

# Ethics and Sustainable Community Design



# Ethics and Sustainable Community Design

Veronica D. de Raadt

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*to  
Donald  
and  
the road trodden together*



# TABLE OF CONTENTS

PREFACE.....	XI
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## CHAPTER 1

INTRODUCTION .....	1
--------------------	---

Threats to a Community's Sustainability.....	1
--	---

Multi-Modal Systems Thinking .....	5
------------------------------------	---

Outline of the Book .....	6
---------------------------	---

Some Limitations.....	8
-----------------------	---

## CHAPTER 2

SUSTAINABILITY AND NORMATIVE ISSUES .....	11
---	----

Introduction .....	11
--------------------	----

State .....	14
-------------	----

Citizens .....	22
----------------	----

Economics .....	25
-----------------	----

Ethics.....	32
-------------	----

Education.....	35
----------------	----

New scientific approach .....	40
-------------------------------	----

Summary.....	42
--------------	----

## CHAPTER 3

ETHICS, BELIEF AND SCIENCE.....	43
---------------------------------	----

Introduction .....	43
--------------------	----

West Churchman and the Predicament of Science .....	44
---	----

---

Nature of the Crisis .....	45
Answers to the Crisis.....	47
Toward a Humane and Ethical Science .....	52
Ludwig von Bertalanffy.....	52
Herman Dooyeweerd's Theory of Modalities .....	58
Multi-Modal Systems Thinking .....	62
Summary and Conclusions .....	70
<b>CHAPTER 4</b>	
<b>MULTI-MODAL SYSTEMS METHOD .....</b>	<b>73</b>
Introduction .....	73
Multi-Modal Systems Framework .....	74
Domains .....	74
Modalities and Linkages .....	76
Systems .....	76
Factors.....	78
Rosvik: a Case Study.....	78
Introducing the Method .....	82
Collecting the data.....	82
Data organisation and itemisation .....	82
Selection of factors.....	83
Matrix and Selection of Links (Arrows).....	83
Analysis.....	83
Design .....	84
Collecting the Data .....	84
Preliminary Interviews .....	84
Panels.....	87
Individual Interviews.....	88
Data organisation and itemisation.....	88
Selection of factors .....	89
Matrix and Selection of Arrows.....	91
<b>CHAPTER 5</b>	
<b>SUSTAINABILITY, CHARACTER AND INTELLECT ...</b>	<b>95</b>
Introduction .....	95
Factors .....	96
Education .....	96
Heritage.....	97
Ethics.....	97
Religion.....	98
Education and Ethics .....	99



---

Ethics and Religion.....	103
Education and Heritage .....	106
<b>CHAPTER 6</b>	
<b>SUSTAINABILITY AND CIVIC FACTORS .....</b>	<b>111</b>
Introduction .....	111
Factors .....	111
Community Sense.....	111
Statism.....	112
Competence.....	113
Statism - Education.....	114
Statism - Community sense.....	118
Community sense - Education .....	124
Competence - Education.....	127
Summary.....	129
Character and Intellect Factors .....	130
Civic Factors .....	132
Conclusions .....	133
<b>CHAPTER 7</b>	
<b>REDESIGNING ROSVIK.....</b>	<b>135</b>
Introduction .....	135
Steps in the Design Process .....	136
Detailed Design .....	138
Ethics.....	138
Competence.....	140
Statism.....	141
Community sense .....	141
Education .....	142
Heritage.....	143
Religion.....	143
Consolidation of Expected Arrows.....	144
Loops.....	145
Conclusions .....	148
<b>CHAPTER 8</b>	
<b>CONCLUSION.....</b>	<b>151</b>
Summary.....	151
Conclusion of the Project .....	155

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REFERENCES .....	157
<b>APPENDIX A</b> ROSVIK REDESIGNED.....	167
<b>APPENDIX B</b> MUNICIPAL EDUCATION DEPARTMENT QUESTIONNAIRE .....	175
<b>APPENDIX C</b> HOUSEHOLDS QUESTIONNAIRE.....	177
<b>APPENDIX D</b> CHURCHES QUESTIONNAIRE .....	185
<b>APPENDIX E</b> SPORTS CLUBS QUESTIONNAIRE.....	189
<b>APPENDIX F</b> BUSINESSES QUESTIONNAIRE.....	193
<b>APPENDIX G</b> PARTY BRANCH QUESTIONNAIRE.....	195
<b>APPENDIX H</b> SCHOOL QUESTIONNAIRE .....	199
INDEX .....	203

## **Preface**

The terrorist attacks on the New York World Trade Centre and Pentagon last September shook the foundations on which rich nations are built. Until then it seemed global markets, technological progress and economic security were firm foundations for the western nations, and others intent on living like those in the west. This criminal action not only shocked us emotionally but also invited us to think about the effectiveness of economics and technology to provide security in life. Could it be that forgetting that our lives are more than technology and economics has left the whole western system vulnerable to the attack of a small band of terrorists?

The research that I have been engaged in for the last four years attempts to deal with how non-technological, non-commercial human factors affect the vulnerability of a community. Factors explored are ways people hold together against threats to community viability - less ominous than a terrorist attack but, nonetheless, as threatening in the long term.

I am indebted to many who have inspired and assisted me in this research. My thanks go to the people of Rosvik without whose help this research would not have been possible. They include the families, school, Betel church and

other groups in the village, especially the village development group. Warm thanks go especially to Arne Forsman, Leif Sandström, Irene and Arne Bäckström, Jan Zetterlund and Max Westerlund. Many thanks also go to the students from my division at Luleå University of Technology who talked to villagers and assisted me with the data collection in Rosvik. Thanks also go to Professor Kristo Ivanov, Dr. Stig Holmberg, Professor Gyorgy G. Jaros, Professor Marcus Schwaninger and Professor Werner Ulrich for their scientific advice. Special recognition though should go to my husband Donald, the inspiration of this work. His scholarship of nearly two decades has been my work's focus and his infectious resolve, its energy. Therefore it is most fitting that I dedicate this book to him and to our future collaboration together.

Uppsala, 2002

# Ethics and Sustainable Community Design



# **CHAPTER 1**

## **Introduction**

Ideally, the best futures thinkers specialize in big-picture overviews in time and space. They take a long view into the past and then forward into time, and a broad view across sectoral and disciplinary boundaries of society and often across national boundaries. They are specialists in generalities, integrators of knowledge, thinkers who emphasize breadth, and educators at large. They are at the leading edge of ideas that are shaping, will shape, or may shape society. To be at the leading edge, they frequently prod people to think about the unthinkable (Marien, Michael, 1992).

### **Threats to a Community's Sustainability**

In 1996 I was approached by a group of villagers to assist with a serious threat to the future of their village, Rosvik, which lies within the reach of the midnight sun in northern Sweden. The municipality had decided to take a grade away from the village school. It had made some forecasts about Rosvik's school-age population and projected that the decline in the numbers of children by the year 2000 did not warrant maintaining grade 6, the last grade in the school.

This alone represented a warning signal to Rosvik, as closure of school grades is the first step of a village's steady decline in Sweden.

It seemed Rosvik was going through a mid-life crisis and losing residents at a fast rate. Young singles were not staying, and families were selling up. Middle aged families, a fair proportion of the village's families, were moving into apartments in town; a common pattern in Sweden. By 1997-99 depopulation had culminated in a loss of almost 20%<sup>1</sup> and was no longer a projection, but rather, a fact of life.

There were other changes in Rosvik since the initial cutbacks in education, and the municipality also reduced health-related, postal, banking and other services. This pattern of shrinkage, both in people and services, was happening in other Swedish communities as well. Villages and small communities in remote areas throughout the country were losing out in government resources and economic opportunities to larger population centres.

The response to such problems in remote communities in Sweden has been to initiate business with the support of information technology. In Arvidsjaur, another small northern village, divisions of a car rental company and a travel agency were opened in response to unemployment. Both were owned by international corporations and made extensive use of information technology. In addition, education in information technology was introduced in the village school, beginning in the lower grades. This was done in the hope of enlarging prospects for future employment and therefore of keeping youngsters in Arvidsjaur.

Despite these initiatives in education and new business ventures however, many people in Norbotten,<sup>2</sup> including the

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<sup>1</sup> Figures taken from report of the Village Development Group, 1999.

<sup>2</sup> Sweden's northernmost county.



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governor, did not really believe in them. They thought the only hope was reliance on handouts from Stockholm or Brussels<sup>3</sup>. Small businesses were unlikely to succeed due to an historical attitude in northern Sweden that had discouraged private business and entrepreneurship. Rather, there had been a preference for state employment and work in large industries such as forestry, mining and steel. For a long time, the region's mentality had overlooked regional, local solutions, and depended on government handouts, or top-down economic and technological solutions.

However by the 1990's government and industry no longer employed as many people. Technology had replaced many who worked in the mines and forests. In addition, people saw that unemployment persisted despite Norbotten's wealth and the access of small businesses to technology. It was against this backdrop of fears that villagers were aware that Rosvik was becoming unsustainable and might not have a future, especially as the young left to make their home in the south.

It was especially because of these youth issues that villagers recognised that normative (moral) issues and not only economic factors, were at stake. Deeper questions were on peoples' minds and they were asking themselves if Rosvik provided good community life and fulfilled the needs of the next generation. People were becoming concerned about the quality of education and care the school provided, the level of security provided by families and neighbourhoods, and the drinking problem among some of the youth and need for parents' attention.

As my involvement grew, it became clear to me that the problem of sustainability needed to be answered by asking normative questions. The central question being posed by

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<sup>3</sup> Kari Marklund, governor of Norbotten, quoted in Norrbotten's Kuriren, Friday 18<sup>th</sup> August, 2000.

villagers about their uncertain future was: What is a good community? And how can a sustainable community serve people so they, in turn, can accomplish the work of community?

Finding answers to normative questions such as these, however, led me into a problem. Modern science, especially economic and technological science, could not handle these issues, despite what politicians and bureaucrats believe. Modern science did not detect, nor know how to handle, the normative problems of sustainability, which were interconnected with not only the economy, but also the environment. Modernism ignored the importance of human responsibility and approached human or natural problems armed with instrumental rationality. Its *modus operandi* was causes and explanations, and its solutions, mechanical or technological fixes.

It seemed we needed a new methodology of science and a new method of implementing it, in regards to both analysis and creative design. An understanding that could apply normative thinking<sup>4</sup> could help us understand Rosvik's crisis in broader terms.

As a result, I decided to make an application of multi-modal systems thinking which was being researched in my department.<sup>5</sup> I thought this understanding could assist by:

- (i) Identifying the most important normative factors that threatened the village.
- (ii) Building a model to show how these factors interacted with each other.

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<sup>4</sup> Many scholars hold this thesis, one of the most notable being West C. Churchman (Mitroff and Churchman, 1993). His ideas will be further explained in later chapters.

<sup>5</sup> This approach was developed in the Department of Informatics and Systems Science, Luleå University of Technology, Sweden.

(iii) Building a design blueprint to respond to the threats.

This book describes the application of multi-modal systems thinking to the problems in Rosvik. It is my hope that community activists, entrepreneurs, educators or social workers may benefit by using it in communities affected by the same sort of problems as Rosvik.

## **Multi-Modal Systems Thinking**

Multi-modal systems thinking is a normative approach to systems science that draws from both conventional systems science such as that developed by von Bertalanffy and his successors, and from Dooyeweerd's theory of modalities. The aim of multi-modal systems thinking is to expand science to add the norms of human life to our understanding of the determinative part of the world. Norms address all areas of life including such things as marriage and child rearing, work, service to others, preservation of our heritage, learning, and ethically following religious, cultural and social pursuits.

Multi-modal systems thinking incorporates all types of systems, although the focus here is specifically on the human systems that have been most neglected in the industrialised world, especially Sweden, such as families, schools, small businesses, churches and voluntary associations. The aim is to understand and explain how each of these systems uniquely contributes to the overall sustainability of a community. In regard to the management of these and other social systems, multi-modal systems thinking maintains that management, whether exercised in private organisations or public institutions, is not an instrument for controlling people, but a sustaining practice that encompasses ethical, social and cultural dimensions. Most of these dimensions

have been lost in the narrow utilitarian, economic understanding of modern management.

Multi-modal systems thinking incorporates diversity and understanding different modalities of life such as the ethical, social, economic, aesthetic, psychological and physical. It does this by integrating the knowledge of the diverse sciences, emphasising their unity without sacrificing their diversity. Finally, multi-modal systems thinking suggests all intellectual activities are unavoidably founded upon what we believe, and belief should be explicit in our discussions. Thus, multi-modal systems thinking openly integrates theology into the deliberation and does not conceal it.

### **Outline of the Book**

Our first task is to find out what other people interested in sustainable communities have to say. This is reported in Chapter 2. A review of these writers shows agreement on six major issues important for community sustainability. These include the role played by the state, citizens, economics, ethics, education and the need for a new scientific approach to understand community sustainability. We describe later how these issues played an important role in shaping the project in Rosvik. The need for a new science emerged as a response to this and is described in Chapter 3. It begins by discussing Churchman who argues that modern science, in losing its human focus and shifting away from normative issues, cannot think systemically and effectively implement ideas. The chapter goes on to survey others who also attempted to address these issues, beginning with von Bertalanffy and his break away from mechanistic science in order to understand humanity. It then turns to the philosophy of Herman Dooyeweerd and his theistic attempt to

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understand the diversity of the specialised sciences, as well as their unity and integrity. Finally, the chapter discusses how multi-modal systems thinking emerged out of an integration of Dooyeweerd's theory with systems science.

Chapter 4 explains the next step in the project: the application of multi-modal systems thinking in order to help the villagers in Rosvik preserve the long-term sustainability of their school and village. It begins by presenting multi-modal systems thinking in more detail. It discusses how various aspects of the theory including domains, modalities, social systems and relationships between them, help us have a broader understanding of sustainability; one that is not limited to an economic or technological understanding. The chapter then goes on to describe more of the situation in Rosvik, the changes the village is going through, and what effects this is having on community groups. The chapter also describes the various means used to collect and analyse the data. Finally it describes the application of a specialised software package, SmCube, to select and analyse various normative factors affecting Rosvik.

The collection of data and selection of a set of normative factors threatening sustainability is followed by an analysis of how these factors are linked and affect each other. Chapter 5 deals with factors that belong to people's character and intellect: these factors include *education*, *heritage*, *ethics* and *religion*. It analyses the need to educate people to become ethically aware of community issues and the role that religion plays in promoting ethical action. Finally it discusses heritage and education, especially how the knowledge of its heritage can strengthen a community and give it identity.

Chapter 6 turns to analyse factors concerned with the civic domain of human life, and how the factors *community sense*, *statism* in public institutions, personal, social and professional *competence* and *education* link with each other.

These links are then assembled in a graph which gives an overall picture of how the interplay of the factors promote or weaken sustainability in Rosvik. The graph shows that while undoubtedly there are some links that help sustain the village, there are others that present such serious threats that the overall situation is rather grim. Therefore this point in the project begs us to ask: What can the villagers do about this?

The analysis helps to respond to this dilemma. It not only explains how the links between the factors affect the sustainability of the village, it also suggests further possibilities and what to do next. In this way the analysis is normative and reveals the responsibilities of villagers towards their village and how they can materialise their responses into actions or operations. To this end, the last stage of the project, presented in Chapter 7, applies the multi-modal systems design approach and produces a blueprint sketch. The blue print suggested could be used by community leaders to develop their own community design.

Finally in Chapter 8 I draw conclusions in reference to villagers decisions and to what extent multi-modal systems thinking helped them.

### **Some Limitations**

Before concluding, I would like to point out some limitations that circumscribe this project. Firstly, the focus of this book is the implementation of a methodology and method in order to help communities ensure their sustainability, rather than the examination of the methodology per se. Therefore the methodology presented is taken as is. This is especially significant because of the normative foundation and belief system upon which the methodology is built. Thus, certain things are assumed as

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being good such as love, family, faith and self-reliance and there are others that are regarded as bad, such as bureaucratic control over peoples' lives, state dependence and selfishness. The epistemological process through which these norms are reached is not discussed, as they have been amply covered in the theoretical literature on multi-modal systems thinking. These norms did not present a problem for the people in the village. On the contrary, they were held by most who wanted a better future for Rosvik.

Secondly, although multi-modal systems methodology makes a clear cut separation between *normative* and *determinative* effects for explanatory purposes, there is not such a sharp separation made in this book. Factors are referred to as being normative when, in reality, they are a blend of normative, as well as, determinative influences. Thus, for example, one can regard religion as normative, for it is up to a person to choose to believe or not to believe. However, this does not mean that religion is not influenced by determinative forces: most people tend to follow the religion of their parents rather than seek a new one.

Thirdly, the term *community* is used in reference to people living in social places, rather than with reference to social problems studied in a location. This distinction has been drawn by Payne (1993), a sociologist, as the two principal foci of interest of community studies in his discipline. Payne points out that most use *community* in the context of problems of communities such as homeless youth, alcoholism, unemployment etc. Therefore the majority of community studies focus on solving problems. However, I use *community* in the broader sense of making a whole community sustainable, including its unique social structures such as families, churches, political party branches and municipalities.

Fourthly and lastly, the term "sustainability" is used in a broad sense and corresponds to the systems term "viability" discussed in Chapter 3. Sustainability is often used in the context of irreversible environmental damage caused by economic and technological development (Marien, 1992), and excludes equivalent cultural and social damage. However, I understand sustainability as encompassing the totality of the natural, human and cultural environments and the systemic endeavours to avert threats from any source, including economic and technological development, to preserve life.



## **CHAPTER 2**

# **Sustainability and Normative Issues**

### **Introduction**

Sustainability has become a catch-all phrase used by researchers in futures studies, technology, environmental issues, sustainable development, domestic issues (usually health care, education, social welfare) and third world development projects. The vast majority of these pose economic and biophysical questions so that about 80 - 90% of the literature on sustainability is limited to economic and environmental issues.

Naturally, these questions are of such an urgent nature that they demand careful consideration. They question whether we can balance our ecology with the present rate of economic growth, and bring up basic long-term doubts over how long human life can be sustained on the planet under these circumstances. These concerns have become known as sustainable development and came to the attention of world governments and the scientific community after the release of the Brundtland Report by the World Commission on

Environment and Development which met in 1987 (Softing et al., 1998).

However, since the notion of sustainable development came onto the world stage it has not triggered an equivalent response from social scientists. A search of the literature shows that there have been very modest attempts to understand the importance of social dimensions in sustainability. In an article summarising the sustainability literature, Marien (1992) confirms that there is an absence of response and counter-arguments of any note from social scientists to sustainable development and environmental issues since the Brundtland Report. In the scant literature that does focus on social issues, there is strong consensus among researchers in the human sciences, that our understanding of sustainability has ignored social issues in preference for economic and environmental ones.

Since our interest is in addressing human and social issues, I will limit my discussion here to the literature specifically dealing with social, cultural and normative questions that arise in sustaining communities. Within this literature, publication sources may be classified as theoretical, empirical or rhetorical. (The last category is mostly based on opinions, using illustrations from real community examples). There are about the same number of sources in each of these categories. Therefore no one particular type of analysis dominates, although the empirical or rhetorical publications when combined, show a leaning in the research toward concrete, applied studies. Theoretical sources are mostly drawn from economics, philosophy and geography; empirical and applied sources are from education, youth studies, environmental and rural studies; and the rhetorical, or opinion-based research, are publications from national commissions, public and economic management, and social policy.

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The disciplines that have contributed the most to the social sustainability literature are geography, ecological economics, education, and urban and rural studies. In geography, various attempts have been made to reintroduce the humanities and ethics back into the earlier positivistic orientation in geography. The same is true for ecological economics where attempts have been made to introduce ethical and human considerations into utilitarian economics. In education, studies have been done at the secondary and tertiary levels to educate for sustainability and make youth aware of the broad issues. In urban and rural studies various empirical studies have been made in city and country settings and contribute much to a concrete understanding of social sustainability.

There is a gap in the literature in the adequacy of methods for studying social sustainability of communities, with two exceptions. Firstly, there are methods specifically designed for economic aid projects in third world, developing communities such as South Africa (Schmidt 1998; Schutte, 2000) although they are less suitable for developed communities in the industrialised world. These methods were developed to incorporate cultural heritage into projects, and to understand the cultural differences between people living together in the same community from different tribal, language, and religious backgrounds. Secondly, although action research methods have been widely applied to industrialised, first world communities with the idea of empowerment, emancipation and applying political pressure, they usually overlook normative aspects.

Looking at the literature as a whole, one can identify agreement about six major issues important for community sustainability including:

**State:** The state threatens sustainable communities by dealing with people as abstract individuals and not

people. Therefore the state has outdated perceptions of community, it does not necessarily solve social problems, and citizens feel alienated.

**Citizens:** It is citizens who play the most important role in sustaining communities. When they play an active role in acquiring knowledge, decision-making processes and implementing community programs, community life improves.

**Economics:** Utilitarian economic growth undermines sustainable communities. Industrialised and centralised, government-controlled economic growth destabilises small local economies and social life in communities.

**Ethics:** We need to develop an ethical and normative understanding of sustainability. Therefore, we need to ask how our communities should be to sustain meaningful life for people, and how people should live.

**Education:** Better education is required for a sustainable future. It will be necessary to educate people, to raise their understanding of community and provide a meaningful life.

**New Scientific Approach:** We need a new scientific approach. The vastness of the issues requires a systems and cross-disciplinary approach to understand sustainability, especially one that incorporates social, ethical and cultural issues that have been neglected until now.

Let us examine each one of these in detail.

## **State**

The political scientist and philosopher Claes Ryn (1981) suggests that modern government, and its belief in the

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blueprint of the good society, has taken over the tasks previously assigned to citizens and community, and in the process, reduced people to abstract individuals. Ryn's analysis of abstract individualism can help us analyse how the state opposes the foundations necessary to build community and in the process, how it hinders sustainable communities.

According to Ryn, abstract individuals are members of an undifferentiated mass; they have abstract rights, are equal to others and have the right to cast a ballot. They are no longer ordinary citizens made to feel important in their social roles as mother, father, worker or community member. They are stripped of heritage and their right to a history, as they do not live in society with those who are living, those who are dead and those who are to be born. Nowhere are these effects felt more acutely than in the modern family, remarkable for its disharmony and the lack of affect, or emotion, between family members. Family is central to Ryn's argument because family forms the basis for people to develop their humanity and sustain community. "In the family man starts to develop many of the qualities which sustain society" (p. 10).

Toward the end of his argument Ryn asks:

"When the dissolution of the people into an egalitarian mass has finally been completed, so that everybody can truly be counted as one, has the individual gained or lost? When does he feel most important and influential; as an active member of groups, or as a member of that mass of equal citizens casting a ballot periodically to decide who shall be his ruler? In its moralistic pretensions, abstract individualism and egalitarianism represents a denial of man's specifically human nature. The 'brotherhood' it seeks is realised in practice by destroying the social fabric of concrete community" (p.16).

It is in totalitarian governments that extreme consequences of a state that treats people as abstract entities

and not real people, can be seen. Totalitarian governments destroy humanity outrightly, both by violent or non-violent, but no less subtle, means. They destroy freely formed associations or intermediate community groups such as businesses, voluntary associations, educational institutions, clubs, unions, media, charities and churches. The absence of this whole sector of society is addressed in the literature on civil society in Soviet Russia and eastern European countries (Taylor et al., 1997) where communism removed the intermediate groups between the state and family.

Less violent governments may not destroy community so outrightly, but they can be just as destructive. They destroy subtly without people being aware of it, as economic security and manipulation are far more effective tools of coercion than the gun or violence. Huntford (1979) claims that socialist government in Sweden is a new form of totalitarianism. He warned that it would only be a matter of time until people in other western countries would feel similar effects as Sweden. In Sweden, genuine community has been replaced under socialism by a sentimental notion of the brotherhood of man, and by government-organised collectivism in work and social life. The failure of the ordinary citizen to understand the difference has been facilitated by the desire for economic security and their historical submission to state authority and control. Although socialism in Sweden is declining, we still see the effects of the radicalism that peaked during the 1960's. Sweden has been left with a weakened community sense and with people who think it is the politicians, and not they, who lack initiative and vision.

Abstract individualism not only affects people and communities but also government itself. Government that becomes removed from real people, develops its own language and ways of thinking. One effect on language can

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be seen in the European Union. In the process of creating new bureaucratic structures, the central government has developed its own language, described by Råberg (1997) as "newspeak", and analogous to Orwell's '1984' manipulative form of language. Råberg believes that language is manipulated by political rhetoric and given meanings opposite to the ordinary sense used by people. He refers to the EU use of the phrase "social dimension", which he considers is misused to reassure people that the government is concerned for their social welfare. He states the phrase "social dimension" is "calculated to reassure a public alarmed by the one-sided economic and bureaucratic presentation of the European integration", when it really means "the creation of a common, mobile labour market that will strengthen the pan-European economy" (p.282).

Government removed from real people also develops out-moded concepts of thinking about people. Geis and Kutzmark (1995) discuss the effects this has on local communities in the U.S. They think local government's perceptions and procedures for solving community issues result in disorder and disintegration in the community. "People cannot walk and play safely, neighbourhoods lack cohesion, buildings are out of scale with their surroundings, human encounters are marked by fear, and the natural environment is overused and polluted" (p.5). These conditions are the result of government that loses touch with humanity and a vision of what human life is. According to Geis government needs to "envision" the sustainable community, rather than define it. Envisioning "good" community life should provide government with ideas for the kinds of support people need to achieve a satisfying life.

Another outcome of abstract individualism affecting our communities is that people become objects or consumers, in the eyes of government. In an analysis of neighbourhood

development projects in black and white neighbourhoods in West Palm Beach, Florida, Turner (1999) found that the main obstacle to success in community projects was that government treated residents as "objects" rather than "subjects".

Turner found that local government regarded people as consumers, rather than decision-makers about the future of their neighbourhood. This had especially negative effects for disadvantaged, black people because they were even more likely to be treated as "objects" than whites. They did not develop good relations with government, and were less successful than whites in obtaining financial support for neighbourhood projects. In addition, Turner found that local government was not interested in developing communities that were not of economic and political interest to them. Poorer communities do not commonly have high property rates nor do they attract business development potential. Finally, Turner thought that government used empowerment as a politically correct word for theirs, and not the people's ends. She says, "Empowerment is useful only so far as it contributes to the ability of local government to reach its goals" (p.18). Scientists and others involved in community work, may also need to reflect whether empowerment, or other notions like emancipation, advance their cause more than local peoples' causes.

The effects of people becoming objects of government are felt in other ways. There is evidence to show that in Sweden youth feel alienated from social and political participation (Wilson, 1991). Wilson notes that young Swedes are not interested in social or political issues, although they are involved in cultural, especially musical, and leisure pursuits. There is a high rate of suicide and alcoholism amongst Swedish youth (Seller, 1991), despite Sweden's high



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standard of living and opportunities for youth to work and study.

Wilson's comparative study found that despite youth in Sweden having far greater opportunities for employment and government assistance than Australian or American young people, they do not use these opportunities. This has affected industries such as Volvo and Pharmacia, and the trade unions, to such an extent, they have suffered from worker shortages and have not been able to fill vacancies. Wilson suggests this is caused by the rootless attitudes of youth towards full-time work and could affect the future development of the Swedish economy. Economic conditions have been such that young Swedes can leave education, get a well-paid job, hold it for a year, and then travel. Wilson estimates that 80,000 Swedish youth travel to Australia every year.

Both Seller and Wilson suggest that the problem is "the Swedish way" and a paternalistic government preoccupied with social control. They think Swedish youth are subject to control and manipulation through social and economic processes that they believe parents, youth workers and youth researchers do not understand and should consider more deeply.

Alienation is not confined to youth. There is a widespread problem of genuine social participation for many in Swedish society. The elderly especially feel a deep sense of alienation. They are not only pensioned off from work but society as well. Family and community are not as necessary when government provides institutionalised care for aged people. There is also evidence of lower numbers of voters going to the polls, a phenomena not confined to Sweden but common in most western countries where voting is not compulsory. The low percentage of voters in the U.S. election last year shows this. Whether it be the "nurse-maiding" of the U.S.

state (Wolf, 1993) or the paternalistic Swedish way (Wilson, 1991)) government ends up benefiting more than its recipients.

The limitations of government therefore lead one to ask: what is the proper role of government and what sort of government ought we to have? According to Ryn (1981), the standard by which various societies, and their governments should be judged is whether "they actually provide their citizens genuine opportunities for the work of community" (p.17). This means individuals should be given the freedom, resources and encouragement to live a fully humane and rich social life and that government provide support only when it is needed; that is, when needs cannot be met by citizens or community groups.

Firstly, therefore, government should listen to citizens so that public officials can evaluate what citizens expect and desire most. According to Wray and Hauer (1997), the essential starting point for improving the quality of life in a community is to hear from citizens what is important to them and how they envision their community. They believe that clarifying values, establishing a shared vision of future community, and developing a consensus on high-priority values are a necessary foundation for efforts related to improving quality of life and measuring performance. They think that if government listened to people, they would provide them with human support needed to help them work out their problems. This was borne out, for example, in the study of a U.S. municipality that spent a great deal of money to upgrade computer systems and provide people with technological assistance, when people really preferred to have a volunteer greeting them with a smile and helpful directions.

