trusted by the others in this social network also. B22 has 12 ties and B7 11 ties to other members. The other central persons are apothecaries, for example B15, B20, B6, B4, and B16 with six ties each. The network is very dense and almost everyone has more than one tie to other actors.
HYMA’s social network of trust regarding work-related matters shows a social structure where trust connects several individuals and is perceived by almost everyone. Trust regarding work-related matters is perceived as an important reason for interaction. The only exception seems to be an outlier, B14, who stands outside the social context. This apothecary is the only outlier in the social network, an individual who is not part of this social network or any other social network in HYMA. Formally, this person has a high position in the network as a member of the board of directors. Other members have, however, not named him as a person they would trust. B14 for his part has not named anyone he would trust in the network. This apothecary is not part of any of the other social networks that have been analysed either, implying that he is an outlier in the social context and social exchange in HYMA. That an actor is not connected to others is not a positive sign and could lead to problems in the network, where everything is built
on voluntary action. An outlier in the social networks can negatively influence the shared feelings of trust and commitment. An interesting finding is also that some respondents name the founding father, who died a couple of years ago, as a person they trust. It seems that trust that has been perceived as important in the pharmacy network remains even after people leave the network.

7.2.5.3. Reciprocal ties

We have seen that in the social structures there is a mix of strong and weak ties which exist side by side in different social contexts. By definition, professional ties can be viewed as weak ties and social, personal ties as strong ties. Professional ties usually encompass a wide range of individuals and involve less commitment and no reciprocity, whereas social ties are built on mutual understanding and reciprocity between a limited number of individuals. The majority of ties in the social networks seem to be professional ties and they can be argued to have central roles in both networks. The strong reciprocal ties can also be found in all social networks. Reciprocity is, thus, one way to measure the strength of relationships.

Table 10  Number of reciprocal ties in YA and HYMA

<table>
<thead>
<tr>
<th>Number of reciprocal ties</th>
<th>YA</th>
<th>HYMA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional knowledge</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>Trust regarding personal matters</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Advice</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>Friendship</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Trust regarding work-related matters</td>
<td>5</td>
<td>12</td>
</tr>
</tbody>
</table>

The number of reciprocal ties varies between different social networks (see table 10). Perceived friendship and trust regarding personal matters include markedly fewer reciprocal ties and most of the ties are one directional ties, which can be labelled as weak ties. Thus, reciprocity of ties is very low and so also is the number of strong ties. There are also fewer individuals included in these social structures compared to the other structures. It can be stated that the professional label in the pharmacy networks seems to dominate perceptions of personal matters and, thus, there are few strong relationships when the ties are measured using personal attributes, e.g. trust and friendship. The social networks are also fragmented into smaller groups of individuals and contacts and the individuals with reciprocal ties are not directly connected to other...
groups. These social structures support the assumption regarding the nature of ties in professional networks. Thus, ties in the professional context are most often weak ties but their ability to link individuals with several other actors and groups of actors in a network make weak ties a valued element of the professional networks (see Granovetter 1973).

Social networks built on advice and trust regarding work-related matters, have the most reciprocal ties of all the networks. The latter network in HYMA includes as many as 12 reciprocal ties, which makes the social network quite different from the other social networks. Both YA’s and HYMA’s social networks built on advice show interesting connections between reciprocal ties. In both structures, reciprocal ties between individuals create a triangle or circle between individuals. In social networks built on trust regarding work-related matters in YA, the reciprocal ties are not interlinked in the same way, although there is a tail of three interlinked reciprocal ties between four individuals. In HYMA’s social network built on trust regarding work-related matters the reciprocal ties are extremely interlinked, forming several triangles. Thus, the reciprocal ties build interesting central clusters in both networks. In YA, the triangle of reciprocal ties in social network related to advice creates a centre for advice related activities, creating thereby an extremely strong centre of social exchange. In HYMA there are likewise several clusters of individuals in the pharmacy network with several reciprocal ties linked to the clusters. These clusters can be identified as concentrated centres of information exchange in the network.

There are several individuals with reciprocal ties in HYMA. The reciprocal ties exist to some degree between the same individuals in all five relationship types, but not in all. For example persons B20 and B22 share reciprocal ties in professional knowledge, advice and trust regarding work-related matters, but not in trust regarding personal matters or friendship. The reciprocity depends on the social context. The reciprocal ties in HYMA are, however, extremely well connected and are indicative of strong relationships in the network. In YA the reciprocal ties are clearly more separate and individuals with reciprocal ties are not as well connected as in HYMA. In YA the reciprocal ties seem to exist between the same individuals in most of the social networks. There is even a pair of individuals, A13 and A19, who share reciprocal ties in all five relationship types, both in professional and personal matters. They do not work in the same city but they have both worked in YA’s management. Individuals A7 and A8 have reciprocal ties in social networks of professional knowledge, trust regarding
personal matters, advice and trust regarding work-related matters – only in friendship they do not mention each other. They work in the same city, which could be the reason for the strong ties between them.

It can be argued that the strength of ties and reciprocity in interpersonal relationships depends on different elements, which provide the content of the relations: the amount of time spent on the relationship, its emotional intensity, the intimacy involved and its reciprocal nature (and, thus, mutual commitment and connectedness). How much time individuals have spent in each relationship depends to a large extent on the history of the relationship. By this I mean how long they have known each other, from where they know each other, and how long they have been members in the network. Having said that, it seems as if much of the reciprocity is built on the interests and values that individuals have in common, regardless of their current formal positions or roles. Individuals in YA have worked in the network from 6 months to 18 years. Responsible pharmacists and managers in YA have in general been in their current positions for less time than apothecaries in HYMA have been in their pharmacies. Thus, the average time individuals have known each other is, in most relationships, a few years, but there are also long-term relationships in the network. Rotation of personnel between different positions is common in YA, meaning that individuals can move from administration to pharmacy units and vice versa. In this way the individuals remain members of the network, it is just their positions and roles that change. This does not affect the length of time they have known other individuals in the network, but it emphasises the relatively high mobility and rotation of professionals in YA. If we look at the current personnel map, most of the head pharmacists have different formal positions today compared with the time when the data was collected. They work in management and administration or they have left the network. In a similar way some administrative personnel have changed job titles or left the network. The number of administrative positions has also increased.

The reciprocal ties in YA exist between persons who have known each other for a long time, over 8 years, and who have worked in the same network for the whole time. Thus, the time invested in a relationship does seem to matter. Still, the majority of the relationships in the social networks represent weak ties, which are built on professional needs and communication. The large number of weak ties can be said to keep YA’s pharmacy network dynamic, although it can be helpful to have some strong ties as they
ensure the stability and continuity of a network’s development. (Hanneman & Riddle 2005)

The number of reciprocal ties in HYMA is no higher than in YA, except in the social network of trust regarding work-related matters. This can be interpreted as a sign of perceived professional attitude in the pharmacy network. One of the main reasons for pharmacy networks’ development is the mutual understanding shared between individuals and the search for competencies among other actors. Thus, finding colleagues with competence and professional knowledge and skills is both a matter of personal interest and a strong business incentive for apothecaries. It is not possible to co-operate and create relationships without mutual understanding, for which personal ties provide support. Professional and social ties are consequently closely interlinked in the interdependent relationships, where the type of information that is exchanged in different contexts is what differentiates them. The analysis shows the importance of social networks related to professional matters, as these networks connect almost all individuals in HYMA. These social networks show also most reciprocal strong ties between the individuals, which create clusters of reciprocal ties.

7.2.5.4. Formality in the pharmacy networks

Actors’ formal positions and roles as well as organisational levels create clusters of people in the social networks with in YA and HYMA. Thus, management shares similar tasks, which is why they communicate with each other at the same organisational level. In some of the social networks we can see structures similar to these formal structures. In the same way, we can identify how pharmacists are connected to their fellow pharmacists. These clusters confirm the existence of formal social networks in the pharmacy networks. Clustering can thereby be linked to actors’ given positions and roles in the pharmacy network. In YA’s social networks the CEO, for example, is very central in almost all social networks and professional knowledge is shared between colleagues in pharmacies, production and administration. There are, however, several exceptions in the social networks of YA and HYMA. Actors are connected to each other, through both weak and strong ties, regardless of their formal positions in the pharmacy networks. Thus, actors can manage their roles and positions through their relationships in pharmacy networks. Their personal contacts are neither limited to colleagues in the same position, nor to individuals in their own pharmacy units. The socially active individuals have contacts all over the pharmacy network, covering different functional
areas and positions. The well-connected actors are typically individuals who are referred to as active persons when pharmacists are talking about network activities. They are also appreciated by their colleagues. In the social networks they are the central actors in enabling informal mechanisms to develop and function. The central actors are “the opinion leaders” among the individuals in the networks, illustrating the influence of social action in concrete terms. The central actors are not necessarily the formally central actors, e.g. the CEO or managers, and they are embedded in the social networks and can be identified only by analysing social connections between individuals.

In HYMA’s less structured business network, one of the key issues identified by my research is the formality and hierarchy within the business network, which are hidden in the otherwise democratic structure. The formality and hierarchy are evident in the poor communication between pharmacies and within pharmacies that respondents have mentioned as hampering the implementation of various decisions. The hidden formality becomes apparent in the accounts of apothecaries’ experiences of the chain development process. The formality of the manner of communication between the apothecaries and pharmacy personnel can be especially problematic. Some of the apothecaries “suffer from the influence of the old pharmacy traditions”, meaning that apothecaries want to have a power position in their own pharmacies and complete power to decide how to run their own businesses. HYMA has 24 member pharmacies and 24 apothecaries who all manage their own businesses as they like and, thus, the level of formality can vary between the pharmacies. Apothecaries have traditionally been the chairmen, CEOs and CFOs of their own pharmacies and it can be very difficult for them to work in a democratic network structure, where they are not in the position of leader. Apothecaries have in the past often acted as ‘the high commanders’ for their pharmacies. There are examples of pharmacies where communication between the apothecary and pharmacists is non-existent because of the strict hierarchy.

"Have you ever worked at an old-fashioned pharmacy, where the apothecary shouts behind the counter to the other? I have and it was just incredible... Well, what else has the pharmacist learned and seen, if he or she has been working for an apothecary, who just yells at the personnel. I suppose that he or she will take over the same habit. No one who is sensible and clever will stay at a pharmacy like that, they go elsewhere.” Management, HYMA

There are great differences between the levels of formality in the various pharmacies, which seems to be linked to the apothecary’s personal character. A pharmacist, who
had recently moved from one HYMA pharmacy to another, noticed a clear difference in the level of formality:

“It is amazing that we can talk to our apothecary at the pharmacy!” Pharmacist, HYMA

The level of formality in the pharmacies can be an issue for the development of the pharmacy network. It is also a paradox if we think about how HYMA was established. Quoting one of the apothecaries in HYMA: “HYMA is about relationships! The business idea of HYMA is built on relationships.” (Apothecary, HYMA) Thus, relationships are a key resource for HYMA, and the apothecaries' own attitudes and perceptions of HYMA’s importance influence the level of commitment in the network, which becomes visible in their activity and participation in different chain activities and in the way they manage their own pharmacies. It can therefore be argued that even though HYMA has an apparently less formal structure, the real level of hierarchy and formality can be high, where apothecaries may try to control the amount of contacts between the pharmacists and the HYMA network. The high level of formality is somewhat surprising, especially as we know that the democratic structure should support open communication between the member pharmacies without any limits. However, we must also remember that apothecaries in HYMA are individuals who manage their own businesses and are used to working alone. They feel it very important to be able to decide the extent to which they participate in network activities.

7.2.6. Summarising the content of social networks

The social networks illustrated and interpreted above provide a novel image of the connections between the actors in the pharmacy networks. Social networks are without doubt part of the pharmacy networks. The social structures in YA and HYMA are different and, depending on the content of the relationships, involve different types of actors. In YA advice seeking and trust regarding work-related matters are important aspects that connect individuals in the network. These social networks are to some extent similar to the patterns in the formal structure of YA. On the other hand, the social network of friendship and liking highlight the difference between social structures and formal structures in YA.

All the analysed social networks in HYMA vary widely in their structure. Social exchange and connectedness to other individuals in the HYMA pharmacy network are
mainly built on advice seeking and trust regarding work-related matters, where issues related to trust regarding work-related matters involve several central actors and create strong reciprocal ties and clusters between individuals. Trust regarding personal matters does not, however, connect individuals, which indicates that trust as part of the professional network is an important attribute for the actors, but that personal perceptions of private matters are kept separate from the business.

HYMA’s social networks have, in general, fewer traces of formal structures than YA’s social networks. The formal network structure does not guide the actors in their social action as much as in YA. In YA the CEO is a central actor in all social contexts except in the network related to friendship. In HYMA the CEO is a central actor in all social networks, but he is not the only central actor in them. In fact, the CEO of HYMA is not directly connected to as many apothecaries as the CEO of YA. The most striking example of the centrality of YA’s CEO in the social networks is probably depicted in the sociogram of trust regarding personal matters (see sociogram 5). To illustrate the comparison between the centrality of the CEOs in YA and HYMA, the CEO ego-networks are illustrated in sociograms 13 and 14, below.

YA’s CEO is in the middle of the actors, head pharmacists and managers, who all have a direct tie to him. The CEO’s role is therefore not only central in terms of the number of ties but also in terms of its position between so many actors in the pharmacy network. YA’s CEO is a central actor in all social networks except for the social network built on friendship and liking. The ego-network of the CEO indicates that the ties to the CEO are weak and thus they are not close ties.
In HYMA the CEO has fewer direct ties to other actors than the CEO of YA. The CEO of HYMA is a central actor in all analysed social networks, including the network built on friendship, but he does not dominate the social structures. There are several other central actors in HYMA’s social networks, implying a heterogeneous structure of actors and relationships and a low centralisation of HYMA’s social networks.
The social network structures in YA and HYMA appear to have a large number of weak ties, which is typical for professional networks, but there are also several strong and reciprocal ties, which indicate strong interdependencies between the socially active individuals. YA’s social network structures are in many ways similar to the formal network structures. The important substance in the social networks emphasises professional knowledge, advice seeking and trust regarding work-related matters. These are social dimensions, where individuals are more connected to each other and which individuals in YA value. However, there are many more ties linked to trust in personal matters and friendship within YA than within HYMA. One could argue that this is a consequence of the centralised structure and management in YA, which creates a formal base for the relationships and supports a network perspective for members of the network. As all actors are employees in the same organisation, it can be argued that the organisational hierarchy and structure may have an impact on the social networks as well. Simultaneously, it is, however, worth emphasising that individuals’ behaviour cannot be forced and individuals will always choose who they prefer to work with and talk to, at least wherever possible. Thus, although actors are employees they still are individuals.

HYMA’s various social structures are clearly different depending on the relationship being analysed. Professional knowledge, advice and trust regarding work-related matters are all issues that connect people, but there are several central individuals present in the social networks. A person who one may trust in personal and delicate matters may not be the person one goes to when seeking a partner to talk to about network strategies or about the planned internal educational scheme. They can be the same person, of course, as we have seen in the social networks, but they can also be different. A general observation about the social networks in HYMA is related to the formal network structure and its low visibility in the social structures. A voluntary network consists of individuals who keep their own business interests in mind at the same time as acting as members of the network. Network membership is just one of their concerns as they are, basically, independent apothecaries. Thus, there are great differences in apothecaries’ mindsets and their perceptions of their changing roles and positions in relation to the emerging network they create through their activities. These varying perceptions become apparent in the social networks and personal contacts.
The visualisation of the social network structures has shown the diversity of the structures and actors that exist within a pharmacy network. There are clear differences in the formal organisational and informal social structures in both pharmacy networks. The social networks related to professional matters of knowledge, advice and trust are all dense and connect almost all actors in both pharmacy networks. The social networks related to advice and trust regarding work-related matters reveal most reciprocal ties and clusters of reciprocal ties between several central individuals. As has been discussed, the depicted social networks illustrate that the central actors in each social context may vary. Some persons are central in several social networks but even then their centrality varies. An actor’s centrality is always linked to the perceived relationship, situation and context and not to a generalised network. The large number of weak ties implies that the pharmacy networks are professional networks, where individuals keep their personal and professional relationships separate. Thus, friendship is regarded as less important than professional advice and knowledge, and so, although individuals might have known each other for a long time, it does not mean that these personal relationships are used in the professional context within the pharmacy networks. The social networks show that individuals are also capable of trusting each other even when they have only known each other for a short time. What seems to be important for the development of social contacts between individuals is that they share similar personal and professional interests. In truly personal matters, even if they are career related, individuals prefer to talk to members of their own families and friends, rather than sharing their personal concerns with colleagues.

7.3. Summary

In this chapter, chain formation has been analysed as a form of horizontal integration, where the ability to co-operate becomes a critical competence. Thus, the integration components of formal integration, decision integration, and execution integration are relevant for conceptualising the contemporary phenomenon of pharmacies’ chain development. The analysis of how integration is executed through different activities shows how the level of horizontal integration differs in a centralised network in contrast to a voluntary network. The formal network structures of the centralised and the voluntary networks are very different and they are also managed differently. YA is a large, centralised organisation, with special privileges providing competitive advantages. It is centrally managed and the organisation employs several hundreds of pharmaceutical professionals. It stands alone as a remarkable actor among the other
pharmacies. YA has claimed the position and fulfils the role of the leading pharmacy as it has the capacity for a large scale business with a wide range of functions. In YA the number of pharmacy units is constant. Only the individuals who manage them, the head pharmacists, may change.

HYMA is a group of apothecaries which stands closer to the privately owned pharmacies and apothecaries in its ideology of a democratic structure. A member of the HYMA network is an individual pharmacy, which means that both individuals and pharmacies can change. Good relationships and social contacts can literally make HYMA grow, whilst conflicts can hamper its growth. HYMA is clearly less integrated than YA but is, however, challenging YA in many ways in the chain development process. Although the structural differences are significant, the chain development characteristics and processes are, however, very similar in YA and HYMA. It can be argued that there is a difference in degrees of integration rather than integration categories or chain development categories.

The investigated social networks illustrate how social action is part of the pharmacy networks. The networks show a high level of actor centrality related to professional knowledge, advice and trust at work-related matters. Social networks depict professional networks and show how actors are informally connected to each other. The social networks exist in parallel with the formal structures. YA’s social networks have a few very central actors, which reflects the centralised management of the pharmacy network. The social networks also imply high connectedness between the actors. In HYMA the actor centrality is lower, implying that there are several relatively central actors. It is line with the democratic and voluntary structure of the pharmacy network. There is also a great variance between the social network structures depending on the different types of social relations. HYMA’s social networks are less dense than YA’s. The number of outliers is also higher in HYMA, which implies that actors are less connected and more independent. It implies that actors have, or tend to exercise, more freedom and are focused on their own businesses at the same time as being network members. As HYMA is built on relationships, it can be argued that social interaction between individuals is a key resource for the voluntary network as it enables human action. Based on our observations, it can, however, be argued that centralised networks are also dependent on the social action between the actors. People can choose with whom they want to work and share knowledge and information with, and, thus, the formal and informal structures seem to exist side by side in both pharmacy networks.
8 HUMAN ACTION AND ACTORS IN THE PHARMACY NETWORKS

Multidimensional actors and social action are in focus in the central assumption that business actors are multidimensional and that their specific constitution in any given situation is determined by human interaction in social networks. In the tentative model of multidimensional actors, presented in chapter 3, there are three main components, which aim to explain the multidimensional actors’ behaviour and action. These components are different identities in the three actor dimensions (individual, firm and network), network identification processes and actorship. These components are interlinked, support each other, and are therefore overlapping. Concepts of trust and commitment gain a central role in creating network identity and shared understanding between actors in the network identification processes. As we have seen in the empirical material, actors are active in the pharmacy networks and shape and create them through their action. Human actors, individuals, have created the voluntary pharmacy network HYMA largely through their personal relationships. One of the research questions specified in the introduction was: how do human action and human actors contribute to the emergence and development of business networks. Another one was: what is the role of social networks in emerging networks? The account of HYMA’s development provides one answer to these questions But one can also ask what has motivated the human action that we can observe? How have the personal relationships and social networks that apothecaries have developed affected the development of the pharmacy networks? The previously presented social networks have illustrated how social action and interaction between individuals are part of the pharmacy networks. As I have chosen to study individual actors in the network context, the focus is here given to the human beings, individuals, in the studied pharmacy networks. By analysing the individuals, their characteristics and social action, and how they perceive the networks, we can better understand the influence of multidimensional actors and social action in business networks. Thus, this chapter focuses on unravelling the motives for human action and exploring the human behaviour in the studied pharmacy networks.
8.1. Membership identification in pharmacy networks

Sense of belonging to a group or a network is a common feature for human actors and it is reflected in the individual behaviour of actors (March 1956). Sense of belonging also emphasises network identification as an important process for individual identities and network identities to connect and for finding shared goals and understanding between actors in networks (Huemer et al. 2004). The individual identities vary depending on different situations and depending on the other actors individuals are in contact with (Ornstein 1986). Therefore, individual identities are formed by social processes (Berger & Luckmann 1967) and it is possible for individuals to switch between different identities. Network identities are created and shaped through actors’ identification and interaction. Thus, network identity is about creating a collective identity, which defines the shared and collective sense of who ‘we’ are in a network (Huemer et al. 2004).

An individual can become a member of a network of actors either by creating a new network together with other individuals (an example is HYMA’s establishment) or by joining an existing network (visible in HYMA’s later development as well as in YA’s recruitment of new employees). To join a pharmacy network one can be invited, recruited, or one may apply for membership. The manner in which people become members in a pharmacy network differs slightly depending on which pharmacy network we observe, but membership also has some common features. First, individuals who are members of YA or HYMA cannot be members of other pharmacy networks. It means that membership of these networks is exclusive and restricts opportunities for membership of other potential pharmacy networks. Membership of a pharmacy network does not, however, prevent membership of other types of networks and several of the members in the voluntary network have been members of other professional networks, e.g. the Association of the Finnish Pharmacies, at the same time as they have been members of HYMA. It implies that although apothecaries are economically bound to one pharmacy network, this membership does not restrict their social action and activity in a professional context outside the network boundaries. Second, becoming a member of a pharmacy network is not a strategic decision that an individual can take on their own in either of the studied pharmacy networks. That an individual wants to become a member is her decision to make but to be accepted as a member of a pharmacy network is a decision made by the management of YA and by the network members of HYMA. Thus, following the centralised network structure of
YA, the management makes the decisions regarding new members, in this case new employees. In YA the head pharmacists, equal to apothecaries in each pharmacy unit, and YA’s apothecary (the only apothecary in YA and also the CEO), work as employees of the central organisation. They are either recruited or they apply for the open positions, and thereby membership is equal to employment. In the evaluation of new employees, professional skills are emphasised. The number of YA pharmacies does not grow with new employees. New members merely fill open positions either in branch pharmacies or in the administration and production units. In HYMA the collective, democratic decision-making regarding new members has been one of the main ideas in its establishment. In HYMA new members are new partners and shareholders in the HYMA corporation. Thus, they are not employees of HYMA. By definition there are only three employees in HYMA: the CEO, marketing manager and education manager. Pharmacists who work at HYMA pharmacies are not employed by HYMA, but by the apothecary and pharmacy that happens to be an HYMA member. Thus, the meaning and character of membership are fundamentally different in YA and HYMA.

