Cooperation in Cooperatives

The Creation, Diffusion and Realisation of Ideas

Master's thesis in Complex Adaptive Systems

JOHAN FRISCH

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The Creation, Diffusion and Realisation of Ideas
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Abstract

The topic of this master's thesis is the creation, diffusion and realisation of ideas in cooperatives. The aim is to investigate how this is done at cooperatives. Cooperatives are democratic organisations were members share an equal vote in the decision making. This study focuses on cooperatives were the workers have the right to apply for membership. Gathering of data was done with interviews. Two cooperatives in Gothenburg, Sweden were selected in the study. The study finds that some cooperative-specific methods were used for the creation, diffusion and realisation of ideas. Furthermore, quantified computer simulations are a potential way of analysing and improving the structure of cooperatives.

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INTRODUCTION

1.1 Background

There are different ways of organising work. The central component of all social organisations is the people involved in them. How they work as individuals, as groups and as part of a larger organisation is essential for reaching the goals of the organisation.

Formally the way work is organised depends on the type of organisation. One category of organisations are "cooperatives", briefly they can be defined as limited liability companies with the difference that the power does not arise from owning shares but from membership in one or more categories of stakeholders such as workers, consumers, residents, etcetera.

Cooperatives with workers as members tend to share a democratic ideal where all members actively participate as free equals, and have one person one vote for all members. There can however be a significant difference between how an organisation is intended to function and how it works in reality. This can be a problem if it undermines the potentially positive benefits of a democratic work environment.

1.2 Aim

This thesis aims to explore democratic decision-making processes in cooperatives. It aims to identify practices performed in cooperatives that enable democratic decision-making at cooperatives were workers can become members. Furthermore, the aim is to identify possible reasons for the chosen methods or the lack thereof, and identify possible ways to simulate the decision-making process in a computer model. Finally, the aim is to investigate societal, ethical and environmental consequences of the decision-making process.

1.3   Thesis Structure

The thesis consists of the following main sections:

- Section 1, INTRODUCTION - introduces the topic and and the overall aim.

- Section 2, CONTEXT - provides the viewing point for the thesis.

- Section 3, FRAMEWORK - contains the models and data for the analysis.

- Section 4, METHOD - describes and motivates the utilised method.

- Section 4, FINDINGS - provides the results.

- Section 5, DISCUSSION - provides the reasoning for the conclusions.

- Section 6, CONCLUSION - presents the conclusions.

- Appendix A - the questionnaire used in the study.

- Appendix B - the software code utilised in the thesis.

2
CONTEXT

This section puts the topic of the thesis in a larger context. The section contains three parts; one containing perspectives on how work can be organised, one about how the ways to organise work has changed historically and one about the internal and external consequences of cooperatives that have been identified. The context section gives a structure that is used to construct the framework section.

The part with perspectives about work lifts philosophical ideas, larger organisational and psychological perspectives and various findings. This gives a structure from which to find possible ways to interpret and enhance the democratic functioning of organisations.

The organisational history provides a historical understanding for the existence of various ways to organise work. It provides a context to cooperatives as an organisation.

The part about the consequences of cooperatives shows how cooperatives can have positive consequences internally and externally. This shows why cooperatives might be an interesting way to organise work and connects to the social, ethical and environmental consequences of cooperatives.

Furthermore, there are two unfortunate tendencies that the context tries to combat. One tendency is the forgetting of past insights, where previously obvious ideas have to be painfully rediscovered. Another tendency is the lack of interactions between different disciplines, resulting in not only a lack of knowledge of the understanding generated elsewhere, but it also risks the creation of an overall misleading perspective and starting point for future attempts of understanding.

2.1 Perspectives on Organising Work

Many perspectives can be taken on the organisation of work. This section contains three parts, one containing philosophical reflections about work, one about general organisational theory and one concerning human social behaviour.

The philosophical part lifts some historical reflections about work mainly from the enlightenment and its successors. The purpose is to give a context around what forms of organising work that might be desirable. The organisational theory lifts various perspectives that can be taken on an organisation. This is done in order to show possible ways an investigation into an organisation can be made.

The part about human social behaviour highlights both philosophical reflections and findings. It gives an indication about what forms of organisation that might be beneficial from the point of view of human behaviour and interaction.

2.1.1 Reflections on Democratic Organisation of Work

Reflections on democracy, work, human nature and their essence and relationships have a long history. Already the leading ancient Greek philosopher and scientist Aristotle (384 – 322 BC) remarked that certain professions undermined one's ability to partake in democratic decision-making processes since they hindered the free development of the inner person (Aristoteles, 2007).

This section on work highlights that there are many different ways to organise work. It therefore attempts to lift up the historical contributions to the subject and broaden the sight in order to avoid myopic preconceptions.

2.1.1.1 Adam Smith
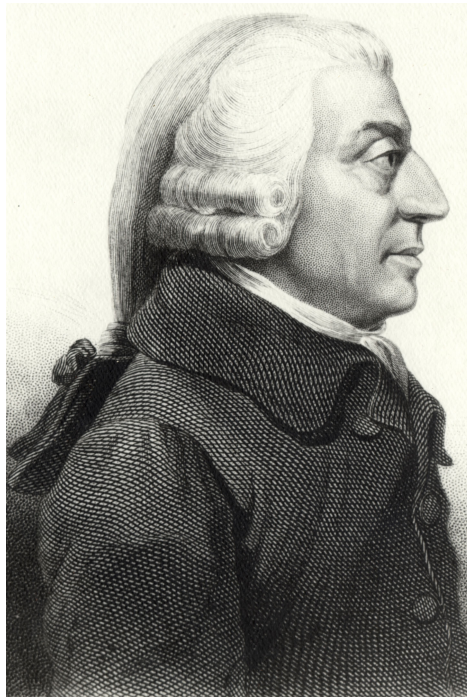
Figure 2.1: Etching of Adam Smith (1723 – 1790). Etching by: Cadell and Davies, 1811 or John Horsburgh, 1828 or R.C. Bell, 1872 (2008).

One of the most prominent actors in the Scottish enlightenment, the Scottish philosopher and economist Adam Smith (1723 – 1790) in what can be considered the cornerstone of classical economics "An Inquiry into the Nature and Causes of the Wealth of Nations" from 1776 (Nationalencyklopedin, 2017a) wrote that working for others reduces efficiency and has detrimental effects.

> "Nothing can be more absurd, however, than to imagine that men in general should work less when they work for themselves, than when they work for other people. A poor independent workman will generally be more industrious than even a journeyman who works by the piece. The one enjoys the whole produce of his own industry; the other shares it with his master. The one, in his separate independent state, is less liable to the temptations of bad company, which in large manufactories so frequently ruin the morals of the other. The superiority of the independent workman over those servants who are hired by the month or by the year, and whose wages and maintenance are the same whether they do much or do little, is likely to be still greater" (Smith, 2007, pp. 69-70).

The modern day corporation, or joint stock company, was also addressed by Smith (2007) and he saw in them a great risk that the board would act unwisely with the investors' money.

> "The trade of a joint stock company is always managed by a court of directors. This court, indeed, is frequently subject, in many respects, to the control of a general court of proprietors. But the greater part of those proprietors seldom pretend to understand anything of the business of the company [...] The directors of such companies, however, being the managers rather of other people's money than of their own, it cannot well be expected that they should watch over it with the same anxious vigilance with which the partners in a private copartnery frequently watch over their own. Like the stewards of a rich man, they are apt to consider attention to small matters as not for their master's honour, and very easily give themselves a dispensation from having it. Negligence and profusion, therefore, must always prevail, more or less, in the management of the affairs of such a company. It is upon this account that joint stock companies for foreign trade have seldom been able to maintain the competition against private adventurers. They have, accordingly, very seldom succeeded without an exclusive privilege, and frequently have not succeeded with one. Without an exclusive privilege they have commonly mismanaged the trade. With an exclusive privilege they have both mismanaged and confined it" (Smith, 2007, pp. 574-575).

Smith (2007) also addressed the conflicting interests in an economy from a macro perspective where "[t]he interest [...] of those who live by wages, is [...] strictly connected with the interest of the society". But this is not the case of the interest of "[h]is employers [...] those who live by profit". This is because the consequences to society are different, "the rate of profit does not, like [...] wages, rise with the prosperity, and fall with the declension of the society. On the contrary, it is naturally low in rich, and high in poor countries, and it is always highest in the countries which are going fastest to ruin. The interest of this third order, therefore, has not the same connexion with the general interest of the society" (Smith, 2007, pp. 199 - 200).

Furthermore, one of the intended consequences of the ideas put forth by Adam Smith were either perfect equality or the continuous increase in equality as a result of freedom. Which is interesting given the earlier remarks about the efficiency of the self-employed worker.

> "The whole of the advantages and disadvantages of the different employments of labour and stock, must, in the same neighbourhood, be either perfectly equal, or continually tending to equality. If, in the same neighbourhood, there was any employment evidently either more or less advantageous than the rest, so many people would crowd into it in the one case, and so many would desert it in the other, that its advantages would soon return to the level of other employments. This, at least, would be the case in a society where things were left to follow their natural course, where there was perfect liberty, and where every man was

perfectly free both to choose what occupation he thought proper, and to change it as often as he thought proper. Every man's interest would prompt him to seek the advantageous, and to shun the disadvantageous employment" (Smith, 2007, p. 82).

2.1.1.2 David Hume

Figure 2.2: Painting of David Hume (1711 - 1776). Painting by: Allan Ramsay (1754).

David Hume (1711 - 1776) is generally regarded as one of the most important philosophers in the history of the English-speaking world (Stanford Encyclopedia of Philosophy, 2017). In Hume (1896, p. 283) emotions are considered the prime mover, necessary to move from "is" to "ought", the source of morality and necessary for action.

Hume concluded that "[r]eason is, and ought only to be the slave of the passions, and can never pretend to any other office than to serve and obey them" (Hume, 1896, p. 283). The emphasis on emotions, the need for them as a source for action and the need for consistency between emotions and actions were then extended upon in the Romantic moment.

2.1.1.3   Alexander von Humboldt

Figure 2.3: Painting of Alexander von Humboldt (1769 – 1859). Painting by: Friedrich Georg Weitsch (1806).

One of the main persons in the Romantic moment with a major impact on the university system all over the world (Anderson, 2004) the Prussian naturalist and philosopher Alexander von Humboldt (1769 – 1859) (Nationalencyklopedin, 2017b) wrote extensively on human nature and the organisation of work.

Central to Humboldt's perspective was that an organisation should not "make man an instrument to serve its arbitrary ends, overlooking his individual purposes" (von Humbolot, 1851, p. 82). Overlooking the internal desires of people would deprive them of the internal energy that truly makes them human. If a person acts in a purely mechanical way, responding to external demands or instructions rather than in ways originating in the persons own interests, energies and power, then the person is reduced to an instrument. "But the loss of energy brings about the loss of all other virtues. Without it, man turns into a machine. We may admire what he does; but we despise what he is" because the worker is not a free person (von Humboldt, 1963, p. 37). The idea was that freedom would enable a person to act according to their inner impulses with true human energies.

> "Freedom is undoubtedly the indispensable condition without which even the pursuits most congenial to individual human nature can never succeed in producing such fair and salutary influences. Whatever does not spring from a man's free choice, or is only the result of instruction and guidance, does not enter into his very being but remains alien to his true nature. He does not perform it with truly human energies, but merely with mechanical exactness" (von Humbolot, 1851, p. 25).

This internal source of impulse would then make possible the creation and integration of new understanding in a deeper way. Since the source of understanding and development is internal, the usage of the internal impulses as the directing force for work would stimulate the development of the individual since "all moral culture springs solely and immediately from the inner life of the soul, and can never be produced by external and artificial contrivances" (von Humbolot, 1851, p. 73). And "[t]he cultivation of the understanding, as any of man's other faculties, is generally achieved by his own activity, his own ingenuity, or his own methods of using the discoveries of others" (von Humbolot, 1851, p. 20). And since "[t]o inquire and to create — these are the centres around which all human pursuits more or less directly revolve" (von Humbolot, 1851, p. 92). This internal spring is an essential aspect of human nature, and it should according to Humbolt be reflected in the way work is organised. Hence the life that suites people best is one in which their internal nature can spring forth and be manifested. A life where the inner person is in harmony with the persons activities.

"Everything towards which man directs his attention, whether it is limited to the direct or indirect satisfaction of his merely physical wants, or to the accomplishment of external objects in general, presents itself in a closely interwoven relation with his internal sensations. Sometimes, moreover, there co-exists with this external purpose, some impulse proceeding more immediately from his inner being; and often, even, this last is the sole spring of his activity, the former being only implied in it, necessarily or incidentally. The more unity a man possesses, the more freely do these external manifestations on which he decides emanate from the inner springs of his being, and the more frequent and intimate is the cooperation of these two sources of motive, even when he has not freely selected these external objects. A man, therefore, whose character peculiarly interests us, although his life does not lose this charm in any circumstances or however engaged, only attains the most matured and graceful consummation of his activity, when his way of life is in harmonious keeping with his character" (von Humbolot, 1851, p. 23).

Von Humboldt considered this internal enthusiasm of people to be connected to the material world in terms of their work. Especially the need to feel as one with the work and the fruits of it.

"The grand characteristic of human nature is organisation. Whatever is to ripen in its soil and expand into a fair maturity, must first have existed therein as the little germ. Every manifestation of power presupposes the existence of enthusiasm; and but few things sufficiently cherish enthusiasm as to represent its object as a present or future possession. Now man never regards that which he possesses as so much his own, as that which he does; and the labourer who tends a garden is perhaps in a

truer sense its owner, than the listless voluptuary who enjoys its fruits"
(von Humbolot, 1851, p. 20).

The same general activities, performed from internal rather than external impulses
would improve those that perform them rather than degrade them.

"In view of this consideration, it seems as if all peasants and craftsmen
might be elevated into artists; that is, into men who love their labour for
its own sake, improve it by their own plastic genius and inventive skill,
and thereby cultivate their intellect, ennoble their character, and exalt
and refine their enjoyments. And so humanity would be ennobled by the
very things which now, though beautiful in themselves, so often go to
degrade it" (von Humbolot, 1851, pp. 23 - 24).

2.1.1.4 Immanuel Kant
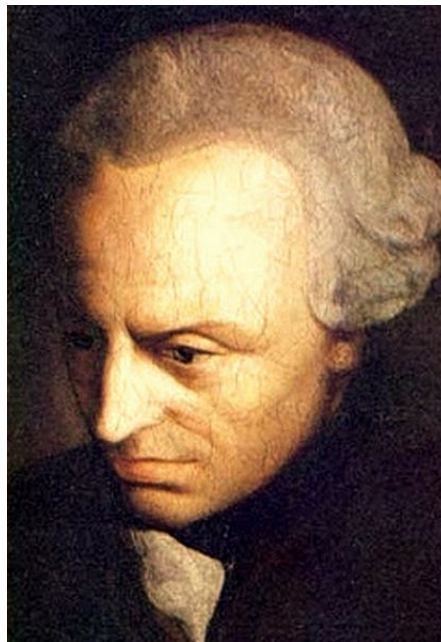
Figure 2.4: Painting of Immanuel Kant (1724 – 1804). Painting by: Elisabeth v.
Stägemann (possibly) (ca 1790).

One of the most influential philosophers of the modern world, Immanuel Kant (1724
– 1804) (Stanford Encyclopedia of Philosophy, 2016a) was not just in agreement
with need for people to perform activities from their inner impulses, but elevated it
to the supreme moral principle. Hence we should "[a]ct in such a way as to treat
humanity, whether in your own person or in that of anyone else, always as an end
and never merely as a means" (Kant, 2018, p. 29).

2.1.1.5 John Stuart Mill
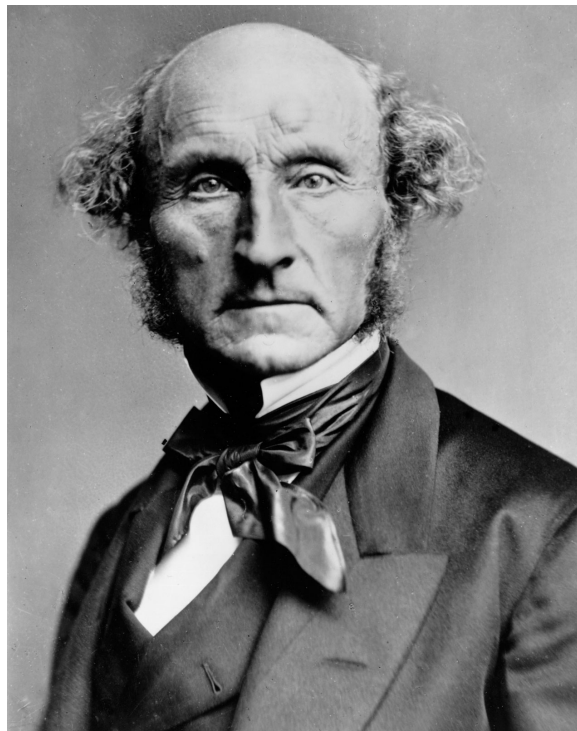
Figure 2.5: Photo of John Stuart Mill (1806 – 73). Photo by: London Stereoscopic Company (ca 1870).

The most influential philosopher in the English-speaking world in the nineteenth century, John Stuart Mill (1806 – 73) (Stanford Encyclopedia of Philosophy, 2016b), was looking forward to a day with increased democracy in the workplace.

> "The form of association, however, which if mankind continue to improve, must be expected in the end to predominate, is not that which can exist between a capitalist as chief, and work-people without a voice in the management, but the association of the labourers themselves on terms of equality, collectively owning the capital with which they carry on their operations, and working under managers elected and removable by themselves" (Mill, 1872, p. 465).

The hope was crucially based on human nature, echoing the sentiment of Wilhelm von Humboldt, that people need a democratic organisation in order to reach their intellectual and social capacities.

> "To work at the bidding and for the profit of another, without any interest in the work — the price of their labour being adjusted by hostile competition, one side demanding as much and the other paying as little

as possible — is not, even when wages are high, a satisfactory state to human beings of educated intelligence, who have ceased to think themselves naturally inferior to those whom they serve" (Mill, 1848, pp. 327-328).

2.1.1.6   John Dewey
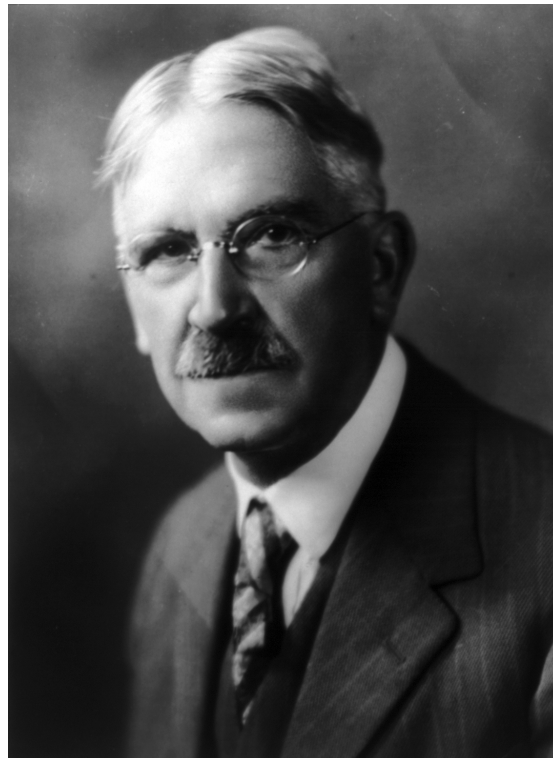
Figure 2.6: Photo of John Dewey (1859 - 1952). Photo by: Underwood & Underwood (ca 1900).

The philosopher and psychologist John Dewey (1859 - 1952) wrote extensively on human nature, especially with regard to education and democracy (Stanford Encyclopedia of Philosophy, 2018b). The influence of John Dewey could be illustrated by the fact that the Canadian historian Hilda Neatby (1953) described him as important as Aristotle was in the middle ages. Dewey defined democracy from an individual perspective as:

> "From the standpoint of the individual, [democracy] consists in having a responsible share according to capacity in forming and directing the activities of the groups in which one belongs and in participating according to need in the values which the group sustains" (Dewey, 2012 (1927), p. 121).

Dewey identified that there was no such democracy in the workplace, and that this reduced the labourers intellectually and spiritually.

"Most of those who are engaged in the outward work of production and distribution of economic commodities have no share – imaginative, intellectual, emotional – in directing the activities in which they physically participate. [...] economic associations are fixed in ways which exclude most of the workers in them from taking part in their management. The subordination of the enterprise to pecuniary profit reacts to make the workers "hands" only. Their hearts and brains are not engaged. They execute plans which they do not form and of whose meaning and intent – beyond the fact that these plans make a profit for others and secure a wage for themselves" (John Dewey, 1984 (1930), p. 104).

The need of having the workers participating in democratic decision-making can also be connected to Dewey's ideas about education. One of Dewey's central principles of education is that the student ought to solve problems that relate to their lives and that the problems ought to be chosen by the students. The allocation to different people, of the task to choose the problem and the task to solve it tend to reduce the task of the students to a mechanical choice of means (Dewey, 1916).

This can be seen as analogous to the separation of people into "hands" and "brains" in the workplace, with their "hearts" left out. Echoing the previous thoughts from the enlightenment, Dewey saw a major problem stemming from this to be the destruction of the individual human persons inner development and growth.

Furthermore education is not limited to a few sectors of society. "In the broad and final sense all institutions are educational in the sense that they operate to form the attitudes, dispositions, abilities and disabilities that constitute a concrete personality". And education is essential because if not "freedom of individual action has intelligence and informed conviction back of it, its manifestation is almost sure to result in confusion and disorder" (Dewey, 1937, pp. 48 - 55).

But the connection between democracy and education goes deeper. "The foundation of democracy is faith in the capacities of human nature; faith in human intelligence and in the power of pooled and cooperative experience". And according to Dewey "[e]very autocratic and authoritarian scheme of social action rests on a belief that the needed intelligence is confined to a superior few [...]". But "[i]t is not belief that these things are complete but that if given a show they will grow and be able to generate progressively the knowledge and wisdom needed to guide collective action" (Dewey, 1937, pp. 48 - 55).

The observations about work and education lead Dewey to the conclusion that the free development of the individual was hampered.

"Instead of the development [growth?] of individualities which [the United States] prophetically put forth, there is the perversion of the

whole ideal of individualism to conform to the practices of a pecuniary culture" (John Dewey, 1984 (1930), p. 49).

Dewey, in order to confront these problems, emphasises a need for a wider approach to democracy. "Democracy is much broader than a special political form, a method of conducting government, of making laws [...]". Rather there is "some kind of government, of control, wherever affairs that concern a number of persons who act together are engaged in" (Dewey, 1937, pp. 48 - 55). Power in today's society "resides in control of the means of production, exchange, publicity, transportation and communication [...] by necessity" (Dewey, 1933, p. 76). Hence also for this reason there is a need for democracy in the different sectors of society. Undemocratic aspects of social life could be seen as remnants of undemocratic political institutions.

"After democratic political institutions were nominally established, beliefs and ways of looking at life and of acting that originated when men and women were externally controlled and subjected to arbitrary power persisted in the family, the church, business and the school, and experience shows that as long as they persist there, political democracy is not secure" (Dewey, 1937, pp. 48 - 55).

2.1.1.7 Bertrand Russell

The influential philosopher, Nobel laureate and founder of mathematical logic Bertrand Russell (1872–1970) (Stanford Encyclopedia of Philosophy, 2018a) criticised what he saw as outdated principles, "[w]e accept the principle of heredity in relation to economic power while we reject it concerning political power. The political dynasties have disappeared, but economic dynasties survive" (Russell, 1972, p. 622). And saw the structure of economic life as impacting that of political life "[t]here can be no real freedom or democracy until the men who do the work in a business also control its management" (Russell, 1917, p. 16).
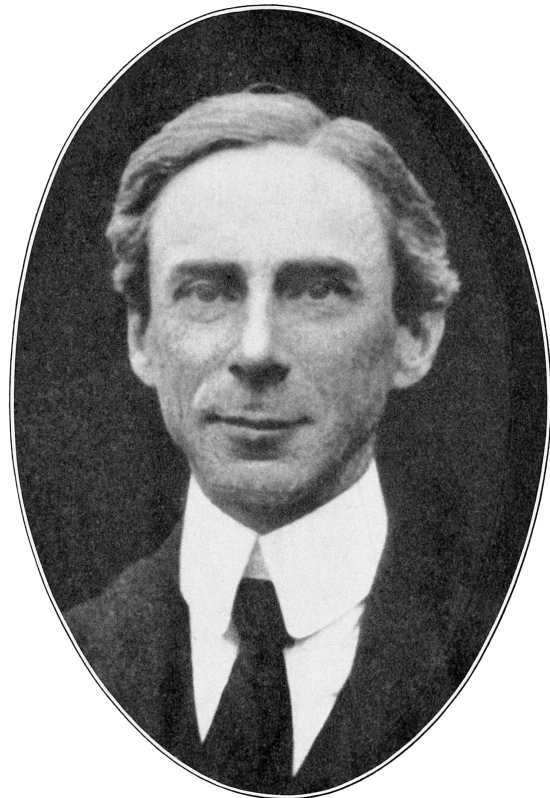
Figure 2.7: Photo of Bertrand Russell (1872–1970). Photo by: Unknown (ca 1900).

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2.1.2 Organisational Metaphors

An organisation can be defined as "[a]n organised group of people with a particular purpose, such as a business or government department" (Oxford University Press, 2017). Organisations are complicated structures, with not only many interacting parts, but with the possibility of viewing them from many different perspectives. It can therefore exist a need to identify and structure such perspectives in order to reduce the analytic bewilderment and enhance further understanding of the topic.

An organisation can be viewed upon from several perspectives. A category of perspectives is metaphors. A metaphor tends to assist in the understanding of some aspects by bringing them up to the surface but hide others. A list of useful metaphors has been complied by Morgan (1998), an organisation can metaphorically be viewed as a:

- Machine

- Organism

- Political System

- Instruments of Domination

- Psychic Prison

- Culture

- Brain

- Flux and Transformation

The following subsections expand on these terms.

2.1.2.1 Machine

In the machine metaphor workers are turned into machines performing predesignated tasks which have been optimised by management. People would be motivated by economic rewards and their behaviour designed by management analogously to how engineers designed the operation of machines. This approach resulted in high output when work could be reduced to simple tasks which where endlessly repeated. Two prominent historical proponents of this approach were the US engineer Frederick Taylor with what became known as Taylorism or Scientific Management (Morgan, 1998) and Lenin in the Soviet Union with Joseph Stalin defining it as part of the "essence of Leninism" (Stalin, 1954, p. 111).

There are several criticisms of this approach which reduces workers to automata. From a narrow point of view such organisations tend to be inflexible, have difficulty handling more complex tasks and often come into conflict with the people working in them. A broader criticism proposed by for example Max Weber (1919) is that such organisations crushes the human spirit and the ability to act spontaneously turning people mindless and myopic with negative ramifications for the individuals as well as the society as a whole (Morgan, 1998).

The destructive nature of division of labour was pointed out by Adam Smith in the 1776 book An Inquiry into the Nature and Causes of the Wealth of Nations. It was turning people into stupid creatures incapable of sound judgement (Smith, 2007).

> "But the understandings of the greater part of men are necessarily formed by their ordinary employments. The man whose whole life is spent in performing a few simple operations, of which the effects are perhaps always the same, or very nearly the same, has no occasion to exert his understanding or to exercise his invention in finding out expedients for removing difficulties which never occur. He naturally loses, therefore, the habit of such exertion, and generally becomes as stupid and ignorant as it is possible for a human creature to become. The torpor of his mind renders him not only incapable of relishing or bearing a part in any rational conversation, but of conceiving any generous, noble, or tender sentiment, and consequently of forming any just judgment concerning many even of the ordinary duties of private life" (Smith, 2007, p. 603).