Secondly, government should encourage citizens to develop their competency to deal with the new challenges

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and engage in the "work of community" referred to by Ryn. Citizens require confidence to deal with civic issues and one of the ways government can help is to treat people as subjects rather than objects of planning, as borne out by Turner's findings, discussed before.

This means thirdly, that citizens be given a voice in decision-making processes. In the United Kingdom, Smith et al. (1999) studied the effectiveness of national and local government in engaging local people to manage community environmental projects. (Although this study was concerned with environmental projects for sustainability, it also discussed social dimensions including community management issues.)

Smith studied local management groups drawn from various communities in England and Scotland that set up environmental projects to promote sustainable lifestyles among the public. The Sustainable Community Projects (SCP's) brought together authorities from local government, researchers from 4 universities, and people from 6 communities across the country who wished to bring change in environmental attitudes and behaviour. SCP's were local projects set up in response to a national code, *Going for Green*, started by national government in the UK. Public meetings were called with the support of local government authorities, and management groups drawn from the residents of the communities. The purpose for forming the groups was so that residents could develop their own environmental projects and formulate an action plan.

Despite efforts to involve people in decision-making processes, there were varying degrees of success between communities in getting their projects started. One of the reasons for failure was because the priorities of local people were not considered. The national code was instigated outside the local community and did not allow for

differences between or within communities, in terms of their different cultures, histories or dynamics. The results of this study showed that what matters and works in one place can be irrelevant and fail in another. "Underlying the Green Code and the concept of the SCPs is a simplistic understanding of what constitutes a 'local community' " (p. 196).

It is not surprising that a national code does not stir people into action. The program might have been more successful had it started from the bottom up, rather than the top down. Responsibility best starts at the local and not national level. Had the residents instigated it, they would have been far more likely to get involved in the decision-making processes and get projects started.

## **Citizens**

This leads us to think about the importance of citizens and grass roots activities in community sustainability. There is evidence to show that the people in a community make it sustainable and not municipalities alone, although these support communities. In addition, there is evidence to show that leadership and management by local people, and not municipal leaders, is more effective.

Citizens can help communities either by complementing existing government services or by providing essential services themselves. Discussing community development projects in the U.S. Wray (1997) points out that communities improve their quality of life when they complement existing services provided by government. Wray believes this means setting up citizen programs to tutor children at risk, adopting a highway to pick up trash, or meeting other community needs.

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In a nationally acclaimed U.S. study, the East St. Louis development project (Reardon, 1999), local activists and citizens were the sole providers of essential services for the city. Volunteers from East St. Louis, a poor urban community, and the student and staff body of the University of Illinois, built new homes in the inner city, repaired old ones, disposed of trash and developed open inner-city spaces with play-grounds and orchards, growing fruit trees and vegetables. Before the development project, the city did not have garbage pick-up, or traffic lights at major intersections because it could not afford to pay the energy bill.

This project has been given national credit for benefits not only to the community, but to the university as well. It inspired a cross-disciplinary approach to teaching courses in architecture, urban planning and landscape architecture, not to mention that the "...experiences in this community-university partnership have been life transforming for many students..." (Reardon, 1999, p.26). It caused students to think about social inequality between rich and poor Americans and their own civic and ethical responsibilities. After graduation, many students involved in the project decided to work in the public services or become leaders of grass roots efforts in other American cities.

In the third world, citizen action in community development is crucial. In South Africa, Schutte (2000) points out that sustainable community development projects are only successful if indigenous people take over ownership of the tasks involved. Schutte believes that the key to sustainability and success in community development is only possible through *indigenous* community development (p.22). He believes local people must take local initiatives, acquire knowledge, plan and execute projects within the limitations of social, economic and natural environments. This therefore excludes socially engineered approaches usually taken by

rich countries that dictate to poor countries (the North/South divide) what sort of aid they need. The top-down approach makes local people mere participants in projects which already determine what, how and when things need to be done to better their quality of life. According to Schmidt (1998) who, like Schutte, has also studied aid to South Africa, these projects usually end up as 'project ruins', 'white elephants', and cease to operate once the involvement of a donor agency ended. The collapse is simply because the local people themselves never determined the "what, how and when" that could improve their lives.

In relation to these findings in South Africa, studies in first world show that management and leadership by local people is important. Smith's study in the United Kingdom (1999), discussed in the previous section of this chapter, suggests how important local management is in community issues and in getting environmental projects to work.

Although there were differences in the level of success between local management groups and some failures, one group was so effective it was perceived by a group of residents to be challenging the role of the local council.

An Australian study found that communities with civic, as opposed to government, leadership, developed more strongly, both socially and economically. In a study of leadership in four small rural communities in Queensland, Sorenson (1996) suggests that people working in occupations outside local government, such as the business, professional, service and landed sectors were better leaders. He differentiated between effectual and consultative leadership and found that the leadership style of private, as opposed to public, individuals was "effectual". They got things done; they contributed jobs, services and facilities to their communities.

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On the other hand, leaders in government tended to be "consultative" and less effective. Because their leadership style emphasised lending their status and authority to the activities of others, people did not think they contributed as much, in concrete terms, as civic leaders. Sorenson points out however that the two leadership styles can supplement each other in getting things done for a community.

Likewise, in a study of co-operatives in a Swedish village, Lorendahl (1996) found that there was a certain type of person important for the success of co-operatives. Leaders who were dedicated, energetic and hard working, and encouraged a spirit of entrepreneurship among people were effective in getting co-operatives off the ground. Lorendahl's insights are significant because leadership, even in rural Sweden, has been strongly dominated by government leaders, and small business and entrepreneurial leaders discouraged.

In conclusion, research about the various roles citizens play in their communities around the world suggests that volunteers, and local management and leadership groups are essential for community development. However, research also points to possible tensions between local and government leadership, and the need for government to encourage local leadership, and assist with resources, time and money. Government should not dominate if communities are to develop.

## **Economics**

There is theoretical and empirical evidence to suggest that economic utilitarianism threatens community sustainability. Various studies show that globalised, centrally-controlled economic growth, based on classical utilitarianism

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economics, undermines small, local economies, environmental and social life, and human wellbeing. They strongly argue that small communities should retain their economic and social integrity and not capitulate to centralised economic trends. In addition, other studies suggest sustainability can be achieved without economic growth, and propose communities "develop" economically, rather than "grow" economically.

Buttimer (1998a) discusses the effects of centralisation and globalisation, since the formation of the European Economic Community in 1958, on small, rural communities in Ireland and the changes this has meant for people living in these peripheral regions. Since the formation of the EEC, local communities have changed from diversified, labour-intensive economies of local distribution, to technologically-driven, product-specialised, export economies. Buttimer concludes that one of the biggest threats facing Irish farming communities is to think that EU control of the agricultural sector is inevitable. She says,

"The impacts of global market- and technologically-driven processes in Ireland from 1950 to 1990 were in many ways predictable: centralisation of economic power, production of social and spatial inequalities, and growing disparity between core and peripheral regions...(However)...To assume that these trends are inevitable is perhaps the greatest pitfall facing rural communities " (p.16).

Buttimer proposes various ways of responding to the effects of centralisation for local farming people. It needs a reply from the top-down; that is, for policy to initiate decentralised mechanisms to embrace various interest groups, including local community voices. It also demands that communities take bottom-up measures themselves by developing creative, local solutions. For example, she suggests reintroducing diversification and producing



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products for the local, rather than export economy, besides developing marketing strategies to distribute them. Furthermore, she recounts how some farmers have experimented with old farming techniques to address ecological issues. They use locally grown grass, rather than E.U. subsidised, imported fodder, for feeding cows.

More importantly, Buttimer concludes that the threats of centralised economics demands that people and local communities change their attitudes and establish common norms of behaviour. She believes education is the key to making people aware that they cannot afford to take their everyday lives for granted anymore, although she warns that changing mindscapes will be even more daunting than changing landscapes (p.17).

Likewise, an Australian study of rural communities suggests that government trends to centralise economic resources in rural regional centres have an adverse effect on small, peripheral communities. Smailes (1995) argues that government needs to find alternatives to "crude" policy that simply concentrates monetary resources to regional growth centres, and away from small, farming towns that lie outside regional centres. He suggests that government allocate these resources to smaller rural units to increase population density and encourage growth in the service sector of these communities. Allocating economic resources to small communities produces social benefits as well. It results in more socially sustainable communities and feelings of community loyalty, social mooring and belonging. These are vital to rural life, and yet, fragile "delicate plants much more easily destroyed than re-grown" (p. 148).

Like Buttimer, Smailes also argues for diversification of the rural economy, and the need to supplement the family farm by finding complementary ways for people to make a living. He believes that stimulating activity in small

businesses is essential for small rural communities in Australia especially as people in areas of low population have few opportunities to work off the farm. The need to supplement incomes in Australian farming communities is indicated by tendencies in other countries, such as Canada, where the percentages of supplementary incomes in remote areas are much higher than in Australia.

Up until the 1980's, Swedish government policy was centralised and favoured investment in larger population areas in preference to rural areas. According to Lorendahl (1994), Swedish policy was geared towards the centre in the belief that the centre stimulates the periphery through economic spread effects. Other countries besides Sweden have assumed the same policy. In the UK, national government has, like Sweden, been sceptical of local government promoting local growth. Small business has not been supported and even discouraged, by central government.

However, since the economic downturn of the 1980's and changes in the large industry and government sectors, there has been a change of attitude by the central governments of Sweden and the U.K. to recognise the development ambitions of local government. This has stimulated considerable experimentation with small businesses, projects and co-operatives started with the help of local government.

Lorendahl's study, mentioned before, of co-operatives in small rural villages in central Sweden suggests that co-operatives are successful in stimulating local development. Of six co-operatives studied, five provided employment for local people with between 2-10 full-time jobs in each co-operative. This had the effect of increasing the population base of one of the villages studied, which had spillover effects into the schools, shops and communications. These findings corroborate Smailes' suggestion that increasing the

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population density in small, rural towns encourages growth in the service sector of the community.

Despite some successes, studies of small rural communities around the world bring us to the reality for most small communities: it is just not feasible that they will grow. However, according to Kinsley (1994) this does not mean that they will not prosper. Kinsley argues that prosperity does not require economic "growth" but rather, economic "development", and that declining, and expanding, communities should encourage local economic development, in preference to economic growth. This will sustain them in the long run and not make them susceptible to the instabilities of either boom or bust, as communities can be just as threatened by too much growth as by too little.

Kinsley describes several examples of economic development without growth tried around the U.S.: one town started a program of "plugging leaks" in its local economy and saved millions of dollars in energy bills. It began an energy saving drive among local people to insulate and install new lighting with the result that they, and the city, saved money, albeit through a simple, common sense way. In addition to "plugging leaks" another principle of local development has been tried, which is "promoting local business". This means local people support local businesses and in one town, a new start-up business was established with the idea of linking local suppliers with local buyers. Yet another principle, "developing underused local assets", has also been tried, and in one town a new business started around canning local berries, a previously unused resource. None of these principles of economic renewal require growth. Rather, they are sustainable principles that safeguard economic and social life in towns that either cannot attract growth, or want less growth.

This brings us to a poignant question: how is it that we believe economic growth is good for us and our communities? Our belief in economic growth and progress is grounded in classical economics. However, scholars question whether the assumptions underlying classical economics promote the good of all. Although a minority, there is a group within the field of ecological economics, who believe that increasing levels of economic consumption do not result in human well-being. On the contrary, they believe that our desire to live well undermines our sustainability and has stretched our environmental and social limits to a point that endangers us.

One such scholar is Dodds (1997) who criticises the limited way some ecological economists discuss well-being. They accept the underlying assumptions of neo-classical economics and believe that the consumption of goods and services (output) positively relates to well-being. As a result, well-being is seen only in relation to commodities, wealth, production, market mechanisms and consumption, to the exclusion of human needs that lie outside economic considerations, such as social and environmental effects.

Dodds believes well-being also encompasses social dimensions of life. He suggests ecological economics should develop a better understanding of the behaviour and well-being of humans as social creatures, individuals located in community and that it should also incorporate other factors. These include the impact of distribution on community well-being, the social construction of preferences and the way in which cultural norms condition human satisfaction. This adds a social dimension to our understanding of sustainable development too, which for Dodds is about "cultivating appropriate institutions and attitudes" (p.95) and not about better management of resources. Therefore the challenge ahead for science is to increase its scope of analysis beyond

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the economic to encompass social and biophysical systems and understand how they relate to each other.

Dodds concludes that many economists' understanding of "well-being", or equivalent concepts such as "human welfare" or "quality of life" is ill-founded and narrow. And as a result, they do not know how to apply these concepts.

Besides Dodds, others also criticise economists' attempts to apply human dimensions to economic formulas. The results of their studies show that increasing wealth not only does not improve well-being, it sometimes undermines well-being. Raven (1997) believes that market mechanisms cannot respond to crucially important information for human life such as the destruction of the soils, seas or atmosphere, nor does it deliver a high quality of life, or reward the most significant contributions to quality of life. Collados (1999) found that it was environmental services offered in communities, and not economic growth that increases quality of life. Jackson and Marks (1999) suggest that people consume more to satisfy social and psychological needs and not material needs. They correlated increases in personal consumption in the UK between 1954 and 1994 with increases in satisfaction of needs (well-being) and concluded that increasing consumption actually threatens human welfare.

Rather than "well-being", Jackson and Marks prefer to use the term "human development" and suggest that non-material needs such as family, community, good work, and a reverence for skill and creativity, satisfy and develop humanity.

## **Ethics**

Sustainability is emerging as a normative concept in several disciplines including economics, environmental philosophy, environmental economics and human geography. Our insufficient response to threats, which make our future unsustainable, self-defeating and even suicidal, indicate the moral dilemma we are in. Despite warnings from various scholars, the pattern of suicidal economic growth has not stopped, and some think, "few scientists today would question the prospect of an 'end' in time for the earth itself and its living inhabitants" (Buttimer, 1991, p.345).

Parker (1993) argues the need for an ethical analysis of sustainability and a sustainable form of growth that is normative for society. She suggests that a normative sustainability would evaluate whether our communities sustain meaningful life for people. Therefore she firstly questions how people should live; what they ought to be encouraged to do and what they ought to be discouraged from doing. And if they need to be discouraged, she secondly asks: what is the replacement and a better way of life?

Parker suggests replacing growth of the economy with growth of meaning in life, and, corresponding to Turner's analysis of seeing people as subjects rather than objects, replacing consumers for citizens. Parker believes in normative sustainability and recommends encouraging sociability and communication between people, and promoting education and intelligent thought to equip people to become vital members of society, rather than occupants of generic roles defined by impersonal organisations. The effects of impersonal organisations on people, especially government, have already been discussed in Ryn's argument.

Parker believes the alternative to normative sustainability is our present system of growth. Our economic system is

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based on the principle of maximising growth and increasing production and using every resource available to sustain the production of goods and services, as represented by calculations of the Gross National Product.

Our problem lies in the fact that we tend to think of this system of growth as being a good thing. Decreases in the GNP and the absence of growth means recession, something we consider bad for us. Consequently, this has become our norm for the good life. Parker thinks, "the problem lies not in aspiring to a good life, but in what we take to be the good life and in what we do to attain it" (p.38). As a result we have a 'non-natural', distorted way of life and a distorted way of thinking about what is good for us. Parker concludes, "As a normative concept, maximisation of material growth falls far short of the best we can do: it places individuals in ethically unfulfilling roles, and sets societies on a collision course with resource depletion."

This raises the question of what sort of individuals we have become. Siebenhuner (2000) examines the conception of human behaviour according to standard economics, or what he calls *Homo economicus*. He believes this conception has serious analytical and normative implications. From an analytical perspective, standard economic theory assumes individuals are rational, self-interested and utility-maximising. From a normative perspective, *Homo economicus* guides people to behave self-interestedly and rationally when exercising moral judgement and making normative decisions. Empirical evidence from research of students majoring in economics found a link between studying economics and self-interested behaviour among students. These findings confirm the utility-maximising view of man and the doubtful implications this has for our capability to care and sustain the planet now, let alone for future generations, the credo of sustainable development.

Therefore, similar to Parker's examination of how we ought to live in community, Siebenhuner suggests an alternative conception of the human individual to *Homo economicus*; that is, *Homo sustinens*, or who we ought to become. This conception is based on an ethical conception of sustainability, and requires several characteristics of a human being living in a sustainable way. Siebenhuner suggests we need an emotional relationship of affection with nature; cooperation and communication to support collective action for sustaining ourselves; learning and creating to solve challenging problems; and moral responsibility for future generations.

Like Ryn, the family is also important for Siebenhuner. He points out the need for learning through collective action which takes place in families, groups and communities, and through childcare, by both parents, during the first years of life. During the period of raising children, parents learn cooperation and altruism, and children learn the culture, norms and ideas of society before they are ready to enter society. Like Buttimer (1998a), education is also important and Siebenhuner thinks that learning not only includes problem solving in physical problems like ozone depletion, but also in developing character, emotional intelligence and learning to be creative.

Inspired by psychology and motivation theory, Siebenhuner thinks that moral responsibility springs from motivation and self-actualisation that come from within the individual, and not from external sources or sanctions. In support, Dodds (1997) also suggests that self-determination is important to humans, and thinks it is even more important than material prosperity.

On a final note, *Homo sustinens*, is a useful conception for sustainability. Essentially, it proposes that people live in community, and that they be responsible for nature, each



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other and future generations. This seriously questions the effectiveness of large societal institutions, such as the state, to solve sustainable problems. Institutions like the state, not in direct communication with people, but far-removed from affecting the motivation of most, are unlikely to be effective. Siebenhuner believes, "... highly abstract institutions with strictly formalised interaction seem to be inadequate for effectively motivating people to learn and to act according to the principles of sustainable development" (p.23) Rather, people need small-scale, discursive processes that take place in community. Siebenhuner concludes by predicting that it is on the communal level that the problem solving and co-operation necessary for sustainability will take place, and where the vision of *Homo sustinens* is likely to be fulfilled.

## Education

This discussion has already pointed out some of the normative questions in sustainability, and the scholarship covered in the section above suggests the importance of understanding human motivation and behaviour, and rebuilding ethically fulfilling roles in family and community life. However, to respond adequately to normative issues we will need to raise the consciousness of people, and to educate them.

Education or "changing mindscapes" has already been described by Buttmer (1998a) as a daunting task; even more daunting than changing landscapes. It will require creativity and unconventional, educational means to explore common norms of behaviour across cultures for awareness of, and re-education in, values we take for granted in everyday life. This section summarises some creative efforts that are taking place, more often than not outside normal educational

parameters, to educate the young and the community in sustainable awareness.

Studies of sustainability education in secondary schools show that the need for changing mindscapes apply to school teachers and school structures, just as much as to students. Nixon's (et al. 1999) study points to the importance of creativity, thinking across disciplines, and experimentation outside the regular curricula and normal boundaries in schools, to effect change in educating for sustainability. Nixon studied the success of introducing cross-curriculum development in sustainability in several Scottish secondary schools. He compared the effectiveness of sustainability education within a school institutional context that emphasises subject-based and hierarchically ordered curriculum, with education that focuses on whole school change. Whole school change is a holistic approach that does not focus on readjusting existing structures but rather brings up questions about reorienting the whole school curricula to bring about innovative change.

Nixon found that the most effective change in sustainability education curricula occurred because of the initiatives of particular teachers, students and communities. Effective teachers were those who got involved in the issues, had integrity, values and were concerned about their professional practice. They were driven by their concern about sustainability; their ability to think across disciplines and collaborate with departments outside their own disciplines; their ability to enlist wider networks, especially non-government sources of funding; to engage in the community outside the school; and finally, to become civic leaders.

Nixon also found that students, and not only teachers, were important in sustainability education. Their efforts included generating projects within their studies, being

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involved in student councils, and linking up globally with other schools. One class started a local woodland protection project that was credited to grades students received in biology. In another school, students were encouraged to participate in student councils to deal with a range of matters affecting the school, including management and social welfare issues. Finally, although chances for going to conferences, visits and exchanges were limited, some schools encouraged international exchange between students through information technology. One school developed links with schools throughout the world so students could share information on environmental issues and express their concern for sustainable issues.

In this study, communities were also important. They supported the efforts of teachers and provided the context for student projects. Some students linked up with community groups such as business, environmental and other groups. One school encouraged students to manage the school grounds and buildings, and students were encouraged to provide school facilities for the local community. These students planted a wildlife and peace garden for both school and community to share.

These creative efforts, although small, contrast sharply with attempts to change curricula within the regular institutional context. Nixon described these conventional approaches as being ineffective, piecemeal and sporadic. He believed that the tightly framed subject areas, in which teachers are professionally registered, limited effective sustainability education. Teachers probably felt constrained and saw sustainability education as being peripheral to mainstream regular subjects. Therefore, they did not take many opportunities in the classroom to experiment with sustainability education.

Finally, this study warns that the work among particular teachers going on in schools is, by itself, not enough for effective sustainability education, and Nixon calls for community involvement in education. He believes that the community should apply pressure to schools to create organisational structures and support sustainability education. He calls for action by parents, students and community leaders to affect the way schools are managed and governed. "Without such structures, education for sustainability will continue to rely on the vision and commitment of a small number of often isolated innovators and will remain, therefore, marginal to the mainstream curriculum" (p.310).

Innovative experiments in educating young people for community service are also going on in the U.S. They aim to equip young people with diverse types of knowledge for community work. In Wolf's (1993) study, described earlier, project leaders expected students to be aware of a variety of issues including historic, political, economic and programmatic aspects of community involvement. This research suggests that educating young participants with diverse sources of knowledge provides them with a context for action and work in advocacy organisations. Likewise, INVEST, a university-level program at the University of Colorado, engages students in two years of study and community action. These years equip students with diverse information and focus on "issues that range from the history of the community to the elements of community organising" (p.16). Yet another community project described by Wolf and dealing with children in poverty, prepares black students in a similar way by teaching them the history of the civil rights movement and how it was organised.

A school study suggests using the school to rebuild family and community. Edward's (1996) study describes a

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programme for poor, black neighbourhoods in New York City that could be a model for better-off neighbourhoods too, whether in America, Sweden or elsewhere. The Rheedlin Centres for Children and Families in New York City is a school-based youth and family development program that provides social services to families. The school provides services in recreation, education and vocational activities, and is a venue for community activities.

Other innovative attempts to increase understanding around sustainable issues have occurred at the university level. Buttimer (1987) reports a creative, cross-disciplinary attempt in the discipline of geography to come to grips with sustainability issues and fill the information gap between the disciplines. She describes the consequences of scientists not being able to communicate with each other and it is worthwhile to cite at length, her reasons behind the project.

"...we thought that educators and would-be designers of tomorrow's world were faced with a paradox: information-overload on the one hand, and an enormous communication gap on the other. The sociology of academic practice, however, has often tended to impede rather than facilitate communication across disciplinary, national or sector boundaries. The language and media normally used in proposing and implementing research has not enabled a sharing of results in a manner which could lead either to mutual understanding or to a comprehensive grasp of the problems" (p.133).

The International Dialogue Project attempted to share trans-disciplinary knowledge about regional development, resource planning and human welfare. The aim was to share knowledge, using as many means as possible, especially technology, to increase understanding in the history of geography. To this end, nearly three hundred discussions and interviews with key people from around the world and

related to the history of geography, were recorded between 1977-1985.

The project was especially successful for teaching students in the classroom, and recordings were used pedagogically in geography programs in universities in the United States, Ireland and Sweden. It was felt the project promoted better communication within disciplines and especially in courses in geography, history of geography and philosophy of geography. However, some results were not achieved. It was hoped that the project would promote better understanding between academics and the public, but there was not sufficient opportunity to test its effectiveness in promoting these links.

### **New scientific approach**

All the research described so far points to the need to think about sustainability in non-economic ways and to incorporate social, psychological, ethical and other issues. Ecological economists such as Collados (1999) believe that the heart of the problem is the fragmentation between economics and other sciences. He says, "Neo-classical economics considers the economic system to be separated from the natural and other social systems" (p. 444). This separation has resulted in a system that deals with material things, the "fetishism of commodities" (Raven, 1997), to the neglect of other spheres of life that are important to our humanity. This situation therefore begs the question: how can we find a new way forward?

Scientists believe we require a systemic paradigm to understand and address diverse spheres of human life. According to Dodds (1997), science must broaden the scope of analysis to encompass a wider system dynamic that

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includes social, economic and ecological systems. Siebenhuner (2000) also believes we need systems thinking. He believes systems thinking, rather than causal, linear thinking, will help us understand complex relationships between human beings and the various spheres of life in which they operate.

Therefore, scientists call for an integrative and trans-disciplinary way of thinking. They want an approach that is generalist and specialist at the same time, able to deal with other disciplines, but specialising in a particular field. To this end, Dodds believes ecological economics provides a way forward. It integrates knowledge and he describes it as "the study of human agency and well-being in the context of enmeshed economic, social and biophysical systems"(p.108). He also includes ethics, and discusses our ethical obligations to the non-human world and responsibility to conserve our natural resources, and keep in check the natural desire to satisfy ourselves. Siebenhuner (2000) also integrates different perspectives, and his sustainable concept of man, *Homo sustinens*, integrates findings from anthropology, evolutionary and neurobiology, psychology and the social sciences. Like Dodds, he also appeals to ethics, as he believes sustainable development is essentially an ethical concept. It infers a normative intention, an "ought", aimed at the survival of mankind and care of our planet for future generations.

Buttimer (1999) also argues for an integrative science of sustainability and unity among the disciplines. She states, "a spirit of ecumenism among the sciences and a concern for the whole picture, as well as excellence in special fields, will be required " (p.112). Humanism, which she describes as the liberating cry of the threatened human heart, can be an integrative force, as it brings together people, and not only scientists, from diverse walks of life. She argues for a

humanistic perspective not only in her own discipline, geography, but also in the sciences and humanities, and believes that humanism can act as a catalyst, "a leaven in the dough". However, Buttimer believes humanism not only refers to the intellectual sphere and the sciences. It also appeals to other spheres of human creativity that embrace faith, emotion, aesthetics, memory and will (p.28). Faith especially, offers hope, a scarce commodity in our fears about our natural and social world.

In another work, Buttimer (1991) issues a challenge to Christians. She urges them to rediscover a spirituality that embraces the whole of living creation and not forget the relation of man to man, as well as between God and man. All these scholars share an ethical responsibility for the planet, and the belief that ethics can inspire dialogue and systems thinking between the sciences.

### **Summary**

Interestingly enough, there is a convergence between the conclusions reached in my investigation of Rosvik and those that emerge in the literature discussed above. We will discuss this convergence in greater detail in the analysis in chapters 5 and 6. However there is one issue that we must deal with first, and that is the need for a new scientific approach that could help communities to be sustainable. I address this in the next chapter.



## **CHAPTER 3**

### **Ethics, Belief and Science**

#### **Introduction**

In addition to the people whose ideas we have surveyed in the previous chapter, many other scientists are also concerned about the ethical crisis in science. West Churchman, one of the most well-known systems scientists still living, believes science has lost the ethical purpose it had before modernism. He candidly places the problem squarely in the lap of the scientists themselves, "As a systems designer, I'm appalled at the magnitude of the acts of humanity that in my lifetime have hurt so many people.....I'm also amazed at the magnitude of indifference that systems researchers have shown about this matter" (1986, p. 63-64). In his conversations, recorded in the systems journal, *System Research*, between 1984 and 1989, he argues that although humanity is the reason for science's existence, science has failed to address such human problems as pollution, the poor, the starving, neglected children and indecent imbalances between the rich and the poor.

This chapter traces the development of an ethical, trans-disciplinary, systems science in the form of multi-modal systems thinking. The chapter has two main sections. It begins by examining Churchman's ideas about the predicament of science, its unsystemic nature, and its need to return to normative issues and thereby justify its existence. These ideas, which emerged towards the end of his academic career, are summarised in the Manifesto for the Systems Sciences (Mitroff & Churchman, 1993). The chapter then follows by discussing various attempts to address the issues Churchman raises and develop a humane and ethical science. These include von Bertalanffy and his break away from mechanistic science in order to understand humanity. His general system theory was based on the organismic model and the idea of open systems. We then turn to the philosophical theory of Herman Dooyeweerd. His was a theistic understanding that tried to integrate the sciences through understanding their source of norms. Finally, the last part discusses the integration of Dooyeweerd with systems science in what has become known as multi-modal systems thinking.

### **West Churchman and the Predicament of Science**

West Churchman has spoken and written much about the purpose of science to the systems community. He has repeatedly challenged scientific audiences with their inability to do something about the children who are dying, people who are starving and those living in poverty<sup>6</sup>. However, most

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<sup>6</sup> Delivered at Churchman's in-coming presidential address at the Annual Conference of the International Society for the Systems Sciences, Portland, Oregon, July, 1990 where he brought forward his criticism and challenge and said there had been a change in his own perspective. He

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systems (and many non-systems) thinkers are aware of the incongruity between science and life and are deeply concerned about the gulf between scientific endeavours and the essential problems of life.