We can see individuals being representatives of their own profession in both pharmacy networks. Whether individuals feel that they represent the network or the unit they work for varies as it depends on the individuals’ own perceptions. YA and HYMA show some differences in these identification processes. Whether individuals represent the network and business units/pharmacies as owners or merely professionals, who are responsible for reaching the set business targets, seem to differentiate the membership definitions to a certain extent. In YA the membership identification takes place through employment, thus, between the individual, i.e. the professional, the profession and the network. Thereby network identification is linked to the role and position an employee holds and the representation of a unit is directly linked to the pharmacy network. When a new member of HYMA is recruited, the old members evaluate how the potential new member fits into the desired structure from the collective perspective. Thereby they evaluate the apothecary’s professional skills as well as their personal character. The pharmacy that the apothecary owns is evaluated separately as its size, location and economic profitability are important criteria for membership. This implies that in HYMA the apothecary and pharmacy unit are clearly combined in membership identification but the network identification varies depending on the individual perceptions.
8.1.1. Choosing the members of a network

Individuals’ capabilities to adapt to the network and their possession of personal qualities that support the networks’ ideologies and strategies are emphasised in the recruitment processes. New members are evaluated on social character, personal values and on their professional knowledge. Membership of YA and HYMA require different kinds of characteristics from an applicant. In HYMA, personal and social abilities are the features primarily evaluated, together with professional skills, although the economic performance of the applicant’s pharmacy is also important, which again are not relevant in YA’s recruitment processes. In a centralised network like YA the formal structures define the positions and roles to be filled. Thus, the person needs to meet the formal criteria of professional skills, which are carefully evaluated for each position and role definition in the network structure, and which take precedence over the social character of a person. However, the social characteristics of an individual can have an important role in recruitment to YA also. The current CEO is an example of this. He previously worked for YA as a head pharmacist but decided to make a career move and left the pharmacy at the end of the 1990’s. He was recruited as YA’s CEO in 2001 as he knew the organisation and its people well and the management of YA knew him.

An interesting characteristic of the establishment of HYMA has been the emphasis on finding the right people. HYMA’s apothecaries have searched for strong personalities, innovative and open-minded individuals to become network members: people who do not want to preserve old traditions in the pharmacy business. HYMA’s operations are built on personal contacts and relationships, where social exchange has been central and network structure less essential. Thus, recruiting the right members is regarded as an important network strategy in the development of HYMA. Its growth takes place through recruitment of new members who generate the growth, and therefore growth in itself is not a primary goal in the voluntary network. Instead, finding the right persons is considered to be more important.

“HYMA’s growth has been organic. Regarding the personal relationships we have an eternal veto-right. If we do not like someone, then we should get rid of him. Wrong recruitment is the biggest risk for us because if a person does not adapt or commit to the activities, we have a problem. The whole idea of HYMA is built on relationships.” Apothecary, HYMA

Every new member in the pharmacy network is expected to contribute with new knowledge and possess the right social and co-operative characteristics, as defined by
the founders. Therefore, individuals can directly influence the development of a voluntary network, as the democratic structure supports the inclusion of individual knowledge and opinions in the decision-making processes. Choosing every new member and evaluating them based on the given economic and social criteria provides an example of human actors’ intentional action in the pharmacy networks. Recruiting members who fit into the network but who are also unique contributes to the development of heterogeneous networks, where human actors contribute to the emergence and development of the pharmacy network.

8.1.2. Mini case: Recruitments in HYMA

Becoming a member of HYMA is not a simple process. All the members have been hand-picked and only a few of them have applied for membership. As the network has evolved organically, its growth has not been fast. HYMA’s members have been very selective when recruiting new members. We can identify three different approaches to recruitment taken by HYMA in the past, which differ according to the period in the network’s development but also in terms of the criteria that have been emphasised when choosing new members (see table 11). The first type of recruitment took place at the establishment of HYMA, and the process was led by the founding father. The second type of recruitment took place between the years 1997 and 2001, as other founders started activating their own contacts and the network was extended through their personal contacts. The third type of recruitment is linked to the recent development in HYMA, i.e. to the strategic decision to expand the network. It can also be related to the time after the death of the founding father and the new demands to organise the growing network and co-ordinate the management of the network in an efficient way.

Table 11 Recruitment of new members in HYMA

<table>
<thead>
<tr>
<th>HYMA is established</th>
<th>1996</th>
</tr>
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<tbody>
<tr>
<td>Founding father</td>
<td>1</td>
</tr>
<tr>
<td>Founders</td>
<td>2</td>
</tr>
<tr>
<td>Other founders</td>
<td>5</td>
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<td>1</td>
<td>2</td>
<td>1</td>
<td>3</td>
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<td>4</td>
<td>5</td>
<td></td>
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</tbody>
</table>
The first members to be recruited were chosen by the founding father and he picked individuals who he personally respected, liked and could trust as skilled professionals and strong people. All the founders were personally recruited by the founding father and HYMA was established by these members.

"I had just become an apothecary in the city centre. I was asked whether I wanted to become a member in society which would include pharmacies that are located in the same cities as YA, and which would consist of apothecaries who would be clever and willing to co-operate." HYMA founder

The first members were chosen based on the personal perceptions of the founding father. He built the group of founders based on his social network. He chose individuals who shared the same entrepreneurial spirit and a capability to "get things done". Some of the founders knew each other, some did not. The founding father knew some of the apothecaries from university, where they had studied and worked together, or from different projects he had been assigned to. The founding father’s social contacts created the group of founders. The ability to trust these people and to be trusted by them was the connecting attribute on which their social relations were built. Thus, trust and personal and professional capabilities can be identified as the important intangible resources for HYMA.

After HYMA’s establishment, the personal circle of connections of the founding father was widened to include contacts of the other founders. The new members were this time chosen based more on economic and professional criteria. Thus, the membership criteria were widened from personal abilities and skills to include other personal characteristics, namely professional background, and economically influential aspects, e.g. strategic location and size of the potential member’s pharmacy. In addition to individual identities, a variety of professional identities was emphasised. The professional identities strengthened the importance of the actual pharmacy business. Thus, the business identity of actors became essential for membership through the pharmacies apothecaries owned.

“I had a wholesaler and hospital background and HYMA needed more actors.”
Apothecary, HYMA

“My pharmacy has an important location in the city centre. I have experience from different pharmaceutical sectors, which is a positive aspect.” Apothecary, HYMA
“I had a big pharmacy and I had worked in the pharmaceutical industry.” Apothecary, HYMA

A wide professional experience from different areas of the pharmaceutical industry, including experience of working on the wholesaler side and manufacturing, as well as academic and educational competencies were highly valued features. The strategic decision that was made was thus to create a heterogeneous group of members. Heterogeneity was seen as a strength for the network and also a competitive advantage. Through wide experiences from different backgrounds, individuals could bring new knowledge and information to the network. The way actors measured other actors’ abilities, expertise and knowledge, combined with new members’ motives and intentions were all linked to trust that actors perceive in relations with each other.

There were one or two new members recruited per year between 1997 and 2001, and in 2002 HYMA recruited three new members during one year. The new members were carefully chosen and HYMA clearly did not rush the expansion of its network. Since 2003 the recruitment decisions have been made based on personal contacts, but in addition to the characteristics defined previously, the strategic choice to expand the network has driven the recruitment process. Thus, actors’ business identity has become even more central and has been emphasised as supporting the individual, professional and network identities.

“After I had received my pharmacy license for my current pharmacy, he (the founding father) phoned me and asked me to join HYMA as part of the expansion strategy. My pharmacy was big enough and it was located in area where there were no other HYMA pharmacies. To join the network was a difficult choice for me to make and my decision making took a long time.” Apothecary, HYMA

“I had established a new pharmacy in an area where the business was about to grow fast. There was a good prognosis for my pharmacy to grow and besides, I had a lot of experience from several areas of the pharmaceutical industry.” Apothecary, HYMA

“I have made my pharmacy very successful. I am not a chicken! The CEO of HYMA called me, and we met and I got a description of and the facts about HYMA’s activities. I thought about the membership for a couple of weeks before I let him know that I would join the network.” Apothecary, HYMA

In the later recruitment phase it is clear that the new members have not necessarily felt the same strong connection with HYMA as the founders did. Apothecaries seem to have had doubts about joining the network, or at least the decision to join has taken some
time. There have been no existing relationships with HYMA members that could influence the decision to join the network. Therefore, trust and commitment have also been lower in the relationships and new members have focused on economic facts and benefits when deciding whether or not to join a network such as HYMA’ or ‘when evaluating the alternative networks. Moreover, the rate of HYMA’s growth has increased significantly with nine new members in just two years.

In this expansion phase, the social aspects of fitting into the network and being “a good person” are not being emphasised to the same extent that they were in the early phases. Instead the professional skills are being highlighted by the members. The most important aspect influencing the recruitment decisions seems to be the strategic importance of the potential new pharmacy to the network, implying economic motives for the decisions: location in a strategically important place and future growth opportunities are seen as competitive advantages for the pharmacy network in its fight against YA.

In HYMA recruitment phases can be found a relatively newly established continuum of the HYMA ideology in pharmacies. There are three pharmacies in HYMA that have changed their owner apothecary during the time they have been members of HYMA. The pharmacies have remained as HYMA pharmacies even after the new apothecary has started and, thus, the new apothecaries have become HYMA apothecaries. According to the new apothecaries in the old HYMA pharmacies, it seemed natural for them and for their pharmacies, including personnel, to continue to be members of HYMA. Thus, new members have joined an existing network through already existing business units. This manner of recruitment is thereby similar to the recruitment processes in YA, where every new pharmacist directly becomes a YA member by filling an open position in the network.

8.1.2.1. The motives behind recruitment decisions

The recruitment phases show how the criteria for recruiting new members have evolved in HYMA. The process of establishing HYMA was built on the social relationships of friendship. The founding apothecaries knew each other from the past and shared a common history and background. They had gone to university together, worked on the same projects or shared the same hobbies. They knew each other personally as well as professionally. Thus, the recruitment choices in the establishment phase were based
primarily on social motives. After the first core group was assembled, the network started to evolve and to slowly recruit new members. The new recruitments were also based to some extent on social motives but to a larger extent on economic ones. The social circle was extended from the direct relationships of the founding father to all the founders’ acquaintances. In the recent recruitment phase the importance of social criteria has decreased and the economic motives have become stronger. The size, location, volume and growth opportunities of pharmacies have become key factors in the recruitment process. The personal character of every new member has nevertheless still been evaluated by the members. The continuum of HYMA’s growth, where new apothecaries have taken over existing HYMA pharmacies is clearly different from the previous phases. It provides an example of the organic growth in a business context, as respondents have stated, and shows a certain maturity in HYMA’s network structure.

The HYMA example has shown that when a pharmacy network has emerged, its main resource has been the individual professionals, who have combined their social and economic resources, which have enabled the development of the pharmacy network. The motives for the recruitment of new members have been both economic and social. The motives imply the intentionality of human action in choosing the new members, which provides an example of actorship in HYMA. As the network has emerged and started to evolve there has been a shift from social motives to economic motives for the recruitment decisions. This indicates a change in intentionality, largely due to joint decisions made about the new growth strategy of the network. Thus, the network identity and shared understanding of the common goals of recruiting between members have developed hand-in-hand with the strategic decisions that have been made. In the beginning, HYMA’s strategy was to collect together a group of individuals, strong personalities, who could ‘do things differently’ and reach the shared goals. The individual motives of the founding father were translated into network motives of the pharmacy network, showing how individual values can become network values through network identification and vice versa as the common values can influence individual values. The shared understanding of network growth and recruitment of new members emphasised heterogeneity in the choice of network members. Different individual identities have therefore created the base for the network development. The recruitment process as such has been built on individuals’ shared understanding of the networks’ purpose and goals, which have been formed by the individuals. Each member has identified the joint purpose and goals in their own individual identity and thereby they have identified themselves as members of the pharmacy network. Thus,
individual, professional and organisational identities of actors have shaped the network identity and what the actors understand as the common values. The processes by which one’s own identities are identified in relation to the network identity and also to other members’ identities is a continuous process. It does not end with the recruitment process. Members of the network evaluate each others’ personal and professional capabilities, individual and professional identities and values. As respondents have stated, they have an eternal veto–right regarding members. In theory this means that if someone does not support the common values, this person can be frozen out from the network. In practice, it is, however, difficult to “sack” members as HYMA is a corporation owned by its members.

8.1.3. Motives for the establishment of the networks and membership of them

HYMA’s pharmacy network is unique in Finland – there are no other examples within the pharmacy business which HYMA could follow and learn from. No other, that is, except YA. YA’s network is ‘one of a kind’ in Finland as a result of its special privileges, the fact that it has been established for educational purposes, and because the University of Helsinki owns the pharmacy license. In a way, then, both YA and HYMA are pioneers within the pharmacy business in developing business practices and questioning the old ethics and moral understanding of what is perceived as appropriate conduct.

Researchers have argued that business networks are seldom established from scratch since the relations that constitute them often already exist (Ford & Redwood 2005). The analysis of the development processes in both pharmacy networks has shown that, as business networks, the pharmacy networks were established as new networks. There were no similar structures within pharmaceutical retailing before their establishment. However, a closer look at the establishment of those pharmacy networks reveals that HYMA was in fact built on the existing social network of an individual. Thus, social motives have clearly been influential in the establishment of a business network and it can be argued that social networks can create the base for business network development and that, for example, HYMA has been established on an existing network.
Generally speaking, motives for the establishment of the pharmacy networks can be divided into two main categories: economic and social. Both YA and HYMA have had economic reasons for establishing their networks as a result of increased competition and lower profitability in the pharmacy business. The motives for establishing both networks have also been social, based on individuals’ perceptions and values. This can be observed especially in HYMA, where actors have emphasised the importance of joint social resources and professional knowledge. Actors’ economic and social motives for the establishment of the pharmacy networks and membership in them are summed up in the following table:

Table 12 Motives for the establishment of the pharmacy networks and membership

<table>
<thead>
<tr>
<th>Economic motives</th>
<th>Social motives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create competition</td>
<td>Create something new – doing things together</td>
</tr>
<tr>
<td>Develop the business through shared</td>
<td>Being an influencer – providing an example for the</td>
</tr>
<tr>
<td>economic resources</td>
<td>other professionals to follow</td>
</tr>
<tr>
<td>Efficiency and synergies, possibilities</td>
<td>Working in a professional network - sharing</td>
</tr>
<tr>
<td>for larger scale business activities</td>
<td>experiences and ideas</td>
</tr>
<tr>
<td>Improve the profitability of own</td>
<td>Having a social network for support and sharing</td>
</tr>
<tr>
<td>pharmacies and the network</td>
<td>social resources – having a spirit of togetherness</td>
</tr>
<tr>
<td></td>
<td>and creating good feeling</td>
</tr>
</tbody>
</table>

YA was the first pharmacy network to be established in Finland. The network has been built on organisational premises, but it can be argued that individuals in YA’s management have played an important role in its development. As the network was established over 50 years ago, we do not have primary information on this. Therefore we need to rely on historical descriptions and reports as information sources. It is therefore difficult to say how individuals contributed to the emergence of the new concept of medical storehouses, other than that certain individuals were instrumental in taking the initiative. Based on historical reports, YA’s representatives actively lobbied the governmental authorities in order to persuade them to expand YA’s privileges. Through the governmental decision in 1950s, YA’s apothecary and management were able to gradually transform the single pharmacy operation into a large-scale pharmacy business. The action taken was critical for YA’s future development, as it enabled the contemporary chain development. The chain development that has followed can be regarded as strategic action, where YA’s motives
have been to increase competition, develop the pharmacy business and practice in Finland, create a large-scale business enterprise, and make a profit. The action is derived from human intention and the human actors leading the process, where the motive for action has been, above all, economic. To quote the CEO of YA: “Chain development is a sign of efficiency. It implies and creates efficiency.” But there are also social motives here. The apothecary and management of YA have aimed to influence the whole pharmacy business by transforming existing practices and creating new one through launching the chain concept. Pharmacists in YA have acknowledged that the fundamental idea of chain development was initially difficult to adapt to. Working in a centralised structure has meant that there are strict guidelines according to which the head pharmacist must act. Simultaneously they have been given the responsibility of ensuring that the key strategies are implemented in every pharmacy unit. Parallel to the centralised action, where the motives for action are purely economic and given by the centralised management, the responsible pharmacists have been encouraged to set their own personal goals and define their personal motives. It has been argued that in a situation where there is co-operation, individual goals and achievements are positively related as actors understand how their personal goals are linked to the network goals (Huemer et al. 2004).

HYMA is the first pharmacy network to have been established by members for the sole purpose of being a pharmacy network. For an individual, belonging to a network is, in this context, a social attribute, as there were several social motives for the establishment of the HYMA network. Apothecaries wanted to find similar-minded people to co-operate with – individuals with similar values and goals. They wanted to find creative entrepreneurs who could change the traditional way of managing a pharmacy business. Thus, it can be argued that social motives for membership have been the key to the establishment of the network. However, the reasons for the establishment of the network were related to economic motives as well, especially apothecaries’ individual economic motives. Apothecaries wanted to join both economic and social resources in co-operation with each other. The economic resources refer to resources that can be measured economically, e.g. the central location of the pharmacy in the same cities as YA branch pharmacies, which guarantee the economic profitability of the pharmacy, and the size of the pharmacy measured by prescriptions per year. The social and intangible resources refer to the personal characteristics of the apothecary as a professional and individual. HYMA’s respondents state that it has been important for them to find ‘the right people’ to co-operate with and, consequently, social motives
have been very influential in HYMA’s establishment. Individuals in HYMA state that they need each other and the network in different ways: for expressing their own ideas, for getting support from the others, for creating new business ideas and for inspiring each other, for problem-solving and for relieving the burden of doing everything alone.

“Networking! It is easier to think about different matters together in a group.” Apothecary, HYMA

“A dense group of people with a good spirit is important for me. Innovative thinking is also important and the understanding of educational values.” Apothecary, HYMA

The future threats against the pharmacy business in general are mentioned as a reason for the establishment of the HYMA network and membership of the network. In HYMA the apothecaries regard the network as being more than a structure for joint purchasing activities – the network provides them with large-scale business opportunities comparable with YA, and professional support as well. Thus, the network activities in various forms are seen to support and secure an apothecary’s own business in the competition against YA and other pharmacies as well as against governmental authorities’ interventions.

“I will manage better in the competition when we can together ponder and implement different things.” Apothecary, HYMA

“Competition, sharing experiences with others is valuable.” Apothecary, HYMA

The joint activities in HYMA increase its member pharmacies’ visibility and they feel that HYMA provides them with better business opportunities. Pharmacists in both networks emphasise the importance of continuous education, learning possibilities from the business and from each other, as well as the fruitfulness of the customer-oriented approach. It can be argued that the economic benefits were a pre-requisite for the establishment of HYMA and the motive for membership for all of the members. Almost all members mention economic benefits, deals with the industry and wholesalers and educational benefits as the key reasons for membership.

“HYMA is large enough and the pharmaceutical industry appreciates our ability to cooperate. The educational and economic benefits are the most important for me in addition to the social dimension.” Apothecary, HYMA
The competitive advantage that the HYMA network provides for the individual pharmacies and apothecaries is related to collective competition, which can be identified as an important economic motive for the apothecaries to become a member. Network members identify the membership and benefits via the different network activities.

“The way we do marketing, the newsletter. By working together we can accomplish more.” Apothecary, HYMA

“Marketing is most useful for me. The deal with cooperation partners and the feeling of belongingness are also important. We are innovative!” Apothecary, HYMA

Joint marketing activities, improved internal education of the pharmacies’ own personnel, the pharmacy network logo, and purchasing deals are mentioned as “benefits of the chain”. Marketing is referred to by several respondents as the heaviest task in their workload for which they gain support from the network. By marketing HYMA members mean the monthly newsletter, advertising campaigns and all the planning work related to advertising. These are, according to respondents, activities that become easier to execute in a group than working alone. The network provides support and security for apothecaries, who feel that they are otherwise acting alone.

“I don’t have enough time to cope with everything. In a group you can accomplish more... and besides you don’t have to do the same work from the beginning every time. Marketing is really heavy if you do it alone. It is much easier to plan the campaigns together.” Apothecary, HYMA

Apothecaries see membership of the network as an extremely valuable asset. It is important to belong to a group. One motive for membership given by the apothecaries is that they find it easier to act in a group, where individuals can share information and communicate. Individuals feel that they can succeed when the other members do that too, as it is seen as encouraging and supporting each other’s efforts. Thus, an individual can better manage her business if she has the network to support her in the work. The individual motives for the membership are built on belongingness and a need to cooperate with others.

“I was interested in working in a group.”
“I want to be part of the chain.”
“I wanted to co-operate and hear others’ experiences.”
“I was looking for collegiality.”
“I was looking for an opportunity to co-operate.”

Apothecaries, HYMA

Respondents refer to the network as a group of actors when they describe the content and meaning of membership. A dense group seems to be important to them and it is an indication that individuals experience a certain group pressure through the network. HYMA’s apothecaries identify this group pressure as being important to them. Through the group they feel that they can identify themselves as individuals in the network, which gives them strength as individuals, professionals, and network members and also provides them with a feeling of uniformity. Apothecaries in HYMA value each others’ professional knowledge and support. Thus, HYMA can be described as ‘a clan’ of professionals, which is regarded as an asset in the competition against YA among other important assets. The density of a group, social relations, affiliation, and feeling good about being part of a group are features that have been found to strengthen the commitment and trust in networks (e.g. Huemer et al. 2004; March 1958; Uzzi 1997).