Furthermore, the labourer tends to improve at a specialised task at the expense of the width and depth of the human creature. Hence the society would have to intervene to save the inner person from degradation.

> "His dexterity at his own particular trade seems, in this manner, to be acquired at the expense of his intellectual, social, and martial virtues. But in every improved and civilised society this is the state into which the labouring poor, that is, the great body of the people, must necessarily fall, unless government takes some pains to prevent it" (Smith, 2007, p. 603).

2.1.2.2 Organism

To view the organisation as an organism in an environment emphasises the need to survive, organisational health, the ability to adapt to changing circumstances, the interaction with the environment and the different "spices" of organisation that is suitable to different environments. It places the organisation in an ecology with

cooperation, competition and evolution. Furthermore the individuals and groups in the organisation can be viewed as organisms with needs (Morgan, 1998).

The Hawthorne Studies were performed in the 1920's and 1930's and brought forth the importance of social needs in the workplace (Harvard Business School, 2018). A perspective emerged from this in which both individuals and groups, like biological organisms, functions optimally under conditions where their needs are satisfied.

The ideas of the psychologists Abraham Maslow (New York Times, 1970) and Manfred A. Max-Neef (Right Lifelihood Award, 2016) suggests that humans are not primarily motivated by economic rewards but by internal biological needs of various kinds.

The strengths of the perspective are that the external as well as internal environment has a more prominent role, were the growth and life cycle of the organisation are considered as well as the needs of individuals and groups. But the metaphor underestimates the vagueness of the actual environment and overestimates the internal cohesion in a typical organisation (Morgan, 1998).

2.1.2.3 Political System

The political systems metaphor stresses structures of competing interests, conflicts and power plays. Decision-making becomes a political process and the organisation becomes politicised because of conflicting interest and different styles of government can be identified. The sources of power can be identified and used to reach appropriate goals (Morgan, 1998).

An organisation might range from highly authoritarian to model democracies. Enterprises are not uniform entities with a common goal rather there are groups within the organisation with common and divergent interests. These groups can then unite in coalitions to press their demands. If there are groups opposed to these requests, then a conflict arises. A conflict of interest is resolved through power as the determining factor (Morgan, 1998). The sources of power according to Morgan (1998) are:

- Formal power

  - Formal authority - open structures with legitimised power.
  - Bureaucratic mastery - the capacity of understanding and using organisational rules, regulations and procedures.
  - Boundary control - controlling and monitoring the flow between two or more parts of the enterprise.

- Resource control

- – Control over scarce resources and their flow - for instance personnel, raw materials, equipment, technology and money.

  - – Flexibility - the ability to deal with unexpected situations, giving an edge when such situations arise.

- Controlling perceived reality

  - – Knowledge and information control

    - ∗ By selecting and framing information to various groups their believed reality can be optimised according to the desire of those with this power making the believers support their agenda.
    - ∗ Having information early is a form of power.
    - ∗ Having mastery of a skill or expertise is also a form of power.

  - – Control of symbolism and meaning – influencing the believed reality of others by controlling meaning and interpretations.

- Decision process control

  - – Decision premises - controlling the agenda and framework of thinking within which decisions will be developed.

  - – Decision process - controlling how a decision will be made, when it will be made and who will make the decision.

  - – Input to the process - preparing reports and advance the discussion on the issue in the desired direction by participation.

- Relationships

  - – Forming organisations - when a group has no formal power it can form counter organisations to assert its claims, for instance trade unions, consumer associations and lobby groups.

  - – Informal relationships - friends in positions of power, sponsors, mentors, informal networks etcetera.

- Overarching structures

  - – Racism, sexism etcetera.

  - – Structural framework - the overall situation in terms of organisation, environment, etcetera can influence the outcome of a conflict.

- Power leads to power - power can be used to gain more power. The taboo aspect of power as a topic of discussion can support this tendency.

The political system metaphor brings conflicting interests and power into the light. The idea of organisational rationality is seen as a myth and politics is seen as a feature of the organisation. Furthermore, fundamental questions about power and control in society are raised. However, the metaphor can be seen as unjust since it underplays gross inequalities in influence and power (Morgan, 1998).

2.1.2.4 System of Domination

Organisations can be seen as systems of domination that exploit its employees, its customers and the economy in general for their own needs. This perspective stresses how mechanisms of domination as part of how activities are organised and the costs inflicted on the oppressed party (e.g. workaholism) for the benefit of the oppression party (Morgan, 1998).

Three forms of domination where proposed by Weber (1919):

- Charismatic, the personal characteristics of a person.

- Traditional, the historically established power.

- Rational-legal, the result of established rules.

This metaphor makes the logic of possible conflicts clearer, explains the prevalence of them in organisational history and shows what consequences are possible for various parties. On the other hand it can escalate social tensions and lead to the blame of decision-makers rather than addressing the logic of the system as a whole (Morgan, 1998).

2.1.2.5 Psychic Prison

An organisation can be seen as a psychic prison. In this metaphor various psychological concepts highlighting irrationality becomes the focus of attention (Morgan, 1998), such as:

- The unconscious

- Obsessions

- Being trapped by strong visions and ways of thinking

- Group think

- Narcissism

- Strong emotions

- Latent sexuality

- Anxieties

- Fear of death

- Illusions of control

- Mind traps

- Mental defence mechanisms

This metaphor questions our understanding of the social world as "rational", gives insight when dealing with organisational changes and invites the integration of conflicting tensions with a more balanced solution. On the other hand, it underestimates the importance of vested interests and sources of power (Morgan, 1998).

2.1.2.6 Culture

Using the culture metaphor, the organisation becomes a mini-society with beliefs, ideologies, values and rituals. The perspective centers on the shared reality and meaning that is the common culture and how it can differ across nations and between parts of the organisation. It stresses the importance of forming the appropriate culture more than various organisational schemes in contrast to traditional methods. Meetings between people are necessary order for a culture to diffuse (Morgan, 1998).

The culture metaphor highlights the symbolic significance of virtually all human activities, the importance of the shared reality and meaning and how these can be operated in order to crate the desired change. The shortcomings of the metaphor is that it might be used for ideological manipulation and control, that cultures often are hard to change and that most of culture is invisible, hard to detect and is not limited to the organisation but extends to the rest of society (Morgan, 1998).

2.1.2.7 Brain

An organisation can be seen as a brain that learns, becomes more intelligent and distributes information and intelligence. In such an organisation employees are encouraged to understand recurring problems and fix their underlying causes as well as improving existing practices. This ability to self-organise requires a redundancy of resources such as personnel as well as a flexibility of roles among the workers and a larger freedom to operate (Morgan, 1998).

An example of this is the Total Quality Management (TQM) Movement (the Japanese concept of Kaizen) with continuous improvement and double-loop learning (Sallis, 2014).

The merits of this metaphor is that it highlights learning and development, takes advantage of information technology, mobilises the potentials of self-organisation.

While on the other hand the realities of power and control can come into conflict with such an organisational approach (Morgan, 1998).

2.1.2.8 Flux and Transformation

Flux and transformation can be a metaphor for the organisation. This creates a perspective that underscores the importance of change. The perspective can trace a long history beginning with Heraclitus of Ephesus stating that "all things are in motion and nothing at rest" for example "the stream of a river", it is not possible to "go into the same water twice" (Plato, 1871, section 402 row 7).

The modern approach uses concepts such as complexity, autopoiesis and dialectical. Morgan (1998) proposes four logics of change:

- Chaos and complexity theory - organised patterns emerge spontaneously from simpler components.

- Autopoiesis - Maturana Varela. (1991) developed a systems theory in which all living systems consciously destroy and generate components in a way that preserves the pattern of the organism.

- Cybernetic ideas - change occurs due to tensions in circular relations.

- Dialectical tensions - the conflict of opposites creates change.

Human social structures can be characterised as complex systems. If they inherit their properties, it then follows that they are hard to manage and the action of any individual or group can lead to a change in the whole (Morgan, 1998). Complexity theory uses ideas such ideas as emergence, tipping-points, limited predictability, evolutionary dynamics and fundamental uncertainty to understand systems (Fieguth, 2016).

2.1.3 Human Social Structures

There are many different ideas about human social structures, and there is an abundance of findings about it. This section contains some ideas, findings and psychological overviews that are interesting from the point of view of democracy in a cooperative.

Since humans are the cornerstone of any organisation there is a need to bring up and systematise the knowledge available concerning the biological behaviour of humans in organisations and the basic driving factors behind human action and interactions.

Furthermore, this is a topic with more questions than answers, meaning that the observations might need to be complemented with general ideas of various kinds.

2.1.3.1 Ideas

The idea that sympathy is central to human nature was expressed by Adam Smith (Smith, 1759) where it was explained as a phenomenon in which humans identify the feelings of others and feel them as they felt them themselves. From this feeling, it follows that they strive for the greatest happiness in others as well as themselves. The central position of sympathy for the thinkers of the enlightenment is illustrated by the fact that Immanuel Kant simply asserted it as the central human property (Kant, 1997).

The ability to cooperate can be considered a factor in evolution. The factor would tend to increase reproductive success because, in general, the better a group is at cooperating the more likely the individuals in it will have reproductive success. If people living in non-agricultural societies can be a guide to "natural" human behaviour, then it can be observed that the shape and extent of cooperation varies widely between groups, but it is always a strong tendency. Various elaborate and complex systems for cooperation have been observed within and between groups reflecting the benefits of cooperation and hence the possibility of cooperation as a factor in evolution (Kropotkin, 1997).

A modern attempt to flesh out the principles underlying human morality have been produced by Marc Hauser (Hauser, 2006). The general perspective is imported from linguistics. Linguists has have tried to explain the capacity of humans to understand words and languages with a "language organ" in the brain with unconscious biological principles. These give a universal grammar that provides the structure for language to "growth" in the mind of a human, given a suitable environment. Analogously the brain has a "moral organ" with a "moral grammar". The state of morals in an individual depends on her or his history. There have been attempts to reach the universal principles by exposing people to artificial and hence new moral situations where a substantial decree of agreement among participants across culture were reached. This indicates a possible fruitful future research field (Hauser, 2006).

The presence of cooperation in the form of economic institutions in an organised society could have benefits for human health and well-being. A comparison between three Italian towns showed that measures of health (including cardiovascular mortality), education, social involvement, crime and social perceptions were significantly more positive where cooperatives employed a larger percentage of the population (Erdal, 2000).

2.1.3.2   Human Behaviour in Foraging Groups

The decision-making and distribution of work and resources in human foraging groups have been studied. The assumption is that these people live as humans have done in prehistory (Erdal, 2000). Since evolution tend to adapt a species to an environment it is therefore reasonable to assume that "basic human social forms, language, and human nature itself were forged during the 99 percent of human history when people lived in hunting and gathering camps" (Lee, 1979, p. 1).

In such groups, despite their enormous diversity, the sharing of food beyond what can be expected from kinship or reciprocation and counter dominance behaviour preventing the emergence of dominant individuals where universal. Furthermore the sharing of resources worked hand in hand with a sharing of risks to acquire food (Erdal, 2000).

The similarities of the universal aspects are impressive across continents and could be summarised as "egalitarianism, co-operation, and sharing, on a scale unprecedented in primate evolution, and sometimes dubbed "primitive communism"" (Lee, 1979, p. 460). The aspects of human social behaviour that evolved as adaptations for social life are adopted to this social environment (Erdal, 2000).

There is no hierarchy of domination in foraging groups and there is no ranking of the individuals (Erdal, 2000) to the extent that "[i]ndividual authority is unthinkable" (Turnbull, 1965, p. 181).

There is no permanent or general respect given, but expertise and personal characteristics can be respected in specific situations. The identical circumstances might arise again the next day without any respect being given, since leadership arises from others listening (Erdal, 2000).

This can be exemplified with the situation with four great hunters "[b]ut while these four (great hunters) can be singled out as exceptional, they could either separately or together be outvoted by the rest of the hunters. On such occasions they were compelled either to give their assent to the popular decision or to refrain from joining the hunt that day. None of them had the slightest authority over any others" (Turnbull, 1965, p. 180).

As an example of how decisions can be made is the Walbiri people where kinship roles defined proper behaviour so "[o]nce a person was aware of the situation, he knew what to do about it. There was, therefore, little need for secular leaders in the community" (Meggitt, 1971, p. 274).

The Walbiri people also provides an example of the changing dynamics of initiative in a group, where if one individual have a major role one day, the same individual will have a minor one the next day "this frequent variation in the extent of authority that an individual exercised from one situation to another militated against the

emergence of a class of permanent leaders" (Meggitt, 1971, p. 249).

The process for making group decisions is universally consensual with a natural and informal discussion. In general, everyone has the right to speak and it is typical that people are always ready to make suggestions and listen to others, often resulting in lengthy conferences (Erdal, 2000). As an example the San can be mentioned "[t]he San respect the aged, experienced and able and turn to them for social leadership, but decisions and solutions to problems are always based on discussion among the whole group" (Tanaka, 1980, p. 123).

In general "group activities unfold, plans are made, and decisions are arrived at - all apparently without a clear focus of authority or influence" (Lee, 1979, p. 343).

In cases where someone tries to assert dominance there is a characteristic reaction. The person is quickly brought back to earth, often quite strongly, irrespective of the standing of the person or the skills the person has to offer. There is simply no tolerance for ambitions of status and dominance (Boehm, 1993).

A person attempting such ambitions can be ignored, criticised, ridiculed, overruled, abandoned, ostracised, attacked or even killed. This is made consciously and intentionally as a group (Boehm, 1993). The counter dominance behaviours are slowly increased in order to stop the attempt of domination. The attempt of a man to at one time to assert dominance can be mentioned as an example. The man tried to assert dominance over the group. But then the mans grandmother started to tell suitably humiliating stories about his childhood, resulting in everybody except the man rolling on the ground, helpless with laughter (Erdal, 2011a).

2.1.3.3   General Models of Human Needs

Maslow has perhaps a more individualistic perspective while Max-Neef might have a more social approach. Furthermore, the needs proposed by Maslow are organised hierarchically while the needs proposed by Max-Neef et al. are more parallel in nature.

2.1.3.3.1   Abraham Maslow   One way to schematise motivation in humans is through Abraham Maslow's theories of need. The model included initially five stages (Maslow, 1943) and (Maslow, 1954) but has later been expanded with three further steps (Maslow, 1970a) and (Maslow, 1970b). The model hence distinguishes eight hierarchically organised needs:

1. Physiological: air, food, warmth etcetera.

2. Safety: protection from elements, security, order etcetera.

3. Belonging and love: friendship, intimacy, being an accepted part of a group etcetera.

4. Appreciation and self-esteem: self-esteem, mastery, independence etcetera.

5. Intellectual: knowledge and understanding, while being guided by curiosity and exploration.

6. Aesthetic: appreciating and striving towards beauty and balance.

7. Self-Actualisation: reaching one's potential and fulfilment, with a focus on continued growth.

8. Transcendence: helping others reach self-actualisation.

A further elaboration of the theory is by Calyton Alderfer (Maslow, 1943).

2.1.3.3.2 Manfred A. Max-Neef et al. The needs of humans have been structured in a non-hierarchical way by Max-Neef et al. (except for the need of subsistence). There are nine needs that can be met with ways of being, things to have, things to do and places to be in (Max-Neef et al., 1991), see table 2.1.

Table 2.1: Human needs and human-scale development developed by Manfred Max-Neef et al. (Max-Neef et al., 1991, p. 32 - 33).

Begin of Table			
Need	Being (qualities)	Having (things)	Doing (actions)	Interacting (settings)
Subsistence	Physical health, mental health, equilibrium, sense of humor, adaptability	Food, shelter, work	Feed, procreate, rest, work	Living environment, social setting
Protection	Care, adaptability, autonomy, Equilibrium, solidarity	Insurance systems, savings, social security, health systems, rights, family, work	Cooperate, prevent, plan, take care of, cure, help	Living space, social environment, dwelling

Continuation of Table 2.1			
Need	Being (qualities)	Having (things)	Doing (actions)	Interacting (settings)
---	---	---	---	---
Affection	Self-esteem, solidarity, respect, tolerance, generosity, receptiveness, passion, determination, sensuality, sense of humor	Friendships, family, partnerships, relationships with nature	Make love, caress, express motions, share, Take care of, cultivate, appreciate	Privacy, intimacy, home, space of togetherness
Understanding	Critical conscience, receptiveness, curiosity, astonishment, discipline, intuition, rationality	Literature, teachers, method, educational policies, communication policies	Investigate, study, experiment, educate, analyze, meditate	Settings of formative interaction, schools, universities, academies, groups, communities, family
Participation	Adaptability, receptiveness, solidarity, willingness, determination, dedication, respect, passion, sense of humor	Rights, responsibilities, duties, privileges, work	Become affiliated, cooperate, propose, share, dissent, obey, interact, agree on, express opinions	Settings of participative interaction, parties, associations, churches, communities, neighborhoods, family
Idleness	Curiosity, receptiveness, imagination, recklessness, sense of humor, tranquility, sensuality	Games, spectacles, clubs, parties, peace of mind	Daydream, brood, dream, recall old times, give way to fantasies, re member, relax, have fun, play	Privacy, intimacy, spaces of closeness, free time, surroundings, landscapes
Creation	Passion, determination, intuition, imagination, boldness, rationality, autonomy, inventiveness	Abilities, skills, method, work	Work, invent, build, design, compose, interpret	Productive and feedback set tings, workshops, cultural groups, audiences, spaces for expression, temporal freedom

	Continuation of Table 2.1			
Need	Being (qualities)	Having (things)	Doing (actions)	Interacting (settings)
Identity	Sense of belonging, consistency, differentiation, self-esteem, assertiveness	Symbols, language, religion, habits, customs, reference groups, sexuality, values, norms, historical memory, work	Commit oneself, Integrate oneself, confront, decide on, get to know oneself, recognize oneself, actualize oneself, grow	Societal rhythms, everyday set tings, settings which one belongs to, maturation stages
Freedom	Autonomy, self-esteem, determination, passion, assertiveness, open-mindedness, boldness, rebelliousness, tolerance	Equal rights	Dissent, choose, be different from, run risks, develop awareness, commit oneself, disobey	Temporal/spatial plasticity
	End of Table			

The needs in 2.1 can be met by four categories of satisfiers (Max-Neef et al., 1991):

1. Destroyers: they destroy the possibility of satisfying the need over time, and hinders the adequate satisfaction of the need. As an example, censorship for protection.

2. Pseudo-satisfiers: these may appear to satisfy the need but do not, for example indoctrination for understanding.

3. Inhibiting satisfiers: these over satisfy one need and undermines the ability to satisfy other needs. Exemplified by Taylorist-style production for subsistence, which inhibits the needs for understanding, participation, creation, identity and freedom.

4. Singular satisfiers: they satisfy one need but are neutral in relation to others. An example is an insurance system which provide protection.

5. Synergetic satisfiers: these satisfy one need but also other needs. For example self-managed production which provide subsistence but also promote understanding, participation, creation, identity and freedom.

2.2 Organisational History

Considerably democratic organisations for cooperation have existed during human prehistory and history. This section contains three parts, one about the history of guilds and villages, one concerning the duty to obey and one about cooperatives. The section gives a definition of cooperative and a historical and geographic understanding of it.

The part about guilds and villages shows that organisations with democratic tendencies are not a new phenomenon. This suggests the possibility of having democratic organisations as a substantial part of a society, enhancing the potential relevance of cooperatives.

The duty to obey shows the history of organisations which are not democratic from the workers point of view. This gives some context to the dominant forms or organisation in the economy today.

The part about cooperatives provides a definition and categorisation of cooperatives and gives a historical and geographical context. The definition enables a more succinct analysis and the historical and geographical contexts give a larger overview of the situation cooperatives exist in.

2.2.1 Guilds and Villages

Considerably democratic cooperation have existed during human prehistory and history. Self-managing guilds and villages where prevalent in Europe during the middle ages. They had a considerably democratic structure (Kropotkin, 1997).

2.2.1.1 Guilds

The guilds where considerably democratic associations consisting of men in the same or similar professions for economic and other purposes.

Figure 2.8: Painting of the Syndics of the Amsterdam Drapers' Guild from 1662. Image from: Rembrandt Harmenszoon van Rijn (1662).

2.2.1.1.1 History of Guilds - the World A form of guilds has existed in ancient cultures around the Mediterranean and in India (Lambert, 1891). In the middle ages the economic life of cities in Europe where organised in guilds. People, as a rule men, in the same or similar occupations formed guilds. The representatives of the more powerful guilds often ruled the city (Kropotkin, 1997). For the city of London this form of rule still persists, if largely ceremonial (City of London, 2018). The decline began around the 16th century, and was first abolished in France 1791 after the French revolution (Nationalencyklopedin, 2018f).

2.2.1.1.2 What Were Guilds - the World Guilds where significantly democratic associations of men in the same or similar professions (Kropotkin, 1997). The guild was a tight knit community characterised by mutual aid. As an example can be taken the rules for an early guild in Denmark. The charter of the guild starts with a statement that brotherly feelings must hold sway over it (Ancher, 1780).

Furthermore the needs for the individual member was in high regard. There is for example a medieval Kuttenberg ordinance that states that "[e]veryone should be pleased with his work, [. . .]" (Janssen, 1883, p. 353) which apart from the sexism might seem idealistic by today's standards. Also the economic equality was strong in the sense that " [. . .] and no one shall make his own, that which someone else has produced by work and effort, because effort and work shall the law shield and protect" (Janssen, 1883, p. 353).

2.2.1.1.3   History of Guilds - Sweden   Before and during the middle ages there existed "gillen" in Sweden. These where associations of people working together for a wide range of possible purposes including some forms of mutual aid such as help during poverty or sickness (Nationalencyklopedin, 2018c). At the end of the 11th century "hantverkare-gillen " (craftsmen-gillen) where formed. The purpose of these where to regulate the craft in the city for the common good.

This required more precise bylaws, these laws where called "skrån". "Ämbete" or "kompani" are the Swedish equivalent for guilds, and the social order based on them is named "skråväsende" (Lindner, 1892).

Gillen tended over time to become more religious to their nature, and they were banned in Sweden in 1544. But guilds where allowed to continue their existence, hence continuing some of the guild tradition (Nationalencyklopedin, 2018c). The first national law regulating the guilds was instituted 1669 (Lindner, 1890). And from this the following laws took steps closer and closer to free trade until 1864 when guilds where banned. Every man then had the right to choose a profession and trade was allowed outside the cities (Larsson et al., 2014).

The replacement of guilds with corporations might have had both internal and external reasons. Internally the right to make people masters of a craft became the subject of abuse and a few tended more and more to gain in wealth and power rather than having the guild work together for the common good. Externally the different way of organising work required by the machine, which required low-skilled people performing different tasks instead of high-skilled workers performing similar ones were not compatible with guilds as organisations (Lindner, 1890). But there still exist some lines of work with a lingering organisational memory of a guild type of organisation (Nationalencyklopedin, 2018c).

2.2.1.1.4   What Were Guilds - Sweden   The men in a guild could be divided into two groups: men who had been accepted as masters in their craft and men undergoing training. The men undergoing training had a duty to obey their masters, but the masters had a duty to care for them. Furthermore, they had the right to organise, conduct other business activities and to be educated, and they could change master and had the possibility to be become masters themselves (Kumlien, 2004). In the case of the death of a member the wife could replace him as a member. The guilds had several functions in society (Lindner, 1890):

- They were systems of mutual support in cases of poverty, sickness, death and for the member and his family.

- They had a monopoly on who could perform the specific craft, decided the requirements for becoming a master and could decide prices.

- They had a duty to keep quality high and prices low.

- They participated in the ruling of the city and area in which they operated.

2.2.1.2   Village Communities

Historically in agricultural societies, most people lived on the countryside in villages. People lived together in considerably democratic villages to farm the land and have animals (Maine, 1871).

2.2.1.2.1   Global Outlook   Historically villages where organised in a significantly democratic way all over the world for example in the British islands; (Walter, 1859), (Seebohm, 1883), (Nasse, 1869), (Vinogradov, 1892), France; (Viollet, 1886) and (Babeau, 1887), Germany; (Sohm, 1871) and India; (Maine, 1871). There does still exist a village in England that to some extent works according to the medieval system. For example, the elected "court leet" can sentence people to fines (Jones, 2005).

2.2.1.2.2   History of Village Community in Sweden   As far back in history as is known, the peasants in what is today Sweden were organised in "byalag" (village communities). It was based on the common property and work of the byalag (Svanström, 1980). In the beginning, there were no known laws regulating the villages and neither the king or the nobility seem to have been concerned about regulation the byalag before the 18th century (Erixon, 1978).

Neither the less, one of the earliest mentions is from the regional medieval Skånelagen (Scania Act) where some regulations regarding for example enclosures and cattle are mentioned. Other regional laws also mention similar regulations (Thölin, 1965).

National regulation of the byalagen first got started around the middle of the 18th century (Erixon, 1978). The partition reforms; "storskifte" (great partition) in year 1749, "enskiftet" (one partition) in year 1807 and "laga skifte" (legal partition) in year 1827 changed agriculture in Sweden. The reforms were done sequentially in village after village and the purpose was to put large areas of land under one owner and break up the old village centre and create separate farms (Pettersson, 1983).

This resulted in a reduced need to organise the byalag as soon as the land had been divided by the state and the land-surveyor (Rosén, 1994). But despite this, the organised byalag still lives on in many places. As an example can be mentioned the byalag in Benestad, Sweden (Arvidsson, 2014).

2.2.1.2.3   What Were Village Communities in Sweden   The members of the byalag (village community) were the landowning men in the village or their

widows (Arvidsson, 2014). And the members of each household had a duty to obey the head of each household who in return received the right to be taken care of (Kumlien, 2004). Although it appears that at least the bylaget in Benestad cared for all inhabitants and did not discriminate between large and small land owners (Arvidsson, 2014).

The byalag consisted of three parts: the "byordning" (village community bylaw), elected functionaries and "bystämma" (village community meeting) (Arvidsson, 2014).

The byordning turned the members of the bylag into "legislators, judges, and executors" (Thölin, 1965, p. 16). The bystämma was usually held twice every year and it appointed functionaries, managed the economy, cared for the roads and fire protection among many things (Rehnberg, 1951).

2.2.2   Duty to Obey

"Lydnadsplikt" (the duty to obey) (Domstolsverket, 2016) has a long history in Sweden. It concerns the duty of subordinates to obey and the duty of superiors to provide for the needs of the subordinates (Kumlien, 2004).

2.2.2.1   History of the Household

Historically pre-modern laws in Europe demanded work and obedience from most of the population. This was also the case in Sweden where every person, with a property below a certain level, had to take employment, or face forced servitude or military conscription. Work at this time was typically done in households.

The members of a household had a duty to obey the head of the household. In turn, the head of the household had a duty to take care of its members. Magnus Eriksson's Stadslag (the National Urban Code) from circa 1350 is one of the oldest known laws that regulates the relationship. It states among other things (Kumlien, 2004, p. 42) that if a master beats "his own servant in order to bring him up to good deeds and virtue and this does not lead to any wound and as long as he does not beat him black or bloody" then the master will not be punished.

This also applied to the wife and children, who could even be killed as a result of the punishment, with the father only receiving a reduced punishment (Kumlien, 2004). The family father also seems to have had a right to decide whether newborns had the right to live or not (Nationalencyklopedin, 2018e). The strength of the duty to obey can be illustrated with the lasting right to use violence:

- The head of the household against the wife until 1734 (Nationalencyklopedin, 2018d).

- The head of the household against adult servants until 1856 (Nationalencyklopedin, 2018d).

- The head of the household against child servants until 1920 (Nationalencyklopedin, 2018d).

- The captain of a ship against the crew until 1922 (Nationalencyklopedin, 2018a).

- The teacher at a school against the pupils until 1958 (Nationalencyklopedin, 2018a).