In a series of editorials published in *Systems Research* between 1984 and 1989, entitled, "Churchman's Conversations," Churchman deals with some overriding, fundamental issues and in them he urges us to reconsider what science should be about. He appeals that we ask of science "what is its purpose?"; "who should be served by it?" and "how can science move from the "is" to the "ought?" He believes humanity should be the kernel and essence of our response to these questions. That is, humanity is the purpose of science, humanity should be served by it, and concern for humanity is the way science can move from "is" to "ought" questions. According to Churchman, the crisis in science is due to the normative shift away from human questions since the rise of positivism, which fragmented science and changed its purpose. This change influenced the types of questions science asked and the responses it made. It also is the reason science has become unable to cope with systems questions. We go on now to see how Churchman believes these have contributed to the ethical crisis of science.

### *Nature of the Crisis*

In the first place, the shift away from normative issues has influenced the types of questions science asks. According to Churchman, science has abandoned questions of purpose or 'oughts'. Purpose, for Churchman, is the most important question we should ask about a human system (1987), and

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questioned the wisdom of his early work in view of his new experience of God.

modern science does not ask "what ought to be the purpose of science" or "who should be served by science".

Instead, the scientific endeavour has shifted from these sorts of normative questions to questions of 'is'. Science has concerned itself with fact or theory and lost concern for the individual and social systems. Theory-building has become "an end in itself", (1993) and fed the narrow, specialised interests of the disciplines. Churchman believes that the mood of inquiry changed in the nineteenth century with the rise of positivism. He describes its foundations as being so weak he is surprised it caught on as a basic philosophy of science (1987). In addition, as positivism was accepted and the sciences fragmented into disciplines, theological inquiry, which deals with questions of 'oughts', was pushed into the background. For Churchman questions about "Does God Exist?" are the most important questions of systems thinking. For him, understanding God is necessary for understanding man, as "...the nature of the human system depends most of all on whether a perfect being exists (1987, p.224).

In the second place, the shift away from normative issues has influenced the types of solutions, or answers to the human question, science has come up with. According to Churchman, modern science produces 'responses' rather than 'answers' (1987, p.140). Science that does not think normatively, or as we have already said, does not ask questions of 'ought', is incapable of producing real answers. It is poor at implementation and produces little real change for humanity, even when it endeavours to approach human issues and intervene in them. According to Churchman, even action research, which tries to intervene, produces little real change to improve the human condition (1993, p.viii).

In the third place, science can no longer think systemically. The shift away from normative questions has made science develop in unsystemic ways. According to

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Churchman, the very essence of humanity is a systemic problem and it is a challenge for scientists, even systems scientists, to tackle the human problem. Churchman states, "How one operationalises the measure of 'serving humanity' is itself a fundamental problem for the systems sciences since the meaning of 'humanity' is systemic" (1993, p.ix).

Therefore, science is myopic and unimaginative when dealing with ethical questions. At worst, it cannot deal with ethics at all. At best, it deals with ethics in the negative instead of in the positive. According to Churchman, scientists can pinpoint when things go wrong and when there is mismanagement resulting in different kinds of disasters (1987). In the previous chapter, we saw the strong sense of ethical outrage in much of the sustainability literature. Although many of these scientists believe we need a major rethink in science for no less reason than the survival of the planet, few seem able to develop the necessary tools to address ethics and norms. Some of these declare themselves humanists, but few, according to Churchman, develop what humanistic means, although they correctly describe what non-humanistic means (1987). For example, while Ann Buttimer has creatively developed a humanistic perspective of sustainability (1990, 1999) and new educational tools (1987), she has not produced the methodological or research tools to deal with the issues. These problems and the lack of purpose and ethical concern to do something to effectively help people, indicates that science must make some radical changes.

### *Answers to the Crisis*

Churchman believes the answer to these dilemmas and the plight of science requires no less than a radical reorganisation of science. In the Mitroff-Churchman Manifesto, a statement of no confidence towards

conventional science, Churchman suggests that scientists require a 12-step treatment plan like that used for the treatment of alcoholics (1993, p.ix). This is not a misrepresentation of Churchman. He believes we need a completely new way of managing science as a human institution and educating scientists as whole human beings (1993, p. ix). This means we need to change the very foundations on which we have built modern science.

To begin with, he believes science will need new ways of thinking, and therefore it must develop a new language to go with it. We said before that Churchman believes the language of science ought to be in the 'ought'. However, modern science does not speak in normative terms but in determinative terms. Therefore science must start with new epistemological questions couched in terms of 'what ought we to know?' rather than the usual starting point of 'how do we know'? This will turn the language of science from questions of 'is', to questions of 'ought', vision, purpose, and meaning. In this way, science will also be able to address other normative issues such as love, hope, community, loyalty, and respect, besides their opposites - hostility, exclusion, alienation, disloyalty and other threats to social systems.

Other systems thinkers besides Churchman point to the importance, indeed the urgency, of asking basic normative questions. Kenneth Boulding, another systems thinker and contemporary of Churchman, has proposed that we study love as carefully and intensely as we study anything else. Unfortunately, the scientific community has not taken his suggestion seriously enough.

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"This suggestion is usually met with jeers. We seem to be thoroughly indoctrinated with the view that anything that is preached about cannot be taken seriously. We may never make a costlier mistake, and all our technological and economic success may go down the drain if it produces a society which is incapable of love, incapable of attracting an un-coerced loyalty and incapable of establishing or maintaining its own legitimacy" (1969, p. 121).

Boulding warns scientists, especially, of the consequences of disregarding love, as they have been largely responsible for the weight given by modern society to economics and technology, and our shortfall on understanding love.

Churchman believes the gulf between scientific endeavours and doing something about the essential problems of life is the fundamental question of systems science. He states in the Manifesto that the "...study of the interactions between world problems and the implementation of solutions is the most fundamental problem of the systems sciences" (1993, p.ix). He also believes the lack of implementation is because of theory-building. Positivistic science separated theory-building from implementation so that theories became ends in themselves and had little bearing on human problems (1993). Therefore, in addition to developing new ways and a new language for thinking, science will have to develop new ways and a new language for action. And this must be in normative and ideal terms. The present language is couched as theoretical response and does not communicate in ethical terms. It also lacks implementation to alleviate human suffering. Therefore, science needs to invoke ethics and develop normative methodologies and methods to make effective changes to human suffering.

Since all these issues are essentially ethical, we must understand belief systems better. However, there is a gap in

our understanding, as systems scientists have not taken belief seriously and integrated it into their thought. According to Churchman "...there have been few contributions in the literature which link together a theory of belief systems with systems research" (1985b, p. 93). Boulding also believes intellectuals have not considered the importance of belief. He is surprised that intellectuals still live in the age of 18th century enlightenment despite the fact that religion is not only popular but also remains relevant to people living in modern societies dominated by technology and science. After describing the negative impact of technology and science on religion he says,

"...religion has survived all these adversities and shows no signs at all of disappearing...In the United States church membership is at an all time high, claiming some 64% of the population. In Europe it is Christian democracy that picked up the pieces after the collapse of Fascism...All this may seem very surprising to those who are still in the age of 18th century enlightenment, as so many intellectuals are, but it is a fact of the world that has to be taken into account and is evidence of the extraordinary ability of religion to adapt itself to the implications of technological and scientific change" (1969, p.119).

Therefore science needs to develop new epistemologies, new research methods and new design tools that incorporate religion and address why religion continues to give purpose, even to modern people. Churchman believes we need to do some serious thinking about whether a perfect being exists and incorporate it into systems design. He says, "...the nature of the human system depends most of all on whether a perfect being exists. If it does, then our main attention as systems researchers should be how our planning relates to its existence" (1987, p. 140). And if God does not exist, Churchman believes we have to find a whole set of god-less values to guide us. In a later publication he also refers to the



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need in the design process for planners to have a "guarantor of destiny" (G.O.D.). He believes no matter how well intended, designers and planners are bound to make mistakes and need a guarantor of destiny, someone to whom designers can relate their planning.

In addition to re-integrating religion, science needs to re-integrate imagination. Churchman believes that design should be imaginative, as one of the most important functions of planning, of any kind, is imagination. This necessitates looking outside the conventional parameters of science for planners and "... experts among the poets, song writers, science fiction writers, historians of the imaginative type, and writers of old tales. And we should look in music, since music is an expression of the rhythm of life - an essential part of a just life" (1988, p.2). Specialisation in science has resulted in narrow thinking and disregarding sources of creative thought.

In conclusion, Churchman's principle aim is to design a moral world for future generations. He says "The design, of course, is the design of a moral world for future generations. And the design's aim is to create a world of moral intelligence..." (1986, p.64). Churchman's design is not just an educational process, but a challenge to the scientific community. Its aim is no less than the ethical and systemic education of the heart and mind which effectively encompasses science and research, and also religion, poetry, painting, dance, drama, besides conversation and action.

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## **Toward a Humane and Ethical Science**

### *Ludwig von Bertalanffy*

It was during the post-war years of the Second World War that Ludwig von Bertalanffy addressed some of the issues later raised by Churchman. His general systems theory is foundational to the development of the systems movement, and moves away from mechanistic scientific principles towards a humane science. It is chiefly concerned with living systems and attempts to bridge the gap between the sciences, address multi-perspectives and unify different aspects, or "levels of reality" of life.

General system theory is based on an organismic view of science which views living organisms as open systems i.e. systems exchanging matter with their environment. They are different from closed systems that are isolated from their environment and characterised by fixed arrangements, structures and processes. Von Bertalanffy defines the machine as a closed system and rejects the mechanistic view of science: the worldview born of classical physics of the nineteenth century. This view of science asks analytical questions which, like the machine, fragments understanding into smaller and smaller pieces. Laws of causality govern it, and this rules out considerations of purpose. It is also a static understanding, which rules out understanding interaction and organisation. In his opinion, "We may state as characteristic of modern science that this scheme of isolable units acting in one-way causality has proved to be insufficient" (1971, p.44).

Therefore von Bertalanffy's general system theory deals with living systems and is concerned about life, complexity and dynamic relationships. It sees the organism as a living, dynamic system and focuses on problems of wholeness,

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dynamic interaction and organisation, rather than problems of separate entities and processes, the problems of a static conception of science. According to Strijbos, "A distinguishing characteristic of von Bertalanffy's view of the organism is that it eliminates the usual contrast between structure and function, and morphology and physiology. Von Bertalanffy rejects this opposition as having a mechanistic origin. Even the structures of the organism...must...be conceived as not static but primarily dynamic." Hence, von Bertalanffy thought the whole organism and the parts as well, were organised in dynamic relationships.

Furthermore, he challenged reductionist trends in science and sought to unify science. He attempted to achieve a view he called "perspectivism", the opposite of "reductionism". He says, "We cannot reduce the biological, behavioural, and social levels to the lowest level, that of the constructs and laws of physics" (1971, p. 32). Therefore he attempted to find laws and principles that would unify the various disciplines and that would apply to generalised systems, regardless of whether they were physical, biological or sociological systems. He states, "There are correspondences in the principles that govern the behaviour of entities that are, intrinsically, widely different" (1971, p.32).

He believed organisation was the unifying principle, as organisation applies to all systems and to all levels within systems. His general system theory addresses complexity and, contrary to conventional physics, suggests that complexity is organised, not disorganised. Because organisation applies to all levels, all systems, social and biological, are governed by a general theory of organisation. Therefore concepts such as organisation, wholeness, directiveness, teleology and differentiation appear. Hence, in his scheme of things he includes systems in mutual interaction, and, like Churchman, includes purpose and

directiveness. These are problems which causal, determinative science could not address.

Finally, von Bertalanffy thought the ultimate precept of science is humanity and the individual, and not science's own interests. He is skeptical and modest about the goals we should attach to science. He warns of the dangers of scientism and social engineering, and believes science can be used for good and for bad in human society. "It is an empirical fact that scientific achievements are put just as much, or even more, to destructive as constructive use" (1971, p.51). Instead, he believes human society and the values of humanity depend on the achievements of the individual. His theory of organisation sees the individual as a free agent and not as a "cog" in the social machine (1971, p.52).

Despite the importance of his thinking for the development of the modern systems movement, von Bertalanffy failed to achieve a truly multi-perspective. He reduced understanding to biology and remained less influential than other systems contemporaries, such as Ashby. Strijbos criticises von Bertalanffy and believes that, from a philosophical point of view, his dynamic view of the organism is simplistic and speculative. There is similar criticism over simplification in the organisation theory literature, where general system theory is considered a comprehensive paradigm for studying social organisations and management, but crude and lacking in precision.

Two management theorists, Kast and Rosenzweig, (1973) warn of using biological and social analogies, "There has been no more pervasive, persistent, and futile fallacy handicapping the social sciences than the use of the physical model for the understanding of social structures" (1973, p.43). They consider comparisons between physical parts of the body and parts of the social system as misleading

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analogies that do not apply to comparisons between biological and social functioning. Unlike organisms, social systems are socially contrived and subject to social and psychological variables to which an organism is not subject.

There are several ways the socially contrived nature of the social organisation limits drawing analogies between organisms and organisations. Firstly, social organisations are made of men, and they are imperfect and hard to predict. Because organisations are made up of men's attitudes, perceptions, beliefs, motivations, habits and expectations they can be either equally enduring or brittle. Organisations can outlast the life span of most organisms, such as companies that are over a hundred years old, or they can fall apart rapidly. Organisms however, follow much more predictable patterns of life, including youth, maturity, decay and finally death.

Secondly, purpose is different between organisms and organisations. To begin with, the predictability of organisms affects their purpose. Therefore, the life cycle of an organism fixes its purpose, and it generally does not change. However, the unpredictable nature of social organisations may cause their purpose to change so that the same organisation can have a variety of purposes over time.

In addition, purpose is decided in socially contrived systems but not in organisms. Social systems have purposeful elements within them, usually consisting of humans who exercise their own will, and make purposeful decisions. This does not apply to organisms. Organisms do not exercise their own will. Their purpose is usually determined for them and defined in relationship to the environment. "In much of general systems theory, the concern is primarily with the way in which the organism responds to environmentally generated inputs" (1973, p. 44). The human element and the question of purpose raise one of

the most important failures of general systems theory. Despite its concern for life, its organismic and biological outlook remained essentially deterministic and it failed to account adequately for human and normative will.

This brings us to another objection to general systems theory and using biological and social analogies. In reducing things to biology, we tend to think in terms of open v's closed, and that open systems thinking is good and closed system thinking is bad. However in the case of social systems, this polarisation does not apply and is therefore not very helpful in improving our understanding of social organisations. Kast and Rosenzweig believe that "most social organisations and their subsystems are 'partially open' and 'partially closed' " (1973, p. 44). Besides, there are times in the life of an organisation when closed system thinking is preferable. For example, as regards a business organisation's technical efficiency, closed system thinking reduces uncertainty and increases performance.

The other problem in the general system approach is one of practice. Management theorists, including Churchman, believe the lack of methodology and methods developed to carry out effective systems practice is a major barrier to exercising systems thinking. The result is that scientists usually practise a partial systems approach. The problem is usually one of competence and not being able to deal with other disciplines. Training in only one particular discipline leaves scientists with the tools to cope with the elements or subsystems of an organisation but not with the relationships between them.

Most scientists deal well with two-variable relationships but find it difficult to cope with three. According to Kast and Rosenzweig, "Perhaps it is because we know a great deal more about the elements or subsystems of an organisation than we do about the interrelationships and interactions

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between these subsystems. And general systems theory forces us to consider those relationships about which we know the least - a true dilemma. So we continue to elaborate on those aspects of the organisation which we know best -- a partial systems view" (1973, p 45). Churchman also believes systems scientists remain naïve in their understanding and have failed to think systemically, or implement their ideas.

In conclusion, general system theory was only partly successful in breaking away from the mechanistic model. While it provoked questions about life and encompassed different life realms and dynamic relationships, it reduced understanding to a biological paradigm that does not deal adequately enough with human systems. It cannot account for social and psychological characteristics, besides human will and purpose.

Therefore, it cannot cope with normative questions. According to Churchman, normative questions are the most central issues of social systems. In 1987, he wrote "...it occurred to me that the most important question we should ask about a human system is its purpose, because I could not agree that humans behave strictly in accordance with deterministic or statistical laws. Hence my first question was 'what is the purpose of the system?' Not quite. After all, why am I thinking about systems at all? And the answer seemed to be 'to help them'. So the correct formulation of the question is 'what *should* the purpose of the system be?' "(1987, p.224). (Churchman's italics).

Other systems thinkers have addressed such questions as these, especially 'What should humans want?' and respond more completely to Churchman's challenge than von Bertalanffy. Herman Dooyeweerd constructed a theory of modalities that linked together the scientific disciplines and addressed human purpose, normative and ethical questions.

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*Herman Dooyeweerd's Theory of Modalities*

Herman Dooyeweerd's philosophical framework (1958, 1975) addresses the limitations of using a reductionist approach to understand human issues. To begin with, Dooyeweerd's epistemology unifies the various scientific disciplines together, and the different dimensions of life (or "modalities") the disciplines represent. In addition, he also addresses diversity. Although he was chiefly concerned about reductionism and the need for unity, he acknowledges the limitations of each discipline and their diversity. Furthermore, his modality theory is a normative understanding of the way social systems such as the family, church and state are connected to each other. Finally his theory is theistic and he addresses the place of religion and theology in his theory. Other systems scientists beside Churchman and Boulding, including Beer (1979), Ivanov (1993), Banathy (1988), and Lazlo<sup>7</sup> also agree a theist perspective is important, although none integrate it to the degree Dooyeweerd did.

To understand Dooyeweerd's philosophy, it is necessary to start with the religious roots behind his thought. He believed that the subject matter of epistemology was essentially religious. Henderson (1994) explains that, according to Dooyeweerd, every framework of thought is based on assumptions of a religious nature. "A basic religious orientation is the inside lining of every tradition of thought; this takes the form of a law idea and sets the course of one's thinking. Whereas such assumptions about the origin and relationship of laws are not usually made explicit by scholars, he [Dooyeweerd] is convinced that this needs to

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<sup>7</sup> Incoming President's Address, Annual Conference of the International Society for the Systems Sciences, Amsterdam, July, 1995.



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(and ought to) be done. It is a matter of self-knowledge, a better grasp of the direction, implications and operation of one's own thought (and position)" (Henderson, 199, p. 150).

Therefore, Dooyeweerd thought that a religious attitude sets the course of one's thinking, and that everyone's assumptions have essentially a religious origin and are organised accordingly, whether the person is religious or not. Hence, non-believers or secular thinkers operate with religious assumptions. In this way then, Dooyeweerd approaches other questions with the fundamental understanding that thought is religious and he deals with norms, ultimate human questions, and unity and diversity in science on the basis of this understanding.

His understanding of norms is very different from neo-Kantian philosophers. They thought values were dependent on ethics, a realm of life they considered essentially irrational, beyond reason and lacking objectivity. However, Dooyeweerd rejected ethics as the basis of norms, and the idea that humans lacked objectivity. Rather he thought there were no independent and self-sufficient functions of knowing (Kalsbeeck, 1975, p.169) as his epistemology encompasses the whole person. Therefore, Dooyeweerd believed thinking, understanding, and knowing was bound up with the complete and active person, which also means understanding in normative terms.

He believed norms were founded on basic religious convictions and that it was possible to establish a basis of norms if "one accepts...spiritual realities, out of which norms proceed to the human side" (1994, p.28). He did not believe that religion was a specious, implausible source of understanding. In this way, his philosophy enables us to approach normative questions without leaving the mind and reasoning out of the picture.

Religious understanding also provided Dooyeweerd with the means to respond to ultimate questions of humanity. He thought it was only through the knowledge of God that we could understand our own and the world's predicament. Therefore, he addresses Churchman's appeal to return God into the picture and reconsider how religious belief contributes to understanding. "Dooyeweerd's acceptance of the importance of divine sovereignty for understanding the structure of reality was also significant in so far as it was a reversal, at least in his own thought, of the historic decision to try to take God out of serious consideration in intellectual, political, economic and juridical life...He did not believe that humanity was able to care for itself, to control the world by its own reasoning and acting power" (Henderson, 1994, p.50). Therefore Dooyeweerd did not accept that science and man were autonomous from God by means of reason: the catchword of positivistic, rationalistic science that suggested reason alone was necessary for understanding.

He also believed that religious, not scholarly, reflection could unify the sciences. He thought because each discipline is limited to its own field of authority, it is beyond the competency of any one science to grasp all of them and unify the sciences. Therefore, he looked for a unifying source outside science to avoid the inevitability of explaining things through one science and falling back into the trap of reductionism. In this way, he protected the province and authority of each science. In his view, each discipline has laws on which it based its authority, and each was inviolable and cannot be explained in terms of any other discipline. Therefore, it was reasonable to accept the limitations of human thought and look for a source outside human reasoning.

In this way his religious understanding wrapped unity and diversity up in the same theoretical nutshell; religion (his

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"law idea") unified the sciences and at the same time, allowed for the separateness and inviolable nature of each field of knowledge. This was an important contribution of Dooyeweerd's. Henderson states,

"One of the strengths of Dooyeweerd's philosophy is the way in which it accounted for both unity and diversity. In spite of the great importance he places on coherence and unity....unity is never allowed to obscure the variety of kinds of creatures, structures or established laws. This tenacious philosophical acknowledgement of diversity of kinds...distinguishes this philosophy from most others" (p. 199).

Diversity and unity were also important for understanding the way social systems such as the family, church and state relate to each other. The contribution Dooyeweerd made to understanding the relationship between social systems lies in the political struggles that were going on in the Netherlands during the term of Prime Minister Abraham Kuyper, between 1901-1905. Kuyper was Prime Minister and also a Reformed theologian, preacher and journalist, and strongly influenced Dooyeweerd and other reformational philosophers' thinking. Kuyper and Dooyeweerd were concerned about the far-reaching role of the state, and were responsible in different ways for developing the idea of "sphere sovereignty." They believed that social systems such as the family, church, school and businesses should be free from state control and sovereign over areas of life in which they operate. The principle of "sphere sovereignty" opposed the tendency for one social system, whether the state, the church or business, to concentrate power and dominate other social systems.

Although Dooyeweerd made an important ethical contribution and a trans-disciplinary approach to science, he does not develop whole-of-life questions and humanity's struggle. This is surprising since he understood thought to be

an action that involved the whole of the human being. Instead, he addresses humanity in an abstract, impersonal and theoretical way. The impersonal nature of Dooyeweerd's philosophy was influenced by neo-Calvinist belief. In their scheme of things, the law relates man and God. Therefore, man does not relate to a personal God but is bound by an impersonal law, which stands apart from God. "While the law can be associated with the character of God, it is more properly thought of as the result of a divine 'plan', i.e.... something drawn-up and instituted by God....Law is construed by Dooyeweerd's as a boundary, partly because it is established heteronomously by God, i.e. from outside creation" (Henderson, 1994, p.197). The emphasis on impersonal law is a Greek-like understanding, strongly influenced by theoretical and philosophical thought, and it is at this point that Multi-Modal Systems Thinking deviates from Dooyeweerd. The understanding that man's relationship to God is a personal one is the foundation for its normative epistemology.

### *Multi-Modal Systems Thinking*

Multi-modal systems thinking examines questions of life and humanity, issues which Dooyeweerd left unexplained, but for which his philosophy laid the foundation. Dooyeweerd tackled questions of a normative nature which others do not deal with, such as the source of norms; the problem of reductionism, unity and diversity among the sciences; and finally belief and theology.

However, there are differences between multi-modal systems thinking and Dooyeweerd's theory. To begin with, this methodology builds its view of purpose and life on a personal, rather than impersonal God. Purpose originates in a personal God, and it is life, and not a theoretical system of thought, that is its ultimate concern. In addition, this

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methodology adds systems thinking to Dooyeweerd's theory of modalities. Multi-modal systems thinking develops the notion of viability, and integrates management ideas from Beer's viable system model.

Multi-modal systems thinking is a normative epistemology founded on the idea that "[e]pistemology, the science that studies understanding, is...concerned far more with how we ought to think than how we actually think" (de Raadt, 1997, p.64). Therefore, this methodology is concerned with purpose - how we ought to think and to live, and what we should or should not do with our lives - and responds to Churchman's appeal for science to return to questions of purpose (1987, p.224). Questions about how we should live are bound up in the theory's distinct conception of visionary life. Life is an active response to a personal God who, rather than being removed and law-giving, is dynamic, and has personality. Life is compelled by his direction. The relationship between God and life is likened to the relationship between a conductor and an orchestra, "Music needs not only to be composed...it requires a "live" performance. This is precisely the situation between God and his living world: God conducts and the world performs" (de Raadt, 1997, p.12). Therefore multi-modal system thinking is a visionary understanding of life in relationship to God; what it calls "logos".

Life, according to this methodology, unfolds in various ways and takes place in the personal, civic<sup>8</sup>, intellectual and natural domains. These are expressions of the logos and additions to Dooyeweerd's scheme of things. They are made

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<sup>8</sup> Other sources explaining multi-modal systems methodology refer to the "community" rather than the "civic" domain. This research substitutes "civic" for "community" to avoid confusion with using "community" as villages or places people live.

up of the modalities Dooyeweerd identified. However for multi-modal systems thinking, life is not only ideal and visionary; it is also broken and incomplete. Unlike science that counts on progress, this methodology is concerned for life and the human struggle, and goes to the heart of Churchman's appeal that science exists to serve humanity's plight.

Therefore multi-modal systems thinking recognises we are poor in spirit and concerns itself for those aspects of life that make us truly human. Both Boulding and Churchman also prize the things that make us human and rich in meaning- love, compassion, neighbourliness, community-mindedness, zeal and courage - and warn of the consequences for neglecting them. For Churchman these amount to human decency, which he believes have been traded in for wealth accumulation and economic maximisation. He states,

"There is such a thing as common human decency, and it is not based on wealth accumulation. It is not that I am against wealth accumulation, but I am against placing that goal ahead of human decency in the priorities.... The U.S.A. is not a very well-developed nation because it has a high GNP or per capita income. As a systems research I want my nation to be decent not wealthy, at the present time it is not a decent nation; it does hurt lots of people" (1984b, 155-56).

Multi-modal systems thinking's understanding of life opposes economic and other forms of reductionism that reduce humanity to existence. These have been responsible for myopic and unsystemic science that cannot incorporate human aspects. Instead this methodology sees life as something much more than existence; life is viability. Viability is "the assurance of ongoing life... an abundant life, a life that spans the whole gamut of our humanity. It should

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include artistic, intellectual, social, family and other expressions of human life. When we face a crisis and any of these spheres of life is threatened, our whole life is in question. To live, one must live life to the full. If any part is taken out of life, the whole of life is endangered (de Raadt, 2000, p.19)<sup>9</sup>.

Viability is founded on two different understandings. To begin with, it is prophetic and based on the Hebraic worldview. Unlike the Greeks, the Hebrews had a personal understanding of God. "...there is a vast difference between the impersonal understanding of the universe and its laws that we have derived from Greek philosophy and the personal understanding inherited from the Hebrew prophets..." (2000, p.27). The Hebrew meaning of life originates in a dynamic and personal God who directs the universe and is so involved in all affairs of life that we could say our humanity is only a reflection of his humanity (2000, p.28). Hence, the foremost concern of the prophet is for life, abundant, meaningful life, in a personal universe, rather than existence in an impersonal universe.

Besides the Hebraic view of life, multi-modal systems thinking has also built the notion of viability on the work of Beer (1979, 1981). Beer applied viability to social systems, especially business organisations, and his management science is essentially different from other management theorists. According to Beer, viability results from open systems operating within a recursive structure of metasystems. His viable system model substitutes the usual maximization goals of business - maximization of profits, shareholders' fund and market share - for a new criteria of organisational effectiveness: viability manifested in the

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<sup>9</sup> It is this meaning of viability that I ascribe to the term sustainability in this book, as I have already indicated in Chapter 1.

stability of essential variables within an acceptable, non-maximized domain (de Raadt, 1987, p. 25). Therefore, Beer's notion of viability allows for non-reductionism and viability is attained by interacting and interdependent systems. In the same way as the viable system model, viability for multi-modal systems thinking, also depends on balance and interdependence between systems. Any social system faced with a crisis threatens other social systems, and possibly the whole of life.

In addition to the need for balance, wholeness and non-reductionism, multi-modal systems thinking also suggests that viability depends on management and implementation. We have already said Churchman thinks science lacks implementation and effective action. He states that the vast majority of "... theoretical findings fail to produce actions because they do not tell users how to implement them, or they do not motivate or persuade users to apply such findings" (1993, p. vii). Multi-modal systems thinking addresses the need of management to achieve viability. It draws again from Beer who thought that "every living thing, whether plant, animal or man, needs a system to manage its interactions within and with its external environment to sustain its life, or make it viable (1979, p. 81). Based on four functions of management in the viable system model, multi-modal systems thinking has developed a method of management informatics and social systems design and applied these to community viability, balance and stability. Research applying multi-modal method and design (2000, 2001) has aimed to strengthen community systems, such as schools, businesses, families and management groups, and balance them in such a way that none dominates over the others but that all promote healthy community life.

Design, for multi-modal systems thinking, is a normative process. It is a way for people to think about purpose,



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vocation, meaning and their place in the world. Most methodologies and methods take a neutral position on these sorts of issues, which nonetheless affect social systems. They do not raise questions of values and morals but leave them to the members of the system to decide about them. However in secular societies, parents and teachers, (who, according to Churchman, are the most important systems designers), often do not know how to deal with them. Therefore, learning and teaching a visionary understanding on questions of purpose and meaning are integral to the multi-modal design process. Consequently, the normative method of teaching and learning differs radically from the mechanistic approach to design, which manipulates and moulds people into roles through government policy and social control.