Membership of a network is felt to be a personal strength by the apothecaries as well. As members share the same values and can be open about various matters, they understand each other and create shared understanding of purpose.

In YA, “membership” is more like a standard employment contract in any other organisation in any other industry, but with strong professional identity tied to it as well. This is not necessarily the case in all employment situations. However, YA is viewed as an attractive network to join for several reasons. Many pharmacists want to start their own pharmacy and by working for YA they can learn about a large-scale business enterprise, which provides a good training for running a pharmacy. Pharmacists’ work at YA is not merely dispensing medicines over the counter as in smaller pharmacies. There are several different in-house functions and operations, which make it possible for the pharmacists to work in varying roles in YA. No other pharmacy can offer the same employment terms and the possibility of rotating working tasks. Thus, on the personal level, the motives for working in YA are focused on the appreciation of working for a large-scale pharmacy which is continuously developing its business and can provide multiple insights into the pharmacy business. Being an employee in the country’s leading pharmacy is important for many professionals as they feel that it gives them an opportunity to be in the vanguard of change, regardless of their formal position in the network. YA supports their identity and values in a similar
way to HYMA, and members of YA perceive the pharmacy network in YA as providing the context for their professional activity and exchange of ideas and knowledge.

It can be argued that in evaluating membership of a network, individuals evaluate its meaning for them as professionals as well as its importance in relation to personal, individual perceptions and values. The reasons for membership are consequently built on both professional and personal values and perceptions. In addition to these dimensions respondents show on several occasions how business values exist side by side with personal and professional values, but still remain separate from them. Business values are often linked to the pharmacy businesses run by apothecaries in HYMA, but individuals in YA also show that business values are important to them. Thus, there seems to be an additional actor dimension and identity, which have not been included in the tentative model of multidimensional actors. The different identities are, consequently, the individual identity, organisational and professional identity, network identity and the additional business identity, which seems to be closely linked to the three identities previously observed.
8.1.4. Leaving a pharmacy network

According to Hertz and Mattson (2004), dissolution of membership can happen for reasons related to dissatisfaction with the performance of the network as well as distrust of the other members’ actions. This is also apparent in the pharmacy networks. Members have left the networks due to dissatisfaction and distrust members have perceived. The consequences of such episodes have been difficult for the remaining network members to handle. Thus, every time a member leaves a network, the structure of that network is broken. In YA, where actors’ positions are well defined and structured, it seems to be easier to replace members than in the loosely structured HYMA, where the roles and positions are shaped by the individuals. As an illustration, the CEO and apothecary of YA has been replaced three times during the past 20 years. It seems that the change of the person in charge has not influenced the general chain development process in YA. YA has a well developed management structure above and beneath the CEO level, thus it can be argued that the network is not so dependent on individuals.

In HYMA the loss of the founding father changed the network structure and strategy to a great extent. The founding father was not only the chairman of the network, he was also highly valued as a person. Therefore, it was difficult for the members to fill the gap that he left behind. The solution was to rethink the management structure and strategy. Based on the examples from YA and HYMA, it seems as if the damage resulting from a broken structure can be more extensive in a voluntary network than in a centralised network. Or, perhaps more accurately, the structure of a voluntary network is more sensitive to the loss of individual members. This does not mean that the structure of YA is not broken when an individual leaves the network, but the effects of the fracture are different. In a voluntary network the network idea is built on relationships and a broken structure affects therefore the internal processes of the network and the level of trust as well.

Reasons for leaving a network do not have to be as dramatic as in the case of perceived mistrust. Individuals may simply leave a network because there are better alternatives in situations where their personal perceptions of their profession or their circumstances change. Thus, it can be argued that if the professional identity of an individual does not match the network identity, the individual may choose to leave the network. If
membership of the network no longer feels right and it does not provide the benefits that a member perceives as being important, every individual is free to leave. Examples of such instances can be found in HYMA, where members have left the network as they have taken over a new pharmacy. If the new pharmacy is located in a city where there is no real competitive threat from YA or other pharmacies, the apothecary may consider the costs of membership to be higher than the benefits. Apothecaries have left HYMA for this reason, based on an economic evaluation of their new situation. Consequently, network membership has lost its meaning of providing competitive advantage in the new circumstances. In YA similar behaviour can be observed in cases where head pharmacists have left the network after they have received their own pharmacy licenses. Thus, the decision to resign has been very logical. Both people and networks evolve and an individual’s separation from the network can be seen as part of the social dimension in network evolution. Network structures are constructed through continuous processes and activities and there are no stable structures in networks. Thus, membership is an attribute dependent on individuals’ perceptions of the network in different situations.

### 8.1.5. Summary

In general, membership of a pharmacy network is seen as providing resources and support that a person can gain either as an individual, a professional, an employee or an owner of a pharmacy. Membership has a reciprocal nature and individuals evaluate it in relation to different actor dimensions. Personal perceptions that are built on social values and that influence individuals’ behaviour in the network change continuously. The benefits of network membership are measured against the networks’ development, against the other members, and, most important of all, against a members’ own professional and personal development as a human being. What is perceived as important today may lose its importance later.

Co-operation and the possibility of influencing others through the network are highly valued attributes as defined by the network members. Through membership both economic and social needs can be satisfied. In the reasoning behind the decision to become a member of a network, the most central aspect seems to be the matter of being a member of a group of professionals. In order to be able to become a member the individual’s own view of the network has to match the network view. Thus, an
individual identifies her/his own values in the collective values of the network. As actors share similar values, their perceptions of network strategies, activities and action are inter-linked. Membership is generally regarded as a strength by the apothecaries, providing economic, professional and social support. In evaluating its importance, the members all seem to mix their personal, professional and business perceptions. However, some individuals identify membership as being more important than others perceive it to be. The importance of the network and membership to the individual members seems to be related to their levels of commitment. Thus, in the next section, I will look at the issue of commitment to the network, that is, the degree to which individuals prioritise the network view before their own personal or pharmacy-related view. This will also reveal how overlapping their own identities have become with the network identity.

8.2. Commitment to the network

Commitment is present in various forms in business networks. It is an implicit and/or explicit promise of continuity that actors sense in relationships. Commitment can be defined as consideration that actors show towards each other in a network. It is a perceived feeling of commitment in the relationships that creates the relational continuity between actors. Thus, a feeling of commitment is an indicator of relationship strength. One way to approach commitment is to study actors’ perceptions of the network in their daily work. Their way of working reveals personal preferences and individual perceptions about the network. Individuals can prioritise their own personal performance over the network in their everyday work. In such case individuals usually are less committed to the network. Individuals can also prioritise the network and actively acknowledge it in their daily work, which implies that individuals are bearing in mind others and the whole network. This perception of being a member of a network is consequently linked to individuals’ commitment to the network. The more the individual and personal preferences are prioritised, the lower we can assume the commitment to the network is. Low commitment implies that an actor prioritises his/her own work over that of the network, for example by viewing different activities merely from their own point of view and considering short-term implications rather than viewing activities from the whole network’s perceptive and considering long-term implications. Another example of individual priorities is linked to the willingness to compromise in different decisions and share information with other members. If an individual has a strong individual perspective, he/she may not be willing to
compromise and regards information as an asset that is something to be possessed rather than shared.

Of the answers given by YA personnel regarding an individual vs. a network perspective in their daily work, 75% of the respondents had a network view and 25% demonstrated an individual view. In HYMA, 67% of the respondents supported the network view and 33% emphasised personal performance. The perceptions were further analysed by dividing the respondents into three different categories: those who focus on their own “self” and their own performance; those who clearly view their work as part of the network, taking a “me-we” perspective; and those who are in between these two poles. Those respondents who represented the network view “me-we” can further be analysed as the actors who also view themselves as members of a network, emphasising the “we-us” perspective. The two pharmacy networks studied here display differences in their members’ level of commitment to the network. In YA, 74% of respondents indicated that they have a network perspective, whereas in HYMA the figure is 54% (see table 13). HYMA clearly has more members who balance between their own perspective and the network perspective. On the other hand, it must be highlighted that members in HYMA operate their own businesses, which is why their situation is in fact different from that of employees in YA.
Table 13 Network view in personal way of working

<table>
<thead>
<tr>
<th></th>
<th>YA 27 INDIVIDUALS</th>
<th>HYMA 24 INDIVIDUALS</th>
</tr>
</thead>
<tbody>
<tr>
<td>NETWORK VIEW</td>
<td>20 74%</td>
<td>13 54%</td>
</tr>
<tr>
<td>IN BETWEEN INDIVIDUAL AND</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NETWORK</td>
<td>6 22%</td>
<td>9 38%</td>
</tr>
<tr>
<td>INDIVIDUAL VIEW</td>
<td>1 4%</td>
<td>1 4%</td>
</tr>
<tr>
<td>NO ANSWER</td>
<td></td>
<td>1 4%</td>
</tr>
<tr>
<td>PHARMACIES/ PHARMACISTS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NETWORK VIEW</td>
<td>10 63%</td>
<td>10 48%</td>
</tr>
<tr>
<td>IN BETWEEN INDIVIDUAL AND</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NETWORK</td>
<td>5 31%</td>
<td>9 43%</td>
</tr>
<tr>
<td>INDIVIDUAL VIEW</td>
<td>1 6%</td>
<td>1 5%</td>
</tr>
<tr>
<td>ADMINISTRATION</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NETWORK VIEW</td>
<td>10 91%</td>
<td>3 100%</td>
</tr>
<tr>
<td>IN BETWEEN INDIVIDUAL AND</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NETWORK</td>
<td>1 9%</td>
<td>0 0%</td>
</tr>
<tr>
<td>INDIVIDUAL VIEW</td>
<td>0 0%</td>
<td>0 0%</td>
</tr>
</tbody>
</table>

Individuals who have an individual perspective concentrate mainly on their own performance in their own unit and they are less flexible regarding various issues related to the network. That 30% of the individuals focus on their own work is, however, not necessarily negative for the network. Individuals who focus on their own work can also be individuals with strong will power, and as such can be influential and important for the dynamics in the pharmacy network. They are determined to make their own view heard and they want the others to support their view. Their input can be needed and desired to retain a certain level of heterogeneity, as long as the majority of individuals are willing to compromise.

The analysed commitment to the network is also an indication of the different identities that actors have simultaneously. The individual view is supported by the individual identity of an actor, and the network view is supported by the network identity. Thus, the level of commitment may depend on the extent to which an actor identifies herself
as a network member or as an individual. Those actors who are in between the individual view and network view display a continuous interplay between the individual identity and the network identity. The dominance of either identity varies in different situations. Those individuals who have both a strong personal view and an equal ability to take a network view represent in total 22% in YA/38% in HYMA of the individuals in respective pharmacy networks. The majority of respondents, in total 20 respondents in YA and 13 in HYMA (74% / 54%), represented the category of individuals with a network view. In common for ‘the networkers’ is that they consider the long-term effect of all their actions and try to create good relations with others within the network by being flexible and considerate towards other members. Moreover, there were four respondents in YA and two respondents in HYMA who indicated that they have a network view without any traces of an individual view. These people are responsible for management and administrative tasks in the networks, thus their network perspective is part of their every day work of supporting the network.

Analysing the pharmacy and administrative personnel separately and comparing these numbers to the total numbers of all respondents, we find a different kind of deviation between individual and network views. Of the managers in YA’s administration, 91% seem to have a network view, whereas the equivalent number among the head pharmacists is 63%. In HYMA the number of management personnel is very small compared to the number of apothecaries, but the difference between the two groups indicates the same trend. The individuals working in network administration and management within HYMA all take a network view. Among the pharmacists in YA and apothecaries in HYMA, 63% of the pharmacists and 48% of the apothecaries think in network terms and, as we can see in HYMA, there are almost as many individuals (nine) who have ‘the in between’ view. In other words, pharmacists who work in their own units in YA, and apothecaries who run their own pharmacies in HYMA, are more focused on work related to their own units than on the network. In HYMA in particular, the apothecaries feel that they primarily work for their own units and secondarily for the network.\textsuperscript{90}

\textsuperscript{90} On a scale from 1-6, where 1= I work for HYMA and 6= I work for my own pharmacy, the mean is 4.85 among the apothecaries in HYMA.
The preferences regarding an actor’s own work can be interpreted as the professional identities of actors being more important, which is linked to an actor focusing on his/her own unit or pharmacy instead of the network. It is therefore interesting to that the individual focus appears to be stronger among the apothecaries and pharmacists than among the managers and the other administrative functions in the pharmacy networks. Apothecaries’ individualistic character as professionals and individuals becomes visible in their preferences and views related to their own working behaviour. The tricky question is, however, how to separate the personal perception of an individual from the professional perception that the apothecary represents. It seems that the actor’s own perception in this matter is equal to what is regarded as the pharmacy’s interest and the professional identity. However, if an actor’s own interests, either individual or professional, come before the common interests of the network, there is a risk that this will lead to low commitment. If an actor’s personal preferences grow stronger than the network related preferences, it can influence the overall network functions and lower the commitment to network activities. This can be defined as a conflict of interests between the members of the network. It explains why commitment to the network is so crucial for the development of business networks.

8.2.1. Commitment as “the right attitude”

It can be argued that actors’ commitment is essential for creating a strong network identity. The sense of belonging, the need for affiliation, acceptance and pride in the network, as well as the level of involvement in the network activities are all built on the actors’ commitment. Thus, the different identification processes are all linked to commitment. The sense of belonging and the need for affiliation tell how strongly individuals feel for the network. Being accepted by others is important for the development of each individual’s personal commitment to the network. Committed actors are proud to be members of a network and are willing to actively participate in network activities. Individuals build commitment through the relationships where their own identity is linked to the other actors’ identities and the shared network identity. In other words, the level of commitment is related to each actor’s network identification and the mutual adaptation processes as well as the willingness to adjust to each other’s needs in the network. The level of commitment becomes central in creating the shared understanding and purpose in the network, which is relevant in finding a consensus among the actors, for example in decision-making.
Respondents in YA and HYMA refer to commitment as having “the right attitude” and having the common interest of the network at the front of their minds when acting in different situations. This “right attitude” enables individuals to act for the common good instead of focusing on themselves. Respondents identify that there is no room for individualistic behaviour as it damages the environment of trust and lowers the commitment in the network. To support the right attitude, both networks emphasise entrepreneurship as being an important actor characteristic. In order to adapt to the networks, individuals need to have the spirit to do things differently and the courage to act without being narrow-minded. In both networks, innovation and the desire “to do something new” are emphasised, in stark contrast to the traditional pharmacy concept. The positive spirit in the network is thus emphasised as enhancing the benefits of being a member, and it is closely related to the action and activities of the members of the networks.

“There are several great individuals in the network and they really inspire me.”
Apothecary, HYMA

“We are creating something new, and our pharmacists are committed to working for us.”
Head pharmacist, YA

“Commitment to the network is strong. We have a feeling of belonging to the group.”
Apothecary, HYMA

Feelings are frequently mentioned as important for the activities in the pharmacy networks. Members in both pharmacy networks feel that there is solidarity and kinship between the members. Mutual understanding between the individuals involves feelings and other emotional judgements that individuals make about each other. These feelings represent commitment to the network. In HYMA the feeling of solidarity is especially emphasised, whereas in YA commitment is defined more in terms of having nice colleagues to work with.

8.2.1.1. Individuals’ identity in commitment

Commitment to the networks can be difficult to instil in an individual if the individual’s own values and identity overrule the common values in the professional network or
organisation. Individuals may think “what’s in it for me?” in being a member and in participating in network activities. As has been discussed in the theoretical part of the thesis, willingness to participate in the activities in a network is a measure of how committed the actors are. Thus, commitment is about giving a certain level of priority to actions and also says something about the kind of values an actor entertains. Individual and network values do not always match. As individuals can choose and manage the way they see and view the importance of different actions their personal identities can dominate the network identity. Actors’ actions have to have a meaning for them, which is part of the subjective interpretation of individuals (e.g. Schutz 1962). Thus, actors’ action is the conscious action of individuals.

Actors who are less committed to the network can be identified as outliers in the social networks. Outliers are not involved in the different joint network activities to the same extent as others. They are not socially active and either decide to stay outside the network activities or they are left outside the social context because of their unwillingness to participate in the joint activities. Individuals who are not committed to the network can create a feeling of insecurity among other individuals as well. Thus, a lack of commitment from one or two actors may influence all the other actors as well, as all relationships are embedded in the network structure. The problem with actors who are less committed to the network is that commitment tends to grow from within each individual in the various relationships within the network and is difficult to create by force. Trying to influence the less committed individuals does not necessarily have the desired effect. As the analysis of the social networks in the previous chapter illustrated there are outliers in the social networks. Respondents have identified the same individuals / outliers as the members who are problematic for the building of shared understanding in the networks. A common feature of the outliers seems to be that they question very much the network’s purpose and focus on economic performance. They do not share the same visions or goals with the network. According to other members, the outliers do not seem to know what they want and their action seems to lack a clear goal. In the worst cases, members have identified cliques of two outliers in the network, which have hindered the other members’ work. Thus, instead of solving joint problems, members’ time is taken up trying solve personal conflicts.

"HYMA is a joint stock-company and we cannot sack members. If there suddenly is a clique of two people, who do not know what they want, it will cause problems for the whole chain and community. If the cliques are within the board (of directors), it will be extremely difficult to work." Apothecary, HYMA
Outliers are individuals who cannot identify themselves in the network. Network identification is not an easy process for actors and, thus, if an actor distrusts the network it becomes a problem for the whole network. In a similar way, if the network perceives that one actor distrusts it, this becomes a problem for the whole network.

Apothecaries who own pharmacies seem to face a dilemma in simultaneously entertaining several interests: the success of their own pharmacies and the success of the network. They have simultaneously three different identities to cope with: the individual identity, the professional identity and the network identity. In addition to these three identities, they also seem to have a business identity. As apothecaries are human beings, the individual identity can easily dominate actions and it can be difficult to control it. Thus, depending on the situation, apothecaries’ identities shift, which will influence their behaviour and what we can describe as the commitment to the network. Quoting an apothecary’s own experiences of this:

“A group of us (HYMA apothecaries) went abroad a couple years ago to see how pharmacies are working there and what the pharmacy business is like. We attended a large medical fair and while we were there, we noticed that we would never be able to go through all the exhibition departments if we didn’t split up and go separate ways. Therefore, we decided to split up as a group in order to see as much as possible and collect new ideas for our future business development. When we met at the end of the day, we had spoken with many people within the pharmaceutical business and identified several new ideas we could try in Finland. All of us were really excited about our experiences and talked about how we could implement new ideas in HYMA.

Everybody except one of us... he came back from the exhibition and was over excited about a great deal he had made with a local manufacturer. He had ordered thermometers for his own pharmacy for a very good price.”

Apothecary, HYMA

The example shows that different individuals can show different levels of commitment in the same situation. The individual identity can take over an individual’s action in a situation in which other actors are applying the network identity. Episodes like this are not beneficial for the long-term relationships in a network, which support the network development. As voluntary networks are based on voluntary relationships from the beginning, commitment to the network and settling into the network are part of the chain concept. Adaptation as part of network identification can be identified as a key element of commitment in business networks. The example above, however, shows how adaptation to the pharmacy network can vary between the members.
8.2.1.2. Commitment is crucial for the evolving pharmacy networks

When network members plan the network’s future development, expansion of the network is regarded as vital for its future success. The network members value the idea of a type of extended family for current and future members, but in the expansion plans the commitment to and trust in the relationships can easily be taken for granted. HYMA’s apothecaries have acknowledged the dilemma.

“Expansion in itself does not bring any added value if we need to control the apothecaries. We hope, of course, that the pharmacists who have worked for us will become members in the course of time. It is not possible in the near future, however, as no young pharmacist will get a big and profitable pharmacy. And we cannot include small (pharmacies) in our network, because our activities require resources.”

Apothecary, HYMA

If the level of commitment among members is low, new members cannot improve the network development. Creating commitment in the networks is thus regarded as a future expansion strategy and long-term relationships are a way to plan for future growth. A pharmacist who previously worked in one of the HYMA pharmacies has recently received her own pharmacy license and has now become a member of HYMA. Through long-term relationships and commitment HYMA can generate a second generation of network members. However, the recent expansion in HYMA has also indicated that in the case of new appointments, more weight is being given to economic values than social values. This can be an issue for the development of long-term relationships and commitment which are generated through social action.

Commitment in the pharmacy networks is related to individual values and perceptions. If an apothecary’s commitment to the network is low, they pass on their low levels of commitment to their employees in the pharmacies. If a member apothecary is an individualist and less committed to the network, pharmacy personnel are most likely to behave in the same way and focus on the work of their own pharmacy. In that case pharmacists will not identify themselves as members of the network and are unlikely to become members of HYMA when they receive their own pharmacy licenses.

8.2.1.3. Commitment and investments

Commitment and prioritisation of activities are related to the investments made in the network as well. Investments in the network affirm partners’ feelings of trust in each other and create also a barrier to exiting the network. Investments are both intangible
and tangible, like all resources in business networks. Actors’ age structure in the network is raised as a critical issue for both tangible and intangible resource investments in pharmacy networks. As stated by several apothecaries, it takes a long time for a young pharmacist to become an apothecary with a large pharmacy, and thereby become a member of HYMA. Being committed to the network demands both economic and social investments from the apothecaries in a voluntary network. The general age structure among the apothecaries seems to have an impact on the levels of commitment.

“It is a totally different thing to talk to young pharmacists, who want to create something, change things and influence, and who haven’t yet received the pharmacy license. You speak different languages with them and with the “50 something” apothecaries. But once the younglings, when finally qualified to run large pharmacies, are in the proper position, they seem to have forgotten the energy from their youth that made them interested in the common good of the chain and willing to invest in it.” HYMA management

The age of an apothecary can be an obstacle for network commitment and network development. Age can have an influence on an individual’s willpower and the perceived enthusiasm for the common interests of the network. Thus, young pharmacists would have high levels of commitment and enthusiasm to share with other members and develop the network, but they would not have the economic resources to become members. The older apothecaries have the economic resources, but are less committed to the common interests of the network and to making investments in it. This is related to prioritising their own individual and professional interests and identities before the network identity. In a centralised network like YA, where ownership is not an issue for the members, even young pharmacists can work as head pharmacists, being in charge of their pharmacy units and, thus, the age is not a factor affecting the level of commitment, enthusiasm and individuals’ willingness to act. Based on this line of reasoning, it could be argued that the level of commitment should be higher in YA, where economic factors do not hinder actors’ willpower and commitment. On the other hand, the centralised structure of YA places another kind of restriction of individuals’ freedom to act, which can influence the level of commitment.