- The head of the household against the parents own children until 1979 (Nationalencyklopedin, 2018a).

The head of the household also had the right to make the decisions about the household, such as economic affairs. In general, the head of the household came to more and more include not just the man but also the wife over the centuries (Nationalencyklopedin, 2018e), (Nationalencyklopedin, 2018d) and (Nationalencyklopedin, 2018a). The duty to obey was combined with the duty of the head of the household to take care of the members of the household, even if they no longer could contribute to the household themselves (Kumlien, 2004).

2.2.2.2 History of the Corporation

Concerning a corporation, two separate rights are traditionally recognised in Sweden. "Abetsledningsrätt" (the right to command the work) and "företagsledningsrätt" (the right to command the corporation) and with the following meanings (Schmidt, 1994).

- The right to command the work: consists of the rights as an employer concerning the individual employment contract (Glavå, 2011).

- The right to command a corporation: consists of the decisions that does not directly affect the employees, such as the type of production, the production, the economy and relations to external parties (Schmidt, 1994).

2.2.2.2.1 The Right to Command the Work   As the pre-industrial society was dismantled in the United Kingdom starting in the 18th century a new relation around work started to predominate. It was the contract between an employee and an employer. This relationship had not been regulated in law before, but started to be so in the United Kingdom under this time. This legislation was done by a

Parliament that strongly represented the interests of the employers during times of considerable social upheavals due to the relative loss of freedom and quality of life experienced by the employees in comparison with previous relations. But the result from this was the basic principle being that all the power is in the hand of the employer (Erdal, 2011b).

The situation was similar in Sweden, although the development was in many ways some decades behind. From medieval traditions and laws there had been a duty to obey in the household. And this relationship was now brought into the industrial society as the defining relationship concerning work (Källström and Malmberg, 2006).

The legal history of this in Sweden started in 1905 when the Swedish Employers Association (Svenska Arbetsgivareföreningen) included in its bylaws (initially § 23 and later § 32) that the member employers must have the right to command and distribute the work and freely hire and fire employees. The Swedish Employers Association and the Swedish Trade Union Confederation (Landsorganisationen i Sverige) agreed 1906 in the so called December-agreement and subsequent collective agreements that this principle holds (Källström and Malmberg, 2006), reasoning from the perspective of private property (Glimstedt Sverige HB, 2015).

The Swedish Employers Association wanted the principle to be enshrined in law but the Swedish Trade Union Confederation did not. On the other hand, the new Swedish workers' movement wanted to be fully recognised in law and agreements. But despite the strong scepticism to hand the matter over to lawyers in the workers' movement, the government instituted the "Labor Court", and it ruled in 1929 that:

> "[. . .] the collective agreement is deemed to mean, that the contracted worker is obliged given contractual remunerations, that apply to the work, where he is employed, to perform all such work on behalf of the employer, which is inherent in his activities and may be regarded as being within the relevant worker's general professional qualifications" (Arbetsdomstolen, 1929).

The principle came during the 20$^{\text{th}}$ century to be developed into a general legal principle. Meaning that it is not to be found in any law, but neither the less applies (Rönnmar, 2004). It is considered to be a hidden clause in collective agreements (kollektivavtal), meaning that it is considered to be part of the agreement even if it is not expressed explicitly (Källström and Malmberg, 2006). Hence the duty to obey was established (Kumlien, 2004).

2.2.2.2.2 The Right to Command the Corporation

There had existed various monopolies such as the Swedish East India Company (Svenska Ostindiska Com-

paniet). But the corporation started first to be created in the United Kingdom in the 18th and 19th centuries (Larsson et al., 2014).

The British system was then starting to be imported to the European continent. And from there to Sweden. The first Swedish law for corporations took effect in 1849 (Larsson et al., 2014) and was based on a French law, which required a special permission for every corporation, this law was replaced in 1895 by a law inspired by German law, which established general rules for the formation of a corporation. Several laws have followed since (Nationalencyklopedin, 2018b).

The economic collapse of Kreuger Toll AB, highlighted the inadequacies in the law conserving accounting and control, resulting in a new law taking effect in 1948. This law was deemed too complicated and replaced with a new law in 1975. This law was replaced in 2005 (Nationalencyklopedin, 2018b).

2.2.2.2.3 Debate The democratisation of the workplace was made the central question in Sweden in the 1970s by some unions and political parties (Bucht et al., 1976). In the beginning of the 1960s the Right Wing Party (Högerpartiet) proposed that workers ought to buy stock in the corporation they worked for. This would equalise the power over the workplace and the shares in the wealth created. This is what they said in their political manifesto from 1964:

> "There is an alternative to the socialistic development of society. The Right Wing Party has this [alternative]. The alternative is the realisation of owner democracy [(ägardemokrati)]". "EARN OWN THRIVE Those three words summarises owner democracy ... [where everyone can] ... earn more ... [be a] ... co-owner in production ... [and] ... thrive more because an increased financial independence gives us personal security and new prospects for the future". "[B]ecause ownership becomes the right for everyone and a privilege for no one" (Högerpartiet, 1964).

At the end of the 1960s the Swedish Social Democratic Party (Sveriges socialdemokratiska arbetareparti) cabinet conducted two public inquires about economic democracy. The 1968 public inquiry concerned publicly owned corporations and the 1969 inquiry concerned state authorities. At the same time the social partners began discussions about private workplaces and local authorities (Bucht et al., 1976). The major parties started to get involved in the debate with ideas and manifestos, below follow some examples. The Swedish Social Democratic Party included the following in its 1970 manifesto:

> "We want democracy and justice in working life. The trade unions shape their programs for the corporations and workplaces democratisation. We are prepared to participate in the realisation of the demands of the trade unions" (Sveriges socialdemokratiska arbetareparti, 1970).

And the following in its 1975 election program:

> "For social democracy is the demand for economic democracy just as
> self evident as the demand for political democracy. The social democ-
> racy opposes the order which gives ownership the right to exercise power
> over people. It fights every concentration of the economic power in a
> few hands. It wants to place the direction of the production and the
> distribution of the result of the production under democratic control.
> The goal is to make all people into equal co-workers in the task of man-
> aging and advancing the productive assets in the society" (Sveriges so-
> cialdemokratiska arbetareparti, 1975).

The Right Wing Party changed name to the Moderate Party (Moderata samlingspar-
tiet) and had the following in its 1970 manifesto.

> "We work for ... [i]ncreased co-determination by the workers in working
> life" (Moderata samlingspartiet, 1970).

The liberal People's Party (Folkpartiet) had the following in its 1970 manifesto:

> "Work democracy: co-determination for the employees on all levels, rep-
> resentatives for the employees in the corporations' boards, more power
> to corporate councils with among other things own budget, openness and
> transparency in public and private corporations" (Folkpartiet, 1970).

Furthermore the People's Party had the following in its 1976 manifesto:

> "Time for real work democracy. Co-determination for the employees in
> corporations and administration". "Employees ought to have legal right
> to the corporations capital formation" (Folkpartiet, 1976).

The Center Party (Centerpartiet) had the following as part of its election program
in 1970:

> "A developed industrial democracy, that gives the employees the possibil-
> ity of insight, initiative and co-determination is crucial" (Centerpartiet,
> 1970).

The Communist Left Party (Vänsterpartiet Kommunisterna) had the following in
its 1976 election program:

"[The Communist Left Party] is alone in demanding constitutional pro-
tections for democratic freedoms and rights in the workplaces. We de-
mand a ban of blacklisting, dismissal of strikers, unlimited right to ne-
gotiate, right to strike, right to agitate and to assemble and other demo-
cratic rights at the workplace. These rights shall be used to change the
power relationships to the workers and the trade unions benefit" (Vän-
sterpartiet Kommunisterna, 1975).

The major trade unions only got substantially involved in the debate after the
Swedish Trade Union Confederation (Landsorganisationen i Sverige) congress in
1976 decided to push for wage-earner funds (löntagarfonder), a form of collective
ownership (Bucht et al., 1976). The wage-earner funds where implemented in a
modified form in the 1980s but abolished in the 1990s after an economic crisis
(Rothstein, 2017).

The current lack of democratic workplaces is according to Rothstein et al. (2017)
due to the unwillingness of the trade unions and left wing parties to contemplate
other forms of organising public services than publicly owned organisations. Such
organisations tend, according to Rothstein et al. (2017) to be organised hierarchi-
cally. The whole debate was focused on the democratisation of corporations, leaving
cooperatives out, and since the 1990s there has not even been a debate about this
question, rather there has been a virtual thought ban (Rothstein, 2017).

2.2.2.3   Corporations Today

Corporations are today the dominant economic organisation. While the forms of
corporation vary from jurisdiction to jurisdiction, almost all of them are dominated
by them. Micklethwait et al. (2005) even calls the corporation the basic unit of
today's society. There are different ways of integrating the workers in corporations'
decision-making processes, some based on government mandates, others based on
the corporate leadership's own initiatives.

2.2.2.3.1   Board-level Representation   Structures for employee representation
exist in several countries. In the EU 28 plus Norway area there are 19 states with
various forms of representation and 14 of these have board level representation (Eu-
ropean Trade Union Institute, 2018a).

The representation on the board varies significantly, both between and within coun-
tries. But for private corporations above a certain size the employees have in gen-
eral at least the following representation. Firstly, there are two systems for the
board, either there is a supervisory board and a managing board or there is a sin-
gle board. Secondly the number or quota of employee representation varies. The
supervisory board consist of at least 1/3 of employee representatives in Austria,

Denmark, Netherlands, Slovakia and Slovenia and 1/2 in Germany. In countries with one board, the employees have one representative in Croatia, France and Hungary, two in Sweden and a third of the board in Norway (European Trade Union Institute, 2018b).

2.2.2.3.2   Representation in Parallel Structures   Several courtiers have representation in parallel structures. This is usually in the form of participation in various councils for information and co-determination (European Trade Union Institute, 2018a).

2.2.2.3.3   Other Forms of Inclusion in Decision-Making   Various forms of self-organisation and autonomy are used in corporations. For example, it exists in several major high technological IT-corporations such as Google, but also in less high technological businesses such as the food processing company Morning Star (Steiber and Alänge, 2016). Furthermore, employees in primarily the United States sometimes have a significant ownership of the corporation. This is mostly done via Employee Stock Ownership Plans that today include about 10 million employees (Rothstein, 2017).

2.2.2.3.4   Forms of Sharing the Capital Accumulation   There are several forms of sharing the capital accumulation of a corporation among the employees, for example via a pension system. Such forms of capital sharing is common in for example the United States, the United Kingdom, France, Italy and Japan (Steiber and Alänge, 2016).

2.2.2.3.5   Worker Owned Corporations   There are several employee-owned corporations for example the John Lewis Partnership in the United Kingdom. It is the largest employee owned corporation in the world with 81 000 partners (Rothstein, 2017).

2.2.3   Cooperative

A cooperative is distinctly organised with the stakeholders (or a subset of them) as the rulers rather than the owners. But it can also be seen as a subcategory of worker owned businesses.

2.2.3.1 Definition of a Cooperative

The industrial world is based on people working together for the production of wealth. But according to Chisholm (1911) this can not be called cooperation, partially since the shares of influence or wealth among those concerned is determined by competition. And partially because the contract of association cannot be regarded as truly voluntary if it is based on service only, without an opportunity to share in the ultimate control. An organisation more inclined to cooperation is the cooperative (Chisholm, 1911).

A cooperative is an economic organisation for people to buy or sell in common. In a narrow sense this can be done in order to reduce prices or increase profits. From a wider perspective it "proposes to replace among rational and moral beings the struggle for existence by voluntary combination for life" (Chisholm, 1911, p. 82). It means the belief that life may be organised not on the basis of competition of individuals but on mutual aid, in a society where each individual is taken care of and with each individual consciously striving for the common good of all. This can be summarised in the motto: "each for all, and all for each" (Chisholm, 1911, p. 82). Specific cooperatives can be placed on a scale from the narrow to the broad perspective (Chisholm, 1911).

There exists the cooperative movement that tries to embody this ideal, with a global presence, where individuals unite for the production of wealth for common purposes or for the participating individuals on the basis of equity, reason and mutual aid. A distinction however has to be made between cooperatives and charity organisations. The distinction is somewhat arbitrary, but cooperatives typically are organised for manufacturing, agriculture, building of housing, owning of housing, the raising of capital etcetera while charity organisations have social, religious or provident purposes (Chisholm, 1911).

Globally, cooperatives tend to be structured in accordance with the definitions and principles defined by the International Co-operative Alliance (ICA) (Tillväxtverket, 2018a). ICA is an international association founded in 1895 in order to further the cooperative social enterprise model. In 2015 ICA consisted of 284 cooperative federations and organisations in 95 countries (International Co-operative Alliance, The, 2018).

A cooperative is defined by the ICA as "an autonomous association of persons united voluntarily to meet their common economic, social and cultural needs and aspirations through a jointly owned and democratically controlled enterprise" (International Co-operative Alliance, The, 1995). ICA furthermore defines seven principles for its members the "Co-operative values and Principles" adopted in 1995 in the "The Statement on Co-operative Identity" (International Co-operative Alliance, The, 1995):

1. The membership is voluntary and non-discriminatory.

2. The members control the cooperative democratically.

3. The members participate economically in a fair and reasonable way.

4. Cooperatives are autonomous and independent.

5. Cooperatives educate and train their members and inform the public about the benefits of cooperatives.

6. The members benefit when cooperatives work together.

7. Cooperatives work for a sustainable development of their communities.

2.2.3.2 Different Kinds of Cooperatives

Any economic activity has stakeholders, a category of stakeholders is a group that have an interest in the operations of an organisations activities. The categories can further be divided into internal e.g. workers and external e.g. customers or the community (Slack et al., 2004).

The members of a cooperative can consist of various categories or combination of categories of stakeholders, for example workers, residents or consumers (Tillväxtverket, 2018b). There are several forms of cooperative, some of them are:

1. Worker cooperative, the workers are the members. For example Rabash, Mimer and Hugin in Sweden (Värmlandskooperativen, 2018).

2. Producer cooperative, the members are producers and have some aspect of their production together (Tillväxtverket, 2018b). For example Lantbrukarnas Riksförbund in Sweden (Värmlandskooperativen, 2018).

3. User cooperative, the members can for example be the people receiving care from personal assistance (Tillväxtverket, 2018b). For example JAG, STIL and many kindergartens in Sweden (Värmlandskooperativen, 2018).

4. Consumer cooperative, the members are buying goods and services from the cooperative (Tillväxtverket, 2018b). For example Bilcoop Ekonomisk Förening in Sweden (Värmlandskooperativen, 2018).

5. Citizen cooperative, those who live in a community own a common enterprise (Värmlandskooperativen, 2018).

6. Social cooperatives, the members are people that go through different kinds of rehabilitation. For example Vägen ut! in Sweden (Värmlandskooperativen, 2018).

7. Cooperative Leasehold estate, the members are the people living in the cooperative (Tillväxtverket, 2018b).

2.2.3.3 The History of Cooperatives

Cooperatives have a long global history and are traditionally traced back to England in the middle of the 19$^{\text{th}}$ century. Soon thereafter the movement spread to the rest of the world and to Sweden.

2.2.3.3.1 The World The history of cooperatives can be traced back to historical forms of cooperation largely based on customs that have existed. For example miners and fishermen in England have long traditions of creating and sharing wealth together. And cooperative workshops began appearing in Scotland in the middle of the 18$^{\text{th}}$ century. The conscious ideas about cooperatives can be traced back to first Robert Owen (1771 - 1858) in England and almost simultaneously Charles Fourier (1772 - 1837) in France (Chisholm, 1911).

Robert Owen was also an early practitioner and started several factories and communities. The early success from these inspired people to form several self-sufficient communities, but these where not long lasting (Chisholm, 1911).

Traditionally the cooperative movement traces its origin to a cooperative formed in Rochdale, today part of Manchester in the United Kingdom. The Rochdale Society of Equitable Pioneers was started as a consumer cooperative in 1844. The goals where idealistic but the starting capital of £28 limited the possibilities to its more practical benefits. But from it did to some extent the whole modern cooperative movement come about (Chisholm, 1911).

In the mostly agricultural societies of western Europe and its offshoots, one prominent problem was the need to acquire the capital needed by small poor farmers. This was one of the reasons for the occurring famines, and after a severe famine the cooperative model began to be utilised for credit creation. The first credit cooperative was the Darlehnscasse, founded by Friedrich Wilhelm Raiffeisen in 1849 in Flammersfeld in today's Germany (Chisholm, 1911).

In France the usage of farmer's producer cooperatives, Syndicats agricoles, in order to reduce the price of chemical manures quickly became a widespread phenomenon. Workshop cooperatives also became widespread in France and England. While agricultural cooperatives also spread in the United States, co-operative building societies tended to be the most common form of cooperatives in the 19$^{\text{th}}$ century. In Italy laborers formed cooperatives for more temporary tasks and engineering projects Società di lavoro (Work partnership), while in Belgium Maisons du peuple (The People's House) constituted co-operative bakeries and distributive societies. In Russia the Artel (Gang) has been a form of organising for example fishing (Chisholm, 1911).

Cooperatives quickly spread to all major countries in the industrialised world and in the beginning of the 20$^{\text{th}}$ century the combined membership was about 6 000 000 people (Chisholm, 1911). Cooperatives have continued to spread and expand its

membership since then (Battilani and Schröter, 2012).

The cooperative movement organised ICA 1895 in order to further the cooperative social enterprise model (International Co-operative Alliance, The, 2018). This highlighted the need for some principles to define what a cooperative is or ought to be. The bylaws of the Rochdale cooperative had served as a blueprint for many but ICA modified them and published a set of principles in 1937. These principles have then been modified slightly in 1965 and 1995 introducing a larger focus on cooperation between cooperatives (Battilani and Schröter, 2012).

Cooperatives are today a widespread phenomenon in many countries with millions of members all over the world. The movement is significant enough to play a social role in many societies. The idea of cooperatives is discussed in the United States today and it is a growing movement there. As a reflection of its significance, the Academy of management, a major professional association for scholars of management and organisations, invited a major proponent for this movement, Gar Alperovitz, to present and discuss the opportunities in 2013 (Academy of management, 2013).

2.2.3.3.2 Sweden Cooperatives first got started in Sweden in the 1860s. The failure rate was very high as with the cooperatives formed before Rochdale in the United Kingdom. But a new wave of cooperatives came in the 1890s where over 200 cooperatives where created (Schediwy, 1989). There is a rich set of cooperatives that have grown since then for everything from insurance to funerals (Rothstein, 2017). Early on as in France, Germany and Denmark the agricultural producer cooperatives were dominant. In the period around the first world war the growth was especially dominated by the growth in agricultural producer cooperatives. The growth in members can be illustrated by that the total number of members in all cooperatives for Sweden increased from 111,293 in 1914 to 225 423 in 1919 (Chisholm, 1922).

The Swedish Co-operative Union (Kooperativa Förbundet), a wholesale cooperative, was founded in 1899. The cooperative movement in Sweden has been dominated by consumer cooperatives in a broad sense after the first world war (Battilani and Schröter, 2012). This could in part be due to that while the Swedish Co-operative Union first welcomed worker cooperatives as members to the federation, this was ended in 1914.

Furthermore, the relationship between the Swedish labour movement and the Swedish cooperative movement has been troublesome. In 1917 there was a split between the reformist branch of the labour movement and the cooperative movement. The relationship between the major unions and the cooperatives has since been neutral or even hostile, with cooperative members being seen as employers not employees (Rothstein, 2017) and the relationship to the major political parties has been mildly positive but passive (Battilani and Schröter, 2012).

There have been attempts to establish worker cooperatives as an important sector of

the society. This was done by syndicalists starting in the in the 1920s. The focus was the stone industry and housebuilding after these branches had experienced severe economic difficulties. But economic mismanagement, a lack of credit and an active opposition from the Swedish Trade Union Confederation with blockades and other tactics undermined and finally eliminated the attempts (Bucht et al., 1976).

Since 1970 around 20 - 25 % of the retail trade in Sweden has been cooperative (Battilani and Schröter, 2012). This in contrast to that there are few worker owned businesses in Sweden and they are usually small (Bucht et al., 1976). But the cooperative is the fastest growing form of business in Sweden today (Coompanion, 2017).

2.2.3.4 The Extent of Cooperatives

Today cooperatives are not a marginal phenomenon. A significant number of people are members globally and in Sweden (International Co-operative Alliance, The, 2017).

2.2.3.4.1 The World There are 3 million cooperatives worldwide, with over 1 billion cooperative members. And together they employ 280 million people corresponding to 10 % of the globally employed workforce. The economically largest cooperatives report a combined turnover of 2,1 trillion USD (International Co-operative Alliance, The, 2017).

There is a great regional variation to the cooperatives where the local history, traditions and economic possibilities and the legal situation have been intertwined to create the various local developments of the cooperative movement. An illustration of some of the situations in Europe follow below.

The world's largest worker cooperative, Mondragon, was founded in the Basque region in Spain in the 1950s (Rothstein, 2017). It had 85 066 employees in 2009 spread on 260 companies of which half are cooperatives (Basterretxea and Albizu, 2011). About 70 % of the workers were estimated to be members around 2015 (Rothstein, 2017).

Italy had 2008 over 30 000 worker cooperatives with around 600 000 workers. Among these around 75 % were members. The movement is concentrated to the Emilia-Romagna region where 12.75 % of the GDP was derived from cooperatives in 1989 (Rothstein, 2017).

There were 1 700 worker cooperatives in France in 2004 which together employed 36 000 people. Over 60 % of the employees are members. Some larger worker cooperatives are Chèque Déjeuner and Acome (Omnicare, 2018).

2.2.3.4.2 Sweden The cooperatives in Sweden have over 4 000 000 members. Mostly in consumer cooperatives of various kinds. There are also some major producer cooperatives, see table 2.2 (Svensk Kooperation, 2016). But worker cooperatives are considerably smaller (Bucht et al., 1976).

Name	Members	Employees	Revenue
Arla Foods	11 922	18 765	93 087 000
Folksam	4 000 000	3 731	47 023 000
Kooperativa Förbundet	3 453 415	11 956	41 642 000
Länsförsäkringar	3 700 000	6 200	37 886 000
Lantmännen	25 159	9 880	37 244 000
Alecta	2 300 000	389	33 557 000
Skandia	1 200 000	2 487	21 847 000
Södra Skogsägarna	50 771	3 740	18 482 000
OK	1 047 231	1 794	10 881 924
HSB	605 070	3 258	9 761 000
Riksbyggen	190	2 538	7 155 137
Mellanskog	26 063	207	2 855 578
Dina Försäkringar	216 000	439	2 844 683
Norra Skogsägarna	16 844	347	2 228 734
Lantbrukarnas Riksförbund	148 580	1 718	1 848 427 *
STIM	900	111	1 839 770
Norrmejerier	463	527	1 779 351
Norrskog	13 000	307	1 746 389
Sydgrönt	78	80	1 508 248
Skånemejerier	466	0	1 315 227
LÖF	21	160	1 265 000
Falköpings Mejeri	177	115	1 161 457
Göteborgs Lastbilscentral	177	115	1 161 457
Fonus	2 543	748	1 011 572

Table 2.2: The major cooperatives in Sweden in 2016 (*2015) based on revenue. The cooperatives are listed according to revenue (in thousands of SEK) with name, number of members and number of employees. Only cooperatives organised as a business association (ekonomisk förening) are included. The members can be natural persons or legal persons (Svensk Kooperation, 2016).

2.3   Studies of Cooperatives and Their Consequences

Cooperatives can have substantial effects internally and on the surrounding society and the environment. This section contains several parts, one about the possible goals of organisations and the following are about the observed effects of cooperatives. The section gives a motivation for the importance of cooperatives as a way to organise work.

2.3.1   Possible Goals

The operation of organisations has consequences for various groups of people. These groups are called stakeholders. The outcomes of the organisation often have contradictory consequences for the stakeholder groups, hence their interests can diverge and be contradictory. The different and often contradictory goals for the various stakeholder groups of a cooperative can be listed as, revised from (Slack et al., 2004):

1. Society

   (a) Employment
   (b) Community well-being
   (c) Environmentally sustainable products and production

2. Customers

   (a) Desired products and services
   (b) Quality products and services
   (c) Fast and dependable delivery
   (d) Flexibility
   (e) Low price

3. Suppliers

   (a) High demand on supplies
   (b) Development of supplier's capability
   (c) Access to information

4. Employees

   (a) Continuation of employment
   (b) High salary
   (c) High standards of working conditions
   (d) Personal development

2.3.2 Efficiency in Production

Worker cooperatives and employee-owned firms have an equal or higher survivor rate than conventional firms. Productivity is a central measure of economic efficiency of an organisation since it needs to be equal to or exceed that of other firms. It can be measured in several ways, for example: value added per unit of investment, value added per unit of asset and value added per worker. There is only an insubstantial amount of evidence that indicates that cooperatives are less productive, but on the other hand substantial evidence supporting that they are at least equal to or exceed conventional firms in productivity. As an addition to this they typically provide various benefits to the community (Logue and Yates, 2005).

Furthermore, there is a positive correlation between on one hand profit sharing, worker ownership and worker participation and productivity on the other. This correlation is strengthened if the firms are controlled and owned by the workers (Doucouliagos, 1995). Productivity is positively impacted by both participation and ownership (Levine and Tyson, 1990).

2.3.3 Lasting Enterprises

It has been realised by the experiences of the Mondragon cooperative in Spain and also Legacoop cooperative in Italy that there is a need to cooperate in a network of cooperatives. Otherwise it is unlikely that individual cooperatives will survive in the market. But there is in general a tendency to make decision-making more long-term in cooperatives (Iuviene et al., 2010).

2.3.4 Effects Directly on the Members

Cooperatives provide superior working conditions (Levine and Tyson, 1990). Co-operatives typically provide their members with meaningful work and a good atmosphere to work in for their members (Gordon Nembhard, 2014). In general, there seem to be more opportunities for advancements within cooperatives (Gordon Nembhard, 2014). Self-managed production promotes understanding, participation, creation, identity and freedom (Max-Neef et al., 1991).

2.3.5 Economic Benefits for the Members and Their Families

Worker cooperatives and employee-owned firms typically prioritise job security for members and their respective family members (Logue and Yates, 2005). Worker

cooperatives and employee-owned firms often have slightly higher wages and deliver additional resources through profit-sharing, dividends, bonuses and more generous benefits (Logue and Yates, 2005). Cooperatives typically increase industry standards in wages and benefits (Levine and Tyson, 1990).

2.3.6 Effects on Society

Most cooperatives report that their activities have resulted in various beneficial outcomes for the members and the community and society in general.

Health benefits: a strong positive correlation between the percent of the population employed in cooperatives and human health, including cardiovascular health has been observed in one study (Erdal, 2000).

Initiative, some people report that the cooperative helped them continue their education. And some cooperatives report their effect of creating empowerment of for example women (Weiss and Clamp, 1992).

The social situation: both a strong positive correlation between the percent of the population employed in cooperatives and the level of education, degree of social involvement and social perceptions and a strong negative correlation to crime was observed in one study (Erdal, 2000).

Social capital such as team work, solidarity, consensus building, and meeting facilitation (Gordon Nembhard, 2014). Cooperatives provide a sense of community for the people involved (Alperovitz, 2013).

Civic participation, many members start feeling more comfortable participating in ways to influence their children's education, running for office in politics and starting up community organisations (Gordon Nembhard, 2014).

Civic values: members tend to appreciate the transparency of their organisation and the structure of working together to reach common goals, so this becomes expectations in all spheres of life (Gordon Nembhard, 2014).

Individual political participation, in all ways except voting increased and kept increasing relative to non-members (Greenberg, 1986).

Cooperatives tend to become a way for less powerful groups in society to promote their interests. They do this by gathering people and resources, enabling them to effect market forces and community development. They tend to shift the communities in the direction of local ownership and control of capital, local hiring, the development of leadership capacity and trusting relationships (Fairbairn et al., 1991).