Some may think that addressing morals, values and religious belief is inappropriate in science. However, many systems scientists believe that systems design should address the existence of God. They, like multi-modal systems thinking, suggest that man is an open system and does not behave strictly in accordance with deterministic laws. Churchman thinks although the question of God is almost entirely absent in today's science God, "the guarantor of design" (1988), is central in all long range planning. Likewise, Beer believes that the safe end of the recursive closure is only God himself (Beer, 1979, p. 261). He is the ultimate source of information and embraces all the information ever needed.

A final note about the methodology's understanding of social systems should be made. Multi-modal systems thinking connects systems to the modalities, and develops the way social systems contribute to viability. In this way the methodology not only rejects reductionism of the modalities, like Dooyeweerd, but takes this one step further and rejects reductionism in social systems. Therefore multi-modal

systems thinking is not only concerned that one social system should not dominate the others, but also, that each social system such as the family, school, church, business or club promotes viability and adds to life.

To this end, the methodology uses Dooyeweerd's concept of sphere of sovereignty of modalities to establish that each social system's vocation and its own peculiar features, are imputed to it by one particular modality. According to multi-modal systems thinking,

"Although every social system... is subject to the commandments of every modality, there is one modality that endows it with its ultimate mission. The essence of that particular modality becomes the essence of the system; it furnishes it with character and uniqueness and distinguishes it from other types of systems (de Raadt, 1997, p. 76).

Multi-modal systems thinking expanded Dooyeweerd's notion of the vocation of social systems. Social systems achieve their vocation through "work". Therefore, as the meaning of "life" for this methodology is not "existence", "work" is equally different to the everyday understanding of the term. Work is vocation with a sense of destiny, calling and fulfilment. It is essentially the worth of the service it provides for another person and the contribution it makes to sustaining others in the family, school, business and community and making them viable. Therefore, work is service in action, and far more than expertise in a job or making a living.

This notion of work and vocation of social systems is identical to the ancient and traditional meaning of "profession," and originates in the personal and purposeful direction of God. "...to understand these systems we must also understand the way Christ commands them. His command is dynamic, present at every moment in history and directing the path of such history to a planned climax. It is a

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command full of concern for humanity and the universe, a command utterly personal. It is this personal aspect with which we need to become reacquainted" (de Raadt, 1997, p.58).

It is the personal, vocational mission of each modality that injects purpose and authority into each social system, and on which viability depends. However, the viability of social systems, and the society at large, comes under threat when their authority is violated, and one social system dominates over the others whose vocational purpose remains unfulfilled. We have already referred to the way government interferes with the authority of the school, hospital, church or family. While this situation cannot be totally reversed, it can be eased at the community level, where these systems can be rebuilt, their purpose reinstated and each system, (and, consequentially, the community) made viable. Hopefully, returning a sense of personal, vocational mission is possible in modern social systems. Traditionally, the family, school and hospital, besides, of course, the church, were associated with a moral, and vocational, intent.

In this way then, multi-modal systems thinking challenges the maximizing norms of our present economic structures that dominate and threaten nearly every social system. It suggests we return to the vocational norms that existed before the industrial revolution, which stressed sacrifice and service to the community. In the same way, Churchman believes that the old, pre-industrialised system of economics, which was concerned for vocation and ethics, could have unified the disciplines. He says,

"I think that had the discipline of economics steered the right course in the last century, then 'economic view of a system' would have been the unifying view, because economics, the study of 'the management of the home', would, with its interest in ethics and aesthetics, have been the same as the study of the management of systems" (1985a, p.2).

Multi-modal systems thinking understands household in the same way as Churchman and develops it in the *bayit*, a Hebrew word meaning "household". This is the social system characterised by ethics and its purpose, which imputes love into the community<sup>10</sup>.

### **Summary and Conclusions**

We have shown how Dooyeweerd's theory of modalities has contributed to the advancement of an ethical systems science in the form of multi-modal systems thinking, and how multi-modal systems thinking responds to Churchman's perspective on the state of science. Multi-modal systems thinking argues for an ethical science, which is systemic and non-reductionist, and concerned for life and human questions.

We started by discussing Churchman's, including Boulding's, concerns over ethical issues. Churchman believes the immoral state of science necessitates a major rethinking about its purpose, whom it serves, and the source of its values. He insists science should respond ethically, rather than theoretically, to the human problem.

We then described von Bertalanffy's general systems theory and how it was limited to an organismic, biological

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<sup>10</sup> Paper and plenary address delivered by J.D.R. de Raadt at the Forty-Second Annual Conference of the International Society for the Systems Sciences, July, Atlanta, Georgia, 1998.

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model. Despite these limitations, general systems theory was pivotal and the starting point for a trans-disciplinary approach that branched out into the humanities, as well as organisation and management theory.

The final part then surveyed Dooyeweerd and multi-modal systems thinking and their response to Churchman's challenge. Using Dooyeweerd as a foundation, especially the religious and ethical questions he raised, the chapter discussed how multi-modal systems thinking integrates together science, the modalities and social systems. It unashamedly takes the values of the Hebrew worldview on which it builds its normative views and unique notion of life, suffering, viability, work and design. In this way, the methodology addresses some of Churchman's concerns especially purpose, normativity and belief. Also its language is normative and visionary. In addressing these, it has developed a methodology, a method of systems inquiry and finally of systems design, of which only the salient features are discussed here. In the next chapter, we go on to isolate and further discuss particular aspects of the theory that were applied to Rosvik.



## CHAPTER 4

# Multi-Modal Systems Method

### Introduction

This and the following chapters describe the empirical work in Rosvik. We begin this chapter with a brief description of multi-modal systems methodology. Multi-modal systems thinking is well documented, so to simplify matters I concentrate on aspects important to the present project. This is followed by more descriptive details about the case study, and Rosvik, the village under threat. Next we briefly outline the method and the steps executed in the research, besides giving a description of the data collection procedure, interviews and discussion panels. This leads to an account of how the data was organised in a database with the help of the *SmCube* software package and the selection of factors regarded as being vital to Rosvik's sustainability. The chapter concludes with a matrix listing all possible links between factors and the selection of links analysed in chapters 5 and 6.

## **Multi-Modal Systems Framework**

To assist our explanation, the framework is presented pictorially in Figure 4.1. The figure shows life unfolding along two axes. The vertical (modal) axis represents eighteen modalities (only ten are shown in the figure) ranging from the ethical to the logical aspects of life. The horizontal (systemic) axis comprises all kinds of systems, both human and natural.

### *Domains*

The eighteen modalities are grouped in four domains. The first domain addresses the character of man, and has three modalities: ethical, aesthetic and juridical. The second addresses man's civic life and also has three modalities: operational, economic and social. The third domain comprises man's intellectual pursuit and has four modalities: epistemic, inforamatory, historical and credal. Finally, the fourth domain pertains to nature and includes eight modalities. While the first three domains apply only to man, the fourth, the natural domain, "applies to the whole world, including man" (2000, p.29). However, because the concern of this project is for the social rather than the physical, and because in Rosvik, ecological issues are not as pressing as human and other social problems, we leave out the natural domain in our analysis. We will limit ourselves to addressing only the character, the civic and the intellect domains as shown at the left side of Figure 4.1.



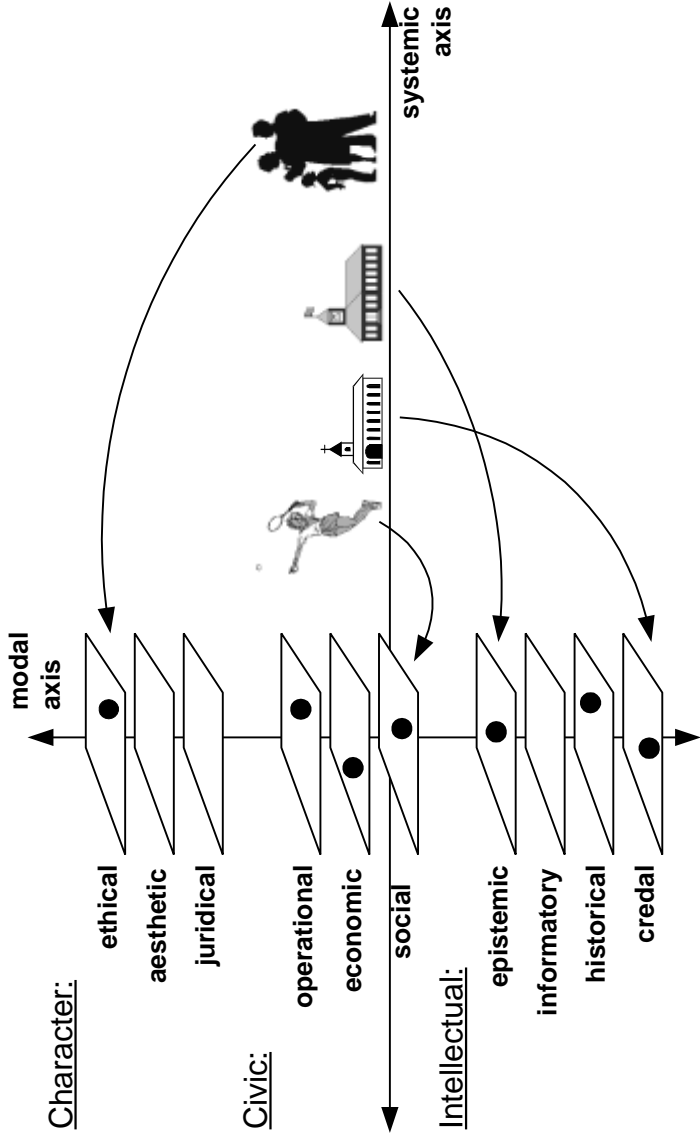


Figure 4.1 Multi-Modal Systems Framework

### *Modalities and Linkages*

The modalities are linked together, and these linkages are important to understand. They have the effect of making the modalities similar to each other but not identical,<sup>11</sup> and they display simultaneously both diversity and unity. To illustrate, let us assume we are trying to understand how the social and epistemic modalities are linked together. In a community, knowing in the social modality is similar with knowing in the epistemic modality. Knowledge is not only a matter of understanding and therefore, an intellectual exercise; it is also a matter of knowing each other in a social context. A further link between these modalities is suggested by the fact that people who wish to exercise a leadership role in their community may seek to acquire more epistemic knowledge.

These linkages are important to the research because, according to multi-modal systems thinking, the normative nature of things resides in the way things relate to each other. Thus a man's pursuit of knowledge to lead and improve his community is good, but his pursuit of knowledge to pamper his vanity and exploit others is bad.

### *Systems*

There are several systems along the horizontal axis in our figure. Since this research only deals with social systems, we have drawn our axis through the social modality. The small drawings along the axis represent various social groups in Rosvik including a sports club, church, school and family. (Other systems are not included in the figure because of the lack of space).

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<sup>11</sup> The technical terms for similarity and identity are respectively homomorphism and isomorphism. I have preferred using the less precise but more common terms to make my explanation clearer.

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All the modalities, from the ethical to the credal, are present in each social system. For example, the family functions in all the modalities. The epistemic gives to the family its important role of educating children. The economic modality gives to the family its role of providing food, shelter and clothing for its members. The social modality gives the family the role of socialising children, preparing them for life, and so forth. Although each social system functions in all modalities, there is one modality in which it particularly focuses its activities and which at the same time, gives it its own uniqueness and character, as represented by the curved arrow in the figure. We can see in Figure 4.1 that the family is focused (see curved arrow) in the ethical modality. It is the ethical modality that makes the family unique, as the family's principal vocational mission is to love and care. No other social system can replace the family and fulfil its vocation, (although there have been many attempts to replace it).

As social systems function in every modality, as well as focus in a particular one, a community becomes a set of interconnected systems that form a totality. Each social system is linked with each of the other systems through the modalities, and each system contributes to the totality of the community, because there is one modality through which they contribute to the whole. This means that each system can only experience a full, multi-modal cultural life in as much as it is integrated into such a community. When a threat appears in any of the modalities, not only does the system focused on this modality suffer, but also the whole community suffers. For example, when education is threatened, the school, along with the whole community, is threatened through the epistemic modality. This is a concept central to systems science and championed by Ashby (1976) and Beer (1979, 1981): a unit is viable only in as much as the

whole is viable; and the whole is viable only in as much as the parts are viable. Therefore if we are to understand the life of each system, we must understand the life of the totality.

### *Factors*

A final word of explanation should be made about the dark circles that appear in several modalities in the figure. When a threat to a community's sustainability takes place, there are certain vital factors - operating in various modalities - in a community that come to the forefront, just as a person experiences the signs of disease through certain symptoms. It is paramount that we understand these vital factors (dark circles). However, if they are normative factors, then based upon what we said earlier regarding the links between modalities and norms, it is even more important for us to understand the interlinkages between them and how they affect the sustainability of a system. It is these vital factors in Rosvik and their links to each other that will occupy the central stage of our research from now on. But first, we must turn to examine the unfolding of the situation that arose in Rosvik.

### **Rosvik: a Case Study**

Rosvik is a coastal village of just under 2,000 inhabitants near Luleå, the capital city of Sweden's northern-most county. Its problems began in the 1970's when the steel plant in Luleå, a large employer of people in the region, expanded and many people from other parts of the country moved north. From that time until the early part of the 1980's, Rosvik grew more rapidly than ever before. Young couples bought houses that were a great deal more affordable than in the larger towns nearby. However rather than signifying

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growth and expansion, this marked the beginning of a downward trend. The steel plant grew to a fraction of the size anticipated and some people who bought houses found themselves without a long-term working future. Consequently there was a high rate of marital breakdown and other social problems. Rosvik youth were considered troublemakers and there were fights between them and other groups at the central high school in Piteå, a larger town nearby.

From the early 1980's families began to move away from Rosvik and were not replaced. Houses were difficult to sell and sometimes remained on the market for years. Homeowners who managed to sell, got half of the value of their houses. Population loss culminated in a 20% loss from 1997-1999. Such problems make up a pattern of shrinkage and depopulation that has gone on in recent decades in many small villages and towns in northern Sweden. Unemployment in northern, inland communities has risen over the last decade to 25%.

It was not only because of expansion in industry and the steel plant that Rosvik's population grew in the 1970s. It also grew because of unemployment in inland communities. At that time there was a steady drift of population from remote areas towards the coast and cities, towns and villages grew. It is concerning that the same pattern is now being repeated on the coast and Rosvik and other small communities along with it, are also losing population and unemployment increasing.

In 1996 the declining number of families in Rosvik brought the village school, the only school option available, under threat. The municipality decided to close grade 6 and bus the children to a nearby village where Rosvik children already attend grades 7-9. Other government funded services, besides the school, were also threatened, including Rosvik's

postal, banking, library, youth leisure centre and health services.

Concerned parents who felt their children too young to be bussed away from the village, formed a group and exerted enough pressure on school officials to shelve their plans for the time being. Villagers felt politicians were making decisions defined principally by economic pragmatism without concern for the children or the village. This was a negation of what people believed their village ought to be. The parents were well organised, and not only asked for a reversal in the municipality's decision, they got an architect to draw up plans to extend the school to grade 9.<sup>12</sup>

It was at this point that I became aware of Rosvik's predicament and was invited by the parent's group in the school to assist. They represented an educated group of people in the village who thought that the problems in Rosvik were profound and would not be fixed up with short-term solutions or more government spending. They talked about social misconduct among Rosvik's youth, losing youngsters to larger communities, government ineptitude and the need for new initiatives. They saw these problems together threatening the long-term survival of Rosvik.

It appeared to me that applying multi-modal systems theory, method and design could significantly contribute to understanding Rosvik's situation for various reasons. Firstly, the threats to the village's survival indicated the need to understand normative aspects and what villagers themselves could do about their problems. Secondly, these problems were connected to each other. The educational inadequacies

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<sup>12</sup> By 2,000 the municipality decided to reject these plans. Furthermore, there have been other attempts to contract the school and decrease educational costs.

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not only affected the school, but other groups and the whole village as well. Thirdly, these problems were connected with clearly defined interacting systems in Rosvik such as families, the school, churches, sports clubs, a branch of a political party, businesses and the municipality. Fourthly, and most importantly, there was a human need in Rosvik and I hoped that a normative and practical method might lead to some operative help, even if it took effect after the research finished.

Reference has already been made to families and the school in Rosvik, and it is helpful now to briefly describe the other systems or groups in the village. There are two churches in Rosvik. One is a small, combined congregation of the Swedish state church/EFS (Evangeliska Fosterlands Stiftelsen), the latter being a missionary branch of the state church. The other is Betel church, a free church, which means that it is free from state control. Betel belongs to Interact, an amalgamation of free churches in which every church is independent but has a relation with the parent group. Betel has a growing congregation and several families have moved to Rosvik because of the church.

There are two sports clubs; a small one with mostly Finnish members and the other, the Rosvik sports club to which about a third of the village belongs, including nearly every child. It is not only strong in numbers and a social meeting point but, for some villagers, as influential in village decisions as the local branch of the social democratic party.

Politically, Rosvik typifies many communities in the north of Sweden, also known as the red north. The branch of the social democratic party in Rosvik has been strong in the past, although the mood has changed and people are discontent with the party. Despite this however, votes in Rosvik for the social democrats reached 84% during the 1990's. The high vote indicates the tendency for people to vote out of habit.

Many say they would like change but there is a lack of new ideas and little real debate over the issues at hand.

Politically speaking, municipalities are powerful. In Sweden municipalities are the smallest unit of government and usually include a combination of cities, towns or villages, like Rosvik. They control the economic purse strings and manage most of village life in Sweden including education, health and social services, roads, transport, sanitation and business support. Concerning the latter however, small business growth is not well established because large industries predominate in the north. Belief in small business and private entrepreneurship is modest and up until now, discouraged. As a result, although there are about 60 businesses in Rosvik, only one-third provide people with their livelihood. Of the other two-thirds, the owners work in other jobs, mostly in either of the two larger towns nearby.

### **Introducing the Method**

The method has been developed especially to address multi-modal systems methodology and aspects specific to the theory (de Raadt, 1989, 1995, 2000 and 2001). Therefore it is a way of modelling to analyse the normative factors, modalities, their links and to build a design for the future. The model is built in various steps and begins with:

#### *Collecting the data*

The data collected is of a qualitative nature and has been gathered in interviews and panels of villagers, and taken from the sustainability literature and other theory sources.

#### *Data organisation and itemisation*

Given the large amount of qualitative data collected and processing demanded by the multi-modal systems method,



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*SmCube* a software package, is used to process this.<sup>13</sup> The data and literature, such as articles and books and other documents used in the analysis, are segmented into items. These are cohesive pieces of text relevant to the research and form the building blocks of the database.

### *Selection of factors*

Next a set of normative factors is selected. These represent the most vital issues that come to the forefront in a community's sustainability. Seven were finally selected. Then the multi-modal framework is superimposed on the factors and out of this, a model of Rosvik starts to appear.

### *Matrix and Selection of Links (Arrows)*

This step in the method further defines the model. The matrix summarises the numbers of items for each factor, and the links between factors. From now on, we shall refer to these links as *arrows*. The researcher uses the matrix to consider all possible arrows and, guided by items that connect at least two factors, selects arrows important for understanding Rosvik's sustainability.

### *Analysis*

The arrows selected form the basis for the analysis. They represent links between factors that either sustain or threaten sustainability. We start by analysing factors and arrows

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<sup>13</sup> In my early applications of multi modal systems method, I first tried *QSR Nud\*ist* as a possible choice in software. However, given the peculiarities of the methodology, this software proved inadequate. Therefore, a project was initiated in my department to develop a new software package on a prototype basis. The result is *SmCube*, and the Rosvik project is one of the test bases for this prototype. This software was published just as the Rosvik research drew to a close (de Raadt, 2001, [www.mssinstitute.com](http://www.mssinstitute.com)).

within the character and intellect domains (Chapter 5), and follow with those in the civic domain (Chapter 6).

### *Design*

The design of the community is built on the basis of the analysis of factors and arrows, and involves designing practical activities that could be instituted in Rosvik to make it more viable. The steps involved are the subject matter of Chapter 7.

Each of these steps will be explained in more detail in the sections to follow.

## **Collecting the Data**

Information was collected in a diversity of ways so that different sets of data from various sources would compliment each other. The first data was collected in 1997 using semi-structured questionnaires<sup>14</sup>; the second data was collected at presentations made by panels of villagers in 1998; and the third set was collected through non-standardised interviews with individuals. These took place between 1997 to 1999. I also continued informal contact with individuals from Rosvik and attended various meetings organised by the village.

### *Preliminary Interviews*

In the preliminary stage, semi-structured questionnaires were developed and 51 interviews with representatives from village groups and households took place. These groups represented the most significant groups recognised in Rosvik. Interview questions were asked in an open-ended

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<sup>14</sup> Copies of each of the questionnaire forms can be found in Appendices B to H.

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way to make people feel comfortable and encourage them to talk freely. This was even more important than usual, as northern people are known for being uncommunicative and shy. It was also felt that a semi-structured way of interviewing was suited to the type of information we wanted to find out. We wanted people to remark, describe and discuss - their opinions about Rosvik, retell why they lived there, describe their business operations etc.

The interview team<sup>15</sup> stayed in the village for 3 days and the people interviewed were from households, churches, sports clubs, businesses, the branch of the social democratic party, the school and the municipality. A breakdown of the number of interviews is presented in Table 4.1 below. A different questionnaire was developed for each village group although some questions were repeated amongst some groups. Similar questions were used for households, churches, political party branch and sports clubs but different questions were developed for the municipality, school and businesses.

Because the preliminary stage was explorative, the questions asked were comprehensive and incorporated two specific lines of questioning; some questions asked about management activities and others, village issues with respect to different modalities, or dimensions of community life. To cover the first, representatives from the municipality and village groups were asked how the village was managed and how they looked at the present state of affairs and the future. For example, questions were asked about how municipal decisions were made, scope of activities offered by the

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<sup>15</sup> The interview team consisted of members of staff and students from Luleå University of Technology. Prior to the data collection all interviewers spent time preparing for the interviews and discussing the objectives of the study.

village, what people thought about village services, how good transportation facilities were and sources of information dissemination. They were also asked how the future looked for theirs and Rosvik's other groups.

**Table 4.1 Interviews of Village Groups**

Social systems	No.	Interviewee	Quest. in Appendix
Municipal education department	3	members of the board	B
households	22	parents	C
churches	2	pastors & assistants	D
sports clubs	2	club managers	E
businesses	18	small business owners	F
party branch	2	party representatives	G
school	2	principals*	H
<b>Total</b>	<b>51</b>		

\*One was an in-coming principal and beginning her job in Rosvik.

Questions concerning village issues with respect to the modalities were also asked. The ethical modality included questions about people's level of activity in village groups and how much adults were concerned about teens and their children's future. The operational included questions about how well the businesses, school, and municipality were run and the contribution of groups to the life of the village. The economic included questions about decision-making

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procedures in the municipality, allocation of resources and business development in Rosvik. The social included questions about the community, how individuals and groups liked the village and if they could see themselves staying there. The epistemic included questions about the school, its recent reverses, and educational standards; the historical included questions about householders' roots and why they lived in Rosvik; the credal included questions about adult and children's religious activities and how important the church is to Rosvik.

### *Panels*

In the second stage, data was collected from two panels of village leaders who spoke to an audience of villagers, and students and staff from the university. One panel spoke at Rosvik school and consisted of the principal, a representative from the teaching staff and a representative from the parent's group of the school. A member of the municipal school department was invited but was not able to attend. The second panel consisted of leaders from various village groups including the business development group, social democratic branch, sports club, Swedish church, Betel church and a group developing a folk museum for Rosvik.

The discussions were focused on sustainability and the panellists were asked to present what their village groups contributed to Rosvik's sustainability now, and how they saw their contribution in the future. To this end they were asked to present why their group was important to Rosvik, what they did, how they did it and what they saw as their role in Rosvik's future. I tape recorded panel members' presentations and their responses to questions from the audience.

### *Individual Interviews*

In the third stage, data was collected from five in-depth interviews with a selection of the key leaders in Rosvik. These interviews were organised to fill in for the information I did not already have. The information collected in the preliminary interviews was diverse and extensive, and I felt it necessary to interview people on a deeper level and spend more time exploring their perceptions of Rosvik and their role there. Those interviewed included the leader of the municipal school department, a member of the village development group, a member of the parent's group, a business owner and pastor of the Free Church. He is the only clergy living full time in Rosvik. During these interviews I asked non-standardised questions in an open-ended, conversational way and tape-recorded them.

### **Data organisation and itemisation**

The material collected from the interviews, panels, literature and theory was organised and processed with *SmCube*. The data was organised into two types of sources differentiating survey from literature data. Examples of survey sources include interviews, panels and annual reports, and examples of literature sources include books, journal articles and conference papers. The literature sources cover not only the theory pertinent to the immediate problem, such as the sustainability and systems literature, but also literary and classical sources, such as Aldous Huxley's *Brave New World*.

Each source was then organised into items. Items form the building blocks of the database and are excerpts of a document. They are a way for the researcher to break sources such as books or transcripts of recorded interviews into

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smaller, manageable pieces, usually about a paragraph long. Each item represents an idea and any other ideas connected with it, and in the process of selecting items, it is important for the researcher to maintain the integrity of the item. In the following item, for example, the main idea is that people are making decisions they have little or no competence to make.

Question: "Are decisions regarding the school made by professional educators or by administrators?"

Answer: "I doubt very much that educators are making educational decisions. For example, the person who has the most influence in the school department is not an educator but an administrator. She knows the municipality well and has worked in other areas of the municipality besides education".

This is a fragment of an interview with a village leader discussing how the decision to take grade 6 away from the Rosvik school was made, and by whom. His reply indicates that people who are not qualified in education make pedagogical decisions affecting educational matters in Rosvik. Rather, they know how the municipality works.

All the material from the survey data and from the literature, were treated in the same way and broken down into items. This meant using only those excerpts from the documents that were salient to the research and disregarding those that were not.

### **Selection of factors**

After the material from the interviews, panels, sustainability literature and theory was itemised, initial factors important to sustainability were selected. The selection of factors changed several times as the research progressed, as it was necessary to carefully consider many

different options. However the consensus of findings in the literature and concerns of the people from Rosvik, pointed to seven that were finally selected. These include *ethics*, which addresses the need for ethical concern; *competence*, or the ability to get involved in the issues facing individuals and communities; *statism*, and especially the effects of a controlling state management; *community sense*, and the need for healthy community structures to which people belong; *education*, and the crisis in the school and education in general; *heritage*, and the role that heritage has in strengthening community identity; and finally *religion*, and the need for a source such as religion, to inspire and give vision.

After the factors were selected, the multi-modal theoretical framework was superimposed upon the factors and each factor was associated to a modality. For example, since statism is the attempt by governments to manipulate peoples' lives by distributing wealth and resources I regarded it as belonging to the economic modality. Likewise, I defined community sense as the degree of belonging felt by people to a group of social systems, therefore I ascribed it to the social modality. In this way, the factors were placed as follows:

<u>factor</u>	<u>modality</u>
ethics	ethical
competence	operational
statism	economic
community sense	social
education	epistemic
heritage	historical
religion	credal



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Each of the items in my database was then attached to any of the seven factors to which it referred. Therefore, each item was associated with at least one factor or more. For example, the item quoted from the interview referred to above was associated with the factors “competence” and “education”, because the item refers to the lack of competence of people making pedagogical decisions.

### **Matrix and Selection of Arrows**

After attaching all the items to factors, I built a matrix with *SmCube* to examine relationships between factors. We said before that each factor can be considered to belong to a particular modality, and that the modalities are linked to each other. This suggests that factors also relate to each other and the matrix is a way of summarising these relationships. The matrix in Table 4.2 displays all possible pairs of factors and numbers of items that link the factors together.

The two left hand columns in the matrix list all possible pairs of factors beginning with “ethics” and “competence” and continuing in the same manner for the rest. The next two columns “literature” and “survey” differentiate the number of items from literature sources as opposed to survey sources that link each pair of factors. The last column tallies up the total number of items, irrespective of their type of source. Therefore the first row of the matrix shows that 1 item from literature sources and 0 items from survey sources link “ethics” and “competence” together. These numbers do not indicate strength of relationship but the need to find more data support if the linkage is important to our understanding. Therefore if the linkage between “ethics” and “competence” were important, the low figures show it is necessary to increase the numbers of both literature and empirical

supports. In addition, sometimes the same items can support more than one relationship. The high numbers in ethics and education, and ethics and religion result from this.






















After considering and weighing up all possible arrows, I selected some of them for analysis. All twenty-one arrows could be selected but I gave priority to those that can help to understand what is contributing to, or taking away, from sustainability in Rosvik. Here the researcher must make a judgement and decide if the arrow is important and should be chosen. One is guided by the items that the factors are made up of and that support a link between factors. I selected seven arrows on the basis of what people in Rosvik said and what the literature identified as key to understanding sustainability. All arrows are shown in the matrix with the appropriate  symbol linking two factors together.

The arrows selected are:

- ethics - education
- ethics - religion
- competence - education
- statism - community sense
- statism - education
- community sense - education
- education - heritage

The arrows in the matrix are visually represented in Figure 4.2 within the modalities framework. They form the basis on which we now proceed, in the next chapter, to analyse the effect that each arrow has on Rosvik's sustainability.