8.2.2. The strongest ties of friendship

Commitment is built over time and it has been used as a measure for relationship strength in networks. Friendship is most often regarded as the strongest relationship
actors can have, implying that actors are highly committed to the relationship and to the network. In HYMA most of the members have been apothecaries for a long time and the length of their careers as owners of their pharmacies varies between 6 to 16 years. More than half of the apothecaries have known each other since they were studying at university, i.e. for more than 20 years, and they know each other very well both as individuals and professionals. A good example of the importance of strong ties is identified in the group of individuals who established the network in the first place. The foundation of the network was built on personal ties between individuals who had known each other for a long time and trusted each other personally and professionally. Thus, the core of HYMA, the founders, had strong ties with each other, built on friendship. However, after the founders had decided to establish HYMA, they started recruiting other professionals, who were friends of theirs but not necessarily friends of all of them. Thus, broadening the network based on contacts to friends of friends is a typical characteristic of network development processes (see Granovetter 1973; 1985).

Although the voluntary network was founded on strong ties of friendship, it has since become more of a mix of strong and weak ties. New members of the network have known one or two members from earlier but they have not had any direct link to the other members before becoming members of the network. In the social networks of HYMA, the strong ties between founders are not visible in the social network of friendship and there are few reciprocal ties between the individuals. It is surprising as, being aware of the time that most actors have known each other, one could assume that there would be strong ties between individuals in this network. Based on the social network analysis there are very few relationships based on friendship between the founders, and members in general, and the strong reciprocal ties are centred on individuals who work closely with each other in the administration team. The social structure built on friendships shows how strength of ties can change over time. Strong ties can be diluted to weak ties and weak ties can become strong ties. Members come to know each other through the network and its joint activities. Consequently the weak ties between individuals in the beginning of a relationship can become strong ties once they come to know each other and work together. This development is well illustrated in the social network of trust regarding work-related matters, where apothecaries who have known each other for only a couple of years report that they trust each other. The social structure indicates individuals’ having reciprocal ties with each other even though their relationships are not long-standing. However, whenever friendship is mixed with the professional network, there is always a risk of emotional conflicts.
between the members, which will influence the interdependencies and dynamics in the networks.

In the centralised network of YA, individuals are well connected in the social networks and there can be found strong ties in all the social networks. It is a little surprising that there are more reciprocal ties between the individuals in YA than there are in HYMA, although the HYMA network has originally been established on strong ties of friendship. YA’s pharmacists and managers have worked for the network for varying time periods, from 4 months to over 15 years. Most of them have worked for YA for between 5 and 10 years. YA pharmacists and managers in the network administration have come to know each other via the network since they started working in YA. There are also exceptions to this as some pharmacists or managers have known each other for over 12 years, some for over 20 years. Although members might know each other from the time they were studying at university together, they have not worked together in YA that length of time. Based on the time some actors have known each other, one could assume that there would be strong ties of friendship between these individuals. Interestingly, the long-term relationships are only identified as friendship in a few cases. The strongest relationships of reciprocal ties are associated with trust and advice regarding work-related matters. Nor are the long-term relationships part of the social network illustrating trust regarding personal matters. Most of the YA pharmacists and managers identify ties of friendship between colleagues who work at the same unit or department, or family members. Thus, long-term relationships do not seem to play an important role in the development of YA. The centralised network is a mix of strong and weak ties, although weak ties outnumber strong, and family and friends are clearly separated from the professional network.

To conclude, there seems to be a mix of both strong and weak ties in the pharmacy networks. The diversity of relationships is part of the dynamics that are created in the networks, and which makes them more heterogeneous. Thus, assumptions about the strength of ties in the studied networks need re-evaluating. One could assume that centralised networks would consist of only weak ties of a short-term nature, as the members are given their formal positions and roles in the centralised management structure. However, the central structure does not seem to hinder actors’ ability to create informal relationships or affect the strength of these relationships. The number of reciprocal ties is somewhat higher in YA than in HYMA. It can be argued that individuals who must interact with each other in the centralised context need to have
some positive level of social bonding for their relationships to reach their potential (Wilson & Möller 1995). Thus, a centralised structure can in a way strengthen the need for social relationships to develop. Hence, relationships always have a mutual purpose at the individual level and the social networks in YA confirm this assumption.

In the voluntary network one would expect to find several strong reciprocal ties and only a handful of weak ties, as the network has been established and built on personal contacts. HYMA’s social structures show that although many of the relationships, especially those between the founders, have been developed in an organic way (e.g. Wilson & Möller 1995), even so most of the relationships are weak ties. This can be explained by looking at the recruitment phases in HYMA. In the beginning of HYMA’s development, the personal and social aspects were the most important criteria for new members. Since the establishment phase the recruitment criteria have become more professionally and economically oriented. Therefore, dynamics in HYMA tell of both organically and strategically developed relationships and there seems to be a high level of heterogeneity in the relationships. The heterogeneous network structure, which both pharmacy networks seem to have, is a positive feature in the networks as far as commitment is concerned. It decreases the risk of over-embeddedness in the networks, which can easily be created in homogeneous networks with strong reciprocal ties and over-harmonised behaviour of individuals. Varying types of relationships, preferences and perceptions of actors add to the dynamics of the network.

8.3. Trust

Trust is a major determinant of relationship commitment (see Achrol 1991; Mentzer et al. 2001). Trust in networks can in many ways be taken for granted, as it is in many cases a prerequisite for membership. Trust is socially constructed, as part of the relationships and networks. Individuals with similar capabilities, as they perceive them, can become close working partners as they share similar interests in business and trust each other as professionals. Shared interests become visible in the social networks within YA and HYMA, where different interests connect different people in different matters. Trust is based on shared moral understanding of what is acceptable behaviour and what is not between actors in a network. As the formal rules and restrictions typically define the formal structure of a network, trust is what defines the moral rules and moral action. Arguing that all exchanges are social in character, trust is the lubricant needed for all exchange between actors (Block 2004; in Krippner et al. 2004).
Trust is, according to Uzzi (1997), an explicit and primary feature of embeddedness and it is voluntarily given and reciprocated. Thus, trust is a purely social attribute, fundamentally the result of a social process and an irreplaceable component in exchange relationships. Trust enables exchange and development of tacit knowledge between actors, information sharing and transfer of knowledge between actors, and the joint problem-solving arrangements between actors, which are all important for the development of long-term relationships in business networks. Distrust between actors, for example in the form of negative ties or dislike individuals may feel for other individuals, or as a result of a breach of the code of trust in the network, is destructive for the network development as the moral understanding of action and activities in the network are disrupted as a consequence.

### 8.3.1. Negative ties

In a similar way as there are active actors and central actors, there are also less active actors in the business networks. Just as the socially active actors and central actors are often popular people, there are also less popular actors in the business networks. These are actors who are not part of the social networks and act separately from the other members. In the social networks they are the outliers or individuals who are connected to very few actors. They are either left outside the social context as a result of conflicts or they decide to focus on their own pharmacy and feel that they do not need the other members’ support. Their connections to others in the social networks are usually built on weak ties, but they can nevertheless have strong ties, based on long-term relationships with other individuals. This means that even though a person is an outlier, it is still worthwhile analysing her in the social context.

In order to analyse the negative ties between actors, respondents were asked with whom they have had most difficulties or problems in their current work and why working with this person has been difficult. Respondents in both pharmacy networks have identified actors who they find it difficult to work with. Several negative ties in the social networks in the pharmacy networks of YA and HYMA can be found (see table 14): 14 negative ties within the YA networks and 17 within HYMA.
Table 14 Sociomatrix of negative ties

<table>
<thead>
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<th>YA Respondent</th>
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The negative ties in YA can be found throughout the network (in total 14). The negative ties exist equally in the network dimension between the pharmacy units, as well as in the pharmacy units between the head pharmacists and pharmacy personnel or managers and other employees within the pharmacy units. Negative ties are identified by the respondents as damaging to their daily work. In addition, YA respondents have reported observing dislike between head pharmacists. Poor personal contacts between pharmacists have resulted in hardly any contact between these pharmacy units, apart...
from the necessary communication within the centralised structure. The frictions between individuals at the management level, between responsible pharmacists and between head pharmacists and managers in the administration are, however, not reflected in the social networks, and the majority of YA managers and head pharmacists do not report any negative relationships in the network.

HYMA has more negative ties than YA, in total 17, but most of the negative ties (n=12) are identified in the relationships between the apothecaries and the pharmacy personnel. The negative ties in HYMA are, in other words, to some extent related to the hierarchy in the pharmacy management that is present within the profession. In HYMA there is also clearly one outlier who is not popular with the other members. This apothecary is connected to the other apothecaries only via formal board meetings. The poor contact with others has led to mistrust and conflicts, as has been reported by the respondents.

In both YA and HYMA the reasons for the identified negative perceptions of other individuals are very similar. Individuals are expected to be able to adapt to the group of actors and the network, and to be co-operative. If a person does not do that, she/he is perceived as different and as an inflexible and demanding person. HYMA’s apothecaries and YA’s head pharmacists and managers identify a negative attitude to work and colleagues as being the most important reason for their negative perceptions.

“She is self-centered and lazy.”
“He is not flexible and has a negative attitude to work.”
“She causes too much friction among the team members.”
“She causes problems all the time. It takes too much of my time and energy to solve them.”
“He has problems with his colleagues.”
“She is very competent but thinks of herself as being perfect. She assumes everyone will do everything as perfectly as she does.”
“He cannot co-operate.”
Head pharmacists and managers, YA/Apothecaries, HYMA

Another common reason for negative ties developing is if managers feel that their employees have problems accepting their roles and positions in the hierarchy.
“Our personal chemistries do not work.”
“She cannot accept criticism, I mean feedback on her work. She gets furious.”
“There is room for only one boss in this house! Besides, she is not “a developing type” of a person, she sticks to the traditional.”

Head pharmacists, YA / Apothecaries, HYMA

The strong hierarchy at the operational level in the pharmacies is visible in the respondents’ stories. Frictions within the pharmacy units and between pharmacists can be an issue for the network development as it lowers the willingness to compromise and commit to the shared network logic. It is natural for there to be disagreements between the management and the employees to some degree, but when managers perceive different opinions as a challenge to their authority, it is an indication of distrust. Usually, negative ties develop due to lack of trust, as can be seen in the respondents’ quotes. Once a person starts questioning another person’s way of working, or his or her decisions, it is an indication that their relationship is not based on trust. Thus, it can be challenging for an apothecary to communicate with personnel, if the apothecary does not trust them. If, in addition, the apothecary feels the employees are threatening his or her position and questioning his or her role and position as a manager, there is a serious conflict between the actors.

The negative ties at the network level in both pharmacy networks are focused on slightly different relational issues than those within the pharmacies. They reflect the general network activities rather than the daily activities or pharmacy hierarchies. The most common negative perceptions between the network members concern a low level of commitment and trust, and a lack of personal appreciation, either as individuals or professionals. Thus, negative ties indicate distrust between members. A feeling of distrust can also spread among members, as can be seen in HYMA, where several individuals have commented upon the same person. They indicate that this person has become disloyal and has shifted away from HYMA’s strategy and the common interests of the network. Thus, other members accuse the apothecary of being self-centered and focused on their own business interests instead of working for the common good. However, there are several examples of individualistic behaviour in the networks and, thus, these examples illustrate how the individual ‘self’ in many situations is more dominant than the network identity.
8.3.2. The code of trust

A code of trust often develops in a network (or within a profession) for creating guidelines as to which kinds of actions and behaviour are approved of and which are not. The importance of social contacts and the feeling of togetherness are very vulnerable attributes in a network. High levels of trust and commitment are required to create an atmosphere which enables individuals to feel that they belong. It is also important to remember that members of the pharmacy networks were previously competitors and that the level of trust consequently may be rather low. Of course the long-term relationships in both pharmacy networks are an exception to this. Trust can easily be broken through individuals’ egocentric behaviour, which can lead to changes in attitudes of the other members and of the network membership as a whole towards them. Trust is embedded in the actors’ action and social networks, and therefore distrust or doubts about a person’s motives for being in the network may be harmful to the whole network. Lack of trust in the networks becomes visible in an unwillingness to participate in different activities, in limited contact and communication with the other members and in general dissatisfaction, each of which will influence the feeling of togetherness in the network. Distrust can be an exceptionally strong feeling, especially if several individuals notice they share the same feeling.

Trust in pharmacy networks is continuously measured by each individual in the various relationships in networks. Individuals measure each others’ abilities, expertise, and knowledge in various situations and trust is produced in the social relationships. The importance of trust is emphasised in the voluntary action at the social level where individuals choose with whom they intend and want to act. Thus, trust has an impact on the choice of co-operation partners (Persson & Steinby 2006). Pharmacy networks show how highly valued professional skills are by the actors in the network. Each and every individual is expected to bring some expertise or something special to the network. In addition to professional skills, individuals’ personal motives and intentions are also evaluated by the actors. Individuals’ motives for action should be in line with the network motives. If individuals feel trust in their relationships with other actors, their individual identities and the network identity will also match. Thus, it can be argued that network identity provides a commonly agreed code for the network members, a code which represents the embedded morality in the network. If some of the members have false motives and intentions, this can harm the rest of the network in a significant way as it breaks the code of trust.
In a voluntary network it is especially harmful as it takes a long time to heal and restore the trust between the members in the network. In one difficult episode in HYMA’s history, they recruited a new member whose motives were not straight. This led to a situation where the commonly accepted code was broken. It is an incident that the members refer to as they underline the importance of trust in the network.

“It is alright to have disagreements on different matters. It is part of the discussion and does not break trust. But one thing that really tested our trust of each other and the network was a false recruitment we made. We had made great effort in educating and supporting the new member, but then he suddenly resigned from our operations and from the membership. He gave statements and let others understand that our way of operating was not open. His “bad will” has caused a difficult trauma, which has taken us over a year to recover from and it takes time to banish the distrust and rebuild the trust in our relationships.”

Apothecary, HYMA

Consequently, HYMA’s apothecaries have emphasised several times that the worst nightmare in the voluntary network is to recruit the wrong person. Violating the code of trust, as the HYMA’s example shows, often has dramatic consequences. It is a moral violation of the shared code and influences actors and their behaviour. The code of trust within the network was broken by one individual and it required efforts from all the other members to mend the damage. Another example of breaking the code of trust was when YA launched its chain concept and the accompanying advertisement campaign in the early 1990’s. This was also perceived as a violation of the moral standards of action by the pharmacy professionals. Thus, YA was the actor who broke the code and the rest of the professional community reacted to that violation.

Lack of trust in a network is also a problem for the development of the network identity. Without a strong network identity, individuals cannot feel the belongingness through which actors can create and recombine knowledge in the network. The respondents in both pharmacy networks point out that if they can trust each other they will also share knowledge and ideas with each other. For this reason, social networks are critical in business networks as it is via social contacts that individuals can communicate with each other. Individuals in YA and HYMA have stated how valuable the professional support that they gain from other members is for them. The most active social networks in both pharmacy networks are built on advice seeking and trust regarding work-related matters. Thus, it can be argued that one of the most important functions of the social networks in the pharmacy network is information exchange and
the solving of both individual and collective problems. Respondents say that through their social contacts they can clarify their own ideas. The social network is important for the exchange of information related to professional matters but clearly also for discussing all kind of matters. Respondents say that they contact each other when they need a discussion partner or want a second opinion on some concrete issue.

“It is good to discuss HYMA’s matters and also lead the discussion as it clarifies my own ideas.” Apothecary, HYMA

“We have the normal chat and talk about what has been going own in our pharmacies, then we can test our development plans on each other.” Apothecary, HYMA

“We discuss professional matters. Usually we discuss some issues that have to do with the whole profession and business. But the 2-3 of us can talk about all kinds of important things, but we are not gossiping.” Apothecary, HYMA

“Apothecaries want to know how the economic aspects are in the chain.” Apothecary, HYMA

Through engaging in joint problem-solving, members can create new knowledge in the pharmacy network and create tacit knowledge between the members. However, the discussions seem to remain on the professional level and members take quite seriously their business and their membership. Many apothecaries clearly identify the need to talk with other members about defined problems that need to be solved either alone or in the network. Contemporary issues in society are an example of subjects about which members want to have a joint opinion. They want to understand how the changes will influence their own business and how HYMA can act if needed.

“I like to ask for advice in matters that are not clear for me.” Apothecary, HYMA

“I want to discuss HYMA’s matters and what is going on in the society and how it will influence us, practically that is. Governmental authorities’ interference is naturally discussed.” Apothecary, HYMA

“We discuss the changes in pharmacy business. We find out the background for the threats and how they will affect us... or then we just have social reasons to exchange ideas.” Apothecary, HYMA

The most common reason for information exchange between members is, however, linked to economic matters and network activities, such as organising education for personnel, marketing campaigns, travelling and meeting agendas. Thus, the network
members need to communicate about their every day business activities and operational issues. The conversations about daily activities concern how to deal with personnel, operative matters, practical issues and normal pharmacy routines. The dense social networks of advice seeking and trust regarding work-related matters confirm the importance of professional and business dimensions of actor identities in both pharmacy networks. The concern about the future development of the networks shows also the importance of these to identities. Governmental decisions and regulations have a direct impact on the network members’ businesses but also on their professional identities and the network identity as well. In the case of interference by governmental authorities, all identities are under threat.

8.4. Diversity of individuals

An individual’s background and experiences are likely to influence his or her behaviour in a specific network context. Within the pharmacy networks studied here, one can find a wide variety of individuals with different characteristics. In this respect, the networks can be regarded as heterogeneous. This individual diversity concerns several different aspects: first, there is a diversity of personalities in the network. Apothecaries and pharmacists in the pharmacy networks are individuals with different strengths as network members. Second, the individuals take on different roles and assume positions in the networks irrespective of their formal positions. The social networks provide structures that enable this type of individual action through which actors define each other based on personal characteristics and achievements. The mix of personalities, roles, positions, etc., provides the studied pharmacy networks with a rich and diverse topology. Different personalities complement each other and help to create a very heterogeneous network. It is possible that this heterogeneity also contributes to keeping the networks dynamic.

Respondents describe different personalities in their accounts of the activities in the pharmacy networks. Their diversity has been found to be an important ingredient in creating network dynamics. The professional experiences that individuals have also have an impact on the behaviour of different personalities. There are innovative and creative individuals that always come up with new ideas for improving the business. They have often worked for pharmaceutical manufacturers or wholesalers and have seen how the whole pharmaceutical business functions. Apothecaries in this category can also be professionals who have had an academic career and are used to analysing
the present situation and want to understand the future. Then there are performers who implement what others have decided, but who keep their feet on the ground. They are most often apothecaries who have worked at different pharmacies and have no experiences of other parts of the pharmaceutical business. These individuals tend to be loyal to the network and quiet in their actions. Then there are the pioneers, leaders who want to express their opinions, act quickly and make things happen. They are most often individuals with varied backgrounds in industry, academia and all kinds of professional activities. The term “entrepreneur” that respondents in both YA and HYMA emphasise, describes quite well these pioneers and their continuous striving to do things. As one of the apothecaries has described herself:

“An entrepreneur does not change his or her attitude. If I did not run a pharmacy, I could sell shoes. Everything goes on and develops. Change is more of an opportunity than a threat.” Apothecary, HYMA

Finally, there are the troublemakers, individuals that the others perceive as difficult to cope with, individuals who always seem to have a different opinion about things. The negative attitudes of these individuals can be difficult for the other members to deal with. On the other hand, troublemakers can also contribute new ideas as they are critical of matters that the majority of members do not question. All these types of personalities have been found in the studied pharmacy networks. Different personalities challenge each other but also support each other. Although all individuals are different, there must also be some glue that keeps them together and makes them co-operate. “Innovativeness and being up-to-date” seem to be the key characters that apothecaries recognise in each other. The spirit shown by actors in the network is identified as an important characteristic, on the basis of which members can also evaluate each others’ commitment to the network.

“There are good people in this network. I get a lot of inspiration from them.” Apothecary, HYMA

“The level of commitment is strong. We have the spirit.” Apothecary, HYMA

There are several social characteristics that respondents emphasise when analysing each other. To some extent the defined personalities overlap as individuals can act in different ways in different situations. Despite their differences, the individuals in the
networks share certain characteristics, such as strong willpower, spirit and inspiration to do things, and have the ability to co-operate.

8.4.1. Strong individuals

Strong individuals provoke very different reactions in other individuals, positive and negative. Members can perceive each other in a positive or negative way. Strong personalities can be inspiring to others and catalysts for action, but simultaneously other members will feel negatively about them. Both pharmacy networks offer examples of the influence of strong individuals. In YA the CEO is the most visible person in the network, and during the past 20 years three different CEOs have been responsible for leading the chain development process and making YA the market leader. The current apothecary’s strong personality has become most apparent in his participation in recent debates in media, where he has defended YA’s strategy and acted against the governmental authorities and politicians.

Most often we identify strong personalities as creating something new, as in HYMA’s case where the pharmacy network was established by a strong individual. He was well known for his vision to change the pharmacy business and also for the statements he used to make. According to HYMA colleagues, the founding father of HYMA would not hesitate to write to the governmental authorities to tell them what he thought about their decisions. And in general he was a very active communicator.