Collective political participation: whole cooperatives can work together to influence politics, for example to improve working conditions and economic compensation in their industry (Gordon Nembhard, 2014).

Worker cooperatives and employee-owned firms typically support community facilities, for example hospitals and schools (Logue and Yates, 2005). And cooperatives provide for the training of the members, a board of directors with well-trained members and the community through information boards and workshops (Gordon Nembhard, 2014).

A lot of cooperatives are explicitly working to improve the economy of the whole community in various ways. For example by the supply of products and services of high quality to relatively low prices (Gordon Nembhard, 2014).

Cooperatives offer communities opportunities to create employment for local residents, create power in the market place, make goods and services available, prevent the leakage of local money and assist in youth retention (Gibson, 2005).

Cooperatives can have a substantial positive economic impact. An example is Wisconsin, USA where 30000 jobs were supported and 1.2 billion USD where created and divided between the members themselves and the public sector in terms of taxes (Zeuli et al., 2003).

There has been an increasing inequality in economic resources within many societies. Such inequality reduces the social capital of the society, causing reduced economic growth and negative effects on political democracy (Rothstein, 2005). But an economic democracy would distribute resources more fairly, and these tendencies could be reversed (Rothstein, 2017).

2.3.7   Harder to Recruit Managers

An experienced difficulty in cooperatives is the recruitment of capable managers with an interest in fostering the cooperative values. Capable managers are essential to the economic success of the enterprise (Davis, 2001) and (Spear et al., 2009). But this problem is possible to overcome, as in the case of the Mondragon Cooperative, perhaps due to its training policy of new management staff (Basterretxea and Albizu, 2011).

3

FRAMEWORK

This section provides a framework for analysis. The section contains five parts; one containing formal ways work can be organised, one about legal aspects, one about human needs in the work environment, one concerning motivation and one about informal structures in the organisation of work. The framework section gives a structure that is used to construct some of the methods and to analyse the findings and conduct the discussion.

The part with formal structures to organise work shows how work can be structured in terms of ownership and formal ways to have control over the cooperative. This gives a structure from which to interpret the formal structure of the cooperatives.

The legal aspects gives an overview of the constraints on organising an organisation. What is the relationship between the members and the cooperative and how can the cooperative be organised internally.

The human needs in the work environment provides various ways to organise work and understanding of what is important from the perspective of motivation, participation and democracy. This enhances the analysis in terms of the methods used.

The part about motivation addresses the sources of motivation and how work and the organisation can be structured in order to maximise motivation.

The informal structure concerns how non-formal structures can exist in cooperatives and in organisations. Furthermore it concerns how organisations can be seen as complex systems.

3.1   Formal Structures to Organise Work

The formal structure can be concerned with the formal control and ownership of the organisation. The ownership structure is fundamental to the organisation and can take several forms.
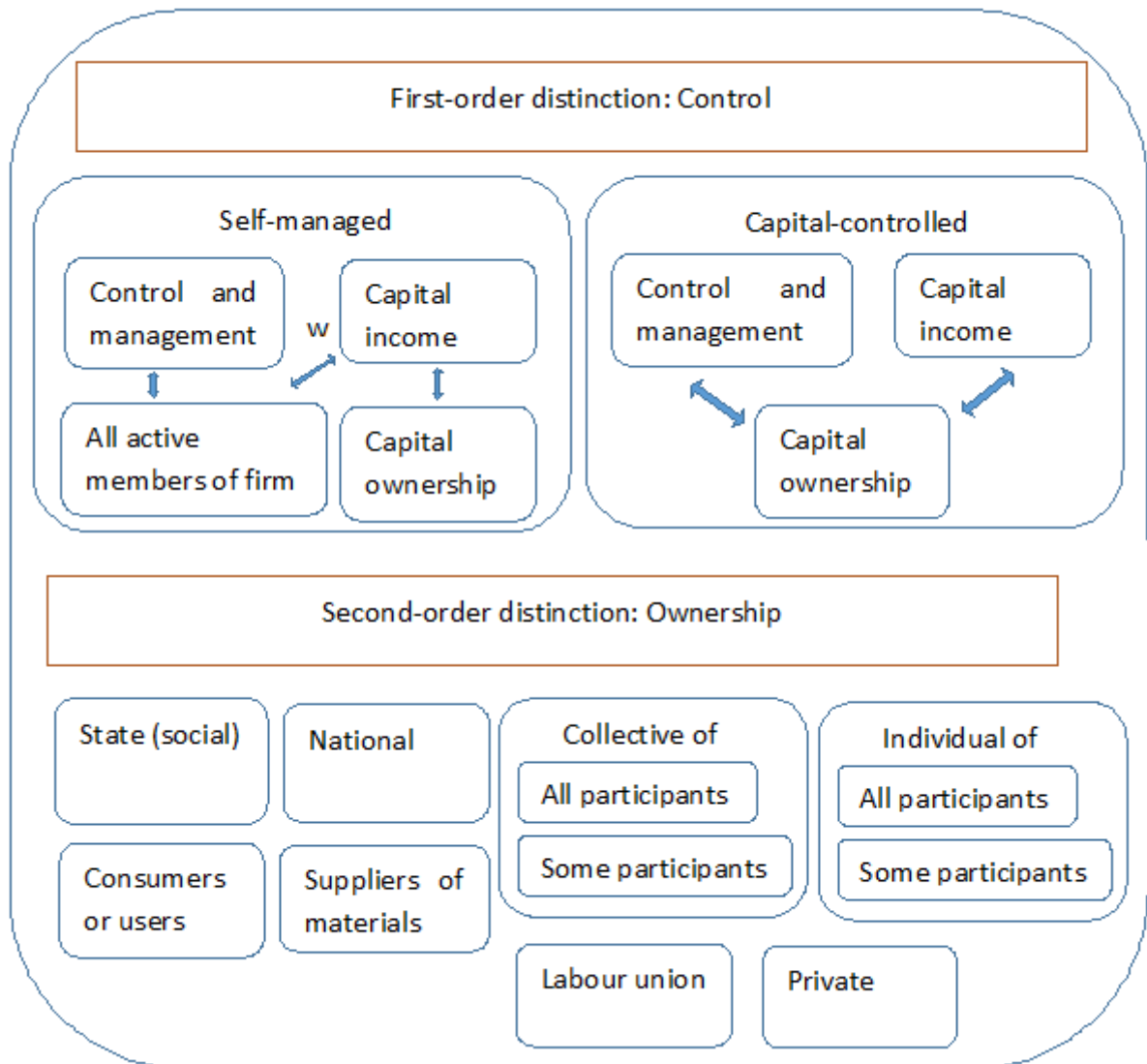
Figure 3.1: The formal structures of control of an enterprise can be categorised on two levels. The arrows mean correspondence (Vanek, 1975b).

The distinction concerning self-management or capital control is that under capital control the owners of the capital control the enterprise, but with self-management the control is in the hands of the members on the basis of one person one vote. Capital in turn can be owned by different actors, see figure 3.1 (Vanek, 1975b):

- State

- National

- Collective of:

  - All participants

  - Some participants

- Individual of:

  - All participants

  - Some participants

- Consumers or users

- Labour union

- Suppliers of material

- Private

All firms can be characterised by some selection from the two orders of distinction. There can also exist hybrid forms, for example worker-codetermination or private ownership with some of the owners being participants.

Organisations can furthermore be organised as federations with different levels. However, there is no agreed upon and precise definition of federation (Jonnergård et al., 1984) but "[...] the method of dividing powers [in a federal constitution] so that the general and regional governments are each within a sphere coordinate and independent of one another" (Wheare, 1963, p. 10) gives a broad definition for a federation.

3.2 Different Kinds of Legal Entities as Cooperatives

Legally in Sweden, a cooperative can be organised in several ways. Three ways are presented in this section. As a non-profit association (ideel förening), as a business association (ekonomisk förening) and as a joint-stock company (aktiebolag).

3.2.1 The Non-Profit Association

The non-profit association is the least clearly specified organisation from a legal point of view. But there are some guidelines according to case law and legal opinion, in order for it to have legal capacity, the following is recommended of the association:

- Being formed by at least two or three people (Hemström, 2007).

- The existence of by-laws that specify the purpose, decision-making process and name of the organisation (Högsta domstolen, 1987).

- The existence of an appointed representative, usually a board (Integrations- och jämställdhetsdepartementet, 2009).

Since there are no laws concerning Non-Profit Association there is the risk that all members will be personally liable for the debts of the organisation. But it also creates the highest degree of flexibility in designing the organisation (Bolagsverket, 2012).

3.2.2 The Business Association

From the point of view of the law in Sweden a cooperative can be an "ekonomisk förening" (business association) partially regulated in law according to "lagen (1987:667) om ekonomiska föreningar" (the law (1987:667) concerning business associations) (Skatteverket, 2018). According to this law the members of a cooperative when meeting together constitute a decision-making body named "föreningsstämma" (association meeting). The association meeting determines the by-laws and appoints the board. The board must consist of at least three members and is responsible for running the cooperative. An accountant must also be appointed by the association meeting and the accountant controls the bookkeeping and the conduct of the board. The board can appoint a chief executive officer if nothing else is stated in the by-laws. Furthermore, the members are not personally responsible for the debts (Riksdagen, 1987).

Given these restrictions the association meeting is free to determine the organisation of the cooperative according to its own by-laws except for various specific regulations, for example that the board is not allowed to appoint new board members themselves and people are not allowed to be hindered from becoming members in a discriminatory way (Riksdagen, 1987).

3.2.3   The Joint-Stock Company

The Joint-Stock Company (aktiebolag) are organised according to "Aktiebolagslag (2005:551)". The basic body of the organisation is the annual meeting of shareholders (bolagsstämma) which in general has the right to make all the decisions in the Joint-Stock Company. Furthermore it writes the articles of association (bolagsordning) and elects the board (styrelse). The specific demands of the Joint-Stock Company increases in certain cases, for example if it is revenue and number of employees exceeds certain limits. Furthermore, the organisation needs a share capital (aktiekapital) of at least 50 000 SEK (Riksdagen, 2005).

This leaves open for the possibility of including the 7 ICA principles in the articles of association and using the Joint-Stock Company form of organisation to create a cooperative.

3.2.4   Formality and Practice

The legal framework allows for a wide variety of ways to formally organise a cooperative internally. This means that a democratic cooperative might be organised as a traditionally organised hierarchical joint-stock company, hence making it maximally hierarchical. Furthermore, the Swedish regulation of joint-stock companies allows corporations to be more democratically organised than some cooperatives with the exception that the corporate equivalent of the association meeting consists of share owners instead of members and the votes are distributed according to the percentage of shares owned by an owner instead of being equally distributed.

If the members of a cooperative want to maximise their influence the cooperative allows them to do so by writing the by-laws or the articles of association. This results in a structure with minimal formal hierarchies. Between these two extremes there are compromises which are common. The important thing in order for democracy to flourish in practice is informal democratic structures, practices and methods (East bay community law center et al., 2014).

3.3   Human Needs in the Work Environment

Humans can be seen as having general needs, and some of them are more relevant in the workplace. A good work-environment has positive consequences for human health and for the production. When performing an activity together humans strive for participation, and they need motivation to conduct any activity. This section consists of three parts and is used to create methods and in the analysis. The three parts concern the benefits of a good work environment, the participation of workers

in their organisations and the motivation of the workers.

The part about the good work environment shows the consequences of a good work environment. It shows the importance of the work environment for the employees as well as for the capacity of the organisation.

The concept of participation concerns the possibility and capacity to participate in decision-making as well as the will and actual realisation of it. This is used in the design of methods and in the analysis.

The part about the motivation concerns the internal motivation of the workers, and its sources and methods to create it. This is also used in the design of methods and in the analysis.

3.3.1 Benefits of a Good Work-environment

A good work-environment has several benefits. Mainly it increases the motivation and production of the workers. Furthermore, it reduces (Rubenowitz, 2009):

- Physical and psychological diseases.

- Short and long-term sick leave.

- Tendency to change workplace.

- The risk of accidents.

The most important factors for workers to experience a positive work environment are (Rubenowitz, 2009):

- Control of one's own work. The work load and the methods employed.

- A cooperative climate between subordinates and managers.

- Enjoyment of the work. The tasks give an outlet for talent and ability.

- A community of friendship between the workers.

- Optimal workload, both from a physical and psychological perspectives.

The actual experienced control over one's work has a clear positive effect on job satisfaction, engagement and psychosomatic health. The most important factor for this experience is not the formal structure but the experienced ability to affect one's situation (Rubenowitz, 2009). Participating in a well-functioning discussion and decision-making process is usually not boring but pleasurable and highly appreciated by the participants (Greaber, 2009).

3.3.1.1 Group Psychology

Work is often organised in relatively independent groups. The reasons are several (Rubenowitz, 2009):

- Easier to distribute complex tasks to groups than to individuals.

- Less sensible to disruptions and more flexible.

- Enables the growth of individuals to want and be able to take a responsibility for the whole of the production.

But the formal decision to organise in groups brings few benefits. Rather there are substantial requirements on how work is organised in practice in order to derive the desired improvements. Groups organised according to self-management needs (Rubenowitz, 2009)

- A well-defined boundary of the work area.

- Well defined goals for their work.

- The necessary competence for the task.

- The necessary administrative and social psychological competence.

- Possible temporary wage differentiation to be based on competence rather than production.

- To influence the recruitment of new people to the group and share common values.

- A degree of anatomy concerning production, quality, economy and administration with the redundancy necessary to make this a reality.

- A variation of tasks for the individual members within the group, giving them both physical and psychological variation, perhaps including administrative tasks.

- To rotate the roll of coordinator if such a position is necessary.

- A moderate work load so the relations within the group are not put under stress and new members are able to cope with the situation.

3.3.2 Participation

The concept of participation concerns several disciplines. In work science, the focus is on worker influence, in behavioural science the emphasis is on personal health and development and within management to create efficient and manageable organisations (Lindquist, 2013).

3.3.2.1 Definition of Participation

While there is no cross-disciplinary agreed upon definition of participation (Marchington, 2005). A definition by Lindquist (2013) is that participation is "engaged and influential behaviour to reach a desired goal" (Lindquist, 2013, p. 73).

The possibility of participation is based on influence and engagement. The influence can be seen as the structural aspect of participation and engagement as the personal aspect. In this context influence means power and competence, and engagement means to perform an activity and to feel involved in it in a desired way. In other words that the person is allowed, capable and willing to do something and actually does it (Lindquist, 2013).

To compare with the definition of participation, the non-technical definition of cooperation is "[t]he action or process of working together to the same end" (Dictionary, 2018). Participation can hence be seen as a more democratic subcategory of cooperation.

3.3.2.2 Influence

Combining the reasoning of (Carole, 1972), points 1-3 and (Marchington, 2005), points 4 and 5, there is a kind of hierarchy of influence concerning participation:

1. The lowest level does not include any actual influence from all participants. But if the participants nonetheless allow themselves to be enthusiastic, then this is "pseudo-participation".

2. The influence can be unequally distributed among the participants, this is "partial participation" in contrast to a situation with total equality which is "full participation".

3. Participation can furthermore exist or not exist at different levels of an organisation. Particularly, it can exist on higher or lower levels in an organisation.

4. Participation can be limited to certain areas at the various levels.

5. Participation can take on various forms where it exists.

Pseudo-participation can be created by control of the cultural and normative aspects of the organisation (Deal and Kennedy, 1983). This has been criticised as a way to use the striving for personal development of people (Styhre, 2002) for an "attempt to create a facade of codetermination" (Erksson-Zetterquist et al., 2008, p. 143). But (Lindquist, 2013) means that such attempts are only successful in the short term. Adman (2004) differentiates between different levels of influence:

- Individual autonomy: the control of the individual worker over the direct work situation.

- Collective everyday-participation: every day decisions made together inside a work group.

- Collective decisions: concerning the whole firm such as investments, marketing, choosing who to have responsible posts etcetera.

Abrahamsson (1975) distinguishes between influence on two levels. Influence on the highest levels of decision-making such as board meetings and management teams is "political participation" and on the lower levels for example the working procedure, job rotation and professionalisation is "sociotechnical-participation".

Furthermore, there is a need for a form of governance, formally or informally, of different scope, and degree of directness, in order for all participants to have real influence (Macy et al., 1989). A top-down structure of power is not necessary, it is possible for power to flow from the bottom to the top (Sawicki, 1991).

The optimal forms of organisation to realise participation according to Mintzberg (1983) are the profession, bureaucracy and adhocracy.

Drucker (1959) points to the challenge of not narrowing people to only performing a narrow function, but being able to use the whole human capacity. "Planning and doing are separate parts of the same job; they are not separate jobs [. . .]" and ought to be done by the same person (Drucker, 1959, p. 251).

Participation is necessary for optimal performance. The worker needs to know how much she contributes directly to the overall work of the organisation and indirectly to society (Drucker, 1959). "The worker will assume responsibility for peak performance only if he has a managerial vision, that is, if he sees the enterprise as if he were a manager responsible, through his performance, for its success and survival. This vision he can only attain through the experience of participation" (Drucker, 1959, p. 270).

3.3.2.3 Engagement

But the influence of the participants requires to be added with their engagement in order to become participation. Engagement can be seen to consist of two parts to do a task, to be "task-involved" and to be "ego-involved" a kind of engagement of the inner person (Allport, 1945). Both phenomena can occur independently of each other, it is possible for the spectators of a football match to be enthusiastic even if they are not participating while performers of repetitive work are often not ego-involved (Lindquist, 2011).

Lindquist (2013) means that ego-involvement might be the most important factor in participation. Hall (1990) has called it the spice in live and what animates the worker. But both its causes and relationship to power, competence and activity are unclear (Lindquist, 2013). Lindquist (2013) speculates that the different aspects might reinforce each other and that the goals of the work as well as the actual tasks themselves influence ego-involvement.

Ego-involvement can be interpreted to have two sources, either it comes from within and the tasks themselves make the worker feel good, or it can come from without where the overall purpose of the organisation can be the source of motivation (Lindquist, 2013).

3.3.2.4 Why is Participation Desirable?

Participation can be motivated from the presumed positive effect on organisational performance and the standpoint of humanistic values. On the personal level, humans have an existential need for engagement, competence and power and in order to affect any situation humans need will, competence and power (Lindquist, 2013). The components of involvement, competence and power can be seen as positive in themselves but participation as a whole also has positive effects.

Competence is both a result of and a perquisite for human growth (White, 1959) and "the strive for competence" is strongly connected to phycological health (Hall, 1990, p. 39). This need is essential for survival as well as for self-respect, self-esteem and self-awareness but seem to have been somewhat lost in industrial society (Lindquist, 2011, p. 82). Mintzberg (1983) claims that development of competence is important for a more equal distribution of power within the organisation.

Power is connected to external goals but also to an individual's inner world and interpersonal relations (Jahoda, 1979). All social relations contain power according to the philosopher Michel Foucault (Brenner, 1994). Power has several positive consequences for the individual:

- Psychological growth (Eriksson, 1971).

- Personal development and mental health (Jahoda, 1979).

- Reduced alienation (Seeman, 1959) and (Blauner, 1964).

- Increased motivation and engagement (McClelland and Burnham, 2008) and (Lewin, 1947).

- Legitimacy and loyalty (Weber, 1947) and (Lewin, 1947).

- The socialisation in the workplace is dependent on the participation in, the formulation of and the making of decisions (Walter, 1983).

These are essential goals for humans (Argyris, 1971) and McClelland (1961) sees humans as having a striving for power. According to some this should therefore be a human right (Hatling and Sörensen, 1998).

Participation as a whole can be seen as having positive effects on four levels, the acceptance of the organisation, the improvement of productivity, personal development and societal improvement. In general, the stronger the participation the stronger the positive effects (Lindquist, 2011).

Participation in important aspects of the general activity, in ways that feel real and meaningful strengthens the sense of responsibility (Festinger, 1957), deepens the loyalty and increases the experienced legitimacy of the organisation's goals and methods (Lindquist, 2011).

The productivity improvements stem from the increase in energy and skill. The increased energy is the willingness to work for longer and more intensely, manifesting itself for example in higher attendance, punctuality and greater tendency to take initiatives. The improvement in skill manifest itself in a will to improve as well as being capable of performing more qualified and independent work (Lindquist, 2011).

Pateman (1972) claims that participation at the workplace is the basis for political democracy. Braverman (1977) claims that the lack of participation under industrialisation has caused a diminishment of the independence and mental activity of the worker.

3.3.2.5 When is Participation Not Needed?

Depending of the state of the individual or the organisation, participation might not be possible or desirable. This would imply the need for more authoritarian organisational forms in such circumstances. Such circumstances can be situations with a lack of time, high degrees of routine and a low psychological maturity of the members. Examples might be if a decision has already been made by the members, too many people are involved with not enough time and space to gather them or the members are not involved and apathetic (Argyris, 1971).

Even if these limitations apply at one level, they might not exist on another level. A decision could be made at a higher level with people participating and thereafter they concede to perform their task without formal power at a lower level. This will allow the members to decide that overall purpose and structure for the activity. This could conserve what appear as the more important part of the participation, namely the engagement (Argyris, 1971).

This will maintain the positive attitude to the organisation and its members. Although it is needed to take into account that engagement depends on things such as will, motivation and attitude and cannot be commanded unlike power, competence and activity (Argyris, 1971).

3.3.2.6 How Can Real Participation Flourish?

According to (Lindquist, 2013) there are four requirements for participation; power over the relevant decisions, appropriate competence, the actual partaking in the activity and the desire to participate. Lindquist (2013) makes a distinction between the former three and the last one. The first three can easily be created by delegation, competence development and being given a set of tasks. The last part, the ego-involvement, can partially be addressed by an awareness and explanation of the goals of the organisation. But the further enhancement of ego-involvement requires a deeper understanding of human motivation. An understanding of its springs and principles is needed (Lindquist, 2013).

3.4 Motivation

Motivation makes production more efficient, and the lack of motivation is estimated to have a major negative impact on the economy and the GDP. The problem of lack of motivation can be illustrated with some statistics from employees in Sweden. Around 16 ± 3 % of the workforce is engaged while 73 ± 4 % is not engaged and 12 ± 3 % is actively disengaged (with a 95 % confidence). The statistics for most countries is rather similar (O'Boyle and Harter, 2013). There are several questions that can be asked about motivation. Three main questions in the context of this report are:

- What is the source of motivation?

- What is the characteristics of motivation?

- Under what circumstances and in what ways is motivation changed, diminished or enhanced?

A scheme for subdividing motivation in terms of its source is provided by Friberg (1975):

- Coercive force, is a negative incentive consisting of physical and biological harm. It can be divided into two subcategories:
  - Direct violence.
  - Structural violence, wherein the structure of society constitutes the violence. For example, insufficient wages without the existence of alternative employment or the threat of being dismissed.

- Material incentive, is the rewarding of people with the possibility of consumption.

- Normative incentive, is the result of being part of a social context.
  - Social incentive, results from being part of a group, in terms of
    * Involvement, where the approval of others is motivating.
    * Identification, which results from taking on a role in a group.
  - Internalised incentive, results from opinions becoming second nature to a person.
    * Morals, are incorporated more unconsciously while growing up.
    * Ideology, is acquired more consciously as an adult.

- Inherent incentive, has its source in the person itself.

This report focuses on the last source of motivation, inherent incentive, but includes an overview of the others.

3.4.1   Coercive Force

Coercive force results in an apparent submission with constant attempts to evade the demanded tasks. Coercive force is unable to make people perform tasks demanding: initiative, interest and responsibility (Friberg, 1975).

3.4.2   Material Incentive

Material incentive has been shown to result in highly varied results. It can be used to stimulate people for any goal, but people will perform tasks mechanically in a routine manner without independence and innovation (Friberg, 1975).

3.4.3 Normative Incentive

The social incentives are among the strongest incentives known. And they can be utilised in order to enhance performance at the workplace (Friberg, 1975).

The internalised incentives, especially the ideology, reduces the scope of possible goals that a person can work for. Morals provide some of the attitudes relevant for work such as discipline. The internalised incentives might become a rigid system of rules resulting in a stifling of creativity and reduced problem-solving capacity (Friberg, 1975).

The internalised incentives in themselves are not so useful for increasing efficiency. But the combination of social incentives and internalised incentives results is used production systems (Friberg, 1975).

3.4.4 Inherent Incentive

Pink (2011) proposes that inherent incentives as a motivator has been underestimated and that the positive effects of economic rewards on motivation have been overestimated. It is not always the case that an increase in the economic reward for success will result in better performance. Sometimes it is rather the case that an increase in the reward will reduce performance, and a too high reward can end in catastrophic performance (Ariely et al., 2009) and (Bowles and Polania-Reyes, 2012). This phenomenon is also observed in other primates (Harlow et al., 1950).

The circumstance when economic reward does work well is when people are encouraged to do specific things in specified ways. And it works most optimally with mundane tasks with no internal motivation, that only require simple rule following. But even the introduction of elementary thinking reduced the positive result of incitements (Deci et al., 2001). The consequences of incentive systems are not only on the performance, it is on the performer too (Deci et al., 1999). Systems of external rewards and punishment has been observed to:

- Extinguishes internal drive (Deci, 1971) and (Bowles and Polania-Reyes, 2012).

- Reduces creativity and makes it harder to think "outside the box" (Glucksberg, 1962) and (Glucksberg, 1964).

- Reduce altruistic behaviour, for example the tendency to donate blood is substantially reduced when a reward is introduced (Mellström and Johannesson, 2008).

- Encourages unethical behaviour for example cheating in school, doping in sports and unethical accounting practices in business (Ordóñez et al., 2009).

The introduction of a punishment can increase the punished behaviour (Gneezy and Rustichini, 2000).

- Rewards can cause addiction like an addictive substance (Suvorov, 2003) and (Knutson et al., 2001).

- Encourage a shift from risk averse to risk seeking (Kuhnen and Knutson, 2005).

- Lead to short-term behaviour such as reduced long-term investment in publicly held corporations (Cheng et al., 2005) and short-term behaviour in schools (Benabou and Tirole, 2003). While creating own goals can be beneficial, the very existence of goals imposed on others can create a short term behaviour (Ordóñez et al., 2009).

In general, people living according to more intrinsic sources of motivation have better health than those aspiring to beauty, fame and money. The improvements have been shown in better interpersonal relationships, more self-esteem and greater well-being in general (Ryan and Deci, 2000).

Rather what motivates people to perform, given that they have enough economic resources so they do not have to worry about their economic situation, is immaterial qualities such as: autonomy, mastery and purpose (Pink, 2011).

3.4.4.1 Autonomy

"Autonomous motivation involves behaving with a full sense of volition and choice," in contrast to "controlled motivation" which "involves behaving with the experience of pressure and demand toward specific outcomes that comes from forces perceived to be external to the self" (Deci and Ryan, 2008, p. 14). According to Pink (2011) our default mode is to be autonomous and self-directed.

The strength of the drive towards anatomy is so strong that it has been observed cross-culturally (Chirkov et al., 2003) and even poor people in Bangladesh strive towards it (Devine et al., 2008). Activities based on autonomous motivation result in (Deci and Ryan, 2008):

- Increased productivity.

- Improved conceptual understanding.

- Higher grades.

- Increased persistence.

- Reduced frequency of burnout.

- Greater general psychological well-being.

- Increased job satisfaction (Green, 2006).

- Higher growth and reduced turnover in firms (Baard et al., 2004).

Pink (2011) proposes a move from "management" to "self-direction", "[w]e're born to be players, not pawns" (Pink, 2011, p. 106). Individuals differ on what they need autonomy over, but in general, for anatomy to emerge, there is a need for the individuals to control the task, their time, their technique and their team (Pink, 2011). Some examples are:

- Task, what to do: At the IT-corporation Google the employees have free disposition over 20 % of their time which has stimulated idea generation (Steiber and Alänge, 2016).