**Table 4.2 Number of Items Linking Two Factors**

			<u>Literature</u>	<u>Survey</u>	<u>Total</u>
ethics		competence	1	0	1
*		statism	11	1	12
*		community sense	6	3	9
*		education	27	13	40
*		heritage	1	0	1
*		religion	20	22	42
competence		statism	5	5	10
*		community sense	0	2	2
*		education	8	12	20
*		heritage	1	0	1
*		religion	1	0	1
statism		community sense	15	18	33
*		education	58	37	95
*		heritage	1	0	1
*		religion	20	8	28
community sense		education	17	13	30
*		heritage	1	0	1
*		religion	8	6	14
education		heritage	4	5	9
*		religion	50	12	62
heritage		religion	1	0	1

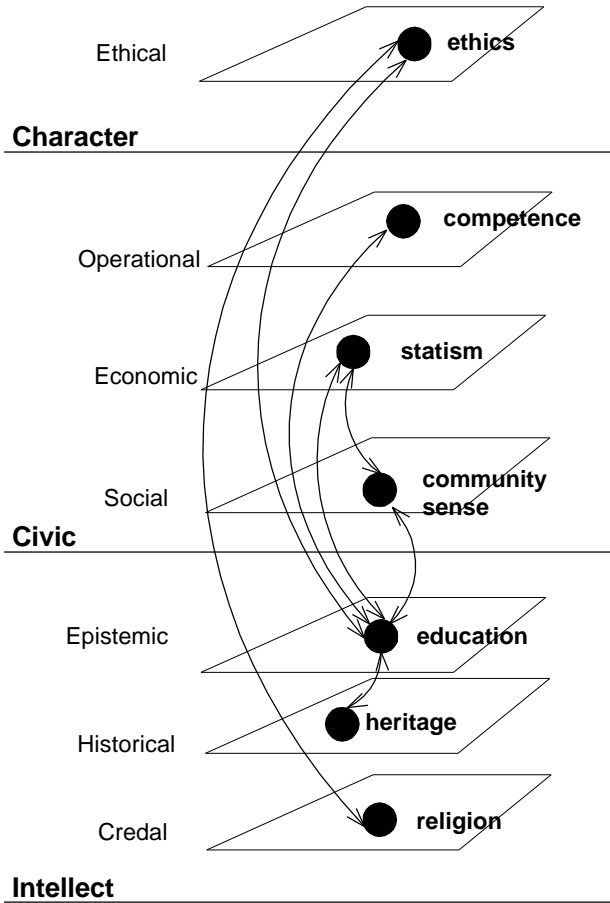


Figure 4.2 Selected Arrows

## **CHAPTER 5**

# **Sustainability, Character and Intellect**

### **Introduction**

In the previous chapter we selected seven arrows linking the seven factors regarded as being vital to Rosvik. These factors have proven to be rather universal, as similar factors emerge from the literature covering sustainable communities in countries around the world, including community research in Sweden and Norbotten. In this and the next chapter, we analyse how these arrows sustain or threaten Rosvik's sustainability. Chapter 5 focuses on the factors and arrows, shown in Figure 5.1, that fall within the character and intellect domains. Chapter 6 discusses the factors that fall within the civic domain. Each starts by describing the factors selected and explaining why they are regarded as being important to Rosvik's sustainability. They then examine the effect of the arrows linking these factors in the light of the literature reviewed and the data collected.

## Factors

### *Education*

The crisis in Rosvik was triggered by the removal of a grade from the school, but after interviews with families, the principal and teachers, other educational issues were also on people's minds. These included poor student performance, shortage of resources, low teacher competence and a lack of parental input into the curriculum. Concern went beyond classroom issues, acquiring knowledge and reading, writing and arithmetic. Parents and teachers thought the connection between community and school was important and that education should include cultural, social and ethical aspects.

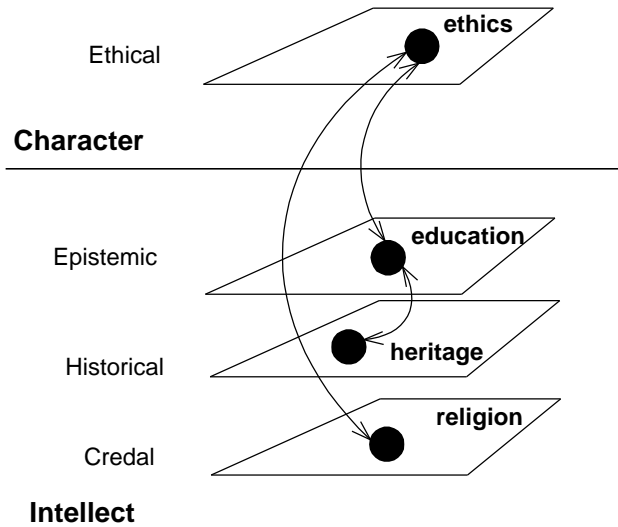


Figure 5.1 Factors and Arrows in the Character and Intellect Domains

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### *Heritage*

During the interviews parents said that Rosvik's history was important in the children's education. They said they want the children to know about the history of the village, and to be taught the old occupations that once took place there. In addition, there are plans to set up a folk museum to attract tourists to Rosvik. The parents also want to interest the young people, besides tourists, in the community's heritage, and they plan for the folk museum to employ youngsters in summer.

These developments illustrate an appreciation for Rosvik's heritage. There is information about Rosvik's history since the Bronze Age documented in a book by one of Rosvik's villagers (Sandkvist, 1984). The first written mention of Rosvik comes from medieval times in 1465; Rosvik is where the father of Rosenius, the religious revivalist and founder of EFS, was born in 1780; and where villagers emigrated from last century, to Australia and the USA.

### *Ethics*

Some parents said the best thing about living in Rosvik was that it provided a good environment for children to grow up in and because, in a village, they can care and look out for each other's children. There is an ethic of concern that motivates people to sacrifice and go the extra mile for actions for which they may receive no repayment.

Ethics are crucial for healthy community life and people who are willing to contribute sacrificially and help each other, are vital, especially as the political landscape changes and government assistance shrinks in Sweden. In the same way as ethics are necessary for communities, communities are just as necessary for ethics. Healthy community life develops ethical attitudes in people, especially the young. It

may be that the desire of Rosvik parents to raise children in a small community reflects an awareness of this, and that parents see that stable community life prepares children for life, work and the mutual concern of each other.

### *Religion*

Most Swedes in general, including church leaders in Rosvik, think that the modern church lacks vision, and is in danger of becoming an irrelevant institution in ordinary community life and disappearing altogether. Today Sweden has a low rate of religious involvement. In the past, Swedish people were more religiously active, although the church did not inspire and give direction. Historically, the state church has been considered elitist, and priests seen more as civil servants than religious leaders. However, the free churches have been seen somewhat differently, and held with a degree of respect (Scott, Franklin D. 1988).

Despite these perceptions, however, and low church attendance in other parts of Sweden, religion is important to Rosvik. Christian belief and practice have an unusual presence and some members of the community have moved to the village because of the church. Betel church has grown over the last few years and the church buildings are currently being extended to twice their former size. Some parents would like the family and Christian beliefs to play a stronger role in the education of children as they feel that a state education is not adequate to teach values.

While an understanding of the factors is important, we are particularly interested in understanding the arrows that link them to each other. With this in mind, we will examine three arrows in this chapter: *ethics - education*, *ethics - religion* and *education - heritage* (see Figure 5.1).



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## **Education and Ethics**

Writing about school education, Tritter (1992) believes that values are even more essential for success in life than actual knowledge, and that parents are probably the most powerful means for transmitting normative values to the young. In Rosvik there is a strong connection between education and ethics. Especially since the crisis in the school, there is a high level of care and involvement by Rosvik parents. The principal says his school has the best parent advisory committee in the municipality, and there is a high level of co-operation by the parents in the village. Parents are actively involved in planning for a 1-9 grade school and say their motives for extending the years of education include a better pedagogical environment, smoother transition to the upper school, a safer environment for their children, besides being good for Rosvik's future in general.

Rosvik exemplifies how important the roles of family, school and municipality are for teaching and educating for an ethical life. Ethics in multi-modal systems thinking is understood as an act due to love, and not only due to justice or duty to fulfil a law or a standard. This distinction is important because many times the modern understanding of ethics is a list of codes like those found in organisational charters of universities, companies or other organisations. While coded ethics are helpful and indeed found in most of the world religions, the understanding of ethics in this research goes beyond meeting stated obligations or laws. Rather it is based on *agape*<sup>16</sup> or self-sacrificial love where others' interests are put before your own, and you "go the extra mile" for the other.

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<sup>16</sup> According to William (1981) this Greek word denotes the highest, most perfect kind of love manifest in acts of loving care and self-sacrifice on behalf of others.

In the past, ethics, or the good, was grounded in absolutes, for the Hebrew, in God, and for the philosopher, in God and absolute laws. The prophet sought understanding through faith in God, and the philosopher, through reason and divinity. However, after Nietzsche scientific understanding was neither informed by faith nor reason, but by an act of the will of the individual. Thus “truth, meaning, or value are not intrinsic to reality, there to be discerned by reason or faith, but are imposed upon reality by an act of the will.” (Cere, 1994). Ethics, or the good, became grounded in the individual’s comprehension, or what the individual understood as being good.

Understanding Rosvik's problems is bound up with understanding how knowledge and modern science has moved away from ethics. In the university, there has been a shift away from finding the good through reasoning and the pursuit of absolutes, towards studies in gender, ethnicity and non-Western culture. Because of this shift, new dogmas, considered as good in themselves, arose out of studies in cultural identity and diversity. Such dogmas, described as hollow pretences by Bromwich (1996) are acceptable because they are persuasive and universal in their appeal. They appeal to everyone and offend no one. However these pursuits have resulted in “a strange silence about ultimate questions of good and evil, life and death, in the academy” (Cere, 1994). They also result in a science that ignores the affliction of the poor and “the fate we share with other people by virtue of a common humanity” (Bromwich, 1996), and echo Churchman's concern over the state of science.

According to Pan (1998) politically correct dogmas are not universal. Instead, they are just as particularistic as the old beliefs and restrain intellectuals from thinking for themselves. Therefore, there is criticism from different quarters both within the academy and from the community

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outside, that science serves only particular narrow notions of culture, (Pan, 1998) and is rapidly losing its authenticity in the service of humanity.

Despite its pretences, the fact is that modern science has left us with a vacuum about ethics that has particular implications for small rural communities. Rebuilding the community requires people to have a sense of direction and mission, and to care. One way to fill the vacuum is to teach a sacrificial ethic, advocated above, to the young, one that will show them how to live in community for the benefit, not only of themselves, but also for others. A moral education study comparing public schools in Moscow and New York (Higgins, 1995), suggests that education focused on service to others is necessary for the complete moral development of children. The study proposes teaching children to be of service to others, encouraging individual responsibility within the community, and love for family and country. This suggestion is similar to the approach of other educational programmes begun by universities and schools to educate and prepare students for community service. These were described in the literature in Chapter 2.

The study by Higgins also suggests the involvement of the total community in the education of youth. It suggests the family, other community groups and the wider cultural and societal context, supplement the school in promoting a sacrificial ethic that upholds service, responsibility, obligation and duty. Of all the groups in the community, the family, by its very nature, should be the nursery of sacrificial love. Fundamental to the family are loyalty and sacrifice - between husband and wife, parents and children - developed to a degree that does not exist in other social groups. Therefore the family especially, can complement and reinforce the school in developing moral attitudes in children. The study by Tritter (Chapter 2) comparing state and

religious schools in England, found that students had stronger attitudes towards morality when the family and school were linked together in the educational process, and where homes and schools were religious.

This kind of mutual overlap is more likely to exist in the small community where family, school, church and other small groups are intrinsically more cohesive than in the large city. This overlap exists to some extent in Rosvik. The school opens its doors to parents, church, sports and other groups, and co-operates on a regular basis with the church in musical education, and with the sports club, in physical education. However there is no moral education curriculum taught at school and parents say they would like to see more co-operation between the school and the family in teaching values. Therefore, Rosvik should continue to reintegrate ethics into education and use creative ways to teach values and use community groups.

Ethics should be re-integrated not only in the school but throughout the whole educational system, including the university in Norbotten (where future schoolteachers are trained). The university should be given the freedom to address ethical issues as it chooses, develop the necessary research skills to deal with ethics, and educate students for ethical service in the community. According to Pan, ethics make up a major part of a student's education in the university. "...colleges [should] focus on what they do best...provide a general education which teaches not only the critical thinking, quantitative analysis, and communications skills necessary for entrance into a more vocational training environment, but also the necessarily particularistic ethical perspectives needed for making decisions in any field" (Pan, 1998). Only then will the local university be able to fill the need for moral leadership in Norrbotten's communities.

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## **Ethics and Religion**

In the past ethical perspectives were rooted in the religious beliefs of people around the world. For example, “.. in the traditions of the various Asian peoples, religions have been inseparable from the respective ways of life and belief. The habit these days [in Asia] of speaking of values away from their religious roots is due to the influence of western secularism, a relatively recent movement on the Western intellectual scene” (Tan Tai Wei, 1994). It has only been since the enlightenment that western science attempted to become objective, value-free and secular, and fragmented thought into various disciplines. Before the enlightenment, science integrated understanding into a metaphysical framework, and embraced absolutes, founded on laws and divinity. We have already explained the effects of Enlightenment thinking according to Churchman in Chapter 3.

This shift in thought has led to a break down of belief systems in the community. Under the old ways, ethics and beliefs were inherent in everyday life and conveyed through social traditions, living practices and customs. As secularism spread, ethics, no longer rooted in tradition, became formalised and were recreated in the public, rather than private sphere of life. The state has played a major role in this process. By creating laws, institutions and social structures, the state has taken on a transcendental quality of its own. According to (Pan, 1998) the state has become “a metaphysical foundation for values” replacing religious metaphysical frameworks.

The transcendental quality attached to the state can be seen in the former USSR where the state became as sacred as religion. Taylor (1997) quotes a party member describing his feelings towards the Soviet state with almost religious

overtones: “Stalin, Molotov, Voroshilov.... We sang songs for them. We believed in them more than ourselves. And we taught others to believe.” According to Taylor, belief in the Soviet state was so strong that its demise has left a “belief-emptiness” in ordinary citizens, a moral vacuum, and also a church without hope.

In the formation of the USA, capitalist, as well as state interests, were important. Nationalist and capitalist interests replaced religious roots with a neutral, humanist ethos. Pan (1998) describes how a neutral, value-free ethos was instrumental in creating proper American, rather than God-fearing, citizens necessary for nation building. It is significant that Asian countries, like Singapore, are shedding religious traditions for a secular ethic as they industrialise and expand economically.

Today Sweden has a mixture of beliefs. Secularism has developed alongside Swedish socialism, and co-exists in a unique way with the country’s long Christian heritage. Tage Lindbom’s (1996) critique of secularism links Swedish socialism with myth, which he believes has the essential, transcendent power to validate the socialist constitution in all spheres of life. Counterpart to Pan’s reference to the metaphysical, the myth-like quality of the Swedish state has assumed an almost god-like benevolence, and people believe in the state in a way others believe in religion. The state regulates and penetrates just about every area of life as well as religious life. In response, modern Sweden has seen a demise in religious influence and practice, despite generous economic support of the state to the church.

Consequently, the church’s role in Swedish communities has weakened. State priests no longer chair local boards of education; church attendance averages twice a year and there are fewer numbers of confirmees every year, although confirmation has been a strongly kept tradition in the past.

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Corresponding to the weakened role of the church in the community, there are weaknesses within the church, and leaders of both state and independent churches are concerned that the future of the church is at risk. Church leaders in Rosvik say the church plausibly may not exist in fifty years time if church attendance continues to decrease at its present rate. Some of the leaders said that the problems of the church stemmed from within because Christians (including the leadership) had not taken their contribution to society seriously. They felt frustrated at the general unwillingness to act. One leader said: "We like to work together, but in Sweden when we say 'work together' it's more like people are afraid to do anything and nothing gets done".<sup>17</sup>

However, recently there have been changes in religious attitudes as socialism confronts new economic and social pressures. Social democratic supporters are disillusioned with the adoption of capitalist strategies by their party; people are concerned about changing social trends and the increase in crime and social instability; and there is awareness of an ethical crisis and a lack of leadership. As these changes occur, there is renewed interest in Sweden's Christian heritage. A recent translation of the Bible has had wide national appeal. In Rosvik a pastor reported that in the last 2 years, the community was responding to his church in a way it had not done for the 18 years he had been there. People who had never approached the church before were asking for help, and his church is being enlarged because numbers are growing. (It is significant that churches in the centre of Stockholm report the same increase of interest in the last two years).<sup>18</sup>

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<sup>17</sup> Village Pastor

<sup>18</sup> Discussion with church assistant from St. Clara's State church, Stockholm

Besides, communities are endorsing the contribution of the church in a way they did not do before. In Rosvik church members have been approached to lead the youth leisure centre and to sit on community boards such as the business club and village development group. The village school liaises with the independent church in music education, and the Rosvik community supports the work of this church in other countries, by contributing food and clothing to congregations in Russia. The positive community response has replaced a degree of suspicion that existed before.

Perhaps the openness towards religion reflects the insufficiency of a secular moral ethic. Mutual love and justice, ethical principles on which socialism is founded, may not prove themselves viable in the face of the economic and social instabilities confronting Swedish people. "... if history has a meaning there must be a transcendent ethical principle which stands above the relativities and wreckage of history. Such an adequate answer to the ethical quest would be known by faith" (International Standard Bible Encyclopaedia, 1996).

### **Education and Heritage**

In the last decade in Sweden, there has been a modest growth in appreciation of the nation's past. In addition to the renewed interest in religion, there is a revival of old customs and traditions, and people are interested in their roots. In Rosvik the past is also important, especially in education. Parents expressed a desire for the children to know about the history of the village and they felt that this should be conveyed in the classroom. They discussed the old occupations and the plans to establish the folk museum where they hope the children will work during summer.



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Some parents also talked about returning to Sweden's Christian heritage.

This marks a shift in Sweden. During Sweden's modernisation this century, some sectors wished to shed their nation's heritage altogether, such as the move to tear down the old city of Stockholm and rebuild it in modern city blocks. However these changes were not unique to Sweden. Other western countries also underwent a combination of post-war industrialisation and technicism that changed much of social life.

The combined effects of modernism not only undermined old city centres, however, but the love for thought itself and regard for accumulated wisdom. The effects of this attitude can be seen in the university in general, as well as the local university. The pre-modern university was committed to excellence, scholarly authority, the examination of evidence, argument and debate. "Competition among its participants [was] organised in such a manner that no one [could] succeed over anyone else, except by means of better arguments, reasonings and demonstrations, thereby advancing reason and truth" (Adler, 1990-91). The contemporary university is directly opposed to excellence and authority. Democratic and egalitarian ideals committed to equality, not excellence, have politicised the modern university, and undermined intellectual life. In Sweden, power has shifted from scholastic to administrative structures, and as a result, the authority of professors within their disciplines has weakened, and the quality of programs declined (Scott, 1988, p. 612).

Intellectuals from various positions agree about the decline in cultural and intellectual heritage. Bloom (1987), an American conservative, has had wide popular appeal, both within and outside the university. According to Bloom, the American university has failed young people by not

providing them with an understanding of the grand literature and philosophy that stimulates learning and self-knowledge. Likewise, Adorno and Horkheimer (Held, 1980) who wrote from a Marxist perspective, foresaw the impact of modernism, especially capitalism, on social and intellectual life. They described modern society as “barbaric” and framed their discussion of modern culture as amusement, distraction and entertainment that left the mind and soul unchallenged.

Artists also decry restraints on thought and culture. In the brave new world of Aldous Huxley, art and science are to be manipulated for stability, comfort and universal happiness. They are not to seek truth and beauty. According to the corrupt director of the new order, “It isn't only art that's incompatible with happiness; it's also science. Science is dangerous; we have to keep it most carefully chained and muzzled” (Huxley, 1946, p. 270). In his 1933 address to the International Institute of Intellectual Co-operation about the future of the European mind, Huxley writes of the modern lifestyle as “vulgar” and “anti-intellectual”, and of Europe’s danger of losing what its intellectual elite had achieved (1993). In addition, he was also concerned for the destruction of the moral foundations of society, and the decline of organised religion. He regarded art as the only sufficient way of filling the moral vacuum.

Several decades have elapsed since scholarly and popular pieces first drew attention to these developments and now we are confronted with new challenges within modernism. Bromwich writes that in the U.S. “the mass media and the politics of the past two decades have been killing the mind of the country, and what have we (the intellectuals) done to resist? (Bromwich, 1996). Ortega y Gasset (1991) a Spanish philosopher, also warned about the influence of the media. He warned of journalists posing as “pseudo-intellectualists” and the power of the media to lead and form public opinion.

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In Russia where much of culture was undermined by communism, the link with the past is being seen as the most reasonable way forward. In the Russian school, teachers believe that the Russian culture is a starting point for rebuilding society. In a study of Russian schools, the teachers,

“wanted more than anything else for their students to feel gratitude toward their parents and love for their Motherland. They said these values had come from the history of the Russian culture. Only from as recently as 1992, due to the change in the political climate, could these values be explicitly taught and these teachers rushed to seize the opportunity. They were acutely aware of what the younger generations could have, or had in fact, lost with 70 years of communism” (Higgins, 1995).

Maybe like Russia, Rosvik is also experiencing a growing appreciation of its heritage. And it is not only for stimulating tourism. Looking back into the past may be a means for assessing the changes it must face in the future.



## CHAPTER 6

# Sustainability and Civic Factors

### Introduction

This chapter continues the analysis and discusses the importance of civic factors including competence, statism and community sense to Rosvik's future (see Figure 6.1). It begins by describing each of these factors and then examines the impact on Rosvik's sustainability of the following four arrows: statism - education, statism - community sense, community sense - education and competence - education. It ends by summarising the overall effect on Rosvik's sustainability of the arrows considered both in this, and the prior, chapter.

### Factors

#### *Community Sense*

Since the recent events in the school in Rosvik, there is an increase in community sense, and the familiarity between people is formal and informally organised. Groups have

begun in response to the challenges Rosvik is facing. A village development group, a parents' group in the school and a business group have been formed in a short period of time. They have plans to expand the school to grade nine, provide better leisure services for youth, develop a centre for small businesses, and work with other villages in developing the region. The village development group is especially important and has been formed to address the need for new leadership in the village, as people no longer support the Rosvik social democratic party branch, even if they still vote for it.

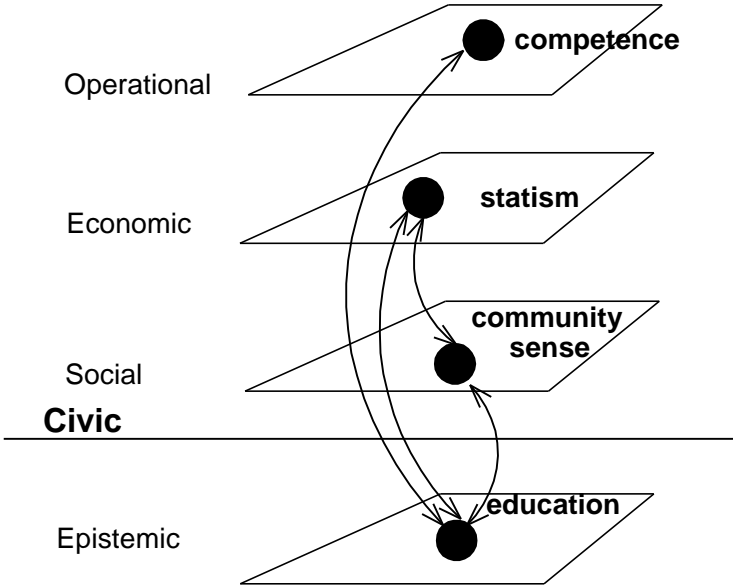


Figure 6.1 Factors and Arrows in the Civic Domain

*Statism*

Statism is the far-reaching control of people’s lives by the state and the antithesis of community sense. Statism

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devalues communities, weakens private associations and impedes the ability of groups within the community to self-organise. In Rosvik the state monopolises education and most other services, and nearly all village groups are in some way dependent on the state. This includes even the church and sports clubs. This has created a climate that does not encourage initiative, creativity and private enterprise, and there are few operational businesses in the village.

However, people are aware of the need to change from state control and dependency, to self-direction. The new groups are being organised to stimulate village development, education and business, and are responses to statist management. The village development group is of particular importance because it is a management unit set up by villagers to address village-wide affairs. Some leaders in Rosvik liken it to the old system of aldermen that existed when village affairs were locally decided under the leadership of an experienced group of villagers.

### *Competence*

In Rosvik parents say they are concerned about the level of competence their children are reaching in the classroom. They want a tertiary education for their children but wonder whether the children will make it in an increasingly competitive world. Parents are also worried about teacher competence, and think the old teachers have no new ideas and should retire. Changes nation-wide are being considered to make teachers and principals more accountable. For example, school leaders in Rosvik talk about national initiatives to introduce school inspectors. Other initiatives require two and five-year plans of principals, and the upgrading of teacher education. In addition to educational matters, competence in the workforce is also a problem, and small businesses in Rosvik complain about the scarcity of

reliable and skilled local people. Finally, there is a vacuum in the competence of people to deal with their own civic affairs, and to act outside the old political framework. Despite their disillusionment in politicians, many people continue to depend on the state.

### **Statism - Education**

Rosvik has two types of problems in education. Firstly the scope and quality of education has declined and parents complain about the narrowness of education and falling standards. This problem stems from state control of education, driven by utilitarian, economic agendas, which have lowered educational standards. The second problem is that education is managed outside the community, and a large machinery of municipal bureaucracy has reduced the involvement of the community in education.

In Sweden, as in most other western countries, economic gain and expansion has changed the focus of education. Over time, there has been a narrowing in focus and a shift from a broad education for knowledge and understanding, to an education for job-related and industrial reasons. The effects of a job-specific education are first felt in the primary school where the emphasis put on knowing only what it is necessary to know, is resulting in innumeracy and illiteracy. In Rosvik, parents complain that children are not taught how to spell and the absence of a grading system. They want a return to regular assessment and to have more say in the contents of the school curricula. On the national level in Sweden, there is a lot of public criticism about falling standards, despite the high cost of education to the taxpayer. Sweden comes below the average in eighth grade mathematics when compared



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with countries in the OECD, and yet is second only to Norway in spending on education (OECD, 1995).

The problems of lower education are mirrored at the tertiary level. In universities in Sweden, emphasis is given to a technical education at the expense of a comprehensive education. After educational reforms were introduced in 1968 at the tertiary level, education became employment-specific, and there was "no notion of broad and 'liberal arts' university education" (Scott, p. 612). Critics believe that trends such as these can seriously challenge the future of knowledge and of the university itself (Bloom, 1987; Piccone, 1998). According to Pan, the modern university "exclude[s] as a dispensable luxury or waste of time the very possibility of dealing with universality, in favour of a narrow technicization of thought and knowledge" (Pan, 1998). In universities around the world, this has resulted in threats to, or the final closure of, departments of history, the classics and liberal arts. Instead, there is expansion in business-related disciplines, and large numbers of students are swelling departments of computer science, information technology and business.

In Sweden the utilitarian emphasis has resulted in establishing foundations<sup>19</sup> to place Sweden in the forefront of technological know-how. As a result of large financial investments, Sweden has rapidly become a leader in Europe in information technology, electronic commerce, telecommunications and mobile telephones. This rapid advance in technology has led to innovations in the classroom. The Swedish government is developing the technological direction in education from the lowest grades, and there is a policy to have three computers in every

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<sup>19</sup> Swedish Foundation for Strategic Research is one of the largest of such foundations.

classroom. Despite these developments however, Rosvik parents are critical and think that the importance being given to the computer is distorted; that municipalities and teachers are unqualified to know the role of the computer in education; and that teachers do not have the skills to use them pedagogically.

Economics not only propels the technological direction of education; it also sets the boundaries. Economic pragmatism influences decision-making at all levels of government and at the municipal level, it influences decision-making for the village school. When the attempt was begun to take away grade 6, parents said the municipality was under pressure to minimise spending and save money. They think this was mostly related to the change in Swedish law lowering the age at which children enter the school system. The municipality had to make room for the new group of beginners at the bottom, so they decided to shave off the upper level and bus grade 6 out of the village. In this way, those who manage the school consider it an economic unit. However, this is not the way villagers see it. Most consider the school an educational unit serving the community, preparing youngsters for life.

The reason for this difference in perspectives is the bureaucracy that manages education. Bureaucracy has become removed from the people it serves; it has turned into the "iron cage" of Weber's description (Adler, 1990-91). It is made up of an ever expanding group of experts and administrators, "elite professionals" (Piccone, 1998), with a tendency to grow to extreme proportions. In Sweden, school bureaucracy has become removed from the educational task, and of such proportions that it has spread into the professions. School principals, academics, doctors and priests complain that bureaucratic demands significantly increase their workloads and threaten their ability to carry out their work. In Rosvik, parents said that bureaucratic tasks

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accounted for a lack of pedagogical leadership in the school, and their dissatisfaction led them to appoint a new principal in 1999.