“His letters were just unbelievable. Sometimes he wrote them to the Ministry of Healthcare sometimes to the Ministry of Education. I would say that we tried to keep the wording of the letters to a level where an apology afterwards would be enough, so that we did not have to go to court after every letter…. He did not spare his words. We had to change the official statements (he had written) and the secretary usually managed to take away the worst ones. He always used to send me a version as well and I used to say to him: “Take away at least that sentence before you send it!” His way of presenting issues was not the most constructive one. Sometimes he wondered why the ministry did not understand his views. I tried to tell him that if you shoot the receiver in the first part of the letter and in the next part present the real matter, then the receiver is not likely to listen to you anymore.” Apothecary, HYMA

Conflicts with governmental authorities were inevitable as a result of the founding father’s correspondence with them. He did not abandon his position easily and his HYMA colleagues describe his negotiation tactics as “the complete exhaustion of the opponent”. Thus, it is not surprising that HYMA has been involved in a great deal of legal action triggered by its members’ ambitions to develop pharmacy practices and
business behaviour. In HYMA the presence of strong individuals is evident in the network and members other than the founding father have actively defended their opinions and acted against the decisions of governmental authorities and politicians. An example of this is a case which the HYMA apothecaries call “the door paragraph”. It started when a HYMA apothecary established a herbal drug store within the pharmacy she owned. The idea was that the herbal drugs were sold in a separate shop within the pharmacy. As the pharmacy business is regulated but the selling of herbal drugs is not, the idea was to start a chain of herbal drug stores which would geographically cover the whole of Finland in readiness for the future deregulation of the pharmacy business. Thus, when the selling of OTC medicines was deregulated, they could be sold in the herbal drug stores owned by HYMA in strategically beneficial locations. However, establishing the first herbal drug store was not easy. According to governmental authorities the apothecary could not have the herbal drug store in the same premises as the pharmacy. Governmental authorities referred to an old law paragraph according to which the entrance to the pharmacy defined also the boundaries of the pharmacy license and operations. Thus, one could not use the same entrance for the pharmacy and the herbal drug store, as it was illegal according to the governmental authorities. HYMA’s apothecary took legal action and won and the old paragraph was overturned. According to the new law the modern cash registers would mark the boundaries of the pharmacy and the herbal drug businesses so that the two would not be mixed up.

As the examples above show, strong personalities can enable development but they can also cause problems. In HYMA’s case a strong individual managed to gather and connect individuals, who together established the new pharmacy network. But a strong individual character is a double-edged sword and cannot guarantee continuity in networks. To quote a HYMA apothecary: “A strong vision of one strong individual creates the foundation but the faith in the matter has to be transferred to the others through the facts.” A strong person is often admired by others but she can also hinder the development of some relationships. Strong personalities can easily influence the development processes as a result of the positive or negative reactions they provoke in other actors. Strong personal opinions and differences between professionals can be seen as resources for a pharmacy network, but they can also become obstacles to co-operation.
### 8.4.2. Multiple identities

Individual identity is part of the “individual self” dimension in a network and it is the starting point for the action of all individuals in pharmacy networks. Each member has his and her own values to start with through which individuals define their own theory of ‘me’. But members in pharmacy networks also have shared values and shared understanding of the purpose of the network which join them and glue them together. The identity of an individual is relevant for understanding how the person defines him/herself in the network. Every individual is different and therefore a network consists of all the individual identities of the members. One way to illustrate the different individual identities is through the various personal characteristics and personalities of individuals. How individuals perceive different situations has an effect on individuals’ behaviour.

Diversity of individuals is directly linked to the multiple identities that actors’ multidimensionality implies. A person can simultaneously have several identities, which he or she enacts in different situations. Thus, in some situations they represent themselves, in others, pharmacy professionals or network representatives, or they can have multiple identities in the same situation as well. This can be explained by an individual’s multiminds (see Ornstein 1986), which enable individuals to have multiple identities or egos on different actor dimensions. An individual can act as him or her ‘self’ or as a representative of a profession, an organisation or a network. Thus, individuals can act in several roles and positions in pharmacy networks. At the same time, actors can take on several shapes and forms, e.g. individuals, professionals, groups of individuals, organisations and networks of organisations. The different shapes and forms can also be referred to as the different actor dimensions in the tentative model of multidimensional actors presented in chapter 3. As respondents identify themselves in different actor dimensions, they have multiple identities in the different actor dimensions. Thereby the different identities become overlapping as we can see in the following quote: “I want to discuss HYMA’s matters and what is going on in the society and how it will influence us.” Apothecary, HYMA

Respondents’ identities vary depending on different situations, i.e. depending on the issues that are being discussed or depending on with whom actors are interacting. Respondents use ‘Me’ and ‘I’ and ‘Us’ to describe their different identities both simultaneously and separately. The meaning of ‘Me’, ‘I’, and ‘We’ and ‘Us’ can also vary.
Sometimes respondents define themselves as ‘Me’ or ‘I’, implying the personal ‘self’. Sometimes the ‘Me’ or ‘I’ is meant to say what they think as professionals, where ‘Me’ is referring also to the professional identity of being an apothecary. ‘Me’ can also refer to the organisational identity of being an owner of and chief in a pharmacy. Very often when respondents refer to themselves as ‘I’ or ‘Me’, the individual and professional as well as organisational identities start to overlap significantly. The following quotes show how the meaning of ‘me’ and ‘I’ can be interpreted as all three identities.

“A dense group of people with a good spirit is important for me.” Apothecary, HYMA

“I will manage better in the competition when we can together ponder and implement different things.” Apothecary, HYMA

When respondents adopt their professional identity they usually use it in some connection to the pharmacy network and thereby their professional identity and the network identity meet. ‘We’ in the organisational dimension is used for describing the relation to their own pharmacy and personnel and in the network dimension as an identification of membership. The professional ‘Me’ becomes ‘We’ in the network as they identify themselves as members in the network through the pharmacy they own or are responsible for.

“We are creating something new, and our pharmacists are committed to working for us.” Head pharmacist, YA

“We dare challenge each other and we can openly speak about matters.”
Apothecary, HYMA

Through the network identity individuals create the ‘We’ in the network and also an identity against actors who are not members of the network. Thus, HYMA and YA both have their own network identities, the defined ‘We-Us’ and through these network identities actors in both pharmacy networks identify the central attributes for their network against the competing network.

The overlapping identities are quite often embedded in the various network activities and respondents reveal them in their accounts of different incidents. Different identities become visible for example in situations where network members feel that some actors are behaving individualistically. In such cases, the actors’ personal
identities dominate their other identities and individuals act on their own behalf instead of on behalf of the network and, thus, individuals forget the common goals of the network. An account that describes well such an incident is the story of HYMA members visiting the medical fair abroad and how one of the members struck a deal on some thermometers for his own pharmacy. In fact this provides an example of a situation in which the individual’s identities are less overlapping and the identification with the network identity is low. Other members notice it in the form of lower commitment or lack of trust.

Network members usually have three different identities that support each other: the personal identity, the professional identity, and the organisational identity. Very often co-operation between the members means that all the different identities are combined with the network identity. The different identities are overlapping as individuals refer to the concrete activities and ‘Individual self’ become ‘We’ in the network.

“We have shared the same vision that chain development is future development.”
Apothecary, HYMA

“We discuss the changes in pharmacy business. We find out the background for the threats and how they will affect us... or then we just have social reasons to exchange ideas.” Apothecary, HYMA

Some members frequently use ‘We’ when referring to the network and membership, as can be seen above, whereas others use primarily “I” when referring to the network.

“I want to discuss HYMA’s matters and what is going on in the society and how it will influence us, practically that is. Governmental authorities’ interference is naturally discussed.” Apothecary, HYMA

Strong network identification and the perceived network identity can be observed in statements made about HYMA as a network. This shows that there is ‘We-Us’ identification.

“HYMA consists of strong and spirited individuals. We do not go to our neighbour if something needs to be done, we want to do something concrete.” Apothecary, HYMA

“Gathering together just to criticise authorities’ actions or YA’s doings or those (HYMA) members who are not at the meeting does not help anyone if it does not lead to anything substantial. It is really frustrating. In HYMA people are ready to do concrete things. They are ready to face social pressure. For Hannu (the founding
father) HYMA was a forum, where he could bring up his own ideas. He was a radical and could not really speak openly about his thoughts and ideas. But we dare challenge each other and we can openly speak about matters.” Apothecary, HYMA

For some actors it appears to be particularly difficult to combine several identities, e.g. an individual, an apothecary, and a representative of a pharmacy chain. Some apothecaries deal with the problem by separating activities. The daily activities in their own pharmacy are kept mentally separate from the activities of the pharmacy network. In that way they can be network representatives.

“If I think about the pharmacy business in the city where my pharmacy is located, I am the local apothecary. But I am always a representative of HYMA. In my pharmacy the pharmacist takes care of the daily activities and campaigns so I do not have to participate in them.” Apothecary, HYMA

Some apothecaries want to keep their pharmacy and HYMA’s network more separate still. These actors can also be identified as the outliers in the social networks or as the less committed members. Thus, network identification is more difficult for them as their individual identity and the network identity do not match, and they are not willing to adapt to the network.

“I want to keep my pharmacy separate from the network. I want to be able to make the decisions in my pharmacy. HYMA’s decisions are not applied here if I don’t feel that they fit in here.” Apothecary, HYMA

8.5. Summing up the findings

At the beginning of the thesis I proposed that the main research interest in the thesis is to increase our understanding of multidimensionality of actors in business networks and the role of social networks in emerging pharmacy networks. Based on my main assumption that business actors are multidimensional and that their specific constitution in any given situation is determined by human interaction in social networks, then unravelling the motives for human action and exploring the human behaviour in the studied pharmacy networks have become central for gaining an understanding of multidimensional actors in business networks.

I have presented in chapter 3 the tentative model of multidimensional actors with three main components: actor dimensions linked to actors’ identities defining the different ‘self- me- we- us’ of an actor, network identification processes joining the
different actor dimensions and identities, and finally the component of actorship referring to human action of actors and motives for action. The base assumption in the model is that all action is socially rooted, whether it is about an exchange of tangible goods between pharmacies or information exchange between two apothecaries. The model has provided the pre-understanding and framework for the analysis. Based on the empirical findings, I have included additional components and the previously defined ones have become more precise (see figure 37).

Figure 37  Multidimensionality of actors in pharmacy networks

If we start our examination of the critical findings in the study with the actors in the networks, the starting point is to acknowledge the multiplicity of actors in the pharmacy networks. Respondents have acknowledged a variety of actors in their accounts. Actors in the case descriptions can be identified as individuals (human
actors), as professionals (apothecaries), as a group of actors or group of professionals, as collective actors (for example the Pharmacy Association), as pharmacies, as universities, as governmental authorities, as politicians, as regulations, as ethical and moral guidelines. In many cases a respondent is referring to her own actions in a situation as an individual, e.g. describing how she received her pharmacy license, and in another as a professional representing apothecary’s views of how to run the pharmacy business in a successful way. Actors’ accounts show, thus, that actors have different identities in different situations. Actors acknowledge thereby that they have simultaneously multiple identities. The multiple identities are linked to the different actor dimensions that an individual as a person and human being enacts, i.e. being him/her self, being a representative of a pharmacy, being a representative of a profession or as being a member of a network. The identities are defined in human interaction between individuals and in the relationship each individual has with the network. The identities are activity driven and identified in connection to different actions in the pharmacy networks. Thus, human interaction is vital for the different identities to exist and thereby it can be argued that human interaction enables the multidimensionality of human actors. The multiple identities can also be observed as a combination of different identities that an actor chooses to have. The choice can be interpreted as individuals’ way of interpreting the world and the different actor dimensions. Individuals evaluate every situation and relation based on the own perceptions. Thus, the multiple identities are built on individuals’ perceptions and on each individual’s own values.

Actor dimensions in the empirical material appear to be overlapping and individuals seem to need the different identities for coping in different situations. The individual identity defines the ‘me’ in each social context with other individuals and the attributes and values important for an individual are supporting the perceptions of ‘me’. Through the interaction with other individuals, i.e. members in a network, the other identities (professional, organisational and network) are defined. In the interaction the different identities become overlapping and ‘me’ and ‘we’ are synchronised. The synchronisation is visible, for example, in the accounts where an individual explains her/his own values or decisions being important for her/him as an individual, but simultaneously implying the same values and decisions being important for ‘us’ in the network, as well. Thus, the individual ‘self’ and the network ‘we’ are interdependent and the individual identity and network identity are overlapping.
In a similar way an individual needs the professional identity for example for the purpose of acting and communicating in the pharmacy network. Through the professional identity an individual can connect with the other members, the other professionals. The personal and professional identities are extremely overlapping. It can be explained by the heritage of the pharmacist’s profession being strongly linked to the individual skills and attributes. The linkage between these identities has developed for centuries. Individuals in the pharmacist’s profession act based on the ethics and moral within the profession and the profession is also related to the society. Individuals identify themselves through the profession and the professional context affects individuals’ behaviour. As a consequence the professional identity can be very dominating and becomes closely linked to the individual identity. As a representative of the profession, pharmacists have the privilege to own pharmacies. The strong bond between the individual and professional identities involves thereby also the organisational identity of apothecaries and all the three identities, the individual, professional and organisational identities, can be extremely overlapping.

From the apothecary’s perspective the organisational identity is needed in the relations within the own pharmacy unit. The organisational identity defines the shared and collective sense of the pharmacy unit and “who we are” in the pharmacy. The overlapping professional, organisational and individual identities also emphasise the apothecary’s role as an organisational leader and decision maker in the pharmacy, which seems to be important for many apothecaries. Apothecaries’ different perceptions of leadership reflect the balance between the different identities and show how some identities can be more dominant than others. Apothecaries in HYMA, in particular, seem to feel extremely strongly about their pharmacy and have close relation to the employees in the own pharmacy unit, as can be observed in several social networks. They trust their employees in personal matters and regard them as friends at work. Thus, the professional and individual identities support the organisational identity of ‘we’ and there is a balance between the different identities. Some apothecaries again seem to want to be the leaders in all situations and they do not trust their personnel to the same extent. For them, the organisational identity is clearly less important for creating the understanding and feeling of ‘we’ in the pharmacy unit. The individual identity and professional identity are dominating and influencing their behaviour.
In the pharmacy networks the organisational identity can be observed as a need to emphasise the own unit above the other member units. It can be argued that apothecaries in HYMA and head pharmacists in YA seem to have strong organisational identities as owners and representatives of their respective pharmacies in both pharmacy networks and they act as representatives of their own units. Apothecaries are proud of their own pharmacies and even want to protect them from external influence or difficulties. Protecting their pharmacy from external influence is clearly an obstacle for the integration of joint activities in the pharmacy network.

Based on what we have seen in both pharmacy networks, individuals act and react based on their different identities. The identities are defined through the interaction and the individuals define the shared and collective sense of belonging by creating the collective identity, i.e. the network identity. The network identity is thereby linked to the individuals’ understanding of the common purpose of the network. An individual cannot be a network member without having an understanding of the purpose of membership or without defining ‘who we are’ in the network. For this purpose the synchronisation of different identities is necessary. The network identity is dependent on how strongly an individual feels for the network and how committed she or he is. Individuals state that the network is needed in order to be able to act, to express ideas, to exchange ideas and to influence the own business. The daily work can however in many cases be intensively about dealing with ‘hands on’ matters in the own pharmacy, where the individual identity easily dominates the network identity. The balance between the individual identities and the network identity are thereby dependent on each individual’s perceptions and to what extent an individual can identify her/him self with the network. The synchronisation of the own personal identity, organisational identity and professional identity tells how well do the own perceptions and values overlap with the network values.

As identities are defined through the human interaction, it can be argued that the social context of every individual is enabling the multiple identities. It has been argued that all action is linked to the social world of actors and that human actors are social beings, rooted in an inter-subjective reality (Schutz 1962). It brings forward the importance of social contacts of a person, which enable the social exchange between
individuals and create the social networks we can observe. It can be argued that social networks are needed in order to enable the relationship between individuals to develop and for all kind of exchange to take place. The social networks provide therefore also the context for different identities to develop and to be defined. The relation between individuals and social networks is reciprocal. Social networks influence the individuals’ perceptions in different relationships and situations in the pharmacy networks and through the social network individuals are able to act and influence each other. Thus, the human interaction, which takes place in the social networks, is built on the continuous evaluations that individuals make of themselves, each other and the network they are members of. Individuals need each other in a network to make things happen. Social networks in pharmacy networks are needed as a platform of exchange and action but social networks also create the base for business network development. A very illustrative example of the central role of social networks can be found in the case of HYMA: there, the founding father’s personal social network constituted the basis for the establishment of the pharmacy network. The pharmacy network would not exist without it. Moreover, the network could develop on the basis of social contacts of the founders. Thus, social networks were important both as a base for the business network to be established and for its development. It is however important to emphasise that a social network of an individual is always personal, which means that the relations an individual has with other individuals are personal and unique. This implies that each social network always has to be built through the interaction between individuals.

The tentative model has suggested the network identification to be very important for the network development. Through the network identification processes the different identities are synchronised as individuals are able to identify the ‘theory of us’ and create the understanding of ‘We-Us’ in the network. In the studied pharmacy networks social networks are in the centre of various network identification processes. Thus, it can be argued that the various network identification processes come about through the social networks. The most central network identification process seems to be the membership identification. It is a continuous process as individuals evaluate and experience their different identities in relation to their own social and economic values and perceptions of other network members and the shared network values. Sense of belonging to a group or a network is emphasised in several occasions implying the importance of membership identification process. Membership in a pharmacy network
is regarded by the respondents as a strength supporting members’ social, economic, professional and individual perceptions. Thus, it can be argued that membership identification really is a process, where the different identities are synchronised. The membership defines the boundaries of the network through which individuals can define each other as members in the network and interact with. Through the social interaction the individual ‘self’ is synchronised with other members’ ‘self’ and together the members create common understanding of who ‘we’ are. Individuals’ own identities are also synchronised with each other, whereby the individuals adapt to the network. Through the membership identification process, the different individual identities meet and individuals identify themselves as network members.

Both commitment and trust have been identified as critical attributes for the network identification processes and for creating a shared network identity in the pharmacy networks. The level of commitment between individuals may vary and some of the members value the membership more than others. Some focus more on their own business interests, either individual or professional, and less on the common good. Respondents perceive such members as less committed to the joint activities. The less committed members’ attitudes and actions can harm the general level of commitment in a pharmacy network, as all actors and relationships between them are embedded in the network. Thus, commitment is related to the feelings of solidarity and kinship between the members. Respondents have identified that individuals with lower commitment are the outliers in the social context. Common features for the outliers seem to be that they question the common purpose of the network and do not share its visions or goals. They focus on the own economic performance and expect to gain economic benefits from the network. This raises a new type of identity among the previously identified ones in the tentative model, namely individuals’ business identity. Business identity is linked to the individual identities as well as organisational and professional identities emphasising the business interests of actors. It seems to be defining the ‘Me and my business’ as well as ‘what’s in it for me’ in different situations and relationships. Consequently, if the economic benefits are valued more important than other attributes in the membership, the individual identities together with the business identity are dominating the network identity. Adaptation to the network is part of the network identification process and it is identified as a key element of commitment in business networks. The examples of low commitment however show how the adaptation to the pharmacy network can vary between the members.
Whenever an individual’s own values and identities overrule the common values, such behaviour is understood as violation of the shared moral understanding and code of trust in the network. Lack of trust in a network, which can be observed for example in form of negative ties between apothecaries and pharmacists, is a problem also for the development of the network identity. The respondents in both pharmacy networks underline that if they can trust each other they will also share knowledge and ideas with each other. Trust is needed for information sharing, problem-solving and all kinds of communication to take place in the pharmacy networks. The exchange of knowledge and the possibility to gain competitive advantage through the new knowledge seem to be important for the members in the pharmacy networks. For this reason the social networks are critical in business networks as it is via social contacts that individuals can communicate with each other. Without a network identity, individuals cannot feel the belongingness and be part of the social networks through which members can create and recombine knowledge in the network.

Actorship in the pharmacy networks can be seen in individuals’ activity and behaviour, which have had an impact on the pharmacy networks’ development. Pharmacy networks are to a great extent an outcome of human interaction. Choosing new members and evaluating them based on given economic and social criteria provides an example of actors’ intentional action in the pharmacy networks. Recruiting members who fit the network but who also are “unique” contributes to the development of heterogeneous networks, where human actors contribute to the emergence and development of the pharmacy network. In the recruitment processes of HYMA we could observe how different identities were emphasised in the different recruitment phases. During the establishment of the network, the individual identities were clearly the most important criteria for membership. Later on individuals’ professional identities were emphasised as the professional identity was regarded to strengthen the actual pharmacy business. Through the professional identities the importance of individuals’ organisational identities also became acknowledged. Finally, through the strategic expansion of the network, the business interests of the network and its members’ economic interests became more important. Therefore, in the latest the phase of the recruitments, actors’ business interests raise the importance of individuals’ business identity among the other identities.
The identified social and economic motives for membership in pharmacy networks, and also for the existence of the pharmacy networks, provide another example of intentional action in the pharmacy networks (see table 15).

### Table 15 Economic and social motives

<table>
<thead>
<tr>
<th>Economic motives</th>
<th>Social motives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create competition</td>
<td>Create something new – doing things together</td>
</tr>
<tr>
<td>Develop the business through shared economic resources</td>
<td>Being an influencer – providing an example for the other professionals to follow</td>
</tr>
<tr>
<td>Efficiency and synergies, possibilities for larger scale business activities</td>
<td>Working in a professional network - sharing experiences and ideas</td>
</tr>
<tr>
<td>Improve the profitability of own pharmacy and the network</td>
<td>Having a social network for support and sharing social resources – having a spirit of togetherness and creating good feeling</td>
</tr>
</tbody>
</table>

Various social motives for membership exist parallel to economic motives explaining actors’ multidimensionality and action in different actor dimensions. Economic and social motives thus go hand-in-hand instead of being separate actions in pharmacy networks. The economic and social motives together give the reasons for the human interaction to take place. Social motives emphasize the role of human interaction on social networks and highlight the individual identities and individuals characters, perceptions and values in exchange. Economic motives are the pre-requisite for economic action between actors. The economic motives have been important for the apothecaries in HYMA and for the existence of the voluntary pharmacy network. Economic motives of the apothecaries are linked to economic benefits the pharmacy network can provide for its members. Triggers causing individuals’ action are built on both social and economic motives. Thereby triggers for human action are linked to the different situations and interaction between individuals, where they synchronise their own values with the other members’ values and especially with the common values of the network, and thereby define the different motives for action. Only the business identity seems to include pure economic motives for an individual, meaning that the economic values go before the social values and the common values in this dimension.

### 8.5.1. Summary

Both pharmacy networks display considerable heterogeneity. We find a variety of relationship types and also a wide variety of individuals with different characteristics. First, the pharmacy networks consist of a mix of weak and strong relationships, which
is typical for heterogeneous networks. There are few strong ties of friendship and most of the relationships are weak ties with professional interest. This is argued to improve the dynamics and information flow in professional networks. Second, there seem to be a diversity of individuals and personalities in the networks. Apothecaries and pharmacists in the pharmacy networks are individuals with different strengths as network members. They have been recruited based on their personal characters, professional skills and economic resources. Individuals take on different roles and assume positions in the networks irrespective of their formal positions in both pharmacy networks.