- Time, when to do it: The headquarters of the consumer electronics corporation Best Buy have switched policy from the billable hour to Results Only Work Environment resulting in better health and increased productivity (Erickson, 2008).

- Technique, how to do it: The customer service department at the online shoe retailer Zappos have a policy of allowing the employees to handle the calls any way they want without any surveillance. This has resulted in one of the highest rankings in customer service (Brady and McGregor, 2009).

- Team, who to do it with: At all departments at the organic grocery chain Whole Foods, all employees vote on whether or not to hire a new employee after a thirty day test period (Restuccia, 2007) and (Hamel and Breen, 2007).

3.4.4.2 Mastery

Pink (2011) defines mastery in this context as "the desire to get better and better at something that matters" (Pink, 2011, p. 106). In order for people to "achieve" mastery they need four components (Pink, 2011):

- Flow, the psychological state of losing oneself in a task (Csikszentmihalyi, 2000).

- Learning orientation, the attitude that the goal is not to reach a specific skill or reach a specific goal but to explore and develop (Dweck, 2006).

- Grit, the "perseverance and passion for long-term goals" (Duckworth et al., 2007, p. 1087).

- Nearing, the realisation that mastery will not be achieved but only neared, a dissatisfaction with the state obtained, (Pink, 2011).

3.4.4.2.1 Flow Flow can be short moments of perfect focus on a task or span the length of a lasting activity. In order for a person to reach flow there is a need for clear goals, immediate feedback and a close matching of abilities and problems. Flow requires having problems of just the right size. A too small problem creates boredom while a too challenging task creates anxiety. The organisational problem is that there is often a mismatch between the individuals and the tasks in this regard. This leads to an under utilisation of flow resulting in less work and less efficient work hence in reduced productivity (Csikszentmihalyi, 2000). Furthermore, by expanding the domain of low autonomy jobs, there is a possibility for periods of flow also in otherwise less demanding jobs (Wrzesniewski and Dutton, 2001).

The correlation between productivity and the source of motivation was found in a study of 11 000 scientists and engineers employed at various companies in the United States. The best predictor for productivity found was the passion to master something new and engaging. The number of filed patents was significantly higher than among those who were mainly motivated by money, even when the expended effort was controlled for (Henry and Cohen, 2010).

In an experiment, people were prevented from reaching flow under one day. In it previously health individuals showed symptoms of generalised anxiety disorder (Csikszentmihalyi, 2000) with problems such as irritability, fatigue, difficulty thinking clearly etcetera (Frances et al., 1994). And continuing the experiment beyond two days was inadvisable for the health of the participants in the experiment (Csikszentmihalyi, 2000). Flow isn't something that is optional to add to life, it's essential for life (Pink, 2011), it's the "the oxygen of the soul" (Pink, 2011, p. 127).

The importance of flow can according to Mihaly Csikszentmihalyi be underlined by the play of children, who work in a highly dedicated fashion at the problem of understanding themself and the world. They seek out flow as surely if it was a natural law and proceed from flow to flow in a pursuit of mastery. We should all do this but as we grow up we "start to get ashamed" that what we're doing "is childish"(Pink, 2011, p. 128). Talking about the change in perspective needed Mihaly Csikszentmihalyi stated (Galenson, 2001, p. 53):

> "There is no reason to believe any longer that only irrelevant 'play' can be enjoyed, while the serious business of life must be borne as a burdensome cross. Once we realize that the boundaries between work and play are artificial, we can take matters in hand and begin the difficult task of making life more livable"

Several companies such as Ericsson, Green Cargo, Microsoft, Patagonia, and Toyota have created flow-friendly workplaces in order to increase work satisfaction and productivity. At the telecommunications corporation Ericsson, this was implemented with clear objectives and quick feedback for employees. With six performance reviews per employees per year instead of one, often over one hour long, where the

level of engagement and progress toward mastery was discussed. And at the logistics corporation Green Cargo, 12 performance reviews were used. In both cases the performance of the affected areas of business were significantly improved (March, 2005).

The more immediate phenomenon of flow is alone not sufficient for mastery which operates on longer time horizons. But it is a necessary start (Pink, 2011).

3.4.4.2.2 Grit While flow can turn activities into something positive, it's not necessarily the case that it can cover all the composite tasks. Then grit becomes important, but it can be something positive, giving meaning to life (Dweck, 1999, p. 41) and be part in creating happiness (Nietzsche, 1882).

Grit, defined as the "perseverance and passion for long-term goals", to work hard in a focused way on the same objective (Duckworth et al., 2007, p. 1087) is highly important for long-term success in adverse situations. An example is the military school West-Point where new students had to pass an intensive seven week physical training program, and the level of grit was the best predictor of the likelihood to continue the education (Duckworth et al., 2007).

Reaching mastery can be painful, and since some expert performance can require a minimum of 10 years of training (Ericsson et al., 1993), grit is an essential component of mastery (Pink, 2011). In the case of Olympic swimmers, a study found that there was a positive correlation between time spent on mundane tasks and athletic success (Chambliss, 1989).

3.4.4.2.3 Learning Oriented A learning oriented mindset says that the main point of competence is the competence in itself and its improvement and not the amount of competence or the benefits from displaying it (Dweck, 2006). For example, the difference between getting a grade on an exam or focusing on understanding the concepts for their own sake (Dweck, 1999). In general, students who were given performance goals, rather than learning goals, in their study of a topic (Dweck, 2006):

- Could solve straightforward problems, but their ability to apply the concept to new situations was inhibited (Dweck, 1999).

- Gave up earlier and tried fewer solutions on new and slightly different problems (Dweck, 1999).

- Excreted less effort since hardship signified that they are lacking in capacity, while the learning oriented appreciated effort because it signified learning.

- Choose easy targets in order to get a constant supply of easy successes and confirmation of their capacity.

- Experience a feeling of helplessness when confronting new problems instead of a desire for mastery.

- Blamed their insufficient intelligence when facing setbacks instead of realising that setbacks are a part of mastering a new competence.

- The learning attitude gave the student the perspective that they do not already have to be good at something in order to think about solutions and try them out (Dweck, 1999).

3.4.4.2.4 Nearing Perfect competence will not be reached. It might be a source of frustration, but it also provides the allure that has its own worth. Mastery is attractive because of elusiveness (Pink, 2011). It is perhaps best illustrated by this quote by Albert Einstein (Dewey et al., 1931, p. 6):

> "The most beautiful thing we can experience is the mysterious. It is the source of all true art and science. He to whom this emotion is a stranger, who can no longer pause to wonder and stand rapt in awe, is as good as dead: his eyes are closed. This insight into the mystery of life, coupled though it be with fear, has also given rise to religion. To know that what is impenetrable to us really exists, manifesting itself as the highest wisdom and the most radiant beauty which our dull faculties can comprehend only in their most primitive forms-this knowledge, this feeling, is at the center of true religiousness. In this sense, and in this sense only, I belong in the ranks of devoutly religious men."

3.4.4.3 Purpose

Pink (2011) defines the need for purpose in this context as "the yearning to do what we do in the service of something larger than ourselves" (Pink, 2011, p. 219) and speculates that it is part of human nature to seek for a purpose, a "cause greater and more enduring than themselves" (Pink, 2011, p. 223). The psychologist Mihaly Csikszentmihalyi thinks that "evolution has had a hand in selecting people who had a sense of doing something beyond themselves" (Pink, 2011, p. 134).

The reason for considering purpose as a force in the working life of people is that "[a]s an emotional catalyst, wealth maximization lacks the power to fully mobilize human energies," according to (Hamel, 2009, p. 92) "one of the world's most influential business thinkers" (Wall Street Journal, The, 2009). This is because "[p]urpose provides activation energy for living" (Pink, 2011, p. 134). The profit motive can hence be complemented with a "purpose motive" (Pink, 2011, p. 133).

There is also a cultural shift happening. It has been clearly observed in the United States, primarily among "Baby Boomers" (in this case born 1946 through 1964) and

Generation Y (in this case born 1979 through 1994). The value system regarding work has gone from focusing on money to non-monetary factors. They "are redefining success [and] are willing to accept a radically 'remixed' set of rewards." Money has been replaced as the most important form of reward by a mix of non-monetary ones, such as "a great team" or "the ability to give back to society through work" (Hewlett, 2009, p. 9). In Sweden similar changes have taken place, starting around the second world war. There has been a shift from working in order to secure economic resources to a focus on inner demands; the tasks ought to be rewarding in themselves and allow for creativity and responsibility (Zetterberg et al., 1987).

The shift in values and the contrasting values work is organised around is consistent with the low levels of worker engagement (O'Boyle and Harter, 2013). Connected to this might be the rising trend of volunteerism, for example in the United States (Pink, 2011) and informal volunteerism in Sweden (Essen et al., 2015). This might indicate that people have work related needs that are not ordinarily fulfilled in the workplace, were purpose is considered ornamental, welcome as long as it does not interrupt the serious activities (Pink, 2011).

According to Pink (2011) purpose, in this context, consists of three parts; goals, words and policies. The goals have to allow the usage of profit to reach purpose, words should underscore that it is about more than self-interest and policies ought to allow people to pursue purpose in their own ways.

3.4.4.3.1 Goals Pink (2011) claims that purpose has to be part of the goals of the organisation, it is not enough to try to make a profit within the limitation of adhering to socially responsible plans and practices. Purpose has to drive and catalyse the organisation, not limit it.

An example of alignment of purpose and profit is TOMS, a corporation that among other things sell shows and eye-wear. For every pair of shoes it sells it gives a pair of shoes away to someone in the third world and when ear wear is sold someone gets eyesight restored in a developing country (*TOMS* 2018).

Another organisation that also have other goals other than profit maximisation is cooperatives. Membership in cooperatives is growing worldwide. In the three decades before 2009 the number of members had doubled to 800 million. There are more people that are members in a cooperative than own stocks both in the United States (Kelly, 2009) and in Sweden (Euroclear, 2018). As examples of big cooperatives can be mentioned SaludCoop in Colombia that provides health care to 25 % of the population and the Mondragón Corporación Cooperativa in Spain that is the seventh largest industrial concern in the country (Kelly, 2009).

3.4.4.3.2 Words The purpose of management is often stated in terms of "efficiency", "advantage" and "value". These values might be important but the words

"lack the power to rouse human hearts". In order "[t]o create organisations that are almost human in their capacity to adapt, innovate, and engage, management pioneers must find ways to infuse mundane business activities with deeper, soul-stirring ideals, such as honor, truth, love, justice, and beauty" (Hamel, 2009, p. 97).

According to Robert B. Reich, a former United States labour secretary, the words used in an organisation can be used to evaluate the organisation. The former secretary has termed this the "pronoun test". It works by asking employees a few questions and investigating whether they refer to the company as "they" or "we". Beyond the substance of the answers given, this simple clue shows what kind of organisation it is (Reich, 1993, p. A19).

According to Robert B. Reich the "we" indicates a "bottom-up" structured organisation that allows input and initiative from all members. This allows for a more flexible and innovative organisation that can make more intelligent decisions, which is essential in the workplaces of the future that do not have simple routine jobs (Reich, 1993, p. A19).

In 2009 in the wake of the 2007-2008 financial crisis, a few second year Harvard MBA students created the "MBA oath". It is a form of Hippocratic oath for graduates in business. It takes ethics as its starting point and specifies in general terms how it can be realised. It starts with that "[a]s a manager, my purpose is to serve the greater good by bringing people and resources together to create value that no single individual can create alone".

Furthermore, the oath pledger commits to "safeguard the interests of my shareholders, co-workers, customers and the society in which we operate" and to "strive to create sustainable economic, social, and environmental prosperity worldwide". The terms used such as "co-workers' interests", "no single individual", "society", "sustainable social prosperity" and "greater good" shows the yearning for purpose (MBA Oath website, the, 2018). In a few weeks about 25 % of the graduating class had signed the oath. Today students from over 300 institutions have taken the pledge (MBA Oath website, the, 2013).

3.4.4.3.3   Policies   Organisational policies create a framework for the activities of the workers. Some policies allow the drive for purpose to be utilised while other does not. For example, policies can extinguish the internal drive for purpose by replacing it with external demands, policies might not allow any space for purpose to take place and policies might not utilise the simple opportunities for purpose that exist (Pink, 2011).

An ethical guidelines policy has been implemented in many organisations. But there appear to be no decline in unethical conduct. According to Max Bazerman, professor at Harvard Business School, this might be explained by a replacement of internal ethical motivations with weak ethical standards that form an external demand. In

practical terms this might mean that an organisation implements standards for diversity in hiring practices. This results in a change from the internally motivated will to do the right thing to an external demand that requires adherence to a check list. The focus shifts from promoting diversity to avoiding breaking the rules, perhaps in order to avoid the organisation from being sued (Bazerman, 2008).

A policy that increases autonomy over what tasks to perform might contribute to better health. This can be illustrated by a study at the Mayo Clinic, where doctors face high pressures resulting in a high frequency of burnouts. By giving the doctors the opportunity to spend one day a week on the tasks they found most meaningful, be it community service, research or patient care, the burnout rate was cut in half (Shanafelt et al., 2009).

The typical policies concerning financial rewards to workers might be a missed opportunity to use purpose as a motivation. Several studies have found that the correlation between financial rewards and happiness can be weak. But an investigation of the issue with higher resolution has revealed a different connection. A change in policy might integrate the drive for purpose into the work of the employees.

It is not only the income that matters for happiness but also the way it is used. In fact, it might be more important. Spending the income on other people or contributing to a cause rather than spending them on oneself, caused subjective well-being to increase (Dunn et al., 2008). A policy proposal by (Bennett, 2009) is to devote a share of the organisation's budget for charity to be decided by the employees. Giving the workers anatomy over this spending could improve the emotional health of the workforce.

3.5 Informal Structures to Organise Work

The informal structures are important for the decision-making in organisations. This section contains five parts. The first part highlights that cooperatives are complicated internally, the second part shows the possibility for conflicts that exist within a cooperative, the third part concerns various forms of decision-making, the fourth part is about organisations as complex systems and the fifth part concerns possible undemocratic tendencies in organisations.

Cooperatives are complicated internally partially due to the many and heterogeneous sources of power. The possibility for conflicts that exist within a cooperative shows the conflict lines that can exist within a cooperative. The various forms of decision-making indicate possible ways to make and form decisions. Organisations can be seen as complex systems that can be simulated in various ways. Finally, cooperatives can become less democratic as a response to market pressure and bureaucratic tendencies.

3.5.1 Complicated Organisations

Organisations can be organised top-down, and in them; relations, conflicts and antagonism are seen as a problem, but in bottom-up organisations they are seen as the basis for decision-making (Jonnergård et al., 1984). This makes cooperatives different from the conventional forms of organising economic activities.

Cooperatives can be more complicated to govern because they have a large set of possible goals instead of profit maximisation as the leading goal of a corporation. Among this set of possible goals choices have to be made and conflicts have to be resolved. Furthermore, there can also be more people involved in the decision-making process with conflicting and multiple roles (Jonnergård et al., 1984).

Self-management structures can further be labour-management and worker-management. In labour-management the workers see the means of production as belonging to society, with a duty to maintain its value and to pay a scarcity rent to the rest of society. Worker-management has a narrower view with no such duties (Vanek, 1975a).

3.5.2 Conflicts

There can be conflicts between the different parts of an organisation. Conflicts can arise between different parts of a cooperative (Jonnergård et al., 1984).

- In federations the conflict stems from the potentially opposing principles of the independence of the parts and the coordination of the whole.

- There can be diverging views concerning the degree of solidarity between the different parts of an organisation. For example, the degree and according to which principles parts of the organisation which are rich in resources should share them with others.

There can be internal conflicts internal to the members in the organisation. The problem is about the degree of solidarity. A decision might be in the interest of the member but not the organisation and vice verse (Jonnergård et al., 1984).

3.5.3 Decision-making

There can be different views concerning the sufficient level of the exercise of democracy in a formally democratic organisation (Jonnergård et al., 1984):

- Election of representatives is sufficient.

- Participation in decision-making, for example through a vote, is necessary.

- Initiation of decision-making, is necessary.

Concerning the decision-making process in general, Adizes et al. (1979) proposes that there exists the following phases in the making of decisions:

1. Unwind

2. Gather facts

3. Compile facts

4. Reflect

5. Reach clarity

6. Construct the possibilities

7. Make the decision

8. Give resources

The phases can be divided into two stages, stage one including phase 1 to 5 and stage two including phase 6 to 8. The second stage is done collectively, but the first stage can be done individually or collectively. If the first stage is done individually then it is usually done in a short amount of time. But the second stage becomes more time consuming because the people tasked with implementing the decision do not see the benefit of it (Adizes et al., 1979).

But if the first stage is also done collectively then it will require much more time. The discussion will provide more perspective on what the problems and goals are, and include a broader set of solutions. If the process works out well, then the overall time will be reduced, since a consensus can be reached in the first stage and the problems of implementation can be dealt with before stage two. But among the requirements for a successful process are according to Adizes et al. (1979) that only the people concerned by a decision are involved in it in order to reduce the discussion. Furthermore, there has to be a genuine interaction between the participants in order to avoid power games.

If people are to be involved earlier then the basis for decisions might be enriched with diverging perspectives (Jonnergård et al., 1984). Steiber and Alänge (2016) identifies several approaches used by high technological corporations in the IT-sector. Among these are:

- Transparency and openness, where the employees have access to almost the same information as the board of the corporation.

- Small teams, with a high degree of freedom and responsibility, are given the possibility to solve tasks semi-independently and fast.

- Simple rules, such as the share of the work hours to spend at new or emerging tasks.

- Semi structured state, wherein some processes such as sales and distribution are structured while more creative areas are unstructured. Similar observations were made by Brown et al. (1997) and Eisenhardt et al. (1998) were a combination of clear responsibilities in some areas and considerable communication in other areas allowed for efficiency and creativity.

The informal discussion in an organisation is important for among other things the creation of a community, the creation of ideas, the formation of options and the early parts of the decision-making process (Ekman, 2003).

3.5.4 Complex Systems

Watts (2002) indicated that when individuals make binary decisions, for example whether or not to report bullying at a workplace, unpredictable social outcomes can result from non-linear interaction. This effect is enhanced when the decision is influenced by the behaviour of others and the individual is embedded in a social structure.

The mean individual might be a misleading when predicting the collective behaviour of a group. Outliers can have key roles in various social processes. Some individuals might for example have an outstanding influence on others (Dykstra et al., 2013).

The mean opinion will not always dominate within a group. Deffuant et al. (2002) and Hegselmann et al. (2002) concluded that societies can converge to various forms of polarisation in opinion. Huet et al. (2008) and Jager et al. (2005) found that minority positions may dominate. These studies indicate that macro changes in a society may originate from a multitude of micro-level interactions. And these micro interactions can explain unique and significant historic events.

The social interplay resulting from socially embedded heterogeneous individuals is difficult to study without models capable of simulating complex interplay (Edmonds et al., 2009). Models simulating the outcomes of social interactions can be either more generic or more specific. More generic network architectures can for example be spatial grids. The more specific models are adapted to a specific empirical case or category of cases and require more data of network interactions (Squazzoni et al., 2014).

The probability of interaction between people tend to increase with their similarity (Brown and Reingen, 1987). Similarity can be expressed in terms of parameters such

as age, gender, education or lifestyle (Rogers, 1983). Greater similarity between people seems to also increase trust, understanding, and attraction between them, creating a stronger relationship (Ruef et al., 2003).

Using for example a survey to estimate the parameters within a population, there is a possibility to estimate the interactions between the individuals and to create a more realistic simulation (Eck, 2013). If time dependent parameters are used then there is a possibility for the network to behave differently structurally (Squazzoni et al., 2014).

Bravo et al. (2012) using experimental data from a trust game, found that cooperation was independent of the initial network configurations (for example: scale-free, small worlds or random networks). But the introduction of partner selection, resulting in dynamic networks, resulted in the increased partnering of beneficial individuals and isolation of less cooperative individuals. This enabled the creation of beneficial norms between most participants. While several standard measurements of network statistics remained the same, the topology of the network changed.

3.5.5 Undemocratic Tendencies

Is there a tendency for democratic organisations to become more authoritarian? Does the drive come from internal or external sources? Michels (1911) proposed how an organisation can become more authoritarian because of an internal logic, while Webb et al. (1921) explained how external forces could shape an organisation.

3.5.5.1 The Iron Law of Oligarchy

According to Michels (1911) there is a tendency of all sufficiently large democratic organisations to develop into an oligarchy regardless of how democratic the organisation was at the beginning. This is because all decisions cannot be made with direct democracy leading to the slow formation of and later organisational capture by an elite of functionaries. The logic for this is about as follows:

1. There is a need for efficient administration.

2. To be efficient there is a need for specialisation.

3. A form of specialisation is decision-making.

4. A bureaucracy is established to deal with the administration.

5. The bureaucracy will be given power, such as control over punishment and rewards.

6. Leadership positions will be given to people with charisma.

7. Power corrupts the bureaucracy.

8. The bureaucracy will increase their power, by for example promoting people that agree with them and controlling the flow of information to the members.

9. The members will be impressed by these charismatic leaders, lack the initiative to gain back their power and wait for the judgement of their leaders before they form their own opinions.

10. The bureaucracy will continue to increase their power until oligarchy is reached.

3.5.5.2 Market Adaptation and Corporatization

Webb et al. (1921) claimed that in a capitalist economy, the long-term success of the firm is not compatible with cooperative and democratic principles. It has been observed that there appear to be a narrowing of the nature and polices of cooperatives on the global market. They tend to become more and more like privately owned corporations (Errasti et al., 2003).

As an example can be mentioned the large cooperative Mondragon in Spain. According to Errasti et al. (2003) there has been a shift in values and culture inside the cooperative compared with its idealistic beginnings. With today only a minority of the employees being members, and regular corporations are now part of the Mondragon structure.

4

METHOD

This section contains the methods used in the thesis. The section has four parts; one providing an overview of different strategies for organising a study, one containing the design of the study, one about how the questionnaires were formulated and chosen and one about the software that was constructed.

The first part gives an overview of strategies. The part with the design of the study lifts various problems and with constructing a study and display show these are addressed in the case of this study. The part about how the questionnaires were formulated provides the problems with formulation of questions and shows the sources of the questions. The part about the quantitative model shows its construction.

4.1 Designing the Study

There are several ways of doing social science research. Some methods are: experiments, surveys, histories, and the analysis of archival information. Advantages and disadvantages are associated with each strategy, as seen in table 4.1, depending upon three conditions: the type of research question, the control a researcher has over events, and if the study is of contemporary or historical phenomena (Yin, 1989).

Strategy	Form of research question	Requires control over behavioural events	Focuses on contemporary events
Experiment	how, why	yes	yes
Survey	who, what, where, how many, how much	no	yes
Archival analysis	who, what, where, how many, how much	no	yes/no
History	how, why	no	no
Case study	how, why	no	yes

Table 4.1: Different research strategies, from Yin et al. (1983).

This study focuses on contemporary events and the "how" and "why" of the examined organisations. Furthermore, the ability to control behaviour was limited. Therefore the case study strategy was chosen.

4.1.1 Case Study

In general, case studies are the preferred strategy when "how" or "why" questions arise, concerning a contemporary phenomenon within some real-life context were the researcher has limited control over events. Case studies are typically used to address the how and why in a complex social human phenomenon by journalists or social scientists (Yin, 1989).

Although case studies might have individual persons or institutions as their focus (Yin, 1989) the core of them has been boiled down to "the essence of a case study, the central tendency among all types of case study, is that it tries to illuminate a decision or set of decisions: why they were taken, how they were implemented, and with what result" (Schramm, 1971, p. 6).

Organisations and processes are often evaluated with case studies (Cronbach et al., 1980) and (Guba and Lincoln, 1981). This is mainly done in five ways (Yin, 1989):

- Investigating real-life phenomena that are too complex for surveyor experimental strategies (U.S. General Accounting Office, Program Evaluation and Methodology Division, 1990).

- Describing real-life phenomena and their context.

- Illustrating selected aspects of an evaluation.

- Exploring situations with unclear goals or outcomes.

- Performing a "meta-evaluation", the study of an evaluating study (Smith, 1990) and (Stake, 1986).

The case study is an empirical investigation and is especially suitable when the boundaries between context and phenomenon are unclear. It furthermore (Yin, 1989):

- Deals with situations with many more variables than data points.

- Relies on evidence from multiple sources.

- And is based on prior development of a theoretical framework.

Case studies can:

- Be both descriptive and explanatory.

- Be single- or multiple-case studies.

- Include, and even be restricted to, quantitative data.

In fact, it is possible to "do a valid and high-quality case study without leaving the library and the telephone, depending upon the topic being studied" (Yin, 1989, p. 11).

Case studies have traditionally been considered "soft research", but although superficially paradoxical, "softer research" is harder. It is pointed out by Yin (1989) that the case study method "is remarkably hard" (Yin, 1989, p. 16).

Several criticisms have been raised concerning case studies, but Yin (2009) presents some ways to remedy most of them.

The most prominent problem with case studies might be the lack of rigour. This is caused by sloppy work, deviations from systematic procedures or the biased interpretation of vague evidence (Yin, 2009). These problems also exist for experiments (Rosenthal, 1966) questionnaires for surveys (Sudman and Bradburn, 1983) and historical research (Gottschalk, 1968).

Case studies are hard to conduct, and given their soft nature the skills needed have not been formalised. Since there is no way to determine a person's ability to conduct them, unlike tests to judge a person's ability to play an instrument or to understand a mathematical concept, there might be a risk of over confidence (Yin, 2009). As a result, "most people feel that they can prepare a case study, and nearly all of us believe we can understand one. Since neither view is well founded, the case study receives a good deal of approbation it does not deserve" (Hoaglin et al., 1982, p. 134).

4.2 The Design of the Study

Significant preparations were done in order to avoid the problems associated with case-studies. The case study consists of four parts. In time sequence they are expert interviews, pre-study, choice of cooperatives and the main-study. The two first steps were done in to ensure the quality of the main-study.

The expert interviews provided an overview of the subject, and were needed for the identification of possible cooperatives to investigate and hence the continuation of the case study and in order to get a better understanding of the topic.

The pre-study was done at a cooperative. The purpose was to create and test the questionnaire. This was needed in order to ensure that a research area with substance could be identified, and the validity of the questions could be ensured. The questionnaire was also created by the usage of the literature in general, and on previously used and tested questionnaires.

Following the pre-study, the cooperatives in the main study were chosen. The choice was based on the size and close proximity of the cooperatives. Finally, the main study was conducted. This main study consisted of asking workers at two cooperatives questions from the questionnaires finalised in the pre-study.

The results from the interviews where then analysed with the literature, and from this conclusions could be drawn and software models created.

4.2.1   Expert Interviews

The expert interviews were done in order to achieve an overview of the literature, as well as the practical operations of existing cooperatives. The two people included in the study were chosen for their contribution to the literature and practical experience from cooperatives. Two roughly one hour long interviews were conducted with each interviewee. A substantial amount of the literature used in the report was identified or indicated in the expert interviews.

4.2.2   Pre-study

The pre-study was conducted at one cooperative. It's purpose was the identification of relevant questions and how to formulate the questions to ensure the reliability of them. For this two people were chosen at the cooperative. The choice of persons was based on that they felt that they had the knowledge needed to answer the questions, and that they had been at the cooperative for different periods of time. This later demand would give the possibility to interview people with different length of experience from the cooperatives.

The validity of the questions was based on the possibility of finding substantial answers that could bring the understanding of the subject area forward. This was done with open questions and a dialog. This back and forth revealed what kind of questions that could be answered and which questions where interesting to ask.

The reliability of the questions is based on the questions being clearly understood and interpreted. The interactions during the pre-study revealed how to ensure that a question was understood. Furthermore, the reception of different answers to questions that ought to produce more similar answers revealed further shortcomings in the questions formulation.

From the pre-study and the usage of literature, the final questionnaire was designed. The questionnaire is included in appendix A.