One of the effects of bureaucracy is fragmentation (de Raadt, J.D.R. 2000). Decision-making amongst specialist government departments is fragmented, and separate municipal services in education, social services, health and other areas overshadow the needs of the community as a whole. A leader of Rosvik's municipal school department referred to this problem and complained that despite having "meeting after meeting" between the various departments in the municipality, we still are "not ... able to see the people as a whole"<sup>20</sup>. People in Rosvik see this too, and say that the municipality's decision to reduce the school did not take into account the village as a community of people, the effects on the local economy and attracting people to live in Rosvik.

Another consequence of bureaucracy is a lack of communication, and this affects both people working in bureaucracy, and the people bureaucracy serves. In Rosvik, the intentions of the municipality were unclear and villagers were confused about why the municipality wanted to close the sixth grade. Some thought it was because of classroom space, some thought it was the cost of employing the sixth grade teacher, and some thought the sixth graders were going to be bussed out for language classes. Confusion also existed at the municipal level. When municipal leaders were asked why the sixth grade had to go, many of their responses to questions were conflicting and vague.

A final effect of bureaucracy is short-term thinking and planning. In contrast to management that emphasises planning and development for the long term (Beer, 1979, 1981), bureaucracy often focuses on the present. In Rosvik,

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<sup>20</sup> Director of the Municipal Education Department

the municipality not only proposed changes in the sixth grade to cope with the need for more class-room space, but other space was made available as well. Consequently, the library was moved outside the school and across the busiest road in the village. Because of this a new safety hazard arose, there were fewer users of the library and parents had to look for monies to fund a traffic safety education program. This has defeated the initial intention of the municipality saving money. Because of the hazard to children, the municipality will probably need to reverse this decision and find another location for the library some time in the future.

To summarise, parental concern over lower standards in education are the result of the economic objectives of government that has made education narrow, job-specific and technologically driven. Furthermore, the size and ineffectiveness of government bureaucracy and the problems of fragmentation, lack of communication, and short-term thinking have contributed to educational problems and weakened the role of the community in the school. The next section discusses how the state also weakens other community groups, besides the school, and suggests changes to rebuild the community.

### **Statism - Community sense**

The state penetrates all areas of social life and in the process, disintegrates communities. According to Piccone “...the all-pervasive “welfare state” ... increasingly colonises all aspects of social reality” and “penetrates all crevices of social life, whether in the family, the workplace, or the community” (1998). In Chapter 2 we saw how Ryn thought this results in the reduction of people to abstract individuals.

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The Swedish state provides villages with customary services such as school, health, postal and library services but it pervades community groups to a greater extent than other welfare countries. In addition to the Swedish family, most children are also reared, in the public, state sphere from about one year of age. Children begin in government funded, nursery-care and pre-schools, and continue their education in state primary, secondary and tertiary education. Sweden has virtually no private universities, and, up until 10 years ago, private secondary education was illegal. Recently numbers of private schools in the south of Sweden have increased, although they are virtually non-existent in the north.

This has developed an expectation in people that the state should be responsible for much of life. In Sweden there is a history of tolerance to centralisation and government, shared by socialists and non-socialists alike. Most Swedes believed in expanding the responsibilities of government as the welfare state took shape by the middle of the twentieth century. A local business-woman reflected on the problem this way:

We have a huge dependence on politicians and the political system. It is so easy, most people don't even think any more. It is very, very bad. If you have a child, you put him in a nursing care when he turns six months old and then you expect the nursing staff to care for the child. Then you send him to school and then you expect them at the school to educate and raise up the child. Then you have the military service that follows that; when are you going to be a father or a mother; where is the family? (Cited in de Raadt, J. D. R. 2000, p.111).

In Rosvik, families expected the state to provide extensively for their social needs, such as providing for their retirement<sup>21</sup> and funding sports facilities<sup>22</sup>. These

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<sup>21</sup> Parent

expectations correspond to claims made by the Rosvik social democratic party branch. The leader of the party branch claims responsibility for a broad list of services in the village including a petrol station, a bank, industrial building, sports facilities and church, and also the post office, school and elderly peoples' home<sup>23</sup>. Small businesses like the petrol station are on her list because they must appear to be endorsed by the state. The ethos in the north is that the state or industry should employ people.

Other groups are also state dependent. Up until January, 2000 the Swedish church was financed by the state and, notwithstanding the separation from the state in January, 2000 and a change of name, the church will not be financially independent in the same way as the free churches in Sweden. The state will continue to collect money on behalf of the church, in the same way as before. Besides economic control, the state also controls the church through appointments to boards and parish councils. Each appointee to the local parish council stands as a political candidate, representing a political party.

Political processes also influence how voluntary groups such as sports clubs, operate and what activities they offer. The manager of the largest Rosvik sports club, said, "We have an ice hockey rink because we had a politician interested in ice hockey. If he had been interested in horses we would have had a stable; or a swimming pool if it had been swimming." Dependence on political ties is strong, despite the club's ample membership and large number of volunteers who help out.

State control of communities has an effect on individuals, and develops the "state dependent personality" described by

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<sup>22</sup> Parent

<sup>23</sup> Party Representative

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Piccone (1998) as the end product of “systematic centralisation and consequent community marginalisation” and easy prey to the culture industry and consumption. In Sweden “consumption” has a public meaning, besides the usual meaning concerning consumer goods. A consumer mentality has developed towards the state. In fulfilling almost every social need in the form of generous pensions and benefits, and providing health, work, education, leisure etc. it has encouraged in individuals an expectation that the state is there to take from, rather than give support when needed. This has led to a constellation of individual qualities similar to those identified in Russia after the fall of communism and described by Taylor as “[c]ynicism, distrust, lack of initiative, antipathy toward market activities and individualism, dependence on strong authorities, passivity, hopelessness....and moral and ethical confusion are all behavioural and attitudinal qualities engendered over these long years of autocratic rule” (Taylor, 1997).

Sweden, the structures of which impose a plethora of rules and bureaucracy, has been likened to Russia by Swedish community leaders who say that the state has discouraged initiative and intimidated people<sup>24</sup>. This has encouraged subservience, timidity, distrust, and passivity along with a strong tendency to obey rules and disregard excellence. This has led to a degree of anti-intellectualism in a country which in the past, produced science and culture highly regarded around the world.

Up until recently, few Swedes questioned the type of society they built. The state provided them with a very high material standard of living; in the 1980's, the highest standard of living in the world, and for the majority of the people. Such remarkable equitability is an uncommon

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<sup>24</sup> Village Pastor

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achievement, and in Rosvik there is pride in what the state has accomplished. A few still consider the politicians as the driving force in the village<sup>25</sup> and see them as making Rosvik what it is today. Another group however, questions the old political system and wish for change. Some families said they felt over-run by politicians<sup>26</sup>, and have lost faith in politicians<sup>27</sup>. The shattering of the former trust they had was expressed by a village leader this way: "What I see happening in society today is a new awareness that we got wrong ideas from our trusting the politicians".<sup>28</sup> This person represents the new leadership who wish to bring about a change from government control and dependence, to community-driven development and renewal.

One of the keys in this process is non-political leadership. However, people working in community development in the north say there are problems finding people with leadership qualities.<sup>29</sup> The state dependent individual does not produce the qualities necessary for leadership; on the contrary, this type shuns public responsibility. Taylor discusses the difficulty of building a civil society in Russia because of this problem, "the best hope of surviving lay in making oneself as inconspicuous as possible, which meant abandoning any thought of independent public activity, indeed any concern with public affairs and withdrawing into one's private world" (Pipes, cited in p. 838 in Taylor, 1997).

Another problem is the existing leadership. The old political leadership see themselves as protectors of state ideology and block new initiatives being tried in community

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<sup>25</sup> Parent

<sup>26</sup> Parent

<sup>27</sup> Parent

<sup>28</sup> Parent

<sup>29</sup> Businessman



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development. They are also reluctant to leave their positions of power. According to a project leader working in northern Sweden,

The Swedish situation is not unlike the situation in the Soviet Union in the 1970s. We are in some way 14 years behind them. One of the problems is that most of the people who are in the leadership in Sweden today would like to take the system back to what they consider as its golden age. They do not realise that we require a new model. This old leadership is still in charge today and is blocking new ideas. For example, if the county board were to establish a new reference group, one can predict who would be the people who would compose that group. It would be the same people who have been sitting at such groups for a long time.<sup>30</sup>

New leaders refer to the old leadership as “the red guards”, but believe that change, although slow, will be inevitable despite them.<sup>31</sup> It is significant that the new leadership team in Rosvik does not include a representative from the social democratic party branch.

Notwithstanding these problems, Rosvik has developed new leadership to a greater extent than other, near-by villages. Leadership has developed around the strength of various village groups operating for several years. For example, the sports club began in 1936; the independent church in 1938; and a village group for farmers, although not so active but still functioning, goes back to 1735. These, especially the sports club, have been important in generating a community sense from which leadership has naturally followed. However leadership is an uphill battle and Rosvik leaders say they do not know what to do next. There is also the need for long-term commitment to the north and one

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<sup>30</sup> Project leader and community worker

<sup>31</sup> Businessman

person said: “There is a need for leaders who have an allegiance to this region, who have a desire to develop it and work here.”<sup>32</sup> This is a serious problem in the north, as talented people, especially amongst the young, have greater opportunity and scope to develop themselves in the south. If northern communities are to keep talented people, they should be given the support needed to develop their vision and creativity, and the chance to apply new ideas.

### **Community sense - Education**

The previous section discussed how statism disintegrates communities on the one hand, and the role leadership plays in rebuilding them. Rebuilding community and revitalising community groups is also important for education, as community disintegration is at the centre of the problems in education. According to Pan, the crisis in education is not due to inadequate resources or a misguided curriculum, but to community disintegration.

“Schools have been forced to take on social tasks which a disintegrating community seemed increasingly unable to fulfil (e.g., breakfast and lunch programs, health maintenance, etc., but also moral education and primary socialisation), resulting in an overload and the failure to carry out both the new as well as the old tasks” (Pan, 1998, p.10).

In Rosvik, the consequences of devitalised community groups are evident and, despite the activity of some parents, some teachers felt that it was difficult to involve parents in educational matters. A teacher spoke about how the parents needed encouragement to visit the classroom:

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<sup>32</sup> Businessman

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..most parents don't consider themselves interesting and that what they know is not important. They forget that the young people are living in another world and that the experiences of the grown ups are important to the young. It takes us time to convince the grown up that he ought to come to the classroom because he has important knowledge.<sup>33</sup>

This passive attitude on the part of some parents is suggested by their responses to questions about education. When asked what they considered a good education, some gave vague answers. Some said a good education should be fun, a few gave the most importance to physical education; others only mentioned that a good education allowed pupils to do what they did best. Furthermore, some parents consider that the school is key in the development of children and do not see themselves as playing much of a part. Maybe this perception results from confusion over roles, due to the emphasis by the school on socialisation rather than learning. When asked what he considered a good education, a principal of the school stressed socialisation, which he was more specific about than erudition: "Good education is to teach the pupils good behaviour; no bad language. Fellowship and team spirit are important..."<sup>34</sup>

The public school now incorporates other forms of care, in addition to teaching socially acceptable behaviour and language. These include feeding, bathing, protecting and controlling; roles that were previously provided by the family. The result for the school is overload and the failure to educate; and for the family and other community groups, weakened vitality to fulfil their function. In Sweden, the family is further weakened by the high rate of divorce and by the state providing family services such as childcare. Thus a

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<sup>33</sup> School teacher

<sup>34</sup> Principal

truly vicious cycle is set up. The school disintegrates the community by doing the job of community groups and lessening their vitality; and the disintegrated community weakens the educational role of the school, by expecting teachers to socialise, care and control.

Despite these problems, there is awareness in Rosvik of the need to revitalise community groups so they can effectively work together. In the school, a group of parents wants to contribute more to education. They talked about families and the school working together to teach the children responsibility towards each other, the elderly and nature. Community groups are working together and becoming stronger in other ways, especially the newly organised groups mentioned previously, to enlarge the school and start other initiatives in business, youth and village development.

Community ownership of the issues and willingness to self-organise has been the first step in this process. The Chairman of the Rosvik business group expressed these qualities this way:

We are rather entrepreneur-like people in Rosvik. We are not looking for what is comfortable. Then we should stay in an apartment in the middle of the town. If you move to a village like this you are prepared to roll up one's sleeves in some way.

Furthermore, the same person felt education was the best place to start. He said, "If I could wish for something in the short run, I think that the school should be built up. This would attract more families with children and in the long run, improve employment in the village."

Renewing the school through reconstituting the community is being recognised elsewhere, and in the USA Piccone (1998) refers to a considerable degree of experimentation going on in education in communities. He

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believes the transmission of culture to future generations depends on finding community, and not government, solutions in education.

“A radical redirection of public opinion [in education] away from government solutions and toward more community-friendly alternatives may go a long way to prepare the cultural climate for eventual drastic reforms prefiguring the introduction of radical alternatives. The transmission of culture and the proper formation of future generations, not to mention the safeguarding of liberal values, depends on it.”

### **Competence - Education**

We have just referred to the way modern education not only attempts to instruct and teach, but also to socialise youth. After World War II, many countries, including Sweden, expanded the role of education to include social matters and used the school as a catalyst for social change. In America in the 1950's, Talcott Parsons, a sociologist, maintained that the school would replace the socialising role of the family. Naturally, experimentation in the school was hardly considered dangerous when families and communities were stronger, and times economically stable.

In Sweden after World War II, social democrat politicians introduced anti-elitist policies to level education, change social structures and break down class differences. They wanted to make education available to the working class and change the rigid elitism of the upper and middle classes. However, experimenting with education and the class structure forfeited high standards and competence. Before the reforms, Sweden's educational system was complete, rigorous and demanding of participants. Entry to the professions was gained only if participants measured up.

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Cost was no obstacle and no able student was held back because of economic need (Scott, 1988). According to Ryn (1994), it was against this standard that Sweden built its moral, intellectual, aesthetic and economic capital, and which made the welfare state possible.

However the legacy on which Sweden distinguished itself in the world, is in danger. The educational reforms of the 1960's sacrificed gifted students in favour of average students, and in the process, lowered standards of competence and excellence. In the university, academics lost motivation. Now the proportion of academic staff in Swedish universities who hold doctoral qualifications is considerably lower when compared with other advanced nations and gifted students look for employment outside Sweden. There is also a shortage of business talent, and companies seek people from other countries. Added to this, business talent is not encouraged by the heavy taxation incurred, and both large and small Swedish companies prefer to operate in other parts of Europe<sup>35</sup>.

People in Rosvik complain about incompetence, and parental concerns over low standards of education have already been discussed. These include the absence of a grading system, spelling ineptitude and the unsuitability of older teachers who lack new ideas and hold old socialist ideas about education. In addition, businesses say there is a lack of local, skilled people and there are complaints about the level of competence in the municipality. Some people believe that politicians and administrators have a low level of education, and are not trained in matters they have power to make decisions about.<sup>36</sup> One university lecturer, who is also a Rosvik parent, said of the municipality:

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<sup>35</sup> Ericsson, for example, recently set up headquarters in London

<sup>36</sup> Parent and board member of the village development group

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We see this every time we meet politicians. We just need to talk about research and science and we can see that they withdraw because they do not have the same knowledge as we do. We are many times more of experts in school matters than the administrators and politicians who have been placed to decide about grade six. Once people realise they know more than the politicians, and take over the power, things will start to happen in society.

However, despite this person's expectations, some people do not get involved and many people are complacent. People are used to dealing with problems through political measures but when these no longer work, it is difficult to engage them in creative, new ways of effecting change. This incompetence can be addressed through education, and one of the biggest challenges facing Rosvik is to interest as many people as possible in education, and especially educate the leadership of the new groups. Management training, knowledge about resources and issues related to their tasks will strengthen their role and equip them for leadership.

## **Summary**

The total impact of the arrows discussed in this and the previous chapter can now be summarised in graphic form in Figure 6.2. The colour of the arrowhead indicates whether the link strengthens or weakens sustainability. A white arrowhead indicates that it strengthens the factor and thus contributes towards sustainability. Conversely, a black arrowhead indicates that the linkage weakens the factor and threatens the sustainability of the village. No arrowhead indicates that the effect of the link is neutral. For example, the white arrowhead from heritage to education indicates that the activities aimed at promoting heritage are having a strengthening effect on education, and thus contributes to the

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sustainability of Rosvik. No arrow in the other direction shows that education is having no effect on heritage in Rosvik, making the link indeterminate. The arrows in the figure reflect the situation that actually exists in Rosvik.

The figure shows that the existing arrows operating within the character and intellect domains promote Rosvik's sustainability, as shown by the number of white arrowheads. The threat to Rosvik's sustainability comes from the arrows within the civic domain, as shown by the number of black arrowheads. We go on now to explain each domain by looking at the factors within them.

### *Character and Intellect Factors*

Figure 6.2 shows that a growing interest in heritage strengthens education in Rosvik although education has no effect on heritage. Heritage is considered part of the young people's education. This is shown in the plans to engage the young people in the folk museum and the wish of parents to incorporate heritage into the children's school education. However, the school does not yet seem to have contributed in any significant way to an historical awareness.

The figure also shows ethics strengthening education in Rosvik. For example, through a degree of personal sacrifice, parents have protected grade 6 and the future of the school. However, there is no clear influence of education on ethics, as the teaching in the school seems rather neutral to ethics. The school staff did not mention ethics or values much in the interviews; it was the parents who did and thought the school should teach values and by doing so, reinforce the family.



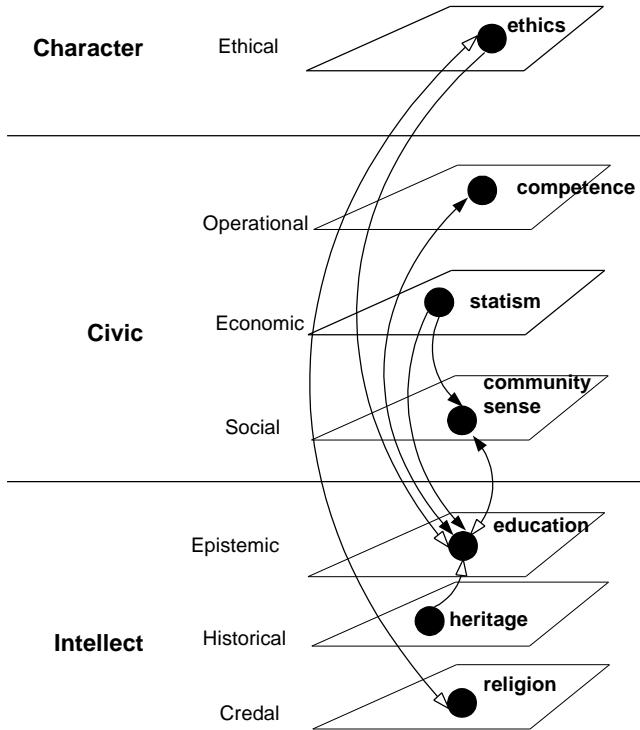


Figure 6.2 Actual Links between Factors after Analysis

On the other hand, religion has strengthened ethics through the greater engagement of the church in Rosvik. This is evident in church-sponsored activities in the village in religious and music education, youth work, stimulating business initiative and the village-wide concern for Russian people. Conversely, a greater awareness of ethics has strengthened religion in Rosvik. The ethical concern of

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people has placed Rosvik ahead of near-by villages in developing their village, and part of this development is an increase in the influence of religion. The work and presence of the church is not only increasing in Rosvik, but being extended to other near-by communities as well, as Betel church is planting a new congregation in Luleå.

### *Civic Factors*

However, the strengthening effects of factors crucial to Rosvik's sustainability in the character and intellect domains have not been matched in the civic domain. The degree of competence, the strong presence of statism and community sense do not, as the figure shows, strengthen other factors. Rather than promoting the sustainability of the village, they threaten it. Except for the positive effect that community sense has on education, all other factors weaken each other and impair sustainability. Statism weakens them because in Rosvik, community groups depend on the state for education, child-care, health, retirement, leisure and initiating business. On the other hand, community sense in Rosvik has had no impact on the statism that dominates it. This is to be expected as it is difficult for small communities like Rosvik to have any significant effect on a statist management. However, the attempts made in Rosvik to return to a degree of autonomous village management show that villagers have the will to move away from the predominance of the state.

Statism also weakens education and in Rosvik this was made manifest in the municipal decision which caused the grade 6 crisis. In turn, the figure shows that a small educational institution, such as Rosvik's school has no effect on statism. There is little chance of the village school changing long-term decisions made by the municipality. This has been borne out by the decision of the municipality, in

summer, 2000, to reject the parents' plans to expand the school to grade 9.

The figure also shows that lack of competence and poor education have a mutually weakening effect on each other. This is to be expected as competence and education naturally go hand in hand. Incompetence in school bureaucracy, school leaders and teachers has contributed much to the crisis in Rosvik's school. In turn, former standards of excellence in education have declined, resulting in incompetence. Parental complaints about falling standards, poor curricula and low class performance are evidence of this.

As already mentioned, the only exception among civic factors is the strengthening effect of Rosvik's community sense on education. Community influence on the school is strong and the community has a group of competent people defending education and monitoring decisions made by the municipality. However, the impact of community sense on education is not yet reciprocated. The education programme at school is still decided by statist bureaucrats who weaken the community sense of students and future citizens. The school replaces the family and other community groups, and has taken on socialising roles formerly carried out by traditional community structures.

## **Conclusions**

The findings indicate that most vital factors in Rosvik are related to education. However contrary to what one would expect of the enlightening and improving quality of education, in Rosvik, education does not build up and strengthen the village's sustainability. At best, education is neutral, (it has no impact on heritage, ethics, or statism). At worst, it undermines community sense and competence.

Behind this unenlightened education and its impact on other factors is statism. State control of education and policies to democratise education and make it job-specific, have significantly lowered educational standards and competence. This has also narrowed the scope of education, so the school does not include an historical appreciation for heritage nor deal with ethics in any serious way. Furthermore, state control in Rosvik has disintegrated community groups and weakened their vitalising influences in the community.

On the other hand, factors outside the scope of the state have strengthened sustainability in Rosvik. Factors within the character and intellect domain, such as an ethical concern, a visionary religion and an appreciation for heritage are revitalising the village, especially as various groups give them expression. However, project leaders working in community development say there is still a vacuum in vitality and spirit and a need for people to lead, and to create new ideas specifically to fit northern communities. Although Rosvik may at least in part be spared, leaders will need to address the insufficiencies apparent in education, competence and statism, and rebuild community groups to safeguard Rosvik's future. The next chapter explains how one fills this normative vacuum through design.

## CHAPTER 7

# Redesigning Rosvik

### Introduction

The two previous chapters presented relationships between factors threatening the long-term sustainability of Rosvik, and it is now necessary to discuss what could be done to avert these threats. We need to redesign at least part of the village to be able to manage the arrows linking the factors. This redesign is normative, that is, it addresses human responsibility and the capacity of villagers to rebuild their own community. The design is not socially engineered, determinative solutions such as more government spending, introducing new industries into a community or technological solutions. These are usually aimed at obtaining some sort of desired behaviour and are used by groups outside the community. Rather, the design is aimed at concrete possibilities that could be attained in Rosvik by individuals and groups from the community. In the long term, villagers should go through their own formulations and design process, so that they can decide how they would like their village to be and the means they need to achieve this.

However, villagers and leaders need some training in how to redesign their village, and this can be best attained with a sample design such as that presented below. The ultimate aim of the design is to create white arrowheads that ensure, rather than threaten, Rosvik's sustainability.

### **Steps in the Design Process**

The design involves three steps. In the first step we *identify qualities* in each of the factors. These represent in summarised form, the vision we are working towards for a community, in this case, Rosvik. In the second step we *formulate operations*. These are activities needed for attaining the quality identified. Finally, in the third step we *specify systems* or social groups in the community that will carry out the operations of the previous step. These steps are illustrated in Figure 7.1 below.

Figure 7.1 is a reproduction of a design screen from SmCube. The left-hand side, a cloud, represents the factor being discussed, (in this case ethics) and the text inside the cloud is a brief description of an identified *quality* of ethics we desire to see in Rosvik (i.e. a community trained to make sacrifices and in which people help each other. A community which promotes volunteerism). The circle in the centre represents an *operation* to attain this quality. This operation suggests training children to serve the community by setting up community projects such as gardening for the elderly, and growing wheat for the folk museum.

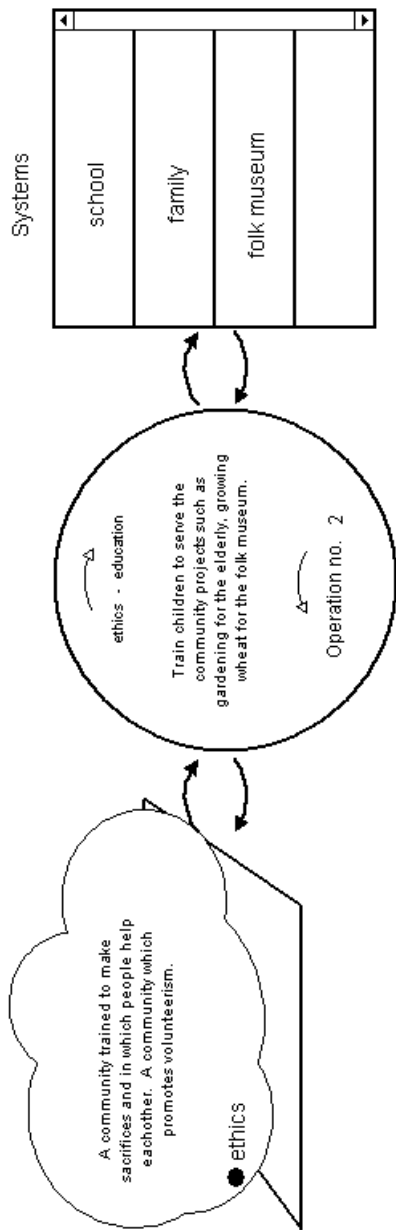


Figure 7.1 Steps in the Design Process

There are two arrows in the circle. The arrow at the top is the actual arrow, that is, it reflects what is happening now in Rosvik: ethics (shown in the sacrifice of time and effort that the parents have made to save grade 6 and safeguard the future of the school) has had a positive impact on education in the village. At the bottom is the expected arrow, that is the arrow we expect the operation to generate. We anticipate that educating youngsters to volunteer for community projects that serve others will enhance the ethical attitudes of young villagers.

The rectangle to the right of the figure lists the *systems* or social groups that will carry out the operation. It indicates that the school, families and folk museum should get together and set up the project for the children.

### **Detailed Design**

Redesigning Rosvik involves repeating this three-step procedure for each of the factors. A complete redesign is provided in Appendix A at the end of the book. This appendix lists under each factor and its desired quality, the operations and the social groups that are to perform them, together with the arrows we expect them to generate (actual arrows are omitted in this listing). The reader is advised to follow this appendix as we review some of these operations below.

#### *Ethics*

Rebuilding Rosvik and ensuring its sustainability will demand a sacrificial ethic of people, especially because they will have to rely on each other and not on the state. Villagers will need to act without repayment, whether in money or



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recognition, and take on the work of some who do not necessarily support their efforts.

Since there is likely to be limited financial support, an expression of a sacrificial ethic will need to be volunteerism. There are a number of voluntary groups in Rosvik but we would like to see them addressing new issues at present neglected by villagers. For example, despite the importance of the sports club to Rosvik, the large numbers of children involved, and their admirable achievements in national sport, there is a youth problem in the village that needs further attention. Young people and adults complain about boredom and drunkenness, especially on weekends. To address this problem, adult volunteers could organise ways for youth to contribute usefully to the community through programs that supplement the usual sports, school, church and other activities.

To this end, Operation 1 suggests forming ethical attitudes in older youth by setting up community exchange programs with less affluent communities. The church in Rosvik has worked with destitute communities in Russia and could provide a ready link for the school to send youth to these communities to serve them. The reader will notice the school and the church are the systems listed to perform the operation.

Operation 2 has already been introduced in Figure 7.1. It suggests the younger children participate in local gardening projects that help the elderly and the folk museum, and which are set up by the school, families and museum. Therefore both operations 1 and 2 are aimed at imbuing youth of all ages with the ethical responsibility of contributing to communities that are both local and remote. Operation 6 concerns the rearing of children. We would like to see children reared in Rosvik for as long as possible, especially in the family and village school. This has been

echoed in the desire of parents to raise their children in a village and to extend the years of education available in the school. However to come closer to a community upbringing, Rosvik should consider organising non-institutionalised child care for pre-schoolers. Operation 6 proposes that informal, family-based care be provided for families that need to supplement their own care. This could take the form of a timeshare, neighbourhood, child-minding group to replace the care provided by the public sector. Operation 7 suggests organising community activities such as a Rosvik's day and annual fete. These types of social occasions would forge closer relationships, heighten community sense and make people aware of eachother's needs and how they can help.

### *Competence*

Rosvik's ability to self-organise has depended on a number of competent people who have made it stronger and helped place it ahead of other villages in the area. However, Rosvik should widen this circle to encompass the whole community. What is needed is a community competent to deal with local, civic matters, and competence in the workforce. These two areas single out the qualities of competence we think need addressing. Operation 8 suggests raising peoples' level of awareness of, and ability to deal with, local matters by educating them about public, civic issues. Then they can meaningfully engage in decisions that affect their personal and community lives.