The tentative model of multidimensional actors has been helpful for improving our understanding of the multidimensionality of actors. The relation between the social world and human action of multidimensional actors in pharmacy networks is complex. A person can simultaneously have several identities, which he or she enacts in different situations. Thus, in some situations individuals represent themselves, in another they represent pharmacy professionals, and they can simultaneously have multiple identities. The tentative model has included the individual/personal identity, professional and organisational identities, as well as the network identity. The analysis has shown that the different identities human actors have, are defined through human interaction and that human interaction enables the multidimensionality of human actors. The identities are driven by different activities and identified in connection to different actions in the pharmacy networks. The multiple identities are built on individuals’ perceptions and values and individuals seem to need the different identities for acting in different situations.

In addition to the identities in the tentative model (in chapter 3), the analysis has shown that there is an additional dimension in the pharmacy networks, which is very central in the multidimensionality of actors. It can be identified as the business identity of actors. This reflects the importance of the business dimension of action and behaviour. Business identity can exists separately from the network and it is therefore directly linked to individual, professional and organisational identities. It can also be separate from the professional identity being linked only to the individual identity. It can be argued that the business identity of an individual is emphasising the individualistic, ego-centric behaviour of an actor. It is however important for the interaction in the network as well, as it keeps the focus on the economic performance and values. The economic values are equally important for the development of
pharmacy networks and the business identity is therefore supporting also the common economic values, as we can observe in the following quote: “...and we cannot include small (pharmacies) in our network, because our activities require resources.” Apothecary, HYMA

The only possible risk with the business identity in the network context is basically a situation where it becomes too dominant for individual actors, which will lower their commitment to the shared goals and purpose of the network. If individuals have stronger economic motives for the membership than social motives, then individuals will have difficulties in identifying themselves in the network, where social values are equally important with the economic values. Thus, it can be argued that the common understanding of the purpose of the network, which constitute the common values, consists of a balanced mix of economic and social values. Dominating business identity does not develop the co-operation, it speaks for short-term action.

The role of social networks has been found crucial for the development of pharmacy networks. The social context of every individual is enabling the multiple identities. The relation between individuals and social networks is reciprocal. Social networks influence the individuals' perceptions in different relationships and situations in the pharmacy networks and through the social network individuals are able to act and influence each other. Social networks in pharmacy networks are needed as a platform of exchange and action but it can also be argued that social networks can also create the base for business network development. Social networks are in the centre of various network identification processes and the various network identification processes are able to take place through the social networks. The most central network identification process is the membership identification where the different identities are synchronised. Through the synchronisation of the identities, individuals define the shared and collective understanding of the purpose and goals for their interaction and create the collective identity, i.e. the network identity. The network identity is thereby linked to the individuals' understanding of the common purpose of the network. An individual cannot be a network member without having an understanding of the purpose of the membership or without making clear ‘who we are’ in the network. For this purpose the synchronisation of different identities is necessary and last but not least, individuals' own identities are also synchronised with each other, whereby the individuals can adapt to the network.
Concepts of trust and commitment gain a central role in creating network identity and shared understanding between actors in the network identification processes. Commitment is related to the feelings of solidarity and kinship between the members. Trust again is needed for information sharing, problem-solving and all kinds of communication to take place in the pharmacy networks. If members in the pharmacy networks can trust each other they will also share knowledge and ideas with each other. Whenever individuals’ own values and identities overrule the common values, such behaviour is understood as violation of the shared moral understanding and code of trust. For this reason the social networks are critical in pharmacy networks as it is via social contacts that individuals can build trust, commitment and communicate with each other.

The motives for human action are both economic and social, as has been observed. Actorship is observed in these perceived motives as well as in the manner for choosing new members and evaluating them based on given economic and social criteria. Social and economic motives for membership are equally important for the actors in the pharmacy networks. Their importance varies depending on different situations and, for example, in the different development phases in the pharmacy networks. Thus, various social motives for membership exist parallel to economic motives and the triggers for individuals’ action are built on both social and economic motives.

Analysing the variety of actors, actor dimensions, identities, activities and social networks in the pharmacy networks that have been the subject of research has shown how extremely overlapping different actor dimension and identities are. It has also shown how overlapping the social and economic action in the pharmacy networks is. Social and economic action can be regarded as inseparable and as complementary for each other. The social networks enable the social actions through which actors define the identities of themselves and others based on personal characteristics and professional achievements. The mix of personalities, roles and positions, provides the pharmacy networks with a rich and diverse topology. Different personalities complement each other and help create very heterogeneous networks. The diversity is thus a resource for the members in the pharmacy networks, which can be utilised via social interaction.
DISCUSSION AND CONTRIBUTION OF THE STUDY

This thesis is a study of multidimensional business actors, a study of the individuals and their identities, and a study of social networks in the emerging pharmacy networks. In this concluding chapter I will discuss the main contributions of the thesis. The thesis has aimed at increasing our understanding of the multidimensionality of actors in business networks and the role of social networks in emerging pharmacy networks, with an emphasis on individual human action. The study has also made an effort to describe the historical and contemporary development of the Finnish pharmacy business, where pharmacies’ chain development has been the phenomenon in focus. Viewing networks as dynamic actor structures has been the conceptual point of departure for the thesis. Actors’ action and interaction have for a long time been identified as key factors for creating the balance between change and stability and, thus, for creating dynamics in business networks. The main contribution of the thesis is in developing the concept of business actors, focusing on the multidimensionality of business actors and the diversity of identities that business actors have. Actors’ multidimensionality emphasises the importance of understanding social networks as an integrated element in the business networks (see figure 38).

Figure 38 Contribution of the thesis
Focusing on business actors in business networks has enabled me to analyse multidimensionality of actors and social action in the socially constructed networks. The central assumption in this study has been that business actors are multidimensional and that their specific constitution in any given situation is determined by human interaction in social networks. The development within pharmacy retailing has revealed human actors’ influence in business network development. Individuals’ interaction and social exchange shape individuals’ perceptions and enable network identification through which the network identity is created. Thus, I have argued that individuals can through their multiple identities both create business networks and influence their development. Social networks can be regarded as an element where individuals’ socially constructed perceptions, values, identities and business network activity meet.

**9.1. Integration of identities, activities and actors**

My analysis suggests that the social action between individuals influences the development of the pharmacy networks. Through interdependencies and integration processes individuals can combine their social resources and identify themselves as members of the pharmacy networks. As individuals’ actions in business networks are related to the individuals’ intentions and perceptions, multidimensionality becomes an important element in the interaction. In the social dimension, individuals create social networks, through which they can co-ordinate their activities and create shared understanding of the purpose of the pharmacy networks. In the co-ordination the network identification processes play a vital role also for defining the common modes of behaviour and moral standards in the pharmacy network.

The study has shown that social networks should be seen as a vital element in business networks and not separate from them. All interaction is essentially social and the key to understanding the interaction in business networks lies in each individual’s varying identities and abilities and willingness to co-operate. Social networks enable therefore the multidimensionality of actors and the interaction between individuals. The formal network structures of YA and HYMA are in many ways different, but nevertheless the social networks and the substance of social action are not remarkably different from each other. This implies that social networks are important for enabling individuals’
action and connecting individuals in the pharmacy networks independently of the formal network structures or the actors’ formal positions in the pharmacy networks.

The model of multidimensional actors (presented and discussed in chapters 3 and 8) has described the multidimensionality of actors in business networks. Based on the model, the human character is what constitutes actors’ activities and enables the business actors’ different identities, roles and positions in business networks. The model explains the connection between social exchange and human action in business networks. Individuals’ identities and ‘multiminds’ become integrated through interaction between individuals and the identification processes in the pharmacy networks. The exchange in the pharmacy networks takes place in social networks and therefore, the social networks are the platform for the interaction between network members. Social networks are emphasised in both YA and HYMA as being crucial for information exchange, exchange of professional and tacit knowledge, and for problem-solving. Pharmacy networks provide professional support for their members in the turbulent environment of the pharmacy business. Pharmacy networks represent the collective actor dimension for the individuals, through which the individuals can act and influence their own businesses. The strength of the pharmacy networks seems to lie in the heterogeneity of actors, social exchange, the multiplicity of actor dimensions and actors’ multidimensionality.

There are several concepts presented in the theoretical framework that have become central in my study. These concepts are interrelated and they have enabled me to gain a better understanding of the multidimensionality of actors in business networks. I have summarised in the following model (see figure 39) the central concepts and elements and I will explain their content and the relation between them in the following sections. I will discuss in more detail the contributions of my study and the interesting questions that have arisen from the research process, which also provide topics for future research, as for example, how individual and collective actor dimensions become overlapping, and how identities are being developed.
Figure 39 The central elements in the study

NETWORK IDENTIFICATION
- Membership Identification
- Moral Standards
- Shared Understanding
- Different Identification Processes
- Commitment
- Trust
- Spirit
- Ideas

NETWORK LOGIC
- Actorship
- Action Intentions
- Perceptions

MULTIDIMENSIONALITY OF ACTORS
- Individual and Collective Actor Dimensions
  - Personal Identity
  - Organisational Identity
  - Network Identity
  - Professional Identity
  - Business Identity

PHARMACY NETWORKS
= Business Networks + Social Networks

ECONOMIC ACTION
- Economic Motives

SOCIAL ACTION
- Social Motives
9.1.1. Which actor dimensions are we referring to?

When taking social action individuals enact several egos, giving rise to the multiple identities of actors. Individuals' identities vary depending on the circumstances and relationships in which they are involved, which explains why individuals can have different identities and “a multimind” setting (see Ornstein 1988). My analysis, which is based on the tentative model of multidimensional actors in chapter 3, suggests that these different identities are interlinked and that there is an interplay and reciprocity between them. The enacted identities affect how individuals perceive their individual ‘selves’ against the other actors' identities as well as how they perceive the collective ‘we’ of the pharmacy network in relation to other pharmacies and pharmacy networks. Thus, it can be argued that an actor’s identity in each situation is defined in terms of relationships in the social context in the pharmacy networks. As the individual ‘self’ is defined through social construction, the collective identity, e.g. the network identity, is created as the property of the collective through interaction between members. Thus, network identity is defined jointly by the actors as the shared collective identity and sense of who they are. Each actor can however interpret the network identity in somewhat different ways.

My study argues that a business actor can indeed be an individual actor and a collective actor at the same time (see A and B in figure 39). This implies that apothecaries and pharmacists are not only individuals but also members of a pharmacy network. The individual identity built on a theory of ‘me’ and the network identity, a theory of ‘us’ exist side-by-side (see figure 3 in chapter 3 and figure 37 in chapter 8). It is, however, reasonable to ask which identities are the individual ones and which are the more collective ones and, thus, which actor dimensions are individual and which collective? Is professional identity, for example, a collective identity or in an individual's possession? As we can see in the empirical material, the professional identity can exist both in the individual dimension and in the collective dimension. It exists in relation to each individual’s personal identity, through which actors identify the professional values of being a pharmacist; but professional identity also represents a collective identity connecting them as pharmacy professionals.

Despite Granovetter’s (1985, 2002) convincing argument against over- and under-socialised networks, the social action of actors can be extremely polarised. The atomisation of actor dimensions implies that there is either an individual or a collective
actor dimension but seldom a dimension in between these two. Both atomised views of social action seem to match with the findings in my material. The atomisation can be observed in the strong diversification of individual and collective action. Actors also try to refine their identities in different situations, as for example by emphasising their roles as professionals or as influential individuals in the pharmacy networks. The individual dimension dominates apothecaries’ perceptions in many ways. However, the collective dimension of business actors is also observed to be important. The collective dimension emphasises individuals’ willingness to interact, communicate and take collective action. Through the collective identity, individuals are able to make collective decisions for the common good of the network, which are based on the shared goals of the network. The individual ‘I’ versus the collective ‘we’ represent therefore extremely atomised perceptions of the pharmacy networks and reflect the under- and over-socialised views that business actors have. The alignment of individual and collective identities at a point in between the over- and under-socialised networks is, however, needed for network development. Thus, it can be argued that the interplay between the individual and collective actor dimensions is critical for the networks’ dynamics.

The relation between individual and collective actor dimension and the different identities can be illustrated in a matrix (see figure 40). As we can see, identities can be either individual or collective, depending on the situation and their status can change.
To begin with, every actor has a personal identity related to the own ego. Therefore, the personal identity is present in the individual dimension and it is an individual identity. However, as we have learned, individuals are influenced by the interaction with other individuals and network members, whereby the personal identity can move closer to the collective dimension and the jointly defined network identity. In a similar way, the professional identity can be perceived as an individual identity, but it becomes a collective identity through the interaction and identification processes. Organisational identity is fundamentally in the collective dimension as it defines the ‘we’ in an organisation. It can, however, be perceived as an individual identity, as apothecaries perceive their pharmacies being close to their personal identities. Network identity is a collective identity of the network, but also this identity can be perceived in different ways. If it is related to the personal identity, especially in the beginning of a network development process, it is rated as both individual and collective identity. As the cooperation with other network members becomes more intense, network identity becomes to a greater extent a collective identity and it moves to the high collective dimension. Thus, it seems that identities vary in terms of individual and collective actor
dimensions and move between these dimensions along with the interaction and identification processes.

As the individual and collective identities overlap and they are all embedded in the pharmacy networks, the main question still seems to be how to separate them. Based on the findings in this thesis I argue that instead of separating actor dimensions and identities we should accept that these concepts overlap significantly. However, one may ask how the different identities fit together. Can they sometimes contradict each other or are they always in line with each other? Different identities are aligned through individuals’ interaction. In some situations, these different identities are mutually supportive, in others they lead to conflicts. Such conflicts can be resolved through adjustments to the identities or by allowing a particular identity to dominate over others. When, for example, an apothecary prioritises his / her own pharmacy in decision-making processes, he / she allows the business identity together with the individual identity, which is built on perceived advantage from the individual perspective, to dominate the network identity and professional identity. In a similar way we can see that an apothecary can prioritise his / her organisational identity in actions, where he / she evaluates what is the best outcome for the own employees at the pharmacy. We can also observe that the professional identity dominates the other identities in the discussion of the future development of the Finnish pharmacies, where the individual identity is pushed into the background. The different identities seem to be weighed against the purpose of action in each situation, and gain different values based on the evaluation that the business actor conducts. Thus, in some situations, some identities are more “supporting” identities, whereas in other situations the same identities are the “leading” identities.

Weighing the identities is not, however, a programmed action implying that actors would consciously every time optimise their actions. The identity of a business actor is the sum of the identities that we can see manifested in different situations. The balance between the identities seems to depend on the situation actors are involved in, the type of the interaction that triggers it and the reasons for this interaction. The level of insecurity and the level of risk that are felt by the actors seem to have an effect on the balance as well. In new situations, where an individual does not know how to act or whether he or she can rely on the other actors, the individual actor dimension is emphasised. Thus, the personal identity is the leading identity for the other identities. In more familiar situations, an individual feels more secure and can relate the situation
to an earlier experience. He or she can also relate to the other individuals in a more secure way and therefore, the perceived level of risk is lower. Thus, in familiar situations, the collective dimension becomes more important and the personal identity becomes part of the collective action, where the network identity or professional identity can gain the leading role.

9.1.1.1. The importance of business identity

The business identity that was identified through the empirical study, and was included to the tentative model of multidimensional actors (see figure 37 in chapter 8), appears to be extremely important for the development of the pharmacy networks (see C in figure 39). The pharmacy networks are striving for the economic advantages that a large-scale business can provide for pharmacies and apothecaries. Economic action in various situations is linked to economic motives of business actors. The business identity of an individual emphasises the importance of economic motives of membership. The business identities of the apothecaries seem to be closely linked to their personal identities and to their organisational identities (see figure 37 in chapter 8). It appears to be an identity which is much closer to the individual’s own ego than to the common interest. Apothecaries’ business identities seem to be quite independent of the pharmacy networks in which they are involved. Therefore, the multidimensionality of actors is clearly a challenge for governing or directing economic actions within pharmacy networks. We have seen that not all members of HYMA are willing to invest in the network operations to the extent that the network has collectively decided. Members are also reluctant to share information regarding their annual accounts. Apothecaries seem to have their own ideas about how the network can support them economically.
9.1.2. Network identification

The economic motives for the establishment of the pharmacy networks show the import of economic action as a collective attribute. The business identity in the collective dimension creates the spine of the business network. In order to create the business identity in the collective dimension, the business identities of the individuals need to be integrated. Network identification processes in the tentative model of multidimensional actors join the different actor dimensions and identities in pharmacy networks. The network identification processes (see D, E & F in figure 39) are needed for creating the shared understanding of the business identity of the pharmacy network, where individuals, essentially, provide new ideas as to how the collective business identity can be developed. Thus, the individual economic interests can be transferred to the collective dimension, where they become part of the collective business identity.

As presented in figure 37 in chapter 8, it can be argued that trust and commitment are essential ingredients in network identification processes linking different actors, actors’ multiple identities, as well as creating a network identity between the members in the pharmacy networks. The membership identification is very important for the synchronisation of different identities. Network identification, or more specifically membership identification, therefore comprises several identification processes that actors go through, such as the sense of belonging, the need for affiliation, acceptance, pride, involvement, goal congruence, feeling of trust, support for problem-solving and information sharing (Huemer et al. 2004; Hatch & Schultz 2000). The shared understanding between pharmacy network members emerges as a consequence of interactions between individuals, where individuals’ personal perceptions and network views are combined and linked to the common goals in the network. Through the membership identification processes, individual and collective identities become overlapping, and the previously discussed balancing between the individual and collective actor dimensions can be seen as a continuous process that network members are involved in. In the network identification processes the ‘me’ of an individual is linked to the ‘we’ in the pharmacy network and the ‘me’ and ‘we’ become ‘we’ and ‘us’ in the same context. Here, the importance of professionalisation should not be forgotten. Although this has not been part of the empirical study, it is likely that the professional
identity gained through education and training constitutes an important part (and for many, the starting point) of network identification.

9.1.2.1. Moral understanding

The previously discussed network identification processes also define the moral standards in the pharmacy networks (see E & F in figure 39). The shared understanding that members develop includes moral and ethical behavioural rules. These rules reflect clearly the professional traditions and social traditions of what is regarded as acceptable and good behaviour and what is not. In this sense, moral standards and shared understanding can be defined as a network logic that influences the individual and collective perceptions (see G in figure 39). Network logic originates from human actors and actorship and provides the grounds for exerting group pressure among the network members (March & Simon 1958:59), as it defines the tacit social rules in the network. Members watch each other’s behaviour and actions, i.e. whether they are acting according to the common social rules. In the pharmacy networks, individuals refer to such tacitly defined social rules on several occasions: “We do not usually do that, it is not appropriate”, or “it is against our ideology”, or “he acted in his own way” (quotes from the apothecaries and pharmacists in YA and HYMA). Thus, individuals are being judged by one another and evaluated against the common network logic of what individuals as members of the network can do and what they cannot do. Therefore, network logic is not only a strategic declaration and a combination of individuals’ identities and network perspectives; it is also a behavioural guideline for the members, where the defined moral rules in pharmacy networks are linked to the traditions and ethics of the profession. If someone breaks the moral rules, it can have an affect on the whole pharmacy network. The greatest threat for the future development of HYMA seems to be the violation of the moral standards.

A strong feeling of affiliation is a strength in the network as it is built through the identification processes. A high level of interaction commits the individuals to the network and creates meaning for the membership of the network. The network logic in the pharmacy network also changes over time. Network logic is not given or static, but created and shaped by the actors’ identities as they interact. Thus, network logic illustrates how individuals’ ideas, perceptions and identities are combined in the pharmacy networks. It is almost as if actors are “infected” by each other’s ideas and perceptions, through which they develop their shared network logic that is in ‘a state of
flux’. Welch & Wilkinson (2002) have argued that connections between ideas within and between organisations are still not well developed and understood in network theories, although they have been identified in the analysis of other dimensions and analysed in other disciplines. Welch & Wilkinson have therefore made a case for introducing ideas and network logic as a co-evolutionary force in networks, creating dynamics by driving network behaviour, development and evolution through actors and interaction. This is also a central theme in recent work on the ‘performativity of economic theories’ at the intersection of economic sociology and marketing (see Callon 1998; Callon, Millo & Muniesa 2007; Araujo, Kjellberg & Spencer 2008). Besides showing how theoretical ideas about markets, for instance, may affect the organising of sectors and industries, these studies have also pointed out that the spread of ideas has consequences for actorship (MacKenzie & Millo 2003; Kjellberg & Helgesson 2006; Kjellberg 2007; Andersson, Aspenberg & Kjellberg 2008).

The import of ideas and network logic can be observed in the phenomenon of pharmacies’ chain development. Chain development is not only about exchange of tangible resources that need to be co-ordinated. It requires a change in the way individuals think about their businesses and making them see the purpose of the shared resources and joint actions. Thus, it can be argued that a pharmacy chain needs to have a shared moral understanding, which defines the common behaviour and lessens the risk of selfish attitudes and individuals maximising their own advantage. Thus, chain development could be defined as a process of integration of moral standards and ideas.

9.1.3. The import of actorship

Actorship has been identified as the third main component in the tentative model of multidimensional actors (see figure 3 in chapter 3 and figure 37 in chapter 8) emphasising the human action and motives and triggers for action. The development of pharmacy networks is based on individuals’ actions (see H & I in figure 39). Individuals have established these networks based on common interests, shared perceptions, joint visions and a shared desire to make a difference. They have crafted joint strategies for the networks and their actorship appears to be a central part of the development of the studied pharmacy networks, not least in terms of their varying intentions behind specific actions. Intentional action takes place at the individual actor level, where individuals shape and change their own businesses, create pharmacy networks and
influence the overall development of the pharmacy business. The individuals’ own values and perceptions of the network, those entertained by them as part of a business identity and those held by them as professionals, all contribute to creating the collective perspective of the business network of which they are members. Thus, through the collective perspective they also create a collective actor that represents the shared values and intentions of individuals.

How, then, should we comprehend actorship? My initial understanding of actorship has been built on the idea of a socially constructed reality (see Berger & Luckmann 1967; Berger et al. 1974; Schutz 1962; von Wright 1971) according to which it can be assumed that individuals’ desire to develop their own businesses will shape and change the business networks and structures as well. I argue that the concept of actorship (see Kjellberg 2001) can explain some of the complexities related to the multidimensionality of actors in business networks. Actorship can be regarded as the coming together of an actor’s socially constructed perceptions and some specific activity. As actors’ action in business networks are related to their intentions and perceptions of that network, the various identities enacted by the actors become an important aspect of actorship. In a socially constructed world action is about individual choices, but also about the joint creation of situations in which choices are to be made. Interaction between individuals is both based on individual choices and provides the basis for such choices.