4.2.3   Choice of Cooperatives

The cooperatives were chosen based on their size. The assumption, based on the expert interviews were that the potential problems with creating a functioning democracy would increase with the size of the cooperative. Specifically a cooperative with more than about six people would require more elaborate mechanisms in order to function efficiently. Hence two relatively large cooperatives were chosen with about 15 workers in each. The cooperative used in the pre-study was revisited in the main study.

4.2.4 Main-study

The two chosen cooperatives were investigated. Three people were chosen from each cooperative with a different length of time active at the cooperative, and with different perspectives. This was done in order to increase the reliability of the study.

In each study one person involved from the beginning in the cooperative, and one with about one year's experience was chosen. The time experience of the third person was determined by who was available for an interview. The persons had different expertise, background and role in the cooperatives, hence giving a more complete picture of the on-goings of the organisation.

The interviews where done with the questionnaire designed in the pre-study and lasted roughly one hour. The two people from the pre-study were interviewed again in the main-study.

4.2.5 Limitations of the Study

The study is based on two cooperatives. A study of more cooperatives might have given a more complete picture of the way cooperative operates. A larger study could also have investigated differences between cooperatives due to location, sector, size etcetera. Furthermore, the more cooperatives that are investigated, the more methods might be discovered that are utilised by the cooperatives.

4.2.6 Ethical Considerations

Bryman et al. (2015) highlights the importance of ethical considerations when conducting case studies. There are four potential ethical problems; absence of informed consent, participants being harmed, deception and invasion of privacy.

The interviewees were informed about the purpose of the interview and the topic of the study. Furthermore, they were informed about the possibility to be anonymous. The questions were designed to be less personal in nature and not aimed at subjects which are probable to be able to cause harm to the interviewees if the data would have been public. Direct data from the interviews has only been accessible by the interviewer.

4.3 Designing the Questions

The questions need to be designed both in terms of the content and their form. This section deals with both of these aspects. The part about asking questions contains possible problems to avoid and methods to use, and the part about the design of the questions integrate these lessons with the content of the questions.

4.3.1 Asking Questions

The asking of questions is often considered the only way to acquire data about subjective variables such as personal motives and believes or past behaviour and experiences (Foddy and Foddy, 1993). But there are problems associated with gathering information from questions, the leading causes of errors in surveys according to (Belson, 1986, p. 36):

- Respondents misunderstanding of the questions.

- A lacking interest or effort by the respondents.

- Unwillingness by respondents to acknowledge some opinions or behaviours.

- A decreased functioning of memory and cognitive capacities caused by the interviews stressed conditions.

- Various failures by the interviewer such as: changing of wording, inadequate presentations or sub-optimal recording procedures.

4.3.2 Asking Questions is Problematic

Factual questions are sometimes incorrectly answered. This can be illustrated by several examples. A study by Palmer (1943) where respondents were re-interviewed eight to ten days later and ten percent changed their age between the interviews. Likewise, Parry et al. (1950) observed in one study that 5 - 17 % gave wrong answers to questions such as if they possessed a library card or driving license.

There is a weak relationship between what respondents say they do and what they actually do. As an example can be mentioned a study by LaPiere (1934). In it a Chinese couple visited 251 hotels and restaurants, only one refused them. Half a year later a letter was sent asking the establishments whether they accepted ethically Chinese as guests. The response rate was 50 % and of these 90 % said no.

The attitudes, beliefs, opinions, habits, interests of respondents can be incredibly unstable. As an example can be mentioned a study by Gritching (1986) where the same question was asked in the beginning and end of an interview and 17.6 % of the respondents had changed their view.

Small and even seemingly innocent changes in wording can result in major changes in the responses. Changes that one might have little reason to suspect would affect the result can have a major influence. For example, in a study by Butler et al. (1976) with the questions "[d]o you accept the government's recommendation that the United Kingdom should come out of the Common Market?" had 0.2 % of respondents in favour of the "pro market position". But the question "[d]o you accept the government's recommendation that the United Kingdom should stay in the Common Market?" resulted in 18.2 % in favour of the "pro market position" (Butler and Kitzinger, 1976, p. 60).

Questions are commonly misinterpreted. This is illustrated by an investigation by Belson (1981) were respondents' interpretation of common words such as: usually, generally, people, children and weekday varied over a wide range.

Earlier answers can affect later answers. The respondent is either striving towards consistency with previous answers or tries to contrast with them. As an example can be mentioned a study by Noelle-Neumann (1970) where the answer to the question if US citizens should be allowed to serve in the French army or the German army varied depending on the order in which the questions were asked.

The order of response options influences the answer. It appears that respondents tend to choose among the first options when they read and among the last when they listen to the questions (Krosnick and Alwin, 1987). Nether the less, respondents are in general more likely to choose an earlier response (Locander and Burton, 1976).

The question format can influence the response. Open-ended questions often result in different answers than when the respondent have to choose among a list of alternatives. In general, an answer is much more likely to be given if it has been proposed in a list than if respondents have to provide it themselves. This can be illustrated by a study by Belson et al. (1962) where the readership rate was 7 % if people were given an open question and the readership rate was 38 % if the alternative was supplies to the respondent in a list.

Respondents frequently provide an answer even if they don't know much about the topic of have reflected over it. As an example can be mentioned a poll by Gallup (1978) about the federal budget deficit in the United States were only 3 % appeared to be factually informed about the matter at hand. In general, roughly up to 30 % of respondents tended to answer even if they did not have any significant familiarity with the topic.

The answer can be different because of the cultural context. For example Briggs

(1986) mentions how respondents from the Navajo in the United States responded differently than other groups. This was due to a cultural unwillingness to answer questions which required the respondent to guess the preferences of others since this was seen as a usurpation of others decision-making powers.

4.3.3 Formulating the Right Questions

Some categories of questions are generally more difficult to answer by the respondent than others. These questions are therefore generally to be avoided. Belson (1981) created 16 categories of difficult questions here displayed in decreasing frequency of occurrence. The questions included or can be characterised by the following (Belson, 1981):

1. The question actually being two questions.

2. To much information in one question.

3. Qualifiers in the question.

4. Multiple subjects in one question.

5. Complicated words.

6. Instructions for the interviewee.

7. Softening formulations.

8. Difficult formulations.

9. Hypothetical questions.

10. Relating back to previous questions.

11. The word "not".

12. Inversions.

13. The word "if".

14. Too long.

15. Both past and present tense.

16. Singular and plural forms of a word.

Furthermore, there are three testing procedures to examine if the questions are understood (Foddy and Foddy, 1994):

- The respondent rephrases the question.

- The respondent answers the question and the explain the reasoning behind the answer.

- The respondent reasons aloud while they arrive at the question.

4.3.3.1 The Design of the Questions

The questionnaire was formulated and designed with the help of the literature regarding case studies and the designing of questions. Furthermore the interaction in the pre-study made it clear how questions could be misunderstood. This was used in order to formulate questions in such a way that they would be understood as intended.

The content of the questions was based on the literature in the framework section and two previously used questionnaires:

- A form designed to measure the work environment, named psycho-social work environment/work satisfaction-survey (in Swedish: psykosocial arbetsmiljökartläggning/arbetstillfredsställelsekartläggning, (PAK/AK)). This questionnaire has high validity a reliability for capturing work satisfaction and the psycho-social work environment (Rubenowitz, 2009).

- A decision matrix designed to capture the decision-making process at cooperatives from the East bay community law center et al. (2014). The decision-making matrix lists common decisions, common decision-making entities and common possible roles played by the entities in decision-making processes.

The questionnaire covered several topics, for which different literature was used. The questionnaire is displayed in appendix A and touched upon the following areas, based on the following areas of the literature:

- The formal right to command the work and the cooperative. This is primarily based on the sections 3.1 and 3.2.

- The business structure. This was based on the sector of operation for the cooperatives and the interaction with their clients.

- Control of the workers own immediate work situation, building foremost on section 3.3 and 3.4.

- The creation of ideas, derived mostly from 3.4 and 3.5.

- The discussion in the cooperative, based primarily on 3.4 and 3.5.

- The making of decisions, foremost from 3.4 and 3.5.

4.3.4 Limitations of the Questions

The questions are designed to cover a wide area within the cooperative. In some sense this is needed to get an overview of the flow from ideas to decision. But this might mean that sufficient focus has not been placed at all the areas needed. A more focused study might therefore uncover more details, that might be important.

4.3.5 The Quality of the Interviews

The quality of the interviews and the analysis of them depend on the interviewer capturing and comprehending the relevant aspects of the object of study. This in turn, among other things depends on several conditions. The interviewees need sufficient understanding and information to begin with, and the interviewer needs to be able to collect, document and understand what the interviewees convey.

Since both some of the most experienced workers as well as new workers where interviewed, it can be assumed that they posses a substantial part of the information and understanding needed. The expert interviews, the pre-study and the literature ensured that relevant questions were asked and the relevant information was collected. The swift recording of the answers with a possibility of asking for clarification ensured that the interviews could be documented. Furthermore, the understanding of the interviews for the analysis was ensured by the same methods that ensured the collection. Hence the investigation was conducted in way that resulted in a substantially supported analysis.

4.4 Quantitative Model

A quantitative model was constructed in order to enhance the study and to provide answers on its own. The formulation of the software needed to take into account the difficulty to transform qualitative values into a quantitative study. The software code was created in MATLAB. The code is displayed in appendix B.

The software aims to simulate decision making in a cooperative. It addresses the inequality in idea generation that can be expected in a cooperative and the unequal participation in decision making that can result. It also concerns the efficiency of the flow of ideas in the cooperative. Furthermore, the aim of the model is also that it potentially could be enhanced and tailored to specific cooperatives in order to provide answers about optimal organisational structures.

An idea is any idea about how to design processes or the development of products and services or how to structure work in the cooperative. Ideas are then assumed

to be transformed into decisions via deliberative processes.

The simulation is based on a number of individuals that have similar probability to create an idea. The idea is then discussed in a group. The ideas from several groups are then combined and discussed in a larger group. This continues until ideas from the whole cooperative is taken into account. Simulating a kind of federative structure of a cooperative.

The cooperatives in the simulations have between 3 and 500 members. The sizes are chosen since cooperatives in Sweden tend to have at least 3 members and a size of 500 members can be assumed to capture a significant share of the internal dynamics that a larger cooperative will generate. In order to facilitate discussion and coordination they are organised into groups of a maximum of six people, since this was the number of people according to the expert interviews that could work together without internal structures.

These groups chooses internally among its members what idea they prefer. This potentially high number of groups that results from this leads to a need to coordinate the work of the groups to. For this six groups chose among them one representative to speak on their behalf. This group then discusses the ideas of their members and makes a choice, and elects a representative for the next level etcetera.

Each individual initially creates an idea. These ideas have a quality, how good they are for the cooperative, and a probability, the probability of being selected at a meeting. The quality of the idea and the probability of being accepted at a meeting is assumed to be identical. This is based on the interviews where level of experience, the access to ideas from other people and various other factors were said to contribute to the ability to create ideas. Since the combination of these aspects were different for the various individuals there could be assumed to be individual variation. And since both the probability of creating ideas and the quality of them depended on the same aspects, the simplest assumption is that the quality and probability are identical.

The quality and probability of an idea is set for each individual at the beginning of the simulation. This assumes that there is a distribution between individuals for constructing these kinds of ideas. The chosen distribution is the uniform distribution from 0 to 1. Each individual has a random value selected and the flow of ideas is simulated in the cooperative. The process is then iterated, while the settings for each individual remains the same, in order to ensure a more statistically stable answer.

One of the results generated is a snapshot of the idealised idea flow in a generic cooperative with 500 members. The size of 500 members is chosen since it displays the most complex situation. Furthermore the different hierarchical groups, if seen in isolation, can be seen as cooperatives with fewer than 500 members. First the ideas are generated at the lowest level among all members. Then the ideas flow through layers of groups where it finally results in a decision. The final decision for the whole

cooperative is represented at the highest level. This aspect of the model could be enhanced and tailored to a specific cooperative in order to visualise the flow of ideas in the organisation.

Another result generated by the simulation is the number of ideas at different levels in the organisation. The number of ideas start out as being equal to the number of members in the cooperative. Thereafter the number of ideas are reduced until finally one idea represents the decision for the cooperative. This could potentially visualise bottlenecks in decision making in a cooperative. Furthermore it shows what potential designs of a cooperative that could be efficient.

Finally a result is generated concerning the distribution of idea generation among the members. This tests whether a small difference in idea generation among the members can result in a skewed distribution of influence in the cooperative. This could be interesting in order to evaluate how unequal the contribution is to the final decision, highlighting the need for policies to enhance the ability to participate in the idea generation among all members.

The quality of the simulation is based on the data and assumptions put into it, these in turn depend on the interviews and the analysis of them. All models of reality needs to be based on simplifications and idealisations. This makes the model possible, with the possibility of generating results that were not included in the data or the assumptions in themselves, but it also neglects aspects that may be of interest. These results can be used to confirm or question the results generated without the simulation. In this case the simulation investigates the ability of a cooperative to generate optimal decisions based on the internal decision-making processes and the ability for all workers to participate in the process. The results can be made more relevant by making the model more specific to the investigated cooperative and by including more parameters and data points based on more extensive interviews.

5

FINDINGS

This section contains the findings of the study. The section contains two categories of parts; one containing the results from the interviews organised after topic and one with the results from the quantitative model. The part with the results from the interviews follows the design of the questionnaire used (see appendix A) and lists the answers from the two cooperatives in close proximity to each other. The part about the quantitative model shows the results from the software simulations.

5.1 The Formal Right to Command the Work and the Cooperative

In this section the formal ways that the cooperative is structured is reported.

5.1.1 History

The cooperative A was started in 1984 by two people focusing on cooperatives as a form of enterprise but had at first no workers as owners. It was at first even more democratic due to the small size even if the formal influence of the workers has increased. Cooperative A has since undergone several changes in its structure.

The cooperative B was founded in 1987 by environmental activists who knew each other. The environmental focus has since been the emphasis of the firm. Cooperative B has kept the same structure, with identical by-laws today as when it was founded.

Both cooperatives have about the same age and where both founded from the point of view of having a larger purpose. But one of the cooperatives has undergone significant structural changes while the other has kept the same.

5.1.2 The Ownership Structures

Cooperative A has two categories of owners, other cooperatives and workers. Currently about 90 cooperatives and 10 workers are members. Workers can apply for membership to the board after one year as employee, which typically is granted. The cooperative is the largest regional office in a federative structure with 25 regional offices.

Cooperative B is owned by the workers. Workers can apply for membership at the board and a person can maximally be employed for six months without applying for membership. This presents a quite different share of formal influence for the employee members between the two groups.

5.1.3 Organs of the Organisation According to the Bylaws

In both cooperatives the members form the "ordinary meeting" ("ordinarie föreningsstämma" in Swedish), with the possibility of having an "extra meeting" ("extra föreningsstämma" in Swedish) if a specified share of the members demand it. The meeting determines the by-laws, elects the board, elects certified accountants and in the case of cooperative B elects an elections committee.

The board in cooperative A consists of between five and 11 members, of which a maximum of two can be worker-members at the cooperative. The board administers the affairs of the cooperative and decides whether new members will be accepted.

The board in cooperative B consists of between three and nine members. It administers the affairs and bookkeeping of the cooperative and decides whether new members will be accepted. There is a striking similarity between the two cooperatives with the different share of worker representation being the major differing aspect. Both cooperatives are legally business associations (in Swedish: Ekonomisk förening).

5.1.4 Further Organs of the Organisation

The board in cooperative A determines the common basis of values and determines the policies. The executive manager is appointed by the board after consulting the employees. The executive manager deals with daily decisions such as whether to submit a bid and gives reports to the board.

Furthermore, co-worker meetings occur every three weeks, and there are Monday meetings every week. The current and future tasks of the various groups and individuals are presented together with ideas and discussion. Various groups with one

person as coordinator exist, such as sales group, groups for various work categories and groups for planning the future of the organisation.

In cooperative B, the biweekly co-worker meeting, has a specific name derived from the name of the cooperative, and is in practice the decision-making body of the cooperative. It is composed of the workers and it is obligatory to attend. Here reports are given and decisions are made. There are appointed service functions typically consisting of individual persons with designated responsibilities. These service functions cover most of the work not directly related to the business activity of the cooperative, for example IT and economy.

Furthermore, the directly business-related work is done in project groups consisting of rarely more than three people. One person is appointed as the assignment manager and is charged with making decisions and reporting to the board.

5.1.5 Documents

The cooperatives have documents concerning the function and organisation of the organisation. These are documents such as by-laws, the common basis of values and policies for work environment, equality and co-workers and work routines. These can in various ways be changed or influenced by the employees. The documents are accessible via IT-systems and are subject to input from members in the case of the by-laws and all employees in terms of the other documents.

5.2 The Business Structure

Here the business area, the professions at the cooperative and the location of the cooperative is reported.

5.2.1 Business Area

There are three business areas in cooperative A:

- Publicly funded business advising people considering staring cooperatives.

- Consulting people in how to set up their cooperatives or consulting people with already existing cooperatives.

- Publicly funded projects, for example EU-projects.

Furthermore, cooperative A strives to use supplies from other cooperatives for its office.

There are three business areas in cooperative B:

- Land-use planning, for instance concerning storm water and landfills.

- Nature conservation, for example natural areas inventory.

- Communication, in the form of for example books or educational projects.

Most of the activities in both cooperatives are directly or indirectly funded by the public sector.

5.2.2 The Professions

In cooperative A most employees work with business consulting, while some are working with administrative tasks. The employees working with business consulting have a varied academic and professional background. The activities of the employees in cooperative B are loosely defined but reflect their academic backgrounds as for example environmental scientists, biologists, geologists, editors, educators, and architects.

5.2.3 Location

Cooperative A operates with one office and is active in one region out of 25 regions with their own regional offices. While cooperative B is located in one city with its office and most of its activities nearby, it still has some projects further away.

5.3 Control Over Ones Own's Immediate Work Situation

The workers more direct control over their own work is reported here.

5.3.1 The Perceived Control Over One's Own Work

The perception is that the core business activities of both cooperatives are done under a substantial amount of freedom. There are routines for some tasks, or parts

of tasks, but in general the work requires the employees to figure out how the work is to be done. The own motivation of the employees is essential in order to perform the tasks.

5.3.2   The Workload

The workload varies substantially in cooperative A, mostly due to the deadlines for when bids are supposed to be handed in.

In cooperative B the workload depends on the number of projects, which vary randomly. Hence the workload can range from 0 to 300 % if three projects are done at the same time. In essence every employee can be seen as a self-employed, resulting in a hypothetically substantial freedom when it comes to workload, but the randomness of the customer demand has a major impact in practice.

5.3.3   Choice of Tasks

In general, partially due to the smallness of cooperative A, there is a tendency to distribute different tasks more equally among workers. There are for example common cleaning days.

The more direct business work is organised in groups in cooperative B. The composition of these groups is based on the experience and competence of the people at hand, resulting in "natural" constellations given the task. But due to the wide variety of the workers along these variables, there is a lack of understanding of the capacities of other workers resulting in some problems when putting together the groups.

There is no specific time set apart for own work in either cooperative, and there is no systematic way to choose tasks of the appropriate degree of difficulty. Tasks are rotated at the co-worker meetings. A lot of the work is done individually.

5.3.4   Choice of Time and Place

In cooperative A, there is opportunity to choose time and place for one's own work, but office time is supposed to be a guideline. People work at a wide variety of places, but are present for meetings or available at via phone, etcetera. There are no sanctions concerning the pace of work.

In cooperative B, there is great flexibility in choice of time and place, given that most projects have deadlines. Furthermore, there is the possibility to choose the

amount of tasks, if the people has the ability to estimate the work needed then the ability to decide over one's own time is increased, but it is dependent on the demand from customers which can be irregular.

5.3.5 Choice of People

Membership in cooperative A is controlled by the board. Currently the executive manager and one or two workers participate in the process of selecting future employees. There is also the possibility to present candidates at the co-worker meetings in order to gather input.

Furthermore, the workers give input to the board for their choice of executive manager. Membership in various groups such as the sales group are open for all, but there is a limitation in the time available so people cannot participate in all meetings that occur at the cooperative and given the work tasks for an individual there are "natural" groups to participate in.

New members at cooperative B are presented at the co-worker meeting and it decides if to accept the new member. The formal decision is made by the board.

Furthermore, when the project groups are constituted there is often a "natural" set of individuals that are relevant for the project. The same "natural" tendency often appear when selecting positions of responsibility. This is due to the competence and experience of the person, which makes the person the most qualified for the task.

5.3.6 Choice of Work-method

In cooperative A, there is a great possibility to develop one's own interests and passions, if there is demand for the work. Many people apply to work at the cooperative because they feel a commitment that they want to realise in their work. The practical realisation of the ability depends on the persons experience and capability. Given that deadlines are met, then there are substantial possibilities to find new ways to do the work, even if the development takes time. There are substantial possibilities for development, for example through courses.

In cooperative B, the possibility to develop one's own interests and passions depends largely on the creativity and capacity for initiative of the individual. In practice the project group needs to agree with the activities.

Furthermore, workers often develop new ways to perform projects, often within the time not paid for by the customer. This is due to variability and complexity of the projects and that the tasks often require more time than the customer has paid for.

The employees can develop by learning from each other in the project groups, and in the proofreading of the works of others.

5.4 Motivation

The sources of the employee's motivation are reported in this section.

5.4.1 The Perceived Sources for Motivation

The perceived sources for motivation are similar in both cooperatives. It tends to stem from people's interests, people have applied for the job because they are interested in it. If a person has time, energy and focus then this usually results in feasible ideas that can be implemented. There can also be economic sources of motivation.

5.4.2 Increasing the Engagement Among Employees

The democratic character of the organisation increases the motivation in both cooperatives, for example the possibility to propose one's own ideas and to participate in the government of the organisation. Furthermore, the various social activities during and after work, for example to celebrate achievements increases the motivation.

The performance appraisals and the favourable terms of employment can be motivating in cooperative A. The distribution of responsibility among people for various tasks can be a way to increase motivation in cooperative B.

5.4.3 Making Taking Initiatives Easier

There are few restrictions on taking initiatives in the cooperatives. But in order to enable initiatives there is a need for sharing information, coordination and distributing the work. This is done by various systems for information sharing, meetings, forming groups and appointing people responsible for various tasks. Furthermore, there is need for the initiatives to be in line with the overall purpose of the cooperatives, and they need to be economically feasible.

5.4.4 Appreciation for Achievements

In cooperative A, there is the informal possibility to get appreciation via the it-system used in the form of positive comments. There are also formal monthly performance appraisals with feedback. What usually is given most appreciation is winning a bid.

In cooperative B, there is an informal and social process enabled by a good atmosphere, interest in what others do and a feeling of being like a family. This is often done at lunch or at coffee breaks where people involved at different tasks can meet. Since a lot of work is done individually for a customer, then there is less possibility for feedback. Most appreciation is typically given for winning a bid.

5.4.5 Purpose

In both cooperatives the business plan is developed in a collaborative way where all employees easily can give their input. Hence giving people the opportunity to steer the organisation towards what they find have purpose.

Furthermore, there is no further conscious enhancement of the motivation stemming from working in a cooperative. People who feel motivated to work in a cooperative are the ones applying for employment. People can feel that the specific work they do serves a higher purpose simply by the tasks they do, and this is not directly amplified in any way.

After each project is finished in cooperative B a report is made. The report describes what investments have been done for the environment, how the customer will disseminate this further and if third party will benefit. In cooperative B, when applicable, the employees are supposed to also propose a more, for the environment or children beneficial solution, when less beneficial but economically more feasible solutions exist. Furthermore, the customer will be asked if a text with a popular version of the work done would be appreciated, in order to display it online and spread the information to others.

5.4.6 Differences in Wages

In cooperative A, the wages are dependent on the role in, and the number of years at the cooperative. In cooperative B, the people performing a project share 83 % of the income from it between themselves based on the number of hours. The rest, 17 % is distributed for common expenses.

5.5 The Creation of Ideas

How ideas are created is reported in this section.

5.5.1 The Enablers of Idea Creation

According to the interviewees ideas are created by interactions with people outside and inside the cooperative, keeping up to date with the relevant subjects and time for reflection.

5.5.2 Creativity and New Perspectives

In neither of the cooperatives are there any special activities in order for people to develop their own creative capacity through for example exercises or get to understand themselves and their thinking more. But there are activities that uses their creativity and makes them get to know each other more.

As an example of activities that uses their creativity, there are recurring development days, about two days each time and about two times per year. One of the cooperatives even has a special name for these activities. Furthermore, information about public lectures are spread internally in both cooperatives and attended.

In cooperative A, usually one or two people go to a lecture, and then they report to the others what have been said. Furthermore, social events with new people are arranged facilitating the meeting with new people.

5.5.3 Keeping Up With the Subject

All employees in cooperative A have 2.5 hours per week for competence development and the cooperative finances literature that is related to the work. Cooperative B finances one seminar per person per year.

5.5.4 Time for Reflection

The cooperative A offers 2.5 hours each week that can be used for health improving activities or competence development.

Cooperative B have arranged a voluntary book circle for the cooperative and possible lectures to attend are shared online.

The cooperatives lack any specified working hours, hypothetically resulting in a constant possibility to take time off for reflection. People can reflect together during for example a meal.

5.6 The Discussion

The discussion at the cooperatives is reported at this section.

5.6.1 Where Does Most of the Discussion Take Place?

Most of the discussion occurs as part of ongoing work. There are also informal discussions before more official meetings, where people talk in person if they meet or via IT-tools if they are at different places. A substantial amount of the discussion takes place at official meetings.

5.6.2 Informal Forums

The informal forums outside of the established groups and meetings, tend to be at the office or the meals and via the IT-systems.

5.6.3 IT-systems

Cooperative A mostly uses email but also uses Slack a collaborative software to communicate. Slack is typically used to share ideas and tips and ask questions. Google drive allows for changes to be made by all employees in the common documents when appropriate.

For communication in cooperative B there is an internal IT-system based on a server with accessible folders. Furthermore, email is used and there is an email address that reaches all employees.

5.6.4 Encourage Constructive Discussions

There are no special arrangements in order to make the discussion constructive rather than destructive, or to foster discussion generally. There appear to be a willingness to discuss matters.

5.6.5 Creating a Community

A participatory culture is considered important in both cooperatives. The cooperative spirit is important and the culture is different from that of non-cooperatives. The community is maintained by celebrating birthdays, eating together at the office and at least in one of the cooperatives having after work there. The culture is characterised by equality, less prestige and helping each other out.

5.6.6 Making the Internal Information Available

In cooperative A there are co-worker meetings every three weeks, and Monday meetings every week. People present what they are about to do during the week during the short 30 minutes Monday meetings. At the coworker meetings the various groups can give their reports and new potential large projects can be reported about. All meeting protocols are shared on Google drive.

Furthermore, some other information is reported to the digital systems, such as the probable income from new projects or the number of people reached in educational projects. This information is available to all employees. One way to push information is the weekly newsletter.

In cooperative B people present what has happened and what they are about to do on the biweekly coworker meetings. Furthermore, reports from various groups and people with responsibilities are given and new and upcoming projects are reported. Information about projects and internal documents is made available in the internal IT-system.

Furthermore, if people want to spread an idea it might be typical to lobby for it at one of the meals. There has been a problem when it comes to spreading information about upcoming conferences and their dates.

5.6.7   Structuring and Focusing the Discussion

In cooperative A, questions can be discussed in smaller groups in order to foster more focused and detailed discussions. Management information is sent the week before the meetings to facilitate the decision making in the various groups and meetings. There is a disagreement regarding the optimal lengths in time of the various meetings.

In cooperative B, meetings are planned in advance with appropriate topics being raised, then they are started with the question of when the meeting is supposed to be finished, which makes the meeting more efficient. When there are more important discussions then there is a clear order made to ensure that everyone can speak.