Operation 9 suggests efforts to improve the level of competence in the workplace. Rosvik needs a competent workforce to create income but there are problems in securing capable employees. Both areas, civic participation and workforce skills, can be improved through education and we would like to see people from Rosvik participating in the various programs and courses offered by the community

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college, university and municipality. Of course, attaining competence begins during youth, and the standards at school, for teachers and students, should also be improved. These issues will be addressed in the section that covers education (below).

### *Statism*

Statism implies a controlling style of management. For a long time, Rosvik has acquiesced to a top-down type of management imposed from outside the village. Operation 10 proposes consolidating and strengthening the village development group to resist control from the municipality and enable local leaders to try new initiatives and make their own plans for the future. To attain this, Operation 11 suggests these leaders be empowered through management training seminars and workshops. Operation 12 advises that the village should also look into managing for the future by encouraging and training young people to become the next generation of leaders.

### *Community sense*

Robust social structures are a quality that will heighten the community sense in Rosvik and the familiarity people share. The family is where familiarity begins and on which healthy communities are built and Operation 13 suggests building up the family through educational courses in parent effectiveness training, marriage, single parenting, inter-relationships etc. In this way education will strengthen community sense. The churches with the help of visiting speakers or consultants could be responsible for programmes for couples, singles and teens.

Operation 14 suggests strengthening community sense by restraining the impact of the municipality and statism, and enhancing the activities of local management of the village

development group. Community structures will be strengthened if Rosvik's village development group takes the initiative and encourages new businesses, develops tourism and stimulates cultural life. There are several talented artists of painting, music, glass blowing and handicraft living in Rosvik, and new opportunities for them could also be addressed. A cultural centre, such as an art gallery could be developed (such as expanding the existing gallery) to house permanent displays of art and handiwork, and to host musical performances.

Rosvik should also consider enlarging its commercial centre, as its present centre is small and villagers say there is a need for better service. It might consider new shops or semi-permanent booths where people can sell seasonal produce (e.g. summer crops or fish). It could also develop the beach, jetty and boat marina for use in the summer.

Tourism is another way of developing new economic possibilities when the folk museum opens. Villagers could consider developing tourist-related businesses such as bed and breakfasts and low cost accommodation. Northern Sweden has promising tourist potential and people from Germany have already bought summer properties in Rosvik.

### *Education*

Education is one of the most important factors in community sustainability and we would like Rosvik to be known as the village that promotes a complete education for all ages. It should concentrate as many efforts as possible into improving education in the school, wider community and workplace. The reader will notice that operations 15 to 21 in Appendix A propose using several factors such as competence, ethics, heritage and community sense to generate arrows. These will offer opportunities for the type

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of education that does not finish at school, but continues throughout life.

Some of these operations (15 and 16) suggest concentrating efforts on the school and, for example, improving the competence of the school staff; while others suggest educating pupils in ethics and heritage (17 and 19). Another operation (20) suggests educating people of all ages through community arts groups connected with the area's cultural life. Finally, Operation 21 suggests Rosvik promote the school, adult education programs, distance education and retraining programs through regular educational fairs in the village. In this way the village itself, rather than the municipality, will be seen as actively promoting various educational activities.

### *Heritage*

Knowledge of its heritage, former culture, traditions and beliefs should help sustain Rosvik in the future. The inspiration that the old system of aldermen has been to village leaders in managing contemporary village affairs is an example of how heritage applies to Rosvik today. Operation 22 suggests that awareness of heritage should be encouraged through education. Learning about the area's history can be attained through exhibitions of culture, demonstrations of folk art and other such activities that help make people aware of the past and what they can learn from it.

### *Religion*

Religious practice that inspires vision and creativity can contribute a lot to a community's sustainability. Some of this is already present and people from Rosvik's religious community are contributing in various ways to the life of the village. However, the contribution of religion to life could be

more carefully considered, not only by the non-religious but the religiously active as well. Education is a means of achieving this and Operation 23 suggests that religious instruction be developed in the school for those children interested. Furthermore, Operation 24 suggests the churches run Alpha, a religious educational program initiated in the U.K., which has proven to be popular and effective internationally. An educational programme of this sort can strengthen practical religion oriented towards serving and caring for others.

### **Consolidation of Expected Arrows**

The left hand column of Table 7.1 lists the actual arrows acting in Rosvik according to the analysis in the two prior chapters. Two new arrows have been added that have not, so far, been included in the model and the analysis. The first one is arrow 01 ethics - community sense, the second one is 09 education - religion. The reason for adding these two new arrows will be explained in the next section.

The right hand column of Table 7.1 lists the consolidated arrows expected to emerge from the operations designed. That is, each of these arrows combines the arrowheads of several other arrows generated by the operations. Let us consider for example arrow 05 statism - community sense. This arrow is a consolidation of the arrows generated by Operations 10, 11 and 14 (see Appendix A). Arrows generated by Operations 10 and 11 have a white arrowhead on their left end and the arrow generated by Operation 14 has a white arrowhead on the right end. Therefore, the consolidated arrow has white arrowheads on both ends.

Finally, while some of the actual arrowheads listed in the left column are black and others are white, the expected

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arrowheads in the right column are all white, for they are meant to counteract the actual black arrowheads or strengthen the actual white ones listed in the left column.

## Loops

Some sets of expected arrows in Table 7.1, when assembled together form a loop. These loops are important, for they are self-reinforcing<sup>37</sup> relationships which progressively strengthen the effect that arrows have on the factors. If the arrowheads in a loop are black, then the effect is highly detrimental to the sustainability of the system. In multi-modal systems methodology and method this is termed a black loop. However, if its arrowheads are white, as is the case here, then the loop strengthens the sustainability of the system and is termed a white loop. Therefore, one of the purposes of the design is to create as many white loops as possible. As Figure 7.2 shows, the operations we designed generated three such loops.

Loop 1 runs through the following factors: *statism* => *community sense* => *education* => *statism*. A greater involvement by the villagers in management (of a supportive rather than bureaucratic, statist kind) will energise the diverse community groups. This will enable the village to make the changes it wants in the school and improve education for all. In turn, an educational climate will strengthen the village with programs for adults and sharpen the management potential of present and future leaders, thereby moving further away from statism.

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<sup>37</sup> The technical cybernetic term for a self-reinforcing loop is positive feedback (de Raadt 1991, 2000).

Table 7.1 Consolidation of Expected Arrows

	actual	expected
01	ethics $\leftarrow$ $\rightarrow$	$\triangle$ $\leftarrow$ $\rightarrow$ community sense
02	ethics $\leftarrow$ $\triangle$	$\triangle$ $\leftarrow$ $\triangle$ education
03	ethics $\triangle$ $\leftarrow$ $\triangle$	$\triangle$ $\leftarrow$ $\rightarrow$ religion
04	competence $\blacktriangleleft$ $\rightarrow$ $\blacktriangleright$	$\triangle$ $\leftarrow$ $\triangle$ education
05	statism $\leftarrow$ $\blacktriangleright$	$\triangle$ $\leftarrow$ $\triangle$ community sense
06	statism $\leftarrow$ $\blacktriangleright$	$\triangle$ $\leftarrow$ $\rightarrow$ education
07	community sense $\blacktriangleleft$ $\rightarrow$ $\triangle$	$\triangle$ $\leftarrow$ $\triangle$ education
08	education $\triangle$ $\leftarrow$ $\rightarrow$	$\triangle$ $\leftarrow$ $\triangle$ heritage
09	education $\leftarrow$ $\rightarrow$	$\leftarrow$ $\rightarrow$ $\triangle$ religion

Loop 2 runs through *community sense* => *ethics* => *education* => *community sense*. A renewed community sense that strengthens community groups, especially the family, will have a positive effect on ethics and make people more aware of service to others. In turn, a deeper sense of ethical commitment will drive community groups to contribute to education, and improve the school, even if it has to be at the cost of the peoples' own time and resources. Consequently, this should influence the educational programme for adults and children to teach a more caring attitude to life and community, further building up community sense in the village. Note that it is only possible to close this loop because we have added arrow 01 ethics -



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community sense to our model and have designed Operations 6 and 7 to generate it. As we said above, the design should aim at creating white loops, and when necessary, new arrows should be generated to attain this.

Loop 3, education => religion => ethics => education also depends on the introduction of a new arrow, 09 education - religion, into our model. The expansion of educational possibilities to include religious courses for both adults and children should enhance the sense of vision and caring for their neighbour in the community. In turn, this will strengthen the understanding of ethics and provide a deeper appreciation for the normative issues of life and everyone's responsibility to fulfil them. Consequently, an enhanced ethical appreciation will empower community groups to contribute to the quality and breadth of education, and the improvement of the school.

As can be seen in Figure 7.2, all three loops pass through education. This is because I have purposely aimed through this design to wrestle the control over education away from statist bureaucracy and to hand it over to both those who serve it (teachers and parents) and those who benefit from it (children and villagers). Furthermore, I have also focused my design on education because, central to multi-modal methodology and method, change and redesign should not be brought about by manipulating people, but by addressing people as humans. This requires that we firstly make them aware of the factors that threaten their sustainability, secondly, empower them to take responsibility over their own lives through teaching and education, and finally help them to do it.

## **Conclusions**

Apart from producing a blue print that villagers could use for thinking about Rosvik's future, preparing a design has had an added benefit. The design revealed aspects about the factors and arrows that arose after the analysis. Therefore it introduced two new arrows, subsequently included in the model, to create the desired white loops. These have made the model more complete and suitable to understand changes needed in the village. Furthermore, the design has heightened an awareness of the need to extend education to encompass all ages in the community, and not only the school-age children. It also shows that education and learning take place through a variety of means: through music, art, heritage, ethics and religion, as well as through formalised courses to teach work skills and civics. Thus the design envisions education for life and learning that takes place over the life span of the person, engaging them in creative thinking, and sharpening their critical thinking as well.

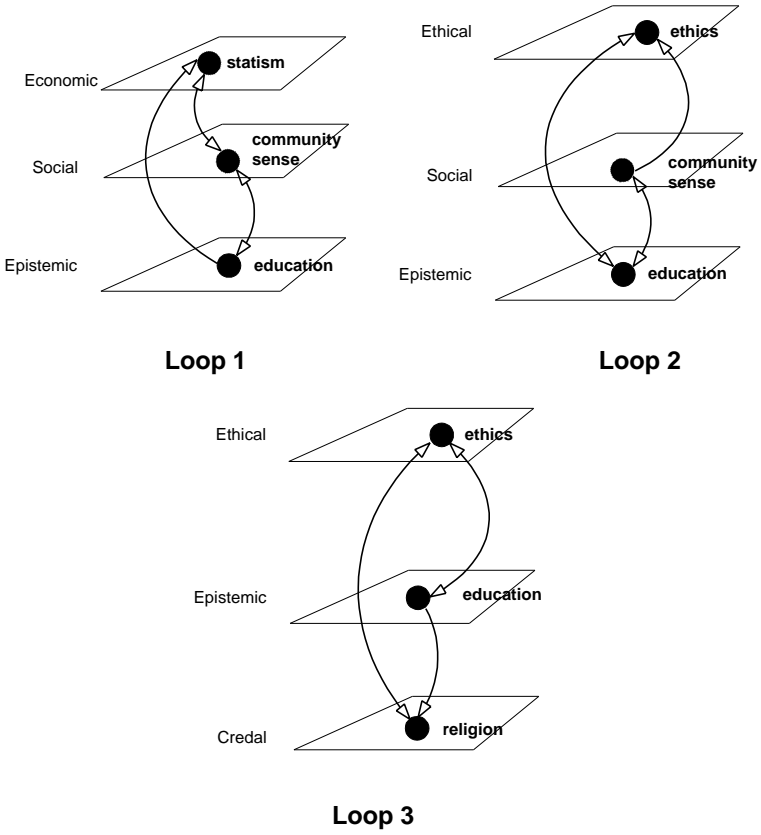


Figure 7.2 White Loops



## **CHAPTER 8**

### **Conclusion**

#### **Summary**

We started in the introductory chapter to point out the need to understand the deeper normative, or moral problems, of sustainability. In Rosvik, economic and technological answers to sustainable issues have eclipsed human and normative questions raised by sustainability. Addressing these is important as the population rapidly decreases and the youth leave for the south. In addition, we said that science has been unable to handle this crisis. Science cannot detect, nor does it know how to handle normative problems, which are nevertheless interconnected with the economy and environment. It chooses to ignore the importance of human responsibility and deals with human or natural problems with instrumental rationality and causal explanations. Finally, we also pointed to the need for a new methodology of science and a new method of implementing it. This approach to science needs to be able to address normative issues and develop methods of analysis and creative design.

We have attempted in various ways to respond to these challenges. We have used sustainability literature, theoretical developments in systems thinking, the multi-modal methodology and method, and a village application to explore how the normative and moral problem applies in an unsustainable world. To begin with, we looked to the literature to find out about normative issues in ethical, social and cultural sustainability research. The results of the search produced a consensus identifying six major issues important for community sustainability. These include the state, because it threatens sustainable communities by dealing with people as abstract individuals and not people; citizens, because it is citizens who play the most important role in sustaining communities; economics, as utilitarian economic growth undermines sustainable communities, especially small local economies; ethics, because a normative understanding of sustainability helps us ask about meaning in life and how people should live; interdisciplinary education, because the interconnected nature of the threats to a sustainable future demands an integrated understanding. Finally, there was consensus about the need for a new approach in science. There was agreement in the literature that the vastness of the issues requires a systems and cross-disciplinary approach to understand sustainability, especially one that incorporates social, ethical and cultural issues that have been neglected.

We turned to systems thinkers who have devoted much of their work to creating a new science. We began with Churchman who thinks science, including systems science, is incapable of dealing with the world's problems and needs a radical reorganisation. Science needs a new epistemology, and should replace the old assumptions built on pure theory, with normative questions, questions of 'ought', vision, purpose and meaning. It also needs to be effective and do

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something to directly help humanity. Churchman says that one of the fundamental problems is the gulf between the scientific endeavour and doing something about the essential problems of life to alleviate human suffering. He also thinks science must understand belief systems better and take them seriously. There is an absence in understanding and few contributions in the literature linking together a theory of belief systems with systems research. According to Churchman this is imperative because, if God does not exist, we have to find a whole set of "god-less" (and not very palatable) values to guide us. Therefore, Churchman talks about creating a moral world, or what he calls a world of "moral intelligence" for future generations. He calls for a normative science that combines the heart and the mind. Together they are the driving forces for normative and imaginative thinking, encompassing not only science, but also religion, poetry, painting, dance, drama, besides conversation and action.

Next we surveyed various attempts within systems science to combine these. We began with von Bertalanffy's general system theory and saw that his theory was only partly successful in breaking away from mechanistic science. While it provoked questions about life and encompassed different life realms and dynamic relationships, it reduced understanding to a biological paradigm that does not deal adequately enough with human systems. Therefore, it remained reductionistic and could not cope with normative questions. We then saw how Dooyeweerd's theory of modalities has contributed to the advancement of an ethical systems science in the form of multi-modal systems thinking. Multi-modal systems thinking responds to Churchman's demand that science reply ethically, rather than purely theoretically, to the human problem. This methodology argues for an ethical science, which is systemic and non-

reductionist, and concerned for life and human questions. Using Dooyeweerd as a foundation, especially the religious and ethical questions he raised, we discussed how multi-modal systems thinking integrates together science, the modalities and social systems. It takes the values of the Hebrew world-view on which it builds its normative view and unique notion of life, suffering, sustainability, work and design. In this way, the methodology addresses the concerns Churchman raised about purpose, normativity and belief. Also, its language is normative and visionary. In addressing these, it has developed a methodology, a method of systems inquiry and finally of systems design. The multi-modal method assembles theoretical literature from journals and books, and copes with empirical data too, such as data collected from interviews and panels of villagers.

The application of the method to a real life situation provided the means of understanding Rosvik in an extensive way, and how a school problem reaches beyond the school gate and extends into the village. We saw how the normative factors identified by the method corresponded closely with sustainability research. Like Rosvik, these studies also suggest human responsibility has an important impact on sustainable issues, and affects the civic, educational, social, economic and ethical purpose of community life. Furthermore, being able to use theoretical sources from political sciences, philosophy, theology, sociology, history and the literary classics helped enlarge understanding normative factors in Rosvik. These sources added rigour to the method and enabled me to incorporate inspiration from several disciplines. This was necessary for a normative understanding, especially as only a small portion of literature was inter-disciplinary or combined empirical, as well as, theoretical and classical sources. In addition to integrating these diverse sources of understanding in the project, the



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method also linked normative factors. Normative problems cannot be understood in a fragmented, disassociated way but are best understood when they are integrated together. In this way I felt better equipped to tackle the problems and come up with more effective actions and solutions.

### **Conclusion of the Project**

The project found insufficiencies in education, competence and statism, and the need to rebuild community groups to safeguard Rosvik's future. At a meeting of the Village Development Group, I proposed the sample design showing the type of operations for overcoming these insufficiencies. These, and the major conclusions of the project, were also presented to a general meeting of villagers in May 2001. The conclusions, in summary were:

1. Most of the vital factors in Rosvik are related to education. However, contrary to what one would expect of the enlightening and improving quality of education, the existing educational programme in the village does not build up and strengthen the village's sustainability.
2. Behind unenlightened education and its impact on other factors is the interference of the state. State control of education has narrowed the scope of education. Thus, the school does not include an historical appreciation for heritage nor does it deal with ethics in any serious way.
3. In addition, state control in Rosvik has disintegrated community groups and weakened their vitalising influences on the community.
4. Other factors such as an ethical concern, a visionary religion and an appreciation for heritage are revitalising the village, especially as various groups give them expression. They provide ground for hope.

At the end of this presentation, villagers agreed that the threats to Rosvik were not limited to educational, school problems, and they wanted to address the other factors suggested by the model as well. They appointed a co-ordinator, Lars Gyllenhaal, who has since joined the village development group to initiate some of the operations suggested in the design proposed. The first set of activities started in autumn 2001 and was directed towards Rosvik youth. A boy scouts group with 15 members was formed. By summer 2002, the church and sports club decided to combine forces and arrange sporting activities for youngsters. These village-based actions constituted the first step towards redesigning Rosvik, although they signified the last step of my involvement in the project.

The endorsement of villagers and their commitment to action show how multi-modal systems thinking, in addition to being a theoretical framework, was also a practical tool to help Rosvik. It was also one step further on the way to a science in the service of humanity.

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## **APPENDIX A**

### **Rosvik Redesigned**

**ETHICS**

A community trained to make sacrifices and in which people help eachother.  
A community which promotes volunteerism.

**Operation 1**



*ethics - education*



Older youth to travel on exchange programs to disadvantaged communities (Russia, E. Europe); to broaden their outlook and teach service.

- school
- church

**Operation 2**



*ethics - education*



Train children to serve the community through community projects such as gardening for the elderly, growing wheat for the folk museum.

- school
- family
- folk museum

**Operation 3**



*ethics - education*



Programs in which local people can help fulfil community needs. Parents assist in classroom; families assist in fund-raising for school; older age group help with child-care.

- family
- senior citizens

**Operation 4**



*ethics - religion*



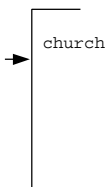
Religious groups to provide community programs for family problems, unemployment, youth, other disadvantaged communities.

- church

Operation 5

$\Delta$   
ethics - religion

Religious leaders to inspire and teach people to care for, and serve their community.



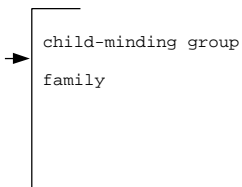
ETHICS

Children spend as much time in the community they belong to; especially in the family and village school.

Operation 6

$\Delta$   
ethics - community sense

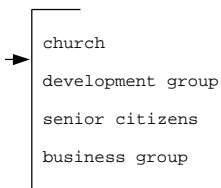
Organise informal, family-based care.



Operation 7

$\Delta$   
ethics - community sense

Organise community activities such as Rosvik day and annual fete.



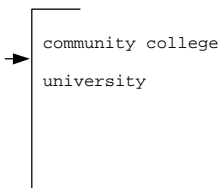
COMPETENCE

Competent civic participation; competent community workforce

Operation 8

$\Delta$   
competence - education

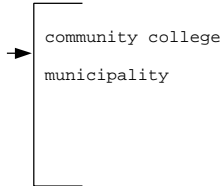
offer adult education and citizenship courses.



Operation 9

$\Delta$   
*competence - education*

Offer courses for the unemployed and retraining for those who need to upgrade their skills.



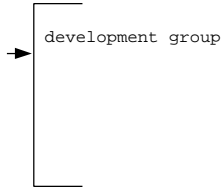
STATISM

Local village management which is supportive and not controlling and which aids communities to try new initiatives, adapt to change and plan for the future.

Operation 10

$\Delta$   
*statism - community sense*

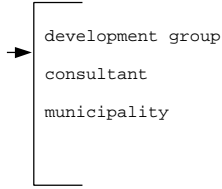
Consolidate and strengthen the village development group for local management.



Operation 11

$\Delta$   
*statism - community sense*

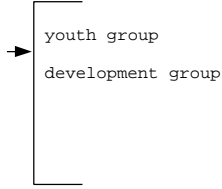
Run seminars and workshops to train the village development group in small community management.



Operation 12

$\Delta$   
*statism - education*

Run seminars to train youth leadership in management.





**COMMUNITY SENSE**

A community where people know each other and social structures are strong enough for people to carry out their roles and participate in the community.

**Operation 13**

*community sense - education*

Educate the family. Run parent effectiveness training courses; marriage courses; pre-marital courses; singles groups; single parents groups; inter-relationships groups. Start a program of surrogate families for youths at risk.

church  
consultant

**Operation 14**

*statism - community sense*

Community leaders to identify new business, cultural and tourist opportunities for Rosvik. Develop Rosvik's shopping centre, beach, cultural centre.

development group  
business group  
cultural facility

**EDUCATION**

A complete education which enhances learning by including the arts, character development, ethics, heritage, civic mindedness.

**Operation 15**

*competence - education*

Upgrade teacher qualifications; send teachers to courses.

school  
school parent's group  
municipality

**Operation 16**

*competence - education*

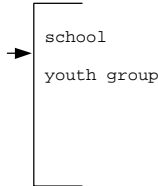
Strengthen the school principal's pedagogical leadership role. Send principal to programs that liase with educators in other cities in Sweden or Europe. Apply for municipal/other funding for this.

school  
municipality  
school parent's group

Operation 17

ethics - education

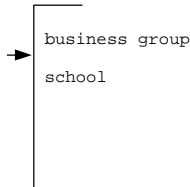
Run a community-aid program and a "sister program" with an African/Asian class.



Operation 18

community sense - education

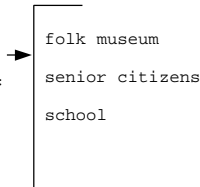
Local work experience of 1-2 weeks for village youth.



Operation 19

education - heritage

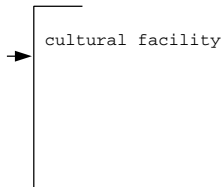
Run programs connected with the area's heritage: teach past culture, traditions, former occupations.



Operation 20

community sense - education

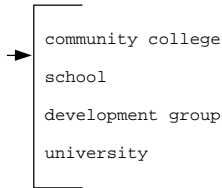
Arts groups to perform and demonstrate music, art, crafts, hobbies.



Operation 21

community sense - education

Community education fairs that promote education. Set up displays from village school, unemployment and retraining programs, adult education and distance education programs.



HERITAGE

A community that knows about the past, especially its former culture, traditions, thought.

Operation 22

education - heritage

Open the folk museum. Organise audio/visual presentations to schools, tourists and heritage promotion activities, e.g. folk dancing & art.

folk museum  
development group  
municipality

RELIGION

Belief in a faith which imparts vision and creativity; and inspires people to act sacrificially.

Operation 23

education - religion

Introduce voluntary religious instruction, bible club at school.

school  
church

Operation 24

education - religion

Run Alfa programme for the community.

church



## **APPENDIX B**

### **Municipal Education Department Questionnaire**

1 Name of Respondent:

2 Address:

3 Interviewer:

4 Date of Interview:

5 Can you explain the role of your department in the Rosvik school in:

- curriculum
- personnel
- accounting procedures
- staff development
- physical resources
- maintenance of physical resources
- future expansion
- other roles I have not mentioned?

6 How are school policies made? Who makes them?

7 How does the school district communicate with the Rosvik

school?

8 Is the school growing? Can you elaborate about present trends.

9 How do you see the future of the school?

10 Is there a 2, 5, 10 year future plan for the school? Can you elaborate?

11 How important are the economic criteria in deciding future growth of the school?

12 How does the school district decide about school growth (adding new classes) or school contraction (taking classes away)?

13 Do you think the resources provided for village schools are good enough to fulfil your educational goals?

14 What is your idea of a good education for the children of Rosvik?

- the basics: reading, writing and arithmetic
- knowing how to use technology: a computer for every student;
- learning values and standards: how to care for others, our environment etc.

15 How do you think the education they receive is preparing them for their future as parents, leaders?

## APPENDIX C

### Households Questionnaire

*Instructions for interviewers: Fill out one questionnaire for each couple. If there is a disagreement in the response to a question please write down the differences.*

1 Family Name:

2 Address:

3 Number of Children: (Include your children, your spouse's children, adopted or fostered children)

4 Age of Children:

5 Interviewer:

6 Date of Interview:

#### DEMOGRAPHICS

7 Sex of respondent:

8 Age:

9 Education: What is your level of formal education:

- No schooling
- Primary only
- Some secondary
- Completed secondary
- Some college or university

- College or university degree

10 Income: We are interested in knowing about how economics affects individuals and communities. Would you mind indicating your family income range, including husband and wife's salaries.

- 5-15,000 kr per month
- 15-25
- 25-35
- 35-45
- 45-55
- 55-65
- 65-75
- 75+

11 Occupation: What is your occupation?

12 Citizenship:

13 Place of Birth:

14 Religion:

#### FAMILY

15 How long have you lived in Rosvik?

16 How far back do your family roots in Rosvik go ?

17 What do you think about living in Rosvik?

- What do you like most about living here?
- What do you like least about living here?

18 Why did you choose to live in Rosvik?

19 What is it about Rosvik that attracts families to live here?



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20 What do you think about the resources like shopping, medical and dental services, businesses etc you have in Rosvik?

- Are there enough?

21 Do you think Rosvik could be doing a better job of providing things for its families? How?

- more leisure pursuits
- better transport services
- information about events in Rosvik and other places?
- other

22 Do you think Rosvik could be doing a better job of providing more for its teenagers? How?

23 What is there in Rosvik for the older teenagers to do? What is their entertainment?

- cafe
- leisure centre
- sports
- other

24 Rosvik children over the age of thirteen have to go outside their village for education, leisure activities etc. Do you see this as a problem for teenagers living in Rosvik?

- If so, what would you like to see done?
- Given the resources, what can be done?

25 How do you look at the future for your children? Do you think life will be better for your children than it was for you?

- How will it be better?
- better opportunities
- higher living standards

- better education
- other

26 How do you look at your own future? Do you think there are better things ahead for you like other better work and living opportunities?

27 How do you look at your retirement? Do you think you will be able to retire comfortably or do you think your retirement will be a hard time; for example, you may have to work until you are old?

## SCHOOL

28 How long have you had children going to the school?

29 Does the school provide the education you want for your children?

- What do you like most about it?
- What do you like least about it?

30 Are the resources good enough: teachers, library, no. of grades, cultural opportunities, sports?

31 Do you think it is as good as other schools in bigger towns?

32 Does the school inform you adequately about its activities?

- Is there a school paper that goes home to parents?

33 What do you think about the parents board in the school that represents the Rosvik community?

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34 Do you think there is a future for the school in Rosvik?

- Do you think the school is growing?
- Is it losing children?

35 How do you feel about the present arrangement for school children being educated in Norrfjärden?

- Would you like this to change?

36 What do you think about the plan to offer grades 7, 8 and 9 in Rosvik?

37 What do you think about the plan to bus the children of Grade 6 to Norrfjärden?

38 Would you like to make some other changes to the school in the future? What changes?

39 What do you think is a good education for your children? Is it. . . .

- the basics: reading, writing and arithmetic
- knowing how to use technology: a computer for every student
- learning values and standards, how to care for others, our environment etc.

We are interested in the role of the church, clubs and political party branches in Rosvik.

**CHURCH**

40 Are you a member of a church?

41 Are you active in a church? Which? How are you active?

42 Are your children active? How are they active?

43 Do you think the church plays an important role? Why?

- What do you see as the role of the church in Rosvik's future?

#### CLUBS

44 Are you a member of a club?

45 Are you active in a club? Which? How are you active?

46 Are your children active? How are they active?

47 Do you think clubs play an important role in Rosvik at present? Why?

- What do you see as the role of the club in Rosvik's future?

#### POLITICAL PARTY BRANCH

48 Are you a member of a branch?

49 Are you active in the branch? How are you active?

50 Do you think political parties play an important role in Rosvik? Why?

- What do you see as their role in Rosvik's future?

51 What do you think is more important for Rosvik:

- clubs
- party branch
- church
- school
- work

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VILLAGE

We are interested in your thoughts about the future of Rosvik.

52 Do you think there is a future for Rosvik?

53 How long do you think you will live in Rosvik?

- until your children are teenagers?
- until your children have left home?
- always

54 Are you planning to move? Why?

- If you could move, would you? Why?