Through pharmacy networks, the individuals, the human actors, interpret the world through their own identities and perceptions. The human actors can manage different situations through their different identities and through interaction with other individuals they can influence each other as well. Thus, individuals’ multimindedness will influence the social exchange in the pharmacy networks and also the strategic action of actors and therefore also the development of pharmacy networks. Social action is consequently an ongoing process for individuals, through which they interpret the world, the network and other individuals around them. The social networks are critically important for this interpretation. Individuals’ identities build thereby the bridge that links the social and individual worlds together, and thus creates the subjective reality of an individual (Berger & Luckmann 1967).

Consequently, individuals’ importance in business networks should not be downplayed. Their impact on network development processes is inevitable and substantial, although often challenging to observe. When we refer to firms’ action and interaction with each
other, we are actually referring to individuals’ interaction as representatives of themselves, their profession, their firm and/or the business network they are members of. All action between business actors, whether we look at the individuals or the collective actors, is eventually social. Therefore, neither social exchange nor information exchange should be excluded from the research on business networks. Hence, it can be argued that network dynamics are derived from the underlying social networks, i.e. from human action within business networks.

9.1.4. The symbiosis of business and social networks

Consequently, it can be argued that the co-operation within the pharmacy networks is built not only on economic motives but also on social motives (see C in figure 39). If the individuals were to always put their own business identities and personal identities first, there would be no pharmacy networks. Therefore, the social dimension in pharmacy networks needs to be emphasised when trying to comprehend the influence of multidimensional actors on the organising of economic actions. We could argue that there is a delicate balance here between the economic and social motives that allow the pharmacy networks to develop. This is also the reason why we can argue that economic action and social action are interlinked and overlap in business networks. Social action comprises many different issues and matters in business actors’ behaviour. Thus, the analysis of multidimensional actors in pharmacy networks shows that we are dealing with a social phenomenon, not just an economic one.

A social network is a medium for individuals to express themselves and enact their different identities. As such, it facilitates the linking of their individual identities to a network identity. This study has indicated the existence of several social networks within the pharmacy networks based on varying relational contents, e.g. professional knowledge, trust regarding personal matters, advice, friendship, and trust regarding work related matters. These social networks link individuals in the pharmacy networks through various exchanges. Professional knowledge, advice and problem-solving are especially valued in exchange. Social networks support and strengthen pharmacy networks and enable individuals’ action in networks and their influence over others. Social networks allow individuals to share their perceptions and thoughts with each other. From the individual point of view, social networks enable that one’s personal opinions can be heard and the possibility to influence one’s own position and role in the network. Through the social networks individuals can influence each other in the
pharmacy networks and, simultaneously, they are influenced by the other members. Moreover, social networks improve their members’ ability to deal with any difficulties and threats they may face; in their own pharmacy units, in the pharmacy network or in the profession in general.

The balance between economic and social action is not fixed once and for all, but is constantly changing through the various activities undertaken in the networks. Indeed, each member is continuously performing a kind of 'balancing act'. For this, they need a certain sensitivity towards issues such as when and how to co-operate, or not, and when and how to compromise, or not, within the pharmacy network. This understanding is explained by the members using terms such as “a spirit” and “a right attitude” and is thus clearly related to commitment among the network members (see J in figure 39). The spirit comes from the people, the individuals in the network, and from their perceptions and ideas of what the network is for and thus, how they interpret the network. The spirit can be identified as a positive source of energy in the network, which links people with the same spirit together. They share an idea, which they want to implement and they realise that they need each other in order to accomplish that. If the spirit is strong enough, it can overcome the problems of individualistic interests and the dominance of individual business identities. Therefore, it can be argued that business networks and social networks live in a symbiosis. They overlap and are required for the interaction to take place and, thus, for the development of long-term relationships. Business networks and social networks support each other and cannot survive alone, as both economic action and social action are needed for organising different activities. Social networks exist within the defined network boundaries but also stretch outside the actual business network, connecting business actors with other business actors. Thus, social networks are also channels for information flow and knowledge transfer from the outside world to the defined business network. However, social networks need a purpose for their existence as actors need a purpose for their interaction. The purpose is linked to the economic interests of each actor in running their business and their joint economic interests in the pharmacy network they have created.

9.2. Change in the form of chain development

Understanding how and why something develops in a certain way is a complex matter and requires us to understand “the mechanism by which sweeping change has its
effects”, as Granovetter (2002) has stated. Thus, change in business networks can seldom be analysed merely as an economic phenomenon and the impression that something is purely economic is biased. It can be argued that pharmacies’ chain development encompasses economic, social, cultural, historical and regulatory elements, to mention a few, which together construct the phenomenon we can observe, i.e. the chain development.

Chain development as a form of change process in the business world is not a new phenomenon. A continuous striving for efficiency in distribution channels has been documented as leading to the restructuring of whole industries ever since the 1920’s. The restructuring and re-organising have been based on the idea of rationalising the distribution system and improving efficiency (see, e.g. Kjellberg 2001; Kauto & Lindblom 2004; Mattsson 1969). Mattsson described in 1969 an emergent situation of changes occurring in the retailing sector in following words:

“...chain organisations, and different kinds of voluntary associations of independent retailers and wholesalers, dominate a rising proportion of the market in many sectors. There has also been a tendency to centralise the making and implementation of marketing decisions in such firms and groups, so that the behaviour of different units in a system becomes more uniform and, in various ways, change the behaviour of the units with a view to achieving higher efficiency in the systems as a whole... the reorganisation of the retailers’ cooperation as nation wide voluntary chains.” (Mattsson 1969:1).

Mattsson’s description of the Swedish retailing sector in the 1960’s - the newly established chain organisations, unified behaviour of business units and the drive for efficiency - depicts very well the contemporary development in Finnish pharmacy retailing. HYMA provides an example of where independent pharmacies have created a nationwide voluntary chain and YA in turn illustrates how the existing organisational nationwide structure has strived for increased centralisation and uniformity. Both pharmacy chains have strived for improved efficiency through co-operation and internal re-organisation but also through increased competition. The competition between YA and HYMA is built on the pursuit of greater competitive advantage and market leadership in pharmaceutical retailing. Thus, it can be argued that collective competition has been driving the development of pharmacy chains and through this development pharmacy professionals have become more dependent on each other. The competitive pressure in the market consists partly of the pressure from the governmental authorities, but, above all, it is created through pharmacy chains’ own activities to improve their business. We can also observe that pharmacy chains try to
follow each other’s example in various actions linked to the chain development. They copy ideas from each other but also from other industries when competing for the opportunities for strategic action (see Hertz & Mattsson 2004). Thus, YA and HYMA can be described as competitors in a good spirit. They lead the development of pharmaceutical retailing in turns and challenge each other. People also know each other very well within the pharmacy business and there are personal, informal contacts between the pharmacy chains. Thus, apothecaries and pharmacists in YA and HYMA communicate with each other across the business network boundaries as professionals and friends.

The collective competition at the network level explains, as such, the forces behind the chain development. The study highlights, however, yet another set of “forces” that generate the change that we can observe. These forces are internal and derive from the individuals in the pharmacy networks. The group of individuals, that are members of the pharmacy networks, consists of individuals with various individual characteristics and personalities. Therefore, the group of individuals is very heterogeneous. As we have been able to observe, individuals do not always agree upon all decisions that are made in the pharmacy networks. They have their own opinions and they do want to influence on the joint decisions. Thus, they interpret the network and all exchange and interaction from their personal perspective. The continuous balancing between the individual and collective actor dimensions and different identities that individuals are processing can also be seen as collective competition within the pharmacy networks. Thus, individuals are competing and co-operating with each other, which causes the internal dynamics within the pharmacy networks and which influences the chain development.

9.2.1. Evaluating the chain development

In theory, chain development is based on carefully defined goals and chain concepts, according to which the chain is supposed to develop its activities and become a superior actor in the market. The rule of thumb in chain management could be stated as “the more centralised and disciplinary the chain is, the better it is for the business”. Thus, chain development strives for homogeneity of actors and activities in business networks. In practice, however, pharmacy networks show very varying forms of chain development. Based on the analysis of the integration level of different activities,
management structures and decision-making processes, neither YA nor HYMA can be said to have reached a level of integration where the networks could be described as homogeneous. YA is a centralised network with a centralised management structure. HYMA is a voluntary network with a democratic management structure. The level of integration varies in the pharmacy networks as a result of the different network structures. To a point, the centralised management thinking has homogenised activities in YA; nevertheless, individuals in the network are still quite heterogeneous. Individuals in YA also want to influence their surroundings and the network they work within, which shows heterogeneity of actors. Furthermore, it has been emphasised that integration in a chain requires that all individuals in the process are committed to the chain development. This study has emphasised that integration demands the “right attitude” from the actors in the chain for the chain to become successful. This conflicts with the rule of thumb in chain management to some extent. Assuming that no action can be forced on individuals, the right attitude cannot either be created through strict chain concept and discipline. The right attitude is more in line with the feeling of commitment that actors gain through co-operation and interaction with each other. Thus, the heterogeneity of the pharmacy networks can be regarded as a positive characteristic, which keeps them agile and alert.

My study suggests that the main motives for the establishment of the voluntary chain have been the need to co-operate with other pharmacy professionals in order to develop and improve the own pharmacy business. Apothecaries need a professional network through which they can exchange information, gain advice, discuss, feel affiliation and acceptance, and in order to be involved in various business related development processes. HYMA has been striving for an increased internal efficiency; despite this, it has remained a relatively democratic network of apothecaries, where the absence of clear organisational structure as well as centralised management are the reasons for its lower level of integration (institutional, decision and execution) and uniformity. Hence, HYMA consists to a large extent of professionals and individuals with individual needs and a focus on their individual work. YA’s chain development has been gradual and the centralised structure has been shaped during several decennia. YA's organisational structure and economic uniformity has enabled it to experiment with, and develop, new pharmacy practices in a way that the privately owned pharmacies have been unable to. YA has therefore had the advantage of being able to grow its business faster than the privately owned pharmacies. The idea of chain development has, however, been crystallised as the process has evolved and, thus, it can be argued that the chain
development has not always been quite so systematic or planned in every detail. The level of different integration processes is higher in YA than in HYMA, but despite the unified network activities, YA is nevertheless also a network of pharmacy professionals. Head pharmacists, directors and managers work for the same pharmacy but they still need the professional network for similar reasons as the apothecaries in HYMA, i.e. for information exchange, for discussions, for affiliation and acceptance, and in order to be involved in various development processes. Thus, the centralised structure has not diminished the importance of the professional identity of actors.

9.2.2. Final remarks on the future of the Finnish pharmacies

Chain development as a phenomenon shows that there is a tension between the current development of the business oriented pharmacy concept and the traditional pharmacy concept linked to the professional traditions and pharmacy privileges. Apothecaries and pharmacists in YA and HYMA want simultaneously to preserve their privileges and yet still develop their businesses. The tension between these two desires increases every time the governmental authorities interfere in the pharmacy business and stipulate new regulations.

Several minor regulations introduced in recent years in pharmaceutical retailing have slowly accumulated and changed the basis of Finnish pharmacy business. Thus the development of pharmacy networks provides an interesting example of a confrontation between the cultural and professional heritage and ethics that are strongly bound to the profession of being a pharmacist and the modern business ideology that drives the pharmacy business today. The ethics and moral standards are being influenced by the contemporary demand for improved profitability and efficiency in the pharmacy business. The recent regulations have had a direct impact on the pharmacy business, influencing the pharmacies margins, revenues, and pharmacy operations in general. This has been seen for example in the introduction of the compulsory sales of generic medicines following the regulation of generic substitution and reference pricing system.

Pharmacies’ role in society and the structure of pharmaceutical distribution in Finland have been repeatedly debated during recent years. This debate about how pharmaceutical distribution should be organised is not, however, a new phenomenon in the long history of pharmacies. The form and structure of the pharmacy system in
Finland has evolved over different time periods. Therefore, the pharmacy practice as we know it today has been gradually developed during the centuries and the special characteristics, professional ethics and cultural bonds of the profession are to a large extent a historical heritage.

Individuals / professionals within the pharmacy business have influenced the development of the pharmacy system. Apothecaries have protected their business from intruders and created an enclosed business environment within which the pharmacy business has been developed in Finland. However, it is the constant involvement of governmental authorities that has had the most dramatic impact on pharmacy retailing. Quite recently, governmental authorities have on several occasions mentioned the possible de-regulation of pharmacy retailing in Finland. The first step has been the de-regulation of the OTC smoking cessation products, which have been available outside the pharmacies since May 2006. The next steps will be the de-regulation of OTC analgesic medicines in lower dosages and some other product categories, for example medicines for the treatment of cold symptoms and allergic reactions. The pharmacy institution in Finland is therefore facing a difficult situation in this era of gradual de-regulation. We can ask what will happen to the Finnish pharmacy institution with its strong cultural and professional heritage if the pharmacy system is de-regulated. How will pharmacists respond to the new demands as stated by the governmental authorities? Re-organising the business in the form of pharmacy networks can be seen as a significant statement on the apothecaries’ part about the issues in question. Pharmacy professionals are also quite cynical about the future of the ethics in the pharmacy business: “When business and economic interests take over the traditional apothecary’s profession then ethics and morals will be thrown out through the window.” (Apothecary, HYMA) Apothecaries thus argue that chain development and the path that YA has chosen with its business model are heading towards a future where there is no room for professional ethics. This provides a radical view of the current development and I would like to argue that there is going to be room for the professional ethics also in the future. As we have seen in the studied pharmacy networks, the understanding of ethics and morals has developed along with the business concept. The shared moral understanding in the pharmacy networks implies that the moral standards and ethics have not been abandoned but redefined by the professionals in the pharmacy networks.
9.2.3. Conclusions

The general attitude in our society supports the cost-cutting in the whole health care sector. Generic substitution and the reference pricing system are just the start of the gradual de-regulation of the pharmacy business. The de-regulation reflects short-term thinking from the governmental authorities to solve the problem of increasing health care costs in society, but also ideological commitments of governmental authorities, and is in contrast to the professional heritage and status that the Finnish pharmacies have obtained during past centuries and decades. Finnish pharmacy professionals have a professional legacy that they should, however, be able to combine with the new demands. Taking into account the strong professional heritage and strength that the pharmaceutical professionals have achieved over the centuries as a group of professionals, it would be strange if the professional knowledge and professional identity would vanish as a result of the eternal quest for efficiency forced on by the governmental authorities. Thus, although the pharmacy business is becoming more difficult to manage and it is not as protected as it used to be, one should bear in mind that the professional knowledge of pharmacy professionals will still be valuable in the future, regardless of the structure of the pharmaceutical distribution system. I believe that pharmacy professionals and professional ethics can adapt to the new demands, as exemplified by the pharmacy networks. There the ethics and moral understanding of professionals are being re-defined to support the network development and the business identities of each individual exist parallel to the professional identities.

9.3. Managerial implications

The phenomenon of chain development has often been studied in terms of supply chains, and the FMCG industry in particular provides several examples of chain development processes. Several scholars have stated that within the industries dominated by chains the only way to compete with the chains is to be part of a chain. Pharmacies’ chain development is a contemporary phenomenon in Finland and provides an example of horizontal integration and, thus, changing market structures and developing business networks. Finnish pharmacies have seldom been studied from a business network perspective and this study has also in that sense offered new information about the network dynamics in pharmacy business.

Several of the findings are of importance for the corporate world. First, the study emphasises the importance of a diversity of actors in business networks creating
dynamic and heterogeneous networks. Second, it highlights human actors’ ability to assume several identities, roles and positions in business networks and create social networks within them. Third, social networks are found to be important for enabling all kinds of exchange to take place in business networks and also across various business networks. Social networks are extremely influential for the development of shared understanding, trust and commitment between the pharmacy network members. These attributes can be argued to be essential for the development of long-term relationships, which are important for all integration processes, and thus for the development of business networks. In other words, business networks and social networks overlap and are dependent on each other.

This thesis has shown how vital the multidimensionality of actors, i.e. actors’ multiple identities, is for the establishment and development of pharmacy networks. Identities overlap as they are developed through social action, which plays an important role in network dynamics. This implies that chain development or other change processes can be very difficult to manage if management only perceives the economic components and the financial aspects as essential for the process. Here, an analysis of the social capabilities and abilities to adapt and commit to the change among the individual actors in firms and organisations constitutes an important complement. The social action as such cannot be controlled or managed by anyone and it can also be difficult to identify its content without a thorough analysis. The social action between individuals is, however, a force that enables the communication between individuals and thereby creates the willingness to co-operate as well as the shared meaning between individuals, which in turn are needed for any kind of integration to take place.

The phenomenon of the emerging pharmacy networks is actually a multifaceted phenomenon in our society, where political, economic, cultural, and historical elements together contribute to the change that we can observe. One external threat related to the future development of the Finnish pharmacies is the de-regulation of the license-based pharmacy business in Finland. The possible de-regulation will have an effect on all pharmacies in Finland, the privately owned pharmacies as well as the pharmacy chains. De-regulation or re-regulation of the pharmacy business has taken place in many European countries during recent years. In the Nordic countries, health authorities and governmental authorities have implemented de-regulation of the pharmacy system in Denmark in 2001 and in Norway in 2003. Pharmacy retailing in Sweden and Finland has not yet been affected by full-scale de-regulation, although
minor reforms have already taken place, as the OTC smoking cessation products have been available in the FMCG sector since spring 2006.

Many of the changes and much of the de-regulation that have taken place within the pharmaceutical industry in the Nordic countries have been influenced by the examples from other countries. Finnish and Swedish authorities have been watching closely the Danish and Norwegian authorities and, consequently, both Finnish and Swedish governmental authorities have seen that it may be possible to open up pharmaceutical distribution to free competition. In Finland in the summer 2006, the Ministry of Social Affairs and Health appointed a working group to investigate the strengths and weaknesses of the de-regulation scenario. In January 2007 the Ministry announced that, based on the results of the inquiry, there would be no changes in the current pharmacy retailing system in the near future. They decided instead to increase the number of small pharmacy-like ‘medicine cabins’ in smaller cities, in order to guarantee the medicine supply to the whole population of Finland.

In Sweden, however, the development is going in the opposite direction. There the decision to end the current pharmacy monopoly will take effect on 1st July 2009. As a consequence, the era of the state-owned pharmacy monopoly will come to its end and the pharmacy system will be re-regulated. This does not mean that pharmacy retailing in Sweden is being completely de-regulated. The state-owned pharmacy business, Apoteket AB, can retain ownership of half of the current 900 pharmacies, but the other half of the state owned pharmacies are to be sold. Of these 450 pharmacies the Swedish government wants to sell 200 to pharmacy professionals and thereby re-establish the concept of privately owned pharmacies in Sweden. Thus, Swedish pharmacies will become more like Finnish pharmacies, as the pharmacies can once again be owned by pharmacy professionals. However, the reform also means that different firms and international chains will be able to enter the market, as the pharmacy license is not a personal privilege, as it is in Finland. The reform therefore offers business opportunities also for Finnish pharmacy chains, i.e. for University Pharmacy. University Pharmacy has stated in the end of 2008 that it will investigate possibilities to expand to the Swedish pharmacy business. Their competitive advantage against other pharmacy chains is in that they have developed and tested their chain concept in Finland, where the health care system is in many ways similar to the Swedish system.
The problem with the re-regulation seems to be that the pharmacy tradition that can be found in Finland has diminished significantly in Sweden since the Swedish state-owned pharmacy monopoly was established in the 1960’s. Therefore, the Swedish Pharmacist Association has suggested that they could buy some of the newly de-regulated pharmacies and provide a centralised organisation for the private apothecaries. Thus, they would support the new apothecaries with purchasing, administration and IT systems as well as in marketing, sales activities and in professional education. The Swedish Pharmacist Association’s proposal refers to a franchising model from the FMCG sector, the so-called ICA-model, which means that the apothecary can gradually increase his or her ownership from 9% to 99%. This means, however, that apothecaries would still be bound to the central organisation, although they would own 99% of their own pharmacy units.

There seems to be many similarities between the future scenario for pharmacy retailing in Sweden and the pharmacy networks that have been established in Finland. Chain development is very clearly present in the development scenarios and the main differences are in the ownership and management structures. As we have observed in the Finnish pharmacy chains of YA and HYMA, chain development can exist in varying structures, where the level of integration of processes and chain activities may vary. In YA all head pharmacists are employees of the pharmacy network and the ownership and management are centralised. In HYMA all apothecaries are independent entrepreneurs. They are members and owners of the HYMA corporation, through which they have created a voluntary network.

Consequently, an interesting finding that must be underlined is the import of professional identity in the pharmacy business. Apothecaries in Finland are documented as being decisive and influential in relation to their own businesses. In Finland apothecaries still have a professional status and apothecaries and pharmacists are profiled as pharmacy professionals. In Sweden there has been a downsizing of the whole pharmaceutical profession ever since pharmacies became a state monopoly in the 1960’s and as a consequence pharmacy personnel’s status has changed. The knowledge of how to be an apothecary and how to run a pharmacy has diminished as two generations of pharmaceutical professionals have been educated according to the state-regulated monopoly. The state owned pharmacy system has blurred the professional identity of pharmaceutical professionals. As pharmacists have become
ordinary “officials” in a countrywide, state-governed bureaucratic organisation, it can be argued that pharmacies and pharmacists in Sweden have gradually lost the strength of their professional and organisational identities, as well as the entrepreneurial freedom, which have been characteristics of the pharmacist profession for centuries. The great challenge of pharmacy re-regulation is consequently linked to re-organising of the pharmacy business and empowering the pharmacists to become pharmacy professionals who can take control of their businesses. Pharmacists need to simultaneously build up their professional identities and business identities, which is clearly a challenging task.

9.4. Future research

The thesis has exposed several research areas that provide new perspectives to be considered in future research on business networks and network dynamics. The notion of multidimensionality of business actors has opened up a number of possibilities for developing our understanding of actors’ influence on the development of business networks.