5.7   Making Decisions

How and why decisions are made is reported in this section.

5.7.1   The Informal Process Before a Discussion

In both cooperatives, people with a shared interest in a question tend to talk about it and develop ideas. Then they formulate a proposal that is presented to for example the co-worker meeting and then if necessary to the board.

5.7.2   Ways to Introduce Ideas

Many decisions are made informally in both cooperatives. In cooperative B there is the possibility to simply try out new ways of doing minor things and as long as people agree then the decision has been made. For example, removing the tablecloth from a table. Decisions that are made formally usually start out as discussion with colleagues in order to structure the idea and see if it is sensible.

Ideas can be proposed in the various groups in cooperative A. Many decisions are taken together with the executive manager and the people concerned, usually in consensus. If agreement cannot be reached, then the executive manager makes the decision. Larger decisions are introduced at the co-worker meeting where consensus often is reached.

The co-worker meetings in cooperative B are one place to introduce ideas. Before the meeting starts there is a half hour time slot where people can propose things

freely. But the common email is also a way for people to propose things.

5.7.3   The Difference in Influence Between Individuals

The employees tend to have an equal influence in both cooperatives. But there are two things that can skew the process, people with more information have to be trusted by others and people with more new ideas have a larger tendency to get their ideas realised than people with less ideas.

5.7.4   How Can Employees Change the Cooperative?

The employees can change the common documents of the cooperative and hence change the purpose and direction of the cooperative. Furthermore, some of the documents change how the cooperative operates in order to reach the purpose. But there are economic restrictions to the feasibility that the cooperative has to work within.

5.7.5   Going from Decisions to Reality

In general, the decisions are turned into reality. In cooperative A the problem might be that decisions are not realised due to lack of coordination or communication, while in cooperative B some decisions might be too unclear to execute. Unclear decisions are then clarified at the recurring development days.

People are appointed as responsible for performing a task and the progress is then later reported back. Often the resources needed are time which is limited. Cooperative B allocates 17 % of the income to common activities, which is a method to create available time.

5.7.6   Social, Ethical and Environmental Concerns

The difference in the decisions concerning social, ethical and environmental concerns between cooperatives and non-cooperatives tend to consist of two things. To begin with, the overall purpose of the cooperative is consciously and formally directed towards such concerns. In this case cooperative A is directed towards increasing the number of cooperatives in society and cooperative B is directed towards environmental improvements.

Furthermore, while the more daily decisions in this area might be similar in cooperatives and non-cooperatives, they tend to actually become a reality in cooperatives. As an example, a decision can be made to reduce the usage of certain means of transportation that are especially damaging to the environment, this tends to actually be implemented in practice in cooperatives while in a lesser degree in non-cooperatives.

5.8   Quantitative Model

The data from the quantitative model is reported in this section. The simulation generated results concerning an idealised snapshot of the flow of ideas in a cooperative, the number of ideas emerging from the floor of the cooperative and being accepted at higher levels and finally how skewed the contribution of accepted ideas is from the members.

A snapshot of the flow of ideas in one cooperative is presented in figure 5.1. It is an example of the flow of ideas in a cooperative with 500 members organised in hierarchical groups consisting of six people. First the ideas are generated at the lowest level among all members. Then the ideas flow through three layers of groups where it finally results in a decision. The final decision for the whole cooperative is represented at the highest level.

The lowest level are the members themselves, the three levels above consists of groups of six members and groups representing six lower groups etcetera, finally the highest group shows the decision of the cooperative. The entities at the bottom are the 500 members, who are grouped together with one idea at higher and higher levels. Dark blue shows the absence of an idea, and the quality of the idea is is increased from light blue via green to yellow. The ideas are first created by the individuals at the bottom. These ideas are then discussed in the groups and one idea can be chosen for further discussion at the group at the next level etcetera. As this process is repeated though out the cooperative, most ideas are discarded but one is finally chosen for the cooperative as a whole.
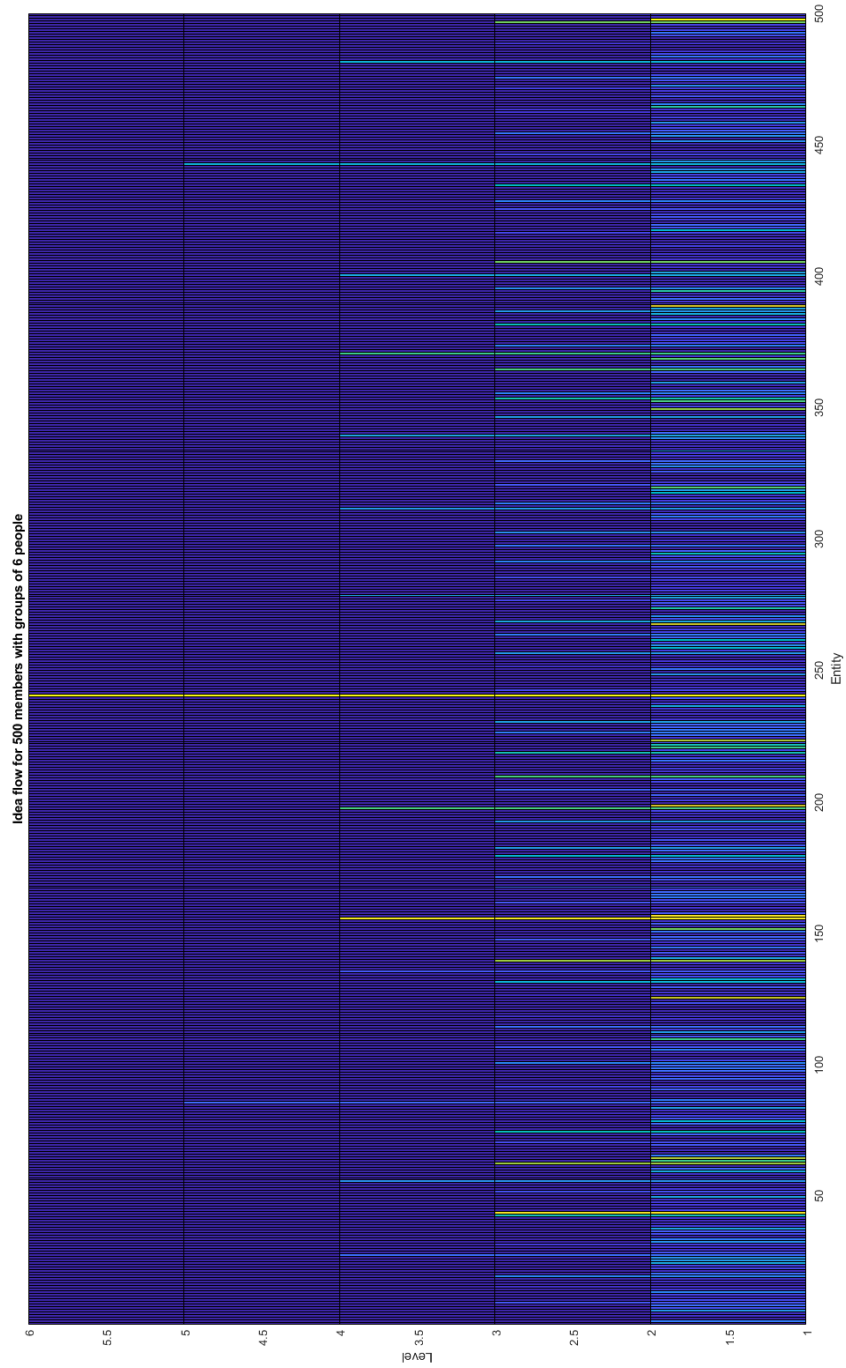
Figure 5.1: The flow of ideas in a cooperative.
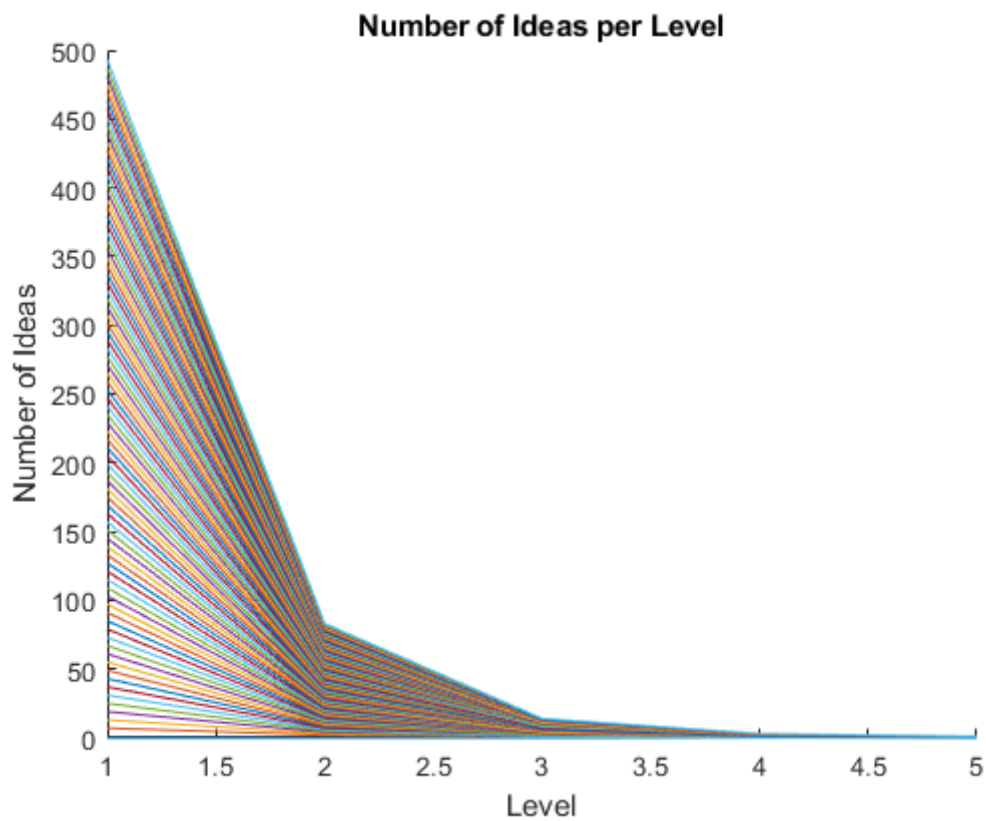
Figure 5.2: The number of ideas at the various levels in cooperatives with 3 to 500 members.

The result of the simulation of the number of ideas at various levels in the cooperatives is displayed in figure 5.2. The cooperatives have from 3 to 500 members and all members contribute with ideas. The number of ideas are then reduced as they are discussed in groups consisting of a maximum of six persons.

The number of ideas becomes fewer as they are filtered by the members and the groups until one idea for the cooperative is reached. At the first level each members has an idea. At the second level the number of ideas is reduced and this process is repeated until an idea is chosen or all ideas are discarded. The image was the average of 100 iterations and only one third of the cooperatives are shown for clarity.
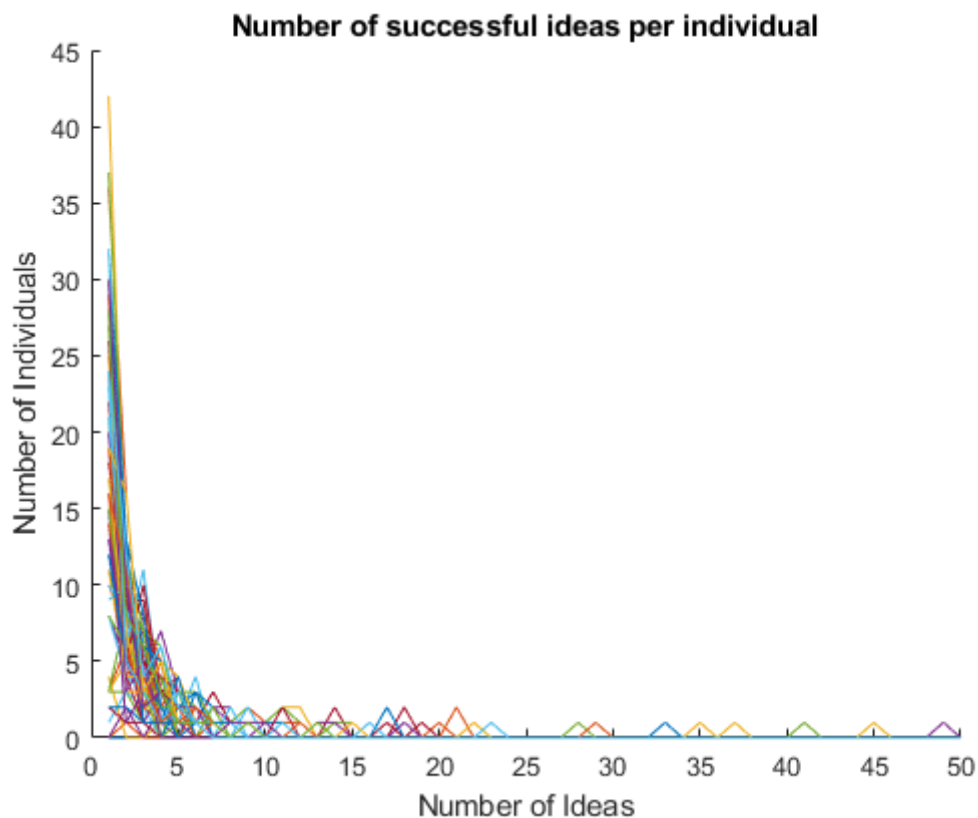
Figure 5.3: The number of individual members contributing with a certain number of successful ideas in cooperatives from 3 to 500 members.

Figure 5.3 shows how many ideas that lead to a decision for the cooperative that originates in the same person. The probability of creating one, and the ideas quality, idea is set the same for 100 iterations in cooperatives ranging from 3 to 500 members.

A successful idea is one becoming the decision of the whole cooperative. Each size of a cooperative is represented with one graph. The image was the average of 100 iterations.

The simulations show that ideas with a high quality can spread in a cooperative but that the ideas might originate from a limited number of workers.

6

ANALYSIS

This section contains the analysis of the findings. The section contains four categories of parts; one containing an analysis of the interviews with a focus on the flow from idea to decision with identified mechanisms and the determining factors for the structure, one with an analysis of the results from the quantitative model, one concerning how to take advantage of the cooperative enterprise and finally one about social, ethical and environmental aspects.

6.1   The Flow From Ideas to Decisions

The general path from idea to reality is analysed in this section. The ideas are mostly created in informal processes. Here the culture of the cooperative enables the people the possibility to create and build up ideas. The discussion that follows is then dependent on the possibility for people to meet and the usefulness of the IT-systems available. In the end there is a tendency for a lot of agreement to have been built up before the formal decision is made.

6.1.1   The Business Structure

Both cooperatives have a wide area of services, but they are centred around a core mission. This might reflect a combination of a commitment to the overall mission, the distribution of capacities among the individuals and the need to deliver an income.

The varied background of the people involved in both cooperatives increases the need for communication and coordination in order for the organisation to function as a whole.

The regional area of operation might reflect a history of being founded by people living in close proximity combined with the small size of the cooperatives.

6.1.2 The Control Over One's Own Immediate Work Situation

The combination of the need for motivation and the constant construction of new methods to solve problems makes the substantial amount of freedom sensible. This is because the freedom to chose how to solve tasks tend to improve the quality and quantity produced (Pink, 2011) (see section3.4). The "cooperative form" offers ways to enable this in the formal structure of the organisation without making it necessary for individuals do yield their legally allowed decision making power to others (Riksdagen, 1987) (see section 3.2).

The variation in workload appear to be a consequence of the internal structuring of the organisation and the demand from customers. The demand from customers could possibly have been reduced as a source of variation if the firms would have been larger. The possibility in one of the cooperatives to choose the workload individually shows the flexibility that can be created at a cooperative. This could also be allowed at a corporation but since the interest of the workers and owners are not parallel (Smith, 2007) the implementation could be more problematic.

In general, there appear to be a blurring of task specific work-time and time available for innovative time. This might be the result of the small scale of the operation, the cultural preference for solving tasks without bureaucracy or the lack of a general "cooperative culture" in the country, but this requires further research. It could be claimed that the choice of task in a sense has been done by deciding the general direction of the cooperative, which gives a framework for which kinds of tasks that are available in the cooperative. Resulting in the choice of tasks being decided at other levels, collectively for the cooperative as a whole and individually by the decision to join the cooperative.

In general, there is great ability to choose time and place, which ought to increase motivation according to Pink (2011). For the investigated work categories this is a qualitative extension of the relative freedom concerning these parameters at non-cooperative according to the employees. The ability to take on the desired amount of work at one cooperative is a qualitative extension of the freedom concerning time and place. This is partially due to that the work is organised in projects.

The degree of influence by the workers in the cooperatives reflect the formal structure of the cooperatives. But the way their voices are included in the decisions and the distribution of people on tasks and groups tend to be "natural" based on competence and experience. This is similar to how decisions are made in foraging groups (Tanaka, 1980, p. 123), hinting at a possible biological root. Cooperatives show a higher efficiency in production than non-cooperatives (Logue and Yates, 2005). The large control over one's own immediate work situation could be a part of the explanation for this.

While the cooperatives are not hindering for workers when it comes to choosing and developing their work methods, there are no real new structures that enhance their ability further. Those ways that do exist tend to arise from the nature of the work itself. This is a potential area for increasing the motivation, since according to Pink (2011) this is important for motivation.

6.1.3 Motivation

While economic motivation is important, the central purpose of the organisation tends to a substantial part to be the motivation of the employees. Having a purpose that the members can agree upon increases the motivation of the workers (Lindquist, 2013) (see section 3.4).

The democratic form of the organisation can be a source of motivation in itself for the members since it allows for participation. And the decisions made by such an organisation can also result in a more favourable work and social environment since they can reflect the preference of the workers.

As a concrete example of activities beyond what would be expected in a non-cooperative is the distribution of responsibilities for various tasks. This is because in a corporation, the right to command the work (Glavå, 2011) and the right to command the corporation (Schmidt, 1994) is in the hand of the employer (see section 3.2). In a cooperative a co-worker meeting can decide who will maintain the IT-system, who will be responsible for the bookkeeping etcetera.

There is a possibility for everyone to take initiates, as long as they are in line with the purpose of the cooperative. Since the purpose is decided by the members (Riksdagen, 1987) (see section 3.2), there is a tendency for either organisational or economic constraints to be the limiting factor. The absence of general structures to take initiatives might reflect the small size of the cooperatives and the perception that the possibility taking initiatives is sufficient.

In general, appreciation is mostly shown informally either via it-systems or in persons when people meet for meals. The great appreciation given for winning bids might be due to the perceived economic constrains, and relative volatility of the organisations due to their small size. This social component of motivation is important in the cooperatives, and also in general according to Friberg (1975) (see section 3.4).

The major sources for purpose seem to be the general direction of the cooperatives and a previous appreciation of working at a cooperative. One of the cooperatives has implemented concrete methods of highlighting and spreading the ethical benefits of their work internally. This motivates people by connecting them to a purpose (Pink, 2011, p. 219) (see section 3.4).

The cooperatives have substantial differences in the way wages are set. This might be a consequence of their own histories of ownership and control, and formal structure as business associations (Riksdagen, 1987) (see section 3.2). Cooperative B is more of an alliance of individuals where the level of participation can be chosen while the work done at cooperative A is more evenly distributed.

6.1.4 The Creation of Ideas

The reported cause of new ideas were based on new interactions, either with new people or with new facts. This perspective focuses on new ideas having an external source.

The lack of any specific activities to develop one's own creative abilities and getting to know oneself might be due to this being a more advanced activity that is less related to the primary work. The activities to use creativity are developed when it comes to more special events, but there are no activities on the daily level. The human need for creativity according to Max-Neef et al. (1991) could potentially be more fulfilled if more methods where developed.

There are some concrete arrangements to assist people in their attempts to keep up with relevant subjects. For example, setting aside a part of the workweek or subsidised seminars.

The lack of required work hours leaves a substantial space for reflection. Some specific arrangements enhance the ability to reflect among the employees. But the overall allowing and atmosphere and structure might be what allows people time and possibility for reflection. And the open interaction with co-workers can enhance the reflections.

In all, there seem to be substantial possibilities to unwind, gather and compile facts and reflect, which is important for the creation of ideas (Adizes et al., 1979) (see section 3.5).

6.1.5 The Discussion

The discussion takes place where people are, either in the office or via the IT-system or simply during a meal. This might reflect the open and cooperative atmosphere of the cooperatives.

There tend to be informal discussions whenever and wherever people have possibility to communicate to each other. This might reflect the positive atmosphere and culture at the cooperatives. This appear to enhance the informal discussions in

the organisations. The informal discussions are important for the functioning of organisations (Ekman, 2003) (see section 3.5).

The cooperatives both extensively uses IT-systems for their internal communication. Systems are to some extent chosen or implemented in such a way as to facilitate the needs of a cooperative. The need of appropriate IT-systems is enhanced by the circumstance that people tend to be at different locations most of the time.

The lack of tools to ensure that the discussion is constructive might reflect a sense that the discussion is sufficiently constructive as it is. This seems reflect a general constructive and cooperative atmosphere at the cooperatives. And furthermore reflects the human need for affection according to Max-Neef et al. (1991).

A functioning community might be the basis for a functioning cooperative. It can form the foundation for an open and cooperative atmosphere which allows for the initiatives and discussions to flourish.

The cooperatives use a similar structure to make the information available. It is mostly a combination of regular meetings and a simple access storage of the information. The information is generally available to everyone and everyone concerned participates in the meetings. This reflects a striking difference between a typical non-cooperative and the cooperatives, where information is restricted and many decisions are not done by the worker. Although this does not have to be the case.

The internal spreading of information has functioned well in general. But there has been some problems in spreading one category of information in one of the cooperatives.

The meetings are in general substantially planned and structured in such a way as to enable participation. One of the cooperatives have a mechanism to regulate the length of time of the meetings while the other does not. The cooperative without a mechanism have some conflicts regarding this issue, either the mechanism could solve the problem, or the lack of mechanism reflects the higher degree of conflict regarding this issues in the cooperative that lacks it.

6.1.6 Making Decisions

The informal process before a decision stresses the importance of a functioning culture with ways to create ideas and share information. In general, the informal process is an important part of the decision-making (Ekman, 2003) (see section 3.5). There are some concrete ways to arrange the process that suits a cooperative well. For example, some decisions are done in consensus and some meetings are structured to make the voice of everyone heard.

The difference in influence between individuals can be partially counterbalanced by having information and experiences shared and by stimulating the creativity of all people. This is to some degree done. Furthermore, if decisions are based on the basis of information and creativity then these inequalities become more important. But decisions ought to be based on these things so this aspect of it indicates a successful decision-making process.

The workers participate in the formulation of the purpose of the cooperative, as well in the steps that make this more concrete. This enables the employees to in practice change what they are doing together as a whole increasing motivation (Lindquist, 2013) (see section 3.4).

The limiting factor in practice for the realisation of ideas is lack of time. One cooperative has a specific method to address the issue; the maximal time for a meeting is set when the meeting starts. There are some further problems that differ between the cooperatives but these appear to be less significant.

The ability of the employees to decide the purpose of the cooperative and to break it down into practice appear to be the two most important differences between cooperatives and non-cooperatives. This way to control the overall purpose could be of major importance for the motivation (Lindquist, 2013) (see section 3.4).

6.1.7   The Quantitative Model

The model indicated the need for internal programs which stimulated idea generation among all workers. This would be in order to ensure that the ideas generated does not emanate from a limited number of individuals. The existence of various mechanisms for the stimulation of the creation and diffusion of ideas addresses the problem partially. But the problem could be addressed further.

The model did not explicitly take into account the internal culture and the informal exchanges between individuals and different parts of a cooperative. But the interviews indicated that these are important. An extended model could include these aspects but that also requires a mapping of these informal exchanges in order to ensure that they are modelled correctly and parameters are given correct values.

6.1.8   As a Whole

The cooperative mechanisms seem to be based on a positive atmosphere. The positive atmosphere is needed for the creation, diffusion and realisation of ideas to take place. This atmosphere appears to be based on the "cooperative culture". Hence the organisational form of being a cooperative could be an enhancing factor in creating

and implementing the mechanisms.

6.2 Reported Mechanisms in the Flow From Ideas to Decisions

There are some mechanisms that have been created by the cooperatives that enhances their ability to come up with ideas, facilitate the discussion and make decisions. Several concrete methods are used that might need a more cooperative and democratic work environment in order to reach their full potential. Extracting the mechanisms from the findings, and then condensing and categorising them gives an overview and understanding of the concrete operations of the cooperatives.

In order to control the more **immediate work situation** the following can be made:

- Tasks can be distributed more equally among the workers, resulting in for example common cleaning days.

- The composition of groups or choice of individual can be arrived at informally based on the competence and experience in relation to the task at hand.

- The workers can participate in the selection process of new employees.

- The employees can grow and learn from each other in various project groups.

- The roles at meetings can be rotated among the workers.

- When and where to work can be decided by the worker.

- The workload can be decided by the worker, by choice of number of projects. The salary is then based on the number of hours worked.

In order to increase the **engagement and motivation** among the workers, the following methods can be implemented:

- The business plan is developed in a collaborative way where all employees easily can give their input. Hence giving people the opportunity to steer the organisation towards what they think has purpose.

- After projects are finished a report is made. The report describes what investments have been done for the environment, how the customer will disseminate this further and if third party will benefit.

- When applicable, the employees are supposed to also propose a more, for the environment or children beneficial solution, when less beneficial but economically more feasible solutions exist. Furthermore, the customer will be asked if a text with a popular version of the work done would be appreciated, in order to display it online and spread the information to others.

- The workers can create for example favourable terms of employment and an appreciated work environment that increase their motivation.

- Spreading out internal tasks among the workers, and for example have a common cleaning day.

- Various social activities during and after work for example to celebrate achievements increases the motivation.

- There can be positive feedback from others for example via the IT-system or at common meals.

Several ways have been implemented in order to **create ideas**:

- There are recurring development days, about two days each time and about two times per year. These days include all the workers and allow them to formulate the general direction of the cooperative and to clarify ideas that previously have been to unclear to turn into reality.

- Having 2.5 hours per week set aside for competence development or for health improving activities.

- Financing literature that is related to the work.

- When one or two people go to a lecture, they report back to the others what has been said.

- Financing one seminar per person per year.

- Sharing via the IT-system possible lectures to attend.

- A voluntary book circle after working hours.

- The cooperatives lack any specified working hours, hypothetically resulting in a constant possibility to take time off for reflection.

- People can reflect together during for example a common meal.

The **discussion and the sharing of information** is facilitated by several methods:

- The sharing of internal documents with the possibility to propose changes in them.

- Co-worker meetings with reports, plans and decisions being made. Either the same meeting every two weeks, or a larger meeting every three weeks combined with a smaller one every week.

- A weekly newsletter.

- Having common meals at the workplace.

- Sharing managerial information a week before the meetings.

- Starting meetings with the question of when the meeting is supposed to be finished.

- When there are more important discussions, then there is a clear order made to ensure that everyone can speak.

The **making of decisions** is enabled by various methods:

- People with a shared interest in a question tend to talk about it and develop ideas. Then they formulate a proposal that is presented to the co-worker meeting.

- Have a half hour time slot where people can propose things freely before a meeting.

- Have a common email were people can propose decisions.

- The employees can change the common documents of the cooperative and hence change the purpose and direction of the cooperative. Furthermore, some of the documents make clear how the cooperative operates in order to reach the purpose, these are also changed by the workers.

- People are appointed as responsible for performing a task and the progress is then later reported back. Often the resource needed is time which is limited. One method is to allocate 17 % of the income to common activities, which is a method to create available time.

Furthermore, a **participatory culture** is considered important in both cooperatives. The community is maintained by for example:

- Celebrating birthdays.

- Eating together at the office.

- Having after work at the office.