Future research looking at the interplay and balance between the different actor dimensions and identities would be one interesting area to focus on. The present study has shown that the importance of the identities varies according to the issue involved. Thus, individuals’ multi-mindedness would be an interesting area of study where some systematic action could be found to lead the human actors as they manage different situations through their different identities in the interaction with other individuals. Two interesting questions would be: How is the balancing between the different identities and dimensions enacted, and can we find a repeated pattern of ‘balancing act’ in different types of situations?

As the present study has shown, there is a strong linkage between the different identities of actors and the network logic they contribute to. The shared network logic is therefore dependent on the different actors and actors’ identities and, therefore, the network logic is continuously influenced by the actors’ identities and ideas. Welch and Wilkinson (2002) have touched upon this area of research as they have noted how the experience gained and the interactions taking place in the network are over time reinforced, communicated, modified with ideas, which contributes to network evolution. Welch and Wilkinson (2002) remain, however, at the firm level in their
analysis, although the network logic can be argued to be manifest also at the individual level where the social world is being assembled (see Berger et al. 1974; Berger & Luckmann 1967; Natanson 1962; Schutz 1962). How ideas are actually spread among the network members and how the actor identities are continuously combined in the shared network logic would be another interesting area for future study.

As we are aware of the existence of several actor identities, another interesting angle for future research would be the development of these identities. This study and previous studies on social networks and business networks have focused on understanding the origins of individual identities, organisational identities and network identities and their development. However, we do not know as much about the professional identities and business identities and how they are established and developed. Thus, we could go deeper into the development processes of these identities. The simultaneous lack of professional and business identities among the pharmacy professionals in Sweden provides an interesting empirical area for studying how these identities are developed. Professional and business identities are crucial for the business actors and they need to be built up as part of the pharmacy business development. However, one may ask, how this rebuilding of identities will happen when both of the identities are shaped and created at the same time?

Another area of research that could be expanded in the future is the social network analysis based on the material that has been collected for this study. As the analysis in the present study has been limited to business actors at the management level, we could take a wider perspective, including the middle management and family members and friends in the analysis. The data could also be used for an analysis of social network attributes other than centrality, i.e. network cohesion, density and structural holes analysis.

In general, it would be interesting to test the framework of multidimensional actors within another industry, where the professional identity is not as strong as it is in the pharmacy business in Finland, and see whether the assumptions and findings in this study could be verified in another setting for business actors. Would we be able to identify the same overlapping nature of social and economic action and social networks between the actors? And would the content of social exchange in the social networks be focused on the same values as in pharmacy networks, i.e. feeling the import of
affiliation in a professional network where members can exchange professional knowledge and advice and help each other in solving various kinds of problems?
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Kauppalehti, 27.12.2001
Kauppalehti, 28.11.2002
Kauppalehti, 16.12.2002
Kauppalehti, 10.1.2003
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Dagens Nyheter, 6.6.2009
APPENDIX A SUMMARY OF THE FIELD NOTES

I had the opportunity to work as a pharmacy student at one of the studied pharmacy networks from November 2001 to April 2002. During that time period, I made field notes of the activities related to pharmacy network integration processes and communication of the network strategy, as well as observed the implementation of these strategies.

In the winter 2001-2002 I worked as a pharmacy student at a pharmacy in Helsinki, called Yliopiston Apteekki (University Pharmacy). University Pharmacy (YA) is the largest pharmacy network in Finland and I was located at the main unit in Helsinki. As a student my duty was to watch and learn. After the introduction to the unit and pharmacy work, the next step was to learn about the network or the chain, as the employees called it. The chain structure was introduced to me as an asset for all employees in YA. YA could provide their employees with education and resources that no other (privately owned) pharmacy could offer. YA was the biggest of all pharmacies in Finland and all employees would share the feeling of being part of a professional pharmacy business. The pharmacy was a whole new world for me, not to mention the chain perspective in the whole. I had not realised how large the organisation was. The main unit alone employed over 30 pharmacists. Everything was extremely well organised, all persons knew their rank and position in the unit and there seemed to be this unexplainable respect between people in their work. Not only the organisation seemed to be organised, also individuals seemed to be exceptionally organised and they took their work very seriously. I was a student and I could also sense that I was supposed to learn quite quickly what my position in the organisation was. Highest in the unit’s hierarchy was the chief pharmacist. Under her were all other pharmacists with higher education level, M.Sc. degree, and under them pharmacists with lower education, B.Sc. degree. Under the pharmacists were medicine workers and lowest in ranking were the cashiers and cleaners. My position was somewhere between pharmacists with B.Sc. degree and medicine workers. I had more rights than the medicine workers but I wasn’t fully educated to have the same responsibilities as pharmacists. In practical terms this meant that I was allowed to give drug information to customers but I had to show my supervisors all prescribed medicines that I handled before giving them to customers. I had two pharmacists as my supervisors, one with higher education and one with lower. They were both assisting me as well as controlling and evaluating my work.

After only few days I noticed that I had become a member of a very professional but also very hierarchic organisation. When I asked my practice supervisors how they felt about the hierarchy, they laughed at the question. They told me that I had not seen anything about hierarchy. They recommended me to visit some of the smaller, privately owned pharmacies in the city to see what the real pharmacy hierarchy was. As an example from this they mentioned that it was very common in the smaller pharmacies that pharmacists hardly ever talked to the chief pharmacist, apothecaries, except when they had some extremely demanding professional problems, that only the apothecary could assist with. This was not the case in YA, but I could not help noticing that people tend to seek for advice first within their own group/category in the hierarchy, before they would go to someone higher up in the hierarchy. Individuals had a quite strong inbuilt respect for hierarchy which they acted accordingly to.
After a couple of days in the pharmacy my status in the unit changed. My supervisors had learned by then that I had started my Ph.D. studies during the same autumn. They became aware of that I was observing them for my research project at the same time as I was learning as a student. It was true that I was observing, but they did not know that I had not decided what my research topic would be. I kept a research diary from the first day at the pharmacy and took notes from my observations. Based on my notes and observations during the six months long practice I started to see something visualising.

Observation 1)
There was one pharmacist who took care of all orders and logistics in the unit. Because of my economic background, I became co-responsible for ordering products from the wholesalers and own-production laboratory, whenever the ordinary person was away. My supervisors and other pharmacists said that they did not know how the logistics in a pharmacy worked. They seemed to keep their work as a pharmacist separate from any business actions. The chief pharmacist and people in management were responsible for all business related tasks. I also noticed that pharmacists had sometimes difficulties in informing customers about what different medicines would cost. Money was in general a difficult topic. My observations summarised in that I could see that there was a strong ethical and moral label in the pharmacists' work. They had “a calling” for their work and the business world was something strange and abstract. The professionalism was strong in the working community and the business thinking was secondary important.

Observation 2)
When I was introduced to the chain strategies, I noticed that YA had invested tremendously in educating their employees about the idea of being the leading pharmacy chain in Finland. The advantages of being a pharmacy chain were presented in all education and introduction material to new employees. YA had invested especially in creating a unified corporate image. They had just rebuilt all the units in Finland to have same interiors and product placement in the shops. They had introduced an intranet, where important information was distributed, sent and received. I noticed, though, that the main unit where I worked was also the place for all pilot studies. All chain strategies and implementations were first tested within this unit. In other words, employees at the unit were used to new experiments. Consequently, I became interested of knowing how well these implementations were carried out in the other units. For example, the intranet project had not yet been launched in the whole chain. I started to realise that the main unit was a different species compared to the other units. I also noticed that units in Helsinki were more equal and created a heterogeneous node. Were the other units in the other cities as unified as they were expected to be. After all, the chain structuring was still in progress. Was YA really a centralised chain or was it still a future plan?

Observation 3)
The most tangible part of the chain strategies was the focus on better customer service and drug information. Pharmacists were aware of the chain's goals of becoming best in customer service within the field. YA's main strategy in competing with other pharmacies has become to provide high standard customer service. They have created a customer loyalty program and improved customer database system. Based on the data they have of each customer, they can offer better and safer drug information for customers. They can also offer reduced prices to loyal customers. However, the strategic background for improved customer service had not really become clear for all pharmacists. It depended on the individuals. Pharmacists on different levels in the unit were responsible for different areas of customer service implementation. Pharmacists on the higher level represented middle management and they all carried
the title “customer service manager”. Pharmacists on the lower level worked directly with customers all day. Both groups had participated in the chain’s internal training of customer service. However, when talking about chain values with pharmacists on different levels, their perceptions seemed to differ. I started noticing that people on different levels had quite varying conceptions of the chain. The harmonized picture of all employees being part of the big chain started to splitter. It became quite obvious that many people especially on the lower level had no comprehensive picture of the chain not to mention the meaning of it. They saw themselves as professionals within their unit. On the higher level people were much more aware of the chain strategy and structure but even there differences between individuals could be observed. The pharmacists on the higher level were supposed to be familiar with the chain strategies, but were they more committed to the chain thinking then pharmacists on the lower level who were obviously committed to the unit they worked for? I started to notice that the chain structuring was indeed very much still in-progress. The main question was, did the position in the organisation influence the commitment of a person to the network?

Observation 4)
Pharmacist from different units in Finland met each other in different education seminars that YA organised. I started to wonder whether the connections over units’ boarders could be more common then it first looked like. After the notion differences in individuals’ position and commitment, I started to observe how the individuals were connected to each other on different levels within the unit and between different units. I could see formal connections within the unit and between the units. These relations included exchange of professional information e.g. about different medicines, prescriptions etc. But there was also informal information that was exchanged between people who trusted each other. There were nodes of people who seemed to have their own network. Could individuals from different parts and levels in the chain influence the network via the social and informal networks? If so then what would the informal networks look like? What kind of connections would the individuals’ social networks reveal?

Observation 5)
During the time I was practicing at the pharmacy in spring 2002 a large media chaos started to circle around YA. Privately owned pharmacies in Finland had made an official complaint about YA’s position within pharmaceutical distribution in Finland. They accused YA for misusing its rights to have establishments all over in Finland and taking customers from other pharmacies with the loyal customer program. Private pharmacies were represented in the case by The Association of Finnish Pharmacies. The events showed that other pharmacies had started feeling the effects of YA’s power within the market. YA had gained 10% of the markets. However, chain development had started also in private pharmacies. There had to be also other pharmacy chains growing who wanted to compete with YA and gain advantages of cooperation. But what were these pharmacy chains like? Could they already be identified as chains or were they in the beginning of launching their partnership?
General information

1. Name: ________________________________________________________________

2. Date of birth (month / year): ________/ ________

3. Gender:  
- [ ] male  
- [ ] female

4. What is your education?
   - [ ] Pharmacist  
   - [ ] M. Sc. (Pharm)  
   - [ ] Doctor  
   - [ ] Other M. Sc. degree  
   - [ ] Other degree

5. Place of work:________________________________________________________________________
Your personal way of working

6. The following questions relate to your personal way of working. For each question, select alternative A or B that best describes your way of working. It is important that you choose the alternative that represents your true way of working and not the way you would like to work.

A. When evaluating different ways of implementing things I usually first think of
   A. My own possibilities/opportunities of influence
   B. Long-term implications

B. My strengths are
   A. being flexible
   B. being precise and determined

C. When discussing and deciding on things I usually try to
   A. be a reconciler
   B. defend my own views

D. I believe people will get into trouble if
   A. they are not willing to compromise
   B. they do not tell others what they really think

E. In a managerial position I believe my strengths are in
   A. getting others to support my views
   B. inform everyone equally

F. When working on a project
   A. I discuss with my colleagues as the project progresses
   B. I strictly follow the agreed project plan

G. When stressed for time
   A. I primarily take care of my own work
   B. I gladly help others
Evaluation of personal networks

The following questions aim to evaluate your personal networks in your daily work. You can have different connections to the same people so you can mention them in several instances. Please remember, the information you provide will remain confidential.

7. Who is your closest superior? First name and initials

8. Think about your current work, where you need help from others and connections to other units on a daily basis. Imagine a situation where you would be changing jobs from University Pharmacy to another company and you would like your successor to receive the best possible introduction to the tasks that you leave behind. Who are the 3-4 people you find important for your own work and whom you would mention to your successor?

First name and initials

9. With whom have you had the most difficulties or problems in your current work / position?

First name and initials

B. Why has working with this person been difficult?

________________________________________________________________
________________________________________________________________
________________________________________________________________
10. If you would be changing jobs, with whom would you discuss it with? (These persons can be family, colleagues, friends etc.)

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11. When evaluating all your work-related contacts within University Pharmacy, which persons and contacts have been the most beneficial for you personally on your career?

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12. And when evaluating all your work-related contacts outside University Pharmacy, which persons and contacts have been the most beneficial for you personally?

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13. With whom do you enjoy working the most?

First name and initials

14. Trust is an import aspect in cooperation. Please name 3-4 people with whom you can discuss matters that are important to yourself.

First name and initials

15. As the last question of this part of the questionnaire, please give the first name and initials of your spouse. If you are single, please leave the box empty.

First name and initials
Actors and individuals in the network

The remaining questions relate to people you have mentioned in the previous part, where you have been able to name a total of 27 people. You have probably named several people more than once and therefore there you have likely mentioned less than 27 names. In order to answer the questions as smoothly as possible in this part, please list the previously provided first names and initials of people in the same order as you have mentioned them in the earlier questions. If the same name is mentioned several times, please list the name at the first mentioning only.

**Persons mentioned**

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16. Please check the names! Is someone missing from the list, whom you have previously mentioned? Someone who has been of great help or someone who has caused a lot of trouble? If any, please add the person to the list if there are still empty slots.

Relationships between actors and individuals in the network

The following questions reflect your personal relationships with each of the previously mentioned persons. Please choose the alternative that best describes the character of your relationship.

The person is **very close**,  
the relationship is one of the most important ones for you

The person is **quite close**,  
you like to work with her/him and you might consider her/him a friend.

The person is **somewhat distant**,  
you like to work her/him but you do not want a closer relationship.

The person is **distant**,  
you do not want to work with her/him unless it is favourable for the work tasks.
17. How close to you are the people you have mentioned?

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18. For how long have you known them? (approximation)

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19. How often do you communicate with each person on average?

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20. And the last assignment, please draw a picture of University Pharmacy and your position in the organisation. The format is free!
APPENDIX C   SURVEY 2

General information

1. Name: _________________________________________________

2. Date of birth (month / year): _______ / _______

4. Gender: 
   ☐ male   ☐ female

4. What is your education?
   ☐ Pharmacist   ☐ M. Sc. (Pharm)   ☐ Doctor
   ☐ Other M. Sc. degree
   ☐ Other degree

5. Place of work:_______________________________________________

6. Position:________________________________________________

7. The apothecary of the pharmacy: _____________________________________

8. Senior pharmacists working at the pharmacy: ____________________________
   _______________________________________________________________
   _______________________________________________________________

9. For how long have you worked at this pharmacy?
   _______________________________________________________________

The following questions are for the apothecaries:

10. When did the pharmacy join HYMA? ________________________________

11. Is this the first pharmacy where you are the apothecary? _______________

If you have been the apothecary in other pharmacies, please name which pharmacy and when:
   _______________________________________________________________
   _______________________________________________________________

12. How did you join HYMA? Did you contact HYMA or were you recruited?
13. Who was/were the contact persons at HYMA?

14. Did you know them beforehand? How?

15. Why were you asked to join? Please describe the joining process with a few words.

16. What was the foremost reason for joining HYMA for you personally?

17. How would you describe the strengths of HYMA as a pharmacy chain? Which aspects are most beneficial for your own pharmacy?

18. Are you working for HYMA or your own pharmacy? Please choose on a 1-6 scale.

   HYMA  1  2  3  4  5  6 own pharmacy

19. Which characteristics do you value the most in your colleagues

   A) trustworthiness

   B) professional knowhow

   C) friendliness

20. When you communicate with your colleagues within the pharmacy, what is the most common reason for being in contact with others?

21. And when you communicate with your colleagues within HYMA, what is the most common reason for being in contact with others?
Your personal way of working

22. The following questions relate to your personal way of working. For each question, select alternative A or B that best describes your way of working. It is important that you choose the alternative that represents your true way of working and not the way you would like to work. You can for example think about the past year 2004 and reflect how you have reacted in various situations.

A. When evaluating different ways of implementing things I usually first think of
   A. My own possibilities/opportunities of influence
   B. Long-term implications

B. My strengths are
   A. being flexible
   B. being precise and determined

C. When discussing and deciding on things I usually try to
   A. be a reconciler
   B. defend my own views

D. I believe people will get into trouble if
   A. they are not willing to compromise
   B. they do not tell others what they really think

E. In a managerial position I believe my strengths are in
   A. getting others to support my views
   B. inform everyone equally

F. When working on a HYMA project
   A. I discuss with my colleagues as the project progresses
   B. I strictly follow the agreed project plan

G. When stressed for time
   A. I primarily take care of my own work
   B. I gladly help others
Evaluation of personal networks

The following questions aim to evaluate your personal networks in your daily work. You can have different connections to the same people so you can mention them in several instances. Please remember, the information you provide will remain confidential.

23. Who is your closest superior?  
First name and initials

24. Think about your current work, where you need help from others and connections to other units on a daily basis. Imagine a situation where you would be changing jobs from HYMA to another pharmacy or company and you would like your successor to receive the best possible introduction to the tasks that you leave behind and to the activities of HYMA. Who are the 3-4 people you find important for your own work and whom you would mention to your successor?

First name and initials
25. If you would be changing jobs, with whom would you discuss it with? If you would not discuss the matter with your colleagues, you can also mention family or friends.

First name and initials

26. When evaluating all your work-related contacts within your pharmacy, which persons and contacts have been the most beneficial for you personally on your career?

First name and initials
27. And when evaluating all your work-related contacts within HYMA, which persons and contacts have been the most beneficial for you personally?

First name and initials

28. With whom do you enjoy working the most?

First name and initials

29. Trust is an import aspect in cooperation. Please name 3-4 people with whom you can discuss important matters regarding HYMA, e.g. what is happening within HYMA and who does what?

First name and initials
30. With whom have you had the most difficulties or problems in your current work / position?

First name and initials

B. Why has working with this person been difficult??

________________________________________________________________
________________________________________________________________
________________________________________________________________

31. And to conclude this part of the questionnaire, please specify your relationship to people mentioned in question 25 that are not colleagues.

Relationship (e.g. husband/wife, friend etc.) First name and initials

________________________________________________________________
________________________________________________________________
________________________________________________________________

__________________________
**Actors and individuals in the network**

The remaining questions relate to people you have mentioned in the previous part, where you have been able to name a total of 27 people. You have probably named several people more than once and therefore there you have likely mentioned less than 27 names. In order to answer the questions as smoothly as possible in this part, please list the previously provided first names and initials of people in the same order as you have mentioned them in the earlier questions. If the same name is mentioned several times, please list the name at the first mentioning only.

**Persons mentioned**

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32. Please check the names! Is someone missing from the list, whom you have previously mentioned? Someone who has been of great help or someone who has caused a lot of trouble? If any, please add the person to the list if there are still empty slots.

**Relationships between actors and individuals in the network**

The following questions reflect your personal relationships with each of the previously mentioned persons. Please choose the alternative that best describes the character of your relationship.

The person is **very close**,
the relationship is one of the most important ones for you

The person is **quite close**,
you like to work with her/him and you might consider her/him a friend.

The person is **somewhat distant**,
you like to work her/him but you do not want a closer relationship.

The person is **distant**,
you do not want to work with her/him unless it is favourable for the work tasks.
33. How close to you are the people you have mentioned?

Persons mentioned

1. very close  quite close  s.w. distant  distant  1.____________________________
2. very close  quite close  s.w. distant  distant  2.____________________________
3. very close  quite close  s.w. distant  distant  3.____________________________
4. very close  quite close  s.w. distant  distant  4.____________________________
5. very close  quite close  s.w. distant  distant  5.____________________________
6. very close  quite close  s.w. distant  distant  6.____________________________
7. very close  quite close  s.w. distant  distant  7.____________________________
8. very close  quite close  s.w. distant  distant  8.____________________________
9. very close  quite close  s.w. distant  distant  9.____________________________
10. very close quite close  s.w. distant  distant 10.____________________________
11. very close quite close  s.w. distant  distant 11.____________________________
12. very close quite close  s.w. distant  distant 12.____________________________
13. very close quite close  s.w. distant  distant 13.____________________________
14. very close quite close  s.w. distant  distant 14.____________________________
15. very close quite close  s.w. distant  distant 15.____________________________
16. very close quite close  s.w. distant  distant 16.____________________________
17. very close quite close  s.w. distant  distant 17.____________________________
18. very close quite close  s.w. distant  distant 18.____________________________
19. very close quite close  s.w. distant  distant 19.____________________________
20. very close quite close  s.w. distant  distant 20.____________________________
21. very close quite close  s.w. distant  distant 21.____________________________
22. very close quite close  s.w. distant  distant 22.____________________________
23. very close quite close  s.w. distant  distant 23.____________________________
34. For how long have you known them? (approximation)

Persons mentioned

1. Approximately ________________ years
2. Approximately ________________ years
3. Approximately ________________ years
4. Approximately ________________ years
5. Approximately ________________ years
6. Approximately ________________ years
7. Approximately ________________ years
8. Approximately ________________ years
9. Approximately ________________ years
10. Approximately ________________ years
11. Approximately ________________ years
12. Approximately ________________ years
13. Approximately ________________ years
14. Approximately ________________ years
15. Approximately ________________ years
16. Approximately ________________ years
17. Approximately ________________ years
18. Approximately ________________ years
19. Approximately ________________ years
20. Approximately ________________ years
21. Approximately ________________ years
22. Approximately ________________ years
23. Approximately ________________ years
35. How often do you communicate with each person on average?

Persons mentioned

1. daily weekly monthly less frequently
2. daily weekly monthly less frequently
3. daily weekly monthly less frequently
4. daily weekly monthly less frequently
5. daily weekly monthly less frequently
6. daily weekly monthly less frequently
7. daily weekly monthly less frequently
8. daily weekly monthly less frequently
9. daily weekly monthly less frequently
10. daily weekly monthly less frequently
11. daily weekly monthly less frequently
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15. daily weekly monthly less frequently
16. daily weekly monthly less frequently
17. daily weekly monthly less frequently
18. daily weekly monthly less frequently
19. daily weekly monthly less frequently
20. daily weekly monthly less frequently
21. daily weekly monthly less frequently
22. daily weekly monthly less frequently
23. daily weekly monthly less frequently

36. And the last assignment, please draw a picture of Hyvän Mielen Apteekit and your position in the organisation. The format is free!