- The culture is characterised by less prestige and helping each other out.

A similar specific method to create and coordinate the purpose of the cooperative existed in both organisations, see figure 6.1. The worker had easy editing access to the documents that lay out the purpose and plan for the cooperative. And from time to time the employees had development days with refreshing activities. These two prerequisites together with more detailed routines made it possible for the employees to design the purpose and the common future of the cooperative as a whole, in reality.
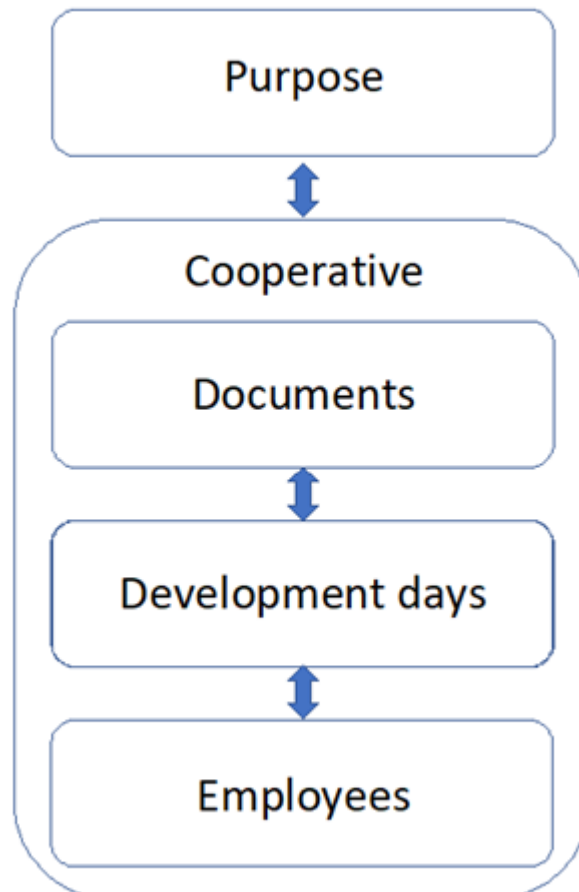
Figure 6.1: The method for creation of a purpose and plans for the cooperative as a whole.

Is there a need for cooperative specific mechanisms? In general, the answer depends on the employees, since it is their cooperative. But a cooperative offers the possibility to command the cooperative as a whole - its area of operation, external relationships and overall purpose - which is not typically possible at a non-cooperative. This is since the right to command the corporation belongs to the employer (Schmidt, 1994) and in a corporation this is ultimately in the hand of the owners (Riksdagen, 2005) (see section 3.2). If this right is totally given to they employees then the owners in practice give their shares to the workers making their ownership somewhat meaningless. This means that there might be a need for cooperative specific methods.

But a non-cooperative might have significant internal democracy within the larger framework of the organisation. The right to command the work (Glavå, 2011) and the right to command the corporation (Schmidt, 1994) can be partially given away to the workers (see section 3.2). In these areas there might be an overlap between the methods used in cooperatives and these non-cooperatives. But one has to avoid to create a facade of codetermination (Erksson-Zetterquist et al., 2008).

But there is also the question of size. Several methods such as sharing documents on an IT-system might be as needed in small as well as in large cooperatives. But other mechanisms, such as a weekly newsletter might become more important when the cooperative becomes larger.

When the cooperative becomes larger than those investigated, then new problems might start to arise. As an example, all workers cannot meet every week with the opportunity scheduled for everyone to speak if there are thousands of employees. This highlights problem of representation and the need to find various collaborative mechanisms.

There might also be a need to make the mechanisms more elaborate. For example, a large cooperative with an internal IT system might needed ways to make overviews of the data on the IT-system so all workers can get the larger picture and find what they are locking for.

6.3 Determining Factors for the Organisational Structure

The experienced factors that shape the internal structure and workings of the cooperatives is discussed here. The discussion is based on the interviews and primarily the sections 3.1, 3.2 and 3.5.

The factors determining the cooperatives internal mechanisms and structures are displayed in figure 6.2. The cooperatives had an institutional structure for power allocation stemming from the bylaws and ownership. This created an influential factor for the internal structures. This is in accordance with the importance of ownership (Vanek, 1975b) and current Swedish law (Riksdagen, 1987) (see sections 3.1 and 3.2). The internal culture was seen as important, especially for the important unofficial internal interactions in the cooperatives. This is expected since informal structures are important (Ekman, 2003) (see section 3.5).

The internal culture in the cooperatives seems to reflect the culture of other workplaces. The experience was that there are usually a high degree of influence on work in the cornered sectors and the cooperatives culture reflected this external culture to a substantial degree. The situation in market had several ways of influencing the
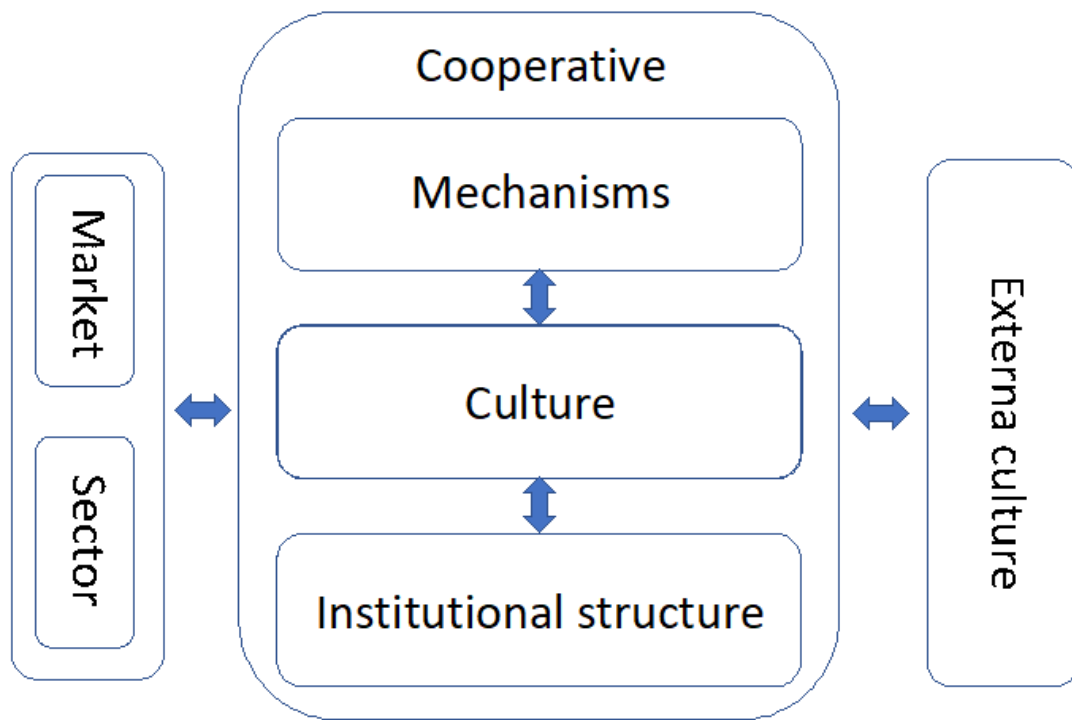
Figure 6.2: The factors determining the cooperatives internal mechanisms and structures.

internal mechanisms. For example the preferred interaction of the customers or the need to respond within a limited time to an offer, determined how the cooperatives operated.

Cooperatives offer substantial freedoms for its members to design structures and processes. But the wishes of the employees are not the only determining factors. The ideas in the cooperatives are created in a larger context that includes for example the structure of the cooperative and the business area.

The share of the influence from workers in the formal structures tend to shape the whole structure, where different principles driven by the represented groups can result in different ways of making decisions on all levels of the cooperative. It can also determine the structure of the workload.

From a resource and market perspective there is a determining factor in the form, amount, frequency and content of the demand from customer. The need to respond quickly to a bid also creates a need for structures that can do fast decisions. The amount and price sets up the amount of resources available for tasks not directly related to the core activity. The frequency of the demand determines periods of low and high workload. The structure for the work and the way the work is done depends on the size of the tasks and the number of people that are needed.

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The internal distribution of competences and capacities of the workers casts a demand on the need for coordination and communication within the cooperative. The availability of capable IT-technology results in the ability to coordinate individuals when spread out.

The cooperative culture creates new opportunities to run the organisation and the strength of the culture enables the cooperative to reach its full potential as an organisation. Furthermore, the culture of the specific cooperative and its purpose can be determining for its future trajectory since the purpose tends to be re-enhanced by people joining the cooperative since they adhere to the purpose.

A lot of the internal sharing of tasks and participation is given "naturally" from the involvement in work tasks and the experience and competence of the various individuals. This highlights the importance of informal discussions (Ekman, 2003) (see section 3.5). And is also in accordance with the need for participation according to Max-Neef et al. (1991).

6.4   The Quantitative Model

The flow of ideas in a cooperative can be large, but one possible way of organising the flow is shown in figure 5.2. The flow can be seen as a search for the optimal decision were all members can contribute. It is possible that the distribution of ideas among groups can result in high quality decisions being made even if the process is affected by random fluctuations. The visualisation captures the decisions made along the way to the the cooperative as a whole.

Figure 5.3 indicates that the usage of hierarchical groups can be an efficient democratic method for selecting a final decision for the cooperative as a whole. This is because the number of ideas is reduced at each level while at the same time keeping the number of ideas to be absorbed by each members low. The reduction in the number of considered ideas, in this specific configuration of a cooperative, were smooth along the different levels indicating that there are no bottlenecks in the idea generation process.

As is shown in figure 5.3, if the probability of creating optimal ideas for the cooperative is unequally distributed, there is a probability that the ideas will originate from a small number of people. The model shows that the influence in the decision-making can be unequal even if the inequality of the participating members is no great, but created by a uniform distribution. This reflects the findings from the interviews where the access to information and creativity can make some people contribute with more ideas.

This could result in a situation where a relative low number of the members in the cooperative contribute with most of the ideas. This would hinder the fulfilment

of the human need for equal rights according to Max-Neef et al. (1991) and could potentially undermine the participation of the members that does not see their ideas realised, reducing their motivation (Lindquist, 2013) (see section 3.4). In order to avoid this there could be a need to make all members as capable as possible to participate in the process. For example by education, access to information, having creative activities etcetera.

The model is an idealised version of reality, but indicates the potential that models could be constructed to evaluate the composition of a cooperative. In order to make the simulation tailored to a specific cooperative, there could be a need to evaluate the relationships between the members and to estimate the quantitative values used in the simulation for the specific organisation and the concerned members. The informal discussion is an important part of the workings of the cooperatives and of organisations in general (Ekman, 2003) (see section 3.5).

6.5 Taking Advantage of the Cooperative Model

How can the possible advantages of the cooperative model be realised? Humans have according to Max-Neef et al. (1991) a need for autonomy. A lot of the freedoms in the cooperatives seems to stem from a high degree of autonomy for the workers, and not from specific rules or regulations that enable this autonomy. This might be an enhancement of the general workplace culture in the country, but his requires further studies.

However, the possibility of consciously creating space for innovative activities seems less utilised. Indicating that the work environment differs more in degree from non-cooperatives and less in kind. Meaning that the cooperatives might have enhanced mechanisms that the workers can use to affect the cooperative, but that those emanate from the same perspective.

A difference in kind could for instance be a change in perspective that the cooperative is not a workplace but a place for human and societal growth, where this development is the starting point. But this requires more investigation. This possible difference in degree rather than in kind, might be due to a lack of a "cooperative culture" in the country, resulting in a relative improvement over the "normal" working conditions, which is being experienced as sufficient. But this requires more investigation.

The lack of methods for creating innovative solutions and creativity might also be due to the small size of the cooperatives. The comparison to larger cooperatives might be an interesting future research project. While the cooperatives have a sufficient number of people involved to create a need for various arrangements, larger cooperatives might have more of them. This might be due to the increased potential for unequal distribution of information and creativity, the enhanced difficulties of communication and coordination and the inability to bring all effected parties into

one meeting. Furthermore, the potential problem of not having personal relationships with all the people involved might increase the need for a different culture.

This might need to be solved with internal methods for personal development, more appropriate IT-systems, and finding forms of representation that enables the workers to exercise efficient control over their work. The culture might need to be both enhanced and protected with introductory courses in the cooperative culture.

Furthermore, cooperatives ought to learn from each other. Forms for this then needs to be created.

6.6 Social, Ethical and Environmental Aspects

The social, ethical and environmental impact of the decisions are discussed in this section. Substantial external values from cooperatives have been observed in general (Gordon Nembhard, 2014).

But the external effects are complex. There might be a tendency to recruit people that are engaged in society rather than making them engaged after joining the cooperative. This might in part be due to the lack of a general awareness of the possibilities of a cooperative. This limits the external positive democratic effects. But this requires more investigation.

The direct external effect seems to be more in the choice of the business area and purpose of the cooperative and the ability to stick with those goals in reality. Such effects might partially explain why democratic forms of organising institutions have been so widespread and successful historically (Kropotkin, 1997).

Given that freedom and democracy are positive social values, as so many of the thinkers from the enlightenment and forward have claimed (see section 2.1.1), then the cooperative per definition offers an increase in these values internally. The importance of purpose and control over one's own work environment indicate that Humbolot's (1851) statement that people need to be able to express their inner person rings as true then as now.

If as Kant (2018) claimed, that humans are ends in themselves, then their intellectual development ought to be prioritised, which seem to be the case the investigated cooperatives. Allowing for all workers to be not just "hands" but "brains" in the terms of Dewey (1984 (1930)) would allow for Hume's (1896) idea that the passions of every one are important. This would according to Mill (1848) require more democratic forms of organisation. Perhaps one day leading to the perfect freedom and perfect equality seen as a desideratum by Smith (2007).

7

CONCLUSION

This section contains the conclusion from the discussion. The section contains four parts; one about the flow from ideas to decisions, one concerning how to take advantage of the cooperative form, one regarding social, ethical and environmental aspects and finally one part about further studies.

7.1   The Flow From Idea to Decision

The cooperatives have several mechanisms that enable the cooperative form to be utilised. These mechanisms need a positive atmosphere to function, which in turn is based on a "cooperative culture". Hence the cooperative form could be an enhancing factor for the creation and implementation of the mechanisms.

The identified mechanisms ranged from ways to control the more immediate work situation, to increase the engagement and motivation among the workers, to create ideas, to share information, to the making of decisions and the creation of a participatory culture. These where considered important and of great value internally for the generation, diffusion and realisation of ideas.

The specific internal mechanisms where, according to the workers, developed in a larger institutional and cultural framework. This larger framework included; the bylaws and ownership structure of the cooperative, the internal culture, the specific sector in which the cooperative operated and finally the external culture that the cooperative was operating inside of.

7.2   Taking Advantage of the Cooperate Form

The study indicates that cooperatives could develop more mechanisms of democratic decision making. While many such mechanisms are used today there appear to be room for more. The reasons why the full potential of cooperatives have not been

utilised might need further studies.

7.3 Social, Ethical and Environmental Aspects

If democracy is considered a value then cooperatives per definition results in a formal increase in democracy at the workplace, put in practice the change can be less profound. However, this study found several signs of a high level of democratic participation in the cooperatives.

The study found that the democratic practices inside the cooperatives resulted in a higher degree of ethical considerations regarding societal and environmental concerns being taken by the organisations as a whole. Cooperatives offer an opportunity to create workplaces with positive societal, ethical and environmental consequences where the ethical ideas are turned into reality.

7.4 Further Studies

The same issues can be investigated further by studying more and larger cooperatives. This can give a better overview of the internal mechanisms of cooperatives and how they vary in different sectors, regions etcetera and how factors such as size and the formal structure etcetera effects the structure of the cooperative.

The identified blurring of task specific work-time and time available for innovative time might have cultural and size reasons. The culture might have a preference for solving tasks without bureaucratic specifications and the small size might lead to a lack of formalisation. This could be investigated by further studies. The workers were observed to have a high degree of freedom in their day to day work. This might partially be due to the general work place culture in the country, but it requires more research.

The low amount of mechanisms specifically for the creation of ideas might be due to the lack of a "cooperative culture" in the country. A comparison with similar cooperatives in areas with a more established "cooperative culture" might shed light on this. Furthermore, the small size might also have contributed, pointing to the need for studies at larger cooperatives in culturally similar regions.

Finally, how the cooperative from could be taken advantage of could depend on the larger institutional and cultural framework. This relationship, as well as to investigate what is the optimal institutional and cultural framework could be the subject of further studies.

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A

Appendix A: Questionnaire in the Main Study

The interviews in the main study were conducted using a questionnaire in Swedish.

1. Vilka områden är ni verksamma inom?

2. Vilka yrken har ni i er verksamhet? a. Hur rutinbaserade är arbetsuppgifterna? b. Hur stor kontroll har de anställda över sitt eget arbete? c. Är de anställdas egna inre motivation viktig för att kunna utföra arbetsuppgiften?

3. Vilka är era . . . a. kunder? b. leverantörer?

4. Finns kooperativet på fler orter?

Formell beslutslutsstruktur

1. Vilka äger kooperativet?

2. Är kooperativet del av en federation?

3. Vad krävs för att bli medlem? a. Hur många av de som arbetar är medlemmar? b. Vilka beslut och medverkan krävs att man är medlem för att kunna delta i?

4. Vilka formella dokument har kooperativet? Kan de skickas elektroniskt? a. Stadgar. b. Värdegrund. c. Policydokument som rör beslut. d. Verksamhetsplan.

5. Vilka beslutande grupper och individer har kooperativet? a. Vilka grupper är du med i?

6. Hur har kooperativets uppbyggnad ändrat sig genom historien?

Arbetsstruktur

1. Hur kan anställda själva välja arbetsuppgifter? a. Har anställda en viss tid

per vecka där de kan välja själva vad de arbetar med? b. Hur kan anställda välja uppgifter som är lagom svåra? c. Finns rotation på arbetsuppgifter eller ledande roller?

2. Hur kan anställda själva välja arbetstider? a. Har ni flextid? b. Kan anställda välja tempo?

3. Hur kan anställda själva välja arbetskollegor? a. Påverka vilka som är med i kooperativet? b. Påverka vilka som är med i grupper de är med i? c. Påverka vilka som de arbetar med i arbetsuppgiften?

4. Hur kan anställda själva välja arbetsmetoder? a. Hur har anställda möjlighet att odla sina intressen och passioner? b. Är det okej att en uppgift tar längre tid än vanligt, så att personen kan komma på nya sätt att lösa den? c. Hur ges anställda möjlighet att utveckla sin förmåga snarare än att leverera snabba resultat?

5. Hur kan uppskattning visas för det arbete som gjorts?

6. Hur gör ni för att anställda kan känna sig motiverade av det faktum att de arbetar i ett kooperativ?

7. Hur gör ni för att anställda ska känna att arbetsuppgifterna i sig ska tjäna ett större syfte?

8. Hur gör ni så att verksamhetens syfte, mål och visioner kan vara drivande i verksamheten istället för begränsande?

9. På vilka grunder baseras löneskillnader?

10. Hur hård är arbetsbelastningen?

11. Finns det stora variationer i arbetsbelastning övertiden?

12. Finns det stora variationer i arbetsbelastning mellan olika personer?

Idéer

1. Hur kommer du på idéer om kooperativets verksamhet? a. Vad avgör vilka idéer du kommer på?

2. Vad gör ni för att anställda ska kunna utforska sin egen kreativitet och vad som stimulerar den?

3. Vad görs för att anställda ska få stimulans till nya idéer och nya perspektiv?

4. Vad gör ni för att anställda ska ha de fakta ifrån andra delar av kooperativet de

behöver för att kunna komma med idéer?

5. Vad gör ni för att anställda ska kunna ha en bra omvärldskoll?

6. Finns möjlighet till reflektion under arbetstid?

7. Vad görs för att anställda ska kunna träffa personer med olika och nya perspektiv?

8. Vad görs för att öka engagemanget bland de anställda?

9. Vad gör ni för att underlätta för anställda att ta initiativ?

10. Vad påverkar hur drivande anställda är i olika frågor?

Diskussion

1. Hur kan anställda föreslå sina idéer?

2. Vad gör ni för att idéer ska sprida sig i organisationen?

3. Vilka informella forum finns det för input och diskussion?

4. Vilka IT-hjälpmedel kan det diskuteras i?

5. Vilka grupper finns att diskutera i?

6. Vad görs för att strukturera och fokusera diskussioner?

7. Vad gör ni för att uppmuntra och underlätta konstruktiva diskussioner?

8. Hur bygger ni upp en gemenskap bland de anställda?

9. Var sker det mesta utav diskussionen?

Beslut

1. Hur kan en idé föreslås? a. Vad avgör om förslaget blir beslutat?

2. Hur viktigt är en kultur där folk vill och kan delta i besluten?

3. Vad gör ni för att skapa en kultur där folk vill och kan delta i besluten?

4. Hur ser den informella processen ut innan ett beslut fattas?

5. Vad kan göra en person mer inflytelserika i beslutsfattandet än andra?

6. Hur informeras anställda om beslut och förändringar? Exempelvis styrelsebeslut, budget, organisationens syfte, värdegrund, policydokument, vilka grupper som finns, gruppaktiviteter, arbetsuppgifter, yrkesroller eller ny produkt.

7. Hur kan anställda påverka eller ändra dessa beslut? Exempelvis styrelsebeslut, budget, organisationens syfte, värdegrund, policydokument, vilka grupper som finns, gruppaktiviteter, arbetsuppgifter, yrkesroller eller ny produkt.

8. Hur tilldelas beslut resurser?

9. Hur blir beslut verklighet?

10. Genomförs beslut som tänkt?

11. Fattar ni andra beslut än ett vinstdrivande företag skulle fatta?

B

Appendix B: The Code for the Software

MATLAB code has been used for the quantitative analysis, it is displayed in this appendix.

```matlab
% % % % % %  PRE PROGRAM  % % % % % %
clc
clear all
disp(' ')
disp(mfilename)
disp(' ')
disp('start')
disp(' ')

% % % % % %  PROGRAM  % % % % % %
%%% SET VALUES %%%
minMembers         = 3;
maxMembers         = 500;
groupSize          = 6;
numberOfIterations = 100;
qualityOfDiscussion = 1;
ideaThreshold      = 0.9;
maxLevels          = 10;
% INITIATE VARIABLES
creativity         = rand(1,maxMembers);
socialInteration   = rand(1,maxMembers);
timeForReflection  = rand(1,maxMembers);
% CALCULATE VARIABLES
ideaCreated        = creativity.*socialInteration.*...
    timeForReflection;
ideaValue          = creativity.*socialInteration.*...
    timeForReflection;
% STATISTICS VARIABLES
storeNumberOfIdeas = zeros(maxLevels,maxMembers,numberOfIterations);
```

```matlab
30   creatorOfIdea       = zeros(1,maxMembers,numberOfIterations);
31   %%% ITERATE %%%
32   for i = 1:numberOfIterations
33       i
34       %%% RUN FOR NUMBER OF MEMBERS %%%
35       for numberOfMembers = minMembers:maxMembers
36           numberOfLevels  = 0;
37           tempMembers = numberOfMembers;
38           while tempMembers > 1
39               tempMembers = ceil(tempMembers/groupSize) ;
40               numberOfLevels  = numberOfLevels + 1;
41           end
42           numberOfLevels = numberOfLevels +1;
43           currentIdeaValue    = ideaValue(1:numberOfMembers);
44           %%% RUN LEVELS %%%
45           % group size
46           groupMatrix     = zeros(numberOfLevels,numberOfMembers);
47           for level = 1:numberOfLevels
48               tempVector      = kron(1:numberOfMembers, ...
49               ones(groupSize^level,1)');
50               tempVector      = tempVector(1:numberOfMembers);
51               groupMatrix(level,1:numberOfMembers) = ...
52                   tempVector(1, 1:numberOfMembers)';
53           end
54           % idea flow
55           ideaMatrix          = zeros(numberOfLevels,numberOfMembers,2);
56           ideaMatrix(1,:,1)   = currentIdeaValue;
57           for level = 1:numberOfLevels
58               numberOfGroups  = groupMatrix(level,length(groupMatrix));
59               for group = 1:numberOfGroups
60                   if (group*(groupSize^level)) > length(ideaMatrix)
61                       lowValue = (((group-1)*(groupSize^level))+1);
62                       highValue = length(ideaMatrix);
63                   else
64                       lowValue = (((group-1)*(groupSize^level))+1);
65                       highValue = ((group)*(groupSize^level));
66                   end
67                   ideaVector  = ideaMatrix(level,...
68                       :, 1);
69                   groupVector = groupMatrix(level,...
70                       :);
71                   positions = find(groupVector == group);
72                   ideasInGroup = ideaVector(find(groupVector == group));
73                   if sum(ideasInGroup) == 0
74                   else
75                       choosenIdea = randsample(1:length(ideasInGroup), ...
```

```matlab
76                              1, true, ideasInGroup);
77                          choosenValue = ideasInGroup(choosenIdea);
78                          if level < numberOfLevels
79                              ideaMatrix(level + 1,...
80                              ((group-1)*(groupSize^level))+choosenIdea,1) = ...
81                              choosenValue;
82                              ideaMatrix(level + 1,...
83                              ((group-1)*(groupSize^level))+choosenIdea,2) = ...
84                              choosenIdea+...
85                              ((group-1)*(groupSize^level));
86                          end
87                      end
88                  end
89              end
90              %%% STORE DATA %%%
91              for store = 1:numberOfLevels
92                  storeNumberOfIdeas(store,numberOfMembers,i) = ...
93                      nnz(ideaMatrix(store,:,1));
94              end
95              creatorOfIdea(1,numberOfMembers,i) = ...
96                  find(ideaMatrix(numberOfLevels,:,1));
97          end
98      end
99      %%%  PLOT  %%%
100     % PLOT: Flow of Ideas
101     figure
102     x = 1:(numberOfMembers);
103     y = 1:(numberOfLevels+1);
104     [X1,Y1] = meshgrid(x,y);
105     Z1 = [ideaMatrix(:,:,1);zeros(1,length(ideaMatrix(:,:,1)))];
106     pcolor(X1,Y1,Z1);
107     xvector = [1,2,3,4,5,6,7];
108     title(['Idea flow for ' num2str(maxMembers) ...
109         ' members with groups of ' num2str(groupSize) ' people'])
110     xlabel('Entity')    % x-axis label
111     ylabel('Level')     % y-axis label
112     % PLOT Number of Ideas per Level
113     figure
114     X2 = 1:(numberOfLevels);
115     Y2 = sum(storeNumberOfIdeas,3)/numberOfIterations;
116     hold on
117     for p = 1:groupSize:(maxMembers-minMembers)
118         plot(X2',Y2(1:numberOfLevels,p,1));
119     end
120     title(['Number of Ideas per Level'])
121     xlabel('Level')             % x-axis label
```

```matlab
122  ylabel('Number of Ideas')    % y-axis label
123  % PLOT Number of Successful Ideas per Individual
124  figure
125  X3 = 1:(maxMembers);
126  hold on
127  for p = 1:groupSize:(maxMembers-minMembers)
128      uniqueIndividuals   = unique(creatorOfIdea(1,p,:));
129      sameNumberOfMembers = creatorOfIdea(1,p,:);
130      sorted = sort([histc(sameNumberOfMembers,...
131          uniqueIndividuals)],'descend');
132      soonToPlot = histc(sorted,1:maxMembers);
133      toPlot = zeros(1,maxMembers);
134      for m = 1:maxMembers
135          toPlot(1,m) = soonToPlot(1,m);
136      end
137      toPlot = toPlot(1:50);
138      X3 = X3(1:50);
139      plot(X3,toPlot);
140  end
141  title(['Number of successful ideas per individual'])
142  xlabel('Number of Ideas')             % x-axis label
143  ylabel('Number of Individuals')   % y-axis label
144
145  % % % % %  END  % % % % %
146  disp(' ')
147  disp('end')
```