55 What do you think the village can offer you and your children in 3, 5, 10 years time?

56 Have you been disappointed or happy about prospects for the future as you have lived longer in Rosvik? How have you been disappointed/happy?

57 Are there positive things that I haven't mentioned and which you value that Rosvik gives you?

58 Are there negative things about Rosvik that I haven't mentioned?

BUSINESS

59 Do you own a business that operates from Rosvik?

60 If yes. . .What do you do?

61 When did you start operating in Rosvik?

62 Do you earn your entire livelihood off your business?

- If not, how much? 25%, 50%...

63 Why did you set up your business in Rosvik?

- Is Rosvik a good place for business?

64 What is it like to operate a business in Rosvik? For example, are there good communication facilities, can you get what you need delivered etc?

65 Do you think there is a future for your business in Rosvik?

- Do you think your business will be here in 3, 5, 10 years time?

66 What do you think about the future of businesses in Rosvik?

## APPENDIX D

### Churches Questionnaire

1 Name of Respondent:

2 Name of Church:

3 Address:

4 Interviewer:

5 Date of Interview:

6 Can you describe your church activities:

- Services. How regular?
- Youth group/s. How regular?
- Choir/s. How regular?
- Camps. How regular?
- Coffee Shop. How regular?
- Other. How regular?

7 What is the attendance at:

- Services
- Youth group/s
- Choir/s
- Camps
- Coffee Shop Other

8 What do you think about the response of the community to these activities? Does the community support the church?

9 How is the church staffed?

- Full time, paid
- Part time, paid
- Volunteers

10 What do the above do at the church?

11 What are the ages of your parishioners? How many are:

- Pre-school
- School
- Youth
- Young married
- Middle age
- Old age

12 What percentage of people in services are regular attendants and what percentage comes to services 3 or 4 times a year (for Christmas, baptisms etc?)

13 What do you like the most about serving the people of Rosvik?

14 What do you like the least about serving the people of Rosvik?

15 Do you think there are any special disadvantages for a village church, which you do not find in larger towns and cities?



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16 Do you think there are any special advantages for a village church, which you do not find in larger towns and cities?

17 How long has your church served the community of Rosvik? Can you tell me about its history: when it began, how it was started, where it has been situated etc?

18 In addition to what it is doing now, what would you like to see your church doing in Rosvik?

19 How important do you think your church is to the people in Rosvik? For example, would the Rosvik people think their village to be a very different place without it?

20 Do you think there is a future for your church in Rosvik?

- Do you think it will grow?
- Do you think the church will be here in 5, 10 years time?
- Do you think it will be operating in the same way in 5, 10 years time?

21 How important do you think the church is to Rosvik's future?



## **APPENDIX E**

### **Sports Clubs Questionnaire**

1 Name of Respondent:

2 Name of Club:

3 Address:

4 Interviewer:

5 Date of Interview:

6 Can you describe your club activities:

- What sports do you offer?
- Do your activities include social events?
- Do your activities include fund-raising events? Apart from the above, do you have other activities?

7 What is the total, average attendance at:

- Sporting activities?
- Social events?
- Fund-raising events?
- Other events?

8 What do you think about the response of the community to these activities? Does the community support your club?

9 How is your club staffed?

- Full time, paid
- Part time, paid
- Volunteers

10 What do the above do in your club?

11 How many people come to your club?

12 What are the ages of your participants? How many of your participants are:

- Pre-school
- School
- Youth
- Young married
- Middle age
- Old age

13 What do you like the most about serving the people of Rosvik?

14 What do you like the least about serving the people of Rosvik?

15 Do you think there are any special disadvantages operating a club in a village which you do not find in larger towns and cities?

16 Do you think there are any special advantages operating a club in a village which you do not find in larger towns and cities?

17 How long has your club served the community of Rosvik? Can you tell me about its history: when it began, how it was started, where it has been situated etc?

18 In addition to what it is doing now, what would you like to see your club doing in Rosvik?

19 How important do you think your club is to the people in Rosvik? For example, would the Rosvik people think their village to be a very different place without it?

20 Do you think there is a future for your club in Rosvik?

- Do you think it will grow?
- Do you think the club will be here in 5, 10 years time?
- Do you think it will be operating in the same way in 5, 10 years time?

21 How important do you think the club is to Rosvik's future?



## **APPENDIX F**

### **Businesses Questionnaire**

1 Name of Respondent:

2 Name of Business:

3 Address:

4 Interviewer:

5 Date of Interview:

6 Can you describe your business operation:

- What do you do?
- Who are your customers?
- How old is your business?
- How many people do you employ?
- How many employees live in Rosvik? Other places?
- Other?

7 Do you earn your entire livelihood off your business?

- If not, how much? 10%, 25%, 50%...

8 Why did you set up your business in Rosvik?

9 How is it to operate a business in Rosvik? For example, are there good communication facilities, can you get what you

need delivered, does the winter pose any special problems etc?

10 Do you think Rosvik is a good place for your business?

- What do you like the most about having a business in Rosvik?
- What do you like the least about having a business in Rosvik?

11 Do you think there is a future for your business in Rosvik? Why?

- will it be here in 3, 5,10 years time? Why?

12 How important are small businesses to Rosvik?

- would Rosvik be very different without them ?
- are they important to Rosvik's future?



## **APPENDIX G**

### **Party Branch Questionnaire**

1 Name of Respondent:

2 Name of Party:

3 Address:

4 Interviewer:

5 Date of Interview:

6 Can you describe your group's activities:

- Branch meetings. How regular?
- Social functions. How regular?
- Other. How regular?

7 What is the attendance at these?

- Branch meetings
- Social functions

8 What do you think about the response of the community to these activities? Does the community support your group?

9 How is the branch staffed?

- Full time, paid
- Part time, paid

- Volunteers

10 What do the above do for your branch?

11 How many people are members?

12 What are the ages of your members: How many are:

- School
- Youth
- Young married
- Middle age
- Old age

13 What do you like most about the response to your activities from the people of Rosvik?

14 What do you like the least about the response to your activities from the people of Rosvik?

15 What is the relationship between the municipal council and the party branch in Rosvik?

16 Do you have representatives from your party who work for the municipality?

17 What role does the municipality play in your present way of operating?

18 Do you think there are any special disadvantages for a village party branch, which you do not find in larger towns and cities?

19 Do you think there are any special advantages for a

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village party branch, which you do not find in larger towns and cities?

20 How long has your branch been operating in Rosvik? Can you tell me about its history: when it began, how it was started, where it has been situated etc?

21 In addition to what it is doing now, what would you like to see your branch doing in Rosvik?

22 How important do you think your branch is to the people in Rosvik? For example, would the Rosvik people think their village to be a very different place without it?

23 Do you think there is a future for your branch in Rosvik?

- Do you think it will grow?
- Do you think the party branch will be here in 5, 10 years time?
- Do you think it will be operating in the same way in 5, 10 years time?

24 How important do you think the party branch is to Rosvik's future?



## **APPENDIX H**

### **School Questionnaire**

1 Name of Respondent:

2 Address:

3 Interviewer:

4 Date of Interview:

5 How many children attend the school?

6 How many grades are offered? Is there double streaming?

7 How long have you been associated with the school? Has this been in your present role?

8 Do you think the resources like teachers, library, buildings, school bus etc are good enough to fulfil your educational goals?

9 How are school policies made? Who makes them?

10 Can you describe for me your role in policy-making for:

- the school curriculum
- the future expansion of the school

- personnel: staffing decisions and staff development
- physical resources

11 How does the school communicate with the community?  
Is there a school paper that goes home to the parents?

12 Do you think there is good communication between the school and the home?

13 What do you see as the role of the home in the education of children?

14 How does the transportation system of the school work?

15 Is it effective or does it need improvement?

16 Is the school growing? Can you elaborate about present trends?

17 What are your own goals for the school's future?

18 Is there a 2, 5, 10 year future plan for the school?

19 What do you think about the plan by the municipality to bus the children of Grade 6 to Norrfjorden?

20 What do you think about the plan to offer grades 7, 8 and 9 in Rosvik?

21 How do you feel about the present arrangement for these children being educated in Norrfjorden?

22 Rosvik children over the age of thirteen have to go

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outside their community not only for education, but also for social activities, jobs etc. Working with young people do you see this as a problem for teenagers living in Rosvik?

- If so, what would you like to see done?
- Given the resources, what can be done?

23 What is your idea of a good education for the children of the school? Is it:

- the basics: reading, writing and arithmetic
- knowing how to use technology: a computer for every student
- learning values and standards, how to care for others, our environment etc.

24 Do you think the education they receive is preparing them for their future as parents, leaders? How?





# INDEX

- absolutes, 100, 103  
activists, 23  
activities, 6, 25, 27, 39,  
77, 85, 86, 120, 121,  
122, 124, 129, 131, 136,  
139, 140, 141, 143, 156  
Adler, 107, 116  
Adorno, 108  
adversities, 50  
aesthetics, 6, 42, 69, 74,  
128  
Africa, 23, 24  
agape, 99  
agricultural, 26  
alcoholism, 9, 18, 48  
aldermen, 113, 143  
Amsterdam, 58  
analysis, 4, 7, 8, 12, 15,  
17, 30, 32, 33, 40, 42,  
52, 74, 92, 95, 102, 111,  
144, 148  
anthropology, 41  
anti-elitist, 127  
anti-intellectualism, 108,  
121  
architecture, 23, 80  
arrowheads, 129, 130,  
136, 144, 145  
arrows, 92, 95, 98, 111,  
129, 130, 135, 138, 142,  
144, 145, 146, 147, 148  
art, 64, 108, 115, 142,  
143, 148  
Arvidsjaur, 2  
Ashby, 54, 77  
Asia, 103, 104  
Atlanta, 70  
Australia, 19, 24, 27, 97  
autocratic, 121  
autonomous, 60, 132  
Banathy, 58  
barbaric, 108  
Beach, 18  
beauty, 108  
Beer, 58, 62, 65, 66, 67,  
77, 117  
beliefs, 6, 8, 14, 28, 30,  
49, 55, 60, 61, 62, 67,  
71, 98, 100, 103, 104,  
143  
Bertalanffy, 5, 6, 44, 52,  
54, 57, 70  
Betel Church, 81, 87, 98,  
132  
Bible, 105  
Bloom, 107, 115  
Boulding, 48, 50, 58, 64,  
70

- 
- Bromwich, 100, 108  
 Brundtland, 11, 12  
 Brussels, 3  
 bureaucracy, 4, 9, 17,  
     114, 116, 117, 118, 121,  
     133, 145, 147  
 Buttimer, 26, 27, 32, 34,  
     35, 39, 41, 42, 47  
 Canada, 28  
 capitalism, 104, 105, 108  
 centralisation, 14, 25, 26,  
     27, 28, 119, 121  
 Christ, 68  
 Christianity, 42, 50, 98,  
     104, 105, 107  
 church, 5, 9, 16, 50, 58,  
     61, 67, 69, 76, 81, 85,  
     86, 87, 98, 102, 104,  
     105, 106, 113, 120, 123,  
     131, 139, 141, 144  
 civic, 7, 16, 23, 24, 25, 36,  
     38, 63, 74, 95, 98, 111,  
     114, 122, 130, 132, 133,  
     140  
 clergy, 61, 98, 104, 116  
 coercion, 16  
 coherence, 61  
 cohesion, 17, 102  
 Collados, 31, 40  
 collectivism, 16, 34  
 communism, 16, 109,  
     121  
 community, 2, 3, 5, 7, 8,  
     9, 11, 12, 13, 14, 15, 16,  
     17, 18, 19, 20, 21, 22,  
     23, 24, 25, 26, 27, 28,  
     29, 30, 31, 32, 34, 35,  
     36, 37, 38, 42, 44, 48,  
     51, 63, 64, 66, 68, 69,  
     76, 77, 78, 79, 80, 81,  
     85, 87, 90, 92, 95, 96,  
     97, 98, 100, 101, 102,  
     103, 104, 105, 106, 111,  
     112, 114, 116, 117, 118,  
     120, 121, 122, 123, 124,  
     125, 126, 127, 132, 133,  
     134, 135, 136, 138, 139,  
     140, 141, 142, 143, 144,  
     145, 146, 147, 148  
 competence, 7, 20, 56,  
     60, 89, 90, 91, 92, 96,  
     111, 113, 127, 128, 132,  
     133, 134, 140, 142, 143,  
     145, 155  
 conservative, 107  
 co-operatives, 25, 28  
 corporations, 2, 50  
 credal, 74, 77, 87, 90  
 crime, 105  
 crisis, 2, 4, 43, 45, 64, 66,  
     90, 96, 99, 105, 124,  
     132, 133  
 culture, 5, 10, 12, 13, 14,  
     18, 22, 30, 34, 35, 77,  
     96, 100, 101, 107, 108,  
     109, 121, 127, 142, 143  
 cutbacks, 2

- 
- de Raadt, J. D. R., 63,  
65, 68, 95, 117, 119,  
145
- decision-making, 14, 18,  
21, 22, 86, 116
- democracy, 50, 81, 85,  
87, 112, 120, 123, 127,  
134
- dependency, 9, 113, 119,  
121, 122
- depopulation, 79
- design, 4, 13, 39, 43, 50,  
51, 66, 67, 71, 135, 136,  
144, 145, 147, 148
- determinative, 5, 9, 48,  
54, 135
- deterministic, 55, 57, 67
- disadvantaged, 18
- divorce, 125
- Dodds, 30, 31, 34, 40, 41
- domain, 7, 63, 65, 74, 95,  
130, 132, 134
- domains, 7, 63, 74, 95,  
130, 132
- Dooyeweerd, 5, 6, 57,  
58, 59, 60, 61, 62, 63,  
67, 68, 70
- ecology, 11, 13, 27, 30,  
41, 74
- economics, 2, 3, 4, 6, 10,  
11, 12, 13, 14, 16, 17,  
18, 19, 23, 24, 25, 26,  
27, 28, 29, 30, 31, 32,  
33, 38, 40, 41, 49, 60,  
64, 69, 74, 77, 80, 82,  
86, 90, 104, 105, 106,  
114, 116, 117, 118, 120,  
127, 128, 142
- ecumenism, 41
- education, 1, 2, 6, 7, 12,  
13, 14, 16, 19, 27, 32,  
34, 35, 36, 37, 38, 39,  
40, 47, 48, 51, 77, 80,  
82, 86, 87, 89, 90, 91,  
92, 96, 97, 98, 99, 101,  
102, 104, 106, 111, 113,  
114, 115, 116, 117, 118,  
119, 121, 124, 125, 126,  
127, 128, 129, 130, 131,  
132, 133, 134, 138, 140,  
141, 142, 143, 144, 145,  
146, 147, 148, 155, 156
- Edwards, 38
- egalitarianism, 15, 107
- elitism, 108, 116, 127
- elitist, 98
- emancipation, 13, 18
- empowerment, 13, 18
- England, 21, 102
- enlightenment, 50, 103
- entrepreneurship, 3, 25,  
82, 126
- environment, 4, 10, 11,  
12, 17, 21, 23, 24, 26,  
30, 31, 32, 37, 52, 55,  
66, 97, 99, 102
- epistemology, 9, 48, 50,  
58, 59, 62, 63

- 
- equality, 55, 107  
 Ericsson, 128  
 ethics, 5, 6, 7, 13, 14, 23,  
     32, 33, 34, 35, 40, 41,  
     42, 43, 44, 45, 47, 49,  
     51, 57, 59, 61, 69, 70,  
     74, 77, 86, 90, 91, 92,  
     96, 97, 98, 99, 100, 101,  
     102, 103, 104, 105, 106,  
     121, 130, 131, 133, 134,  
     136, 138, 139, 142, 143,  
     144, 146, 147, 148, 155  
 ethnicity, 100  
 Europe, 16, 17, 50, 108,  
     115, 128, 142  
 excellence, 41, 107, 121,  
     128, 133  
 factor, 7, 8, 9, 30, 78, 89,  
     90, 91, 92, 95, 98, 111,  
     129, 130, 132, 133, 134,  
     135, 136, 138, 142, 145,  
     147, 148, 155, 156  
 faith, 9, 42, 100, 106, 122  
 family, 2, 5, 9, 15, 16, 19,  
     27, 31, 34, 35, 38, 58,  
     61, 64, 66, 67, 68, 69,  
     76, 77, 79, 80, 81, 86,  
     96, 97, 98, 99, 101, 102,  
     107, 109, 112, 113, 114,  
     116, 118, 119, 122, 124,  
     125, 126, 127, 128, 130,  
     133, 138, 139, 141, 146  
 farming, 26, 27, 28, 123  
 Fascism, 50  
 fetishism, 40  
 Finland, 81  
 Florida, 18  
 fragmentation, 40, 45,  
     46, 52, 89, 103, 117,  
     118  
 framework, 57, 58, 74,  
     90, 92, 103, 114  
 Franklin, 98  
 Geis, 17  
 gender, 100  
 Georgia, 70  
 globalisation, 25, 26, 37  
 GNP, 33, 64  
 God, 42, 45, 46, 50, 59,  
     62, 63, 65, 67, 68, 100,  
     104  
 government, 2, 3, 11, 14,  
     16, 17, 18, 19, 20, 21,  
     22, 24, 25, 27, 28, 67,  
     69, 79, 80, 82, 90, 97,  
     115, 116, 117, 118, 119,  
     122, 127, 135  
 grading, 2, 79, 114, 115,  
     117, 128  
 Greek, 62, 65, 99  
 guarantor, 51, 67  
 handouts, 3  
 Hauer, 20  
 health, 80, 82, 117, 119,  
     121, 124, 132  
 Hebraic, 65  
 Hebrew, 65, 70, 100  
 Henderson, 58, 60, 62

- 
- heritage, 5, 7, 13, 15, 90,  
 92, 97, 98, 104, 105,  
 107, 109, 129, 130, 133,  
 134, 142, 143, 148, 155  
 Higgins, 101, 109  
 historic, 38, 60  
 history, 3, 15, 38, 39, 40,  
 68, 74, 87, 90, 97, 106,  
 109, 115, 119, 130, 134,  
 143, 155  
 holistic, 36  
 homeless, 9  
 Homeowners, 79  
 homo economicus, 33,  
 34  
 homo sustinens, 34, 41  
 homomorphism, 76  
 hopelessness, 121  
 Horkheimer, 108  
 household, 69, 84, 85, 86  
 household (Hebrew), 69  
 humanism, 13, 41, 47,  
 70, 104  
 Huntford, 16  
 Huxley, 108  
 ideology, 122  
 Illinois, 23  
 incompetence, 128, 129,  
 133  
 individualism, 15, 16, 17,  
 121  
 industrialisation, 3, 5, 13,  
 14, 19, 28, 69, 82, 104,  
 107, 114, 120, 121, 135  
 inequality, 23  
 informatics, 66  
 information-overload, 39  
 informatory, 74  
 inner-city, 23  
 innovation, 2, 36, 38, 39,  
 115  
 innumeracy, 114  
 instability, 29, 73, 105,  
 106  
 institutionalisation, 5, 7,  
 16, 19, 30, 35, 36, 37,  
 48, 98, 103, 132  
 intellect, 6, 7, 32, 34, 42,  
 50, 51, 60, 63, 64, 74,  
 76, 95, 100, 103, 107,  
 108, 128, 132, 134  
 interconnection, 4, 77  
 interdependence, 56, 65,  
 78  
 interviews, 39, 73, 84, 85,  
 86, 88, 89, 96, 97, 130  
 Ireland, 26, 40  
 Irish, 26  
 isomorphism, 76  
 items, 88, 89, 91, 92, 93  
 Ivanov, 58  
 Jackson, 31  
 jobs, 19, 24, 28, 68, 82,  
 86, 114, 118, 126, 134  
 journalism, 61, 108  
 Judeo-Christian, 71  
 juridical, 60, 74  
 justice, 99, 106

- 
- Kalsbeeck, 59  
 Kast, 54, 56  
 Kinsley, 29  
 knowledge, 1, 6, 7, 14,  
     23, 38, 39, 41, 59, 60,  
     76, 96, 99, 100, 114,  
     115, 125, 129  
 Kutzmark, 17  
 Kuyper, 61  
 labour, 17  
 law, 53, 57, 58, 60, 62, 65,  
     67, 99, 100, 103, 116  
 law-giving, 63  
 Lazlo, 58  
 leadership, 8, 22, 23, 24,  
     25, 36, 38, 76, 87, 88,  
     89, 98, 102, 105, 112,  
     113, 115, 117, 120, 121,  
     122, 123, 124, 125, 129,  
     133, 134, 136, 141, 143,  
     145  
 life, 2, 5, 6, 7, 11, 14, 16,  
     17, 20, 21, 22, 23, 24,  
     26, 27, 29, 30, 31, 32,  
     33, 34, 35, 40, 41, 43,  
     45, 49, 51, 52, 55, 56,  
     57, 58, 59, 60, 61, 62,  
     63, 64, 65, 66, 67, 68,  
     70, 71, 74, 77, 82, 85,  
     86, 97, 98, 99, 100, 103,  
     104, 107, 108, 116, 118,  
     142, 143, 146, 147  
 link, 7, 8, 29, 33, 37, 40,  
     50, 57, 76, 77, 78, 91,  
     92, 95, 98, 102, 104,  
     109, 129, 135, 139  
 logos, 63  
 London, 128  
 Lorendahl, 25, 28  
 love, 9, 48, 64, 70, 77, 99,  
     101, 106, 107, 109  
 Luleå, 78, 85, 132  
 management, 5, 12, 21,  
     22, 24, 25, 30, 37, 54,  
     62, 65, 66, 69, 70, 85,  
     86, 90, 113, 117, 120,  
     132, 141, 145  
 manipulation, 16, 17, 19,  
     67, 90, 108  
 mankind, 41  
 marginalisation, 121  
 Marien, 1, 10, 12  
 marital, 79  
 Marklund, 3  
 Marxist, 108  
 matrix, 73, 91, 92  
 mechanistic, 4, 6, 26, 30,  
     31, 44, 52, 53, 57, 67  
 media, 16, 39, 108  
 mentality, 3, 121  
 metaphysical, 103, 104  
 metasystems, 65  
 method, 4, 8, 66, 67, 71,  
     73, 145, 147  
 methodology, 4, 8, 9, 13,  
     47, 49, 50, 56, 62, 63,  
     64, 66, 67, 68, 71, 73,  
     145, 147

- 
- mid-life, 2  
 mindscapes, 27, 35, 36  
 mismanagement, 47  
 misrepresentation, 48  
 missionary, 81  
 Mitroff, 4, 44  
 Mitroff-Churchman, 47  
 modalities, 5, 6, 7, 57, 58, 62, 63, 67, 68, 69, 70, 71, 74, 76, 77, 78, 85, 86, 90, 91, 92  
 model, 39, 44, 54, 57, 62, 66, 70, 123, 144, 147, 148, 156  
 modernisation, 107  
 modernism, 4, 43, 107, 108  
 Molotov, 104  
 moral, 15, 32, 33, 34, 51, 66, 67, 69, 98, 101, 102, 104, 106, 108, 121, 124, 128  
 morphology, 53  
 Moscow, 101  
 multi-modal, 5, 6, 7, 8, 9, 44, 62, 63, 64, 65, 66, 67, 68, 69, 70, 73, 76, 77, 80, 90, 99, 145, 147  
 multi-perspective, 52, 54  
 municipalities, 9, 22, 82, 116  
 municipality, 1, 2, 20, 22, 79, 80, 81, 85, 86, 87, 88, 89, 99, 114, 116, 117, 118, 128, 132, 133, 141, 143  
 music, 18, 51, 102, 106, 131, 142, 148  
 neighbourhood, 17, 18, 39, 64, 140  
 neo-Calvinist, 61  
 neo-classical, 30  
 neo-Kantian, 59  
 Netherlands, 61  
 newspeak, 17  
 Nietzsche, 100  
 Nixon, 36, 37, 38  
 non-believers, 59  
 non-human, 41  
 non-humanistic, 47  
 non-political, 122  
 non-reductionism, 65, 66, 70  
 non-standardised, 84, 88  
 non-systems, 45  
 non-Western, 100  
 normative, 4, 5, 6, 7, 8, 9, 12, 13, 14, 27, 30, 32, 33, 34, 35, 41, 44, 45, 46, 47, 48, 49, 55, 57, 58, 59, 62, 63, 66, 69, 71, 76, 78, 80, 99, 134, 135, 147  
 Norrbotten, 3, 102  
 Norway, 115  
 operation, 58, 74, 85, 86, 90, 113, 136, 138, 139, 142, 143, 144, 145, 156

- 
- Oregon, 44  
 organisation, 5, 32, 38, 52, 53, 54, 55, 56, 59, 65, 70, 73, 80, 84, 88, 99, 107, 108, 111, 113, 126, 140  
 organism, 52, 54, 55  
 organismic, 44, 52, 55, 70  
 Ortega, 108  
 parent, 80, 81, 87, 88, 99, 128, 141  
 Parker, 32, 33, 34  
 Parsons, 127  
 pastor, 86, 88, 105  
 paternalism, 19, 20  
 Payne, 9  
 perspectivism, 53  
 philosophy, 6, 12, 14, 32, 40, 46, 54, 57, 58, 59, 61, 62, 65, 100, 108  
 Piccone, 115, 116, 118, 121, 126  
 Pipes, 122  
 Piteå, 79  
 planning, 21, 23, 39, 50, 51, 67, 80, 97, 99, 106, 112, 113, 117, 130, 133, 141  
 poetry, 51  
 policy, 12, 26, 27, 28, 67, 115, 127, 134, 155  
 political party, 9, 81, 85, 86, 103, 105, 112, 120, 123  
 politics, 4, 9, 13, 14, 16, 17, 18, 38, 60, 61, 80, 81, 85, 97, 100, 107, 108, 109, 114, 119, 120, 122, 127, 128, 129  
 polls, 19  
 pollution, 17, 43  
 Portland, 44  
 positivism, 13, 45, 46, 60  
 poverty, 38, 44  
 pragmatism, 80, 116  
 pre-modern, 107  
 pre-schools, 119  
 prophet, 65, 100  
 pseudo-intellectualism, 108  
 purposeful, 55, 68  
 Queensland, 24  
 questionnaires, 84, 85  
 radicalism, 16  
 rationalism, 4, 33, 60  
 Raven, 31, 40  
 Reardon, 23  
 recursive, 65, 67  
 reductionism, 53, 57, 60, 62, 64, 67  
 religion, 5, 7, 9, 13, 25, 41, 42, 50, 51, 58, 59, 60, 64, 67, 70, 87, 90, 92, 97, 98, 99, 102, 103, 104, 105, 106, 108, 125,



- 
- 131, 134, 143, 144, 147,  
148, 155
- responsibility, 4, 8, 23,  
34, 41, 42, 49, 61, 64,  
101, 119, 120, 122, 126,  
135, 139, 141, 147
- revivalist, 97
- Rheedlin, 39
- Rosenius, 97
- Rosenzweig, 54, 56
- Rosvik, 1, 2, 7, 8, 9, 71,  
73, 74, 76, 78, 79, 80,  
81, 82, 84, 85, 86, 87,  
88, 89, 92, 95, 96, 97,  
98, 99, 100, 102, 105,  
106, 109, 111, 113, 114,  
116, 117, 119, 120, 122,  
123, 124, 126, 128, 129,  
130, 131, 132, 133, 134,  
135, 136, 138, 139, 140,  
141, 142, 143, 144, 155,  
156
- Russia, 16, 106, 109,  
121, 122, 131, 139
- Ryn, 14, 15, 20, 21, 32,  
34, 118, 128
- sacrifice, 6, 69, 97, 101,  
128, 130, 138, 139
- Sandkvist, 97
- Schmidt, 13, 24
- school, 1, 2, 5, 7, 28, 36,  
37, 38, 61, 66, 67, 68,  
69, 76, 77, 79, 80, 81,  
85, 86, 87, 88, 89, 90,  
96, 99, 101, 102, 106,  
109, 111, 113, 114, 116,  
117, 118, 119, 120, 125,  
126, 127, 129, 130, 132,  
133, 134, 138, 139, 141,  
142, 143, 144, 145, 146,  
147, 148, 155, 156
- Schutte, 13, 23
- science, 4, 5, 6, 11, 12,  
14, 30, 32, 39, 40, 41,  
42, 43, 44, 45, 46, 47,  
48, 49, 50, 51, 52, 53,  
54, 56, 57, 58, 59, 60,  
61, 62, 63, 64, 65, 66,  
67, 70, 71, 77, 100, 101,  
102, 103, 108, 115, 121,  
129
- Scotland, 21
- Scott, 98, 107, 115
- Scottish, 36
- secularism, 59, 67, 103,  
104, 106
- self-determination, 34
- self-direction, 113
- self-organise, 113, 126,  
140
- self-reliance, 9
- self-sacrifice, 99
- self-sacrificial, 99
- self-sufficient, 59
- Seller, 18, 19
- Siebenhuner, 33, 34, 41
- Singapore, 104
- Smailes, 27, 28

- 
- SmCube, 7, 73, 88, 91, 136
- Smith, 21, 24
- sociability, 32
- social, 5, 6, 7, 9, 10, 12, 13, 14, 15, 16, 17, 18, 19, 20, 23, 24, 26, 27, 29, 30, 31, 35, 37, 39, 40, 41, 42, 46, 48, 53, 54, 55, 56, 57, 58, 61, 64, 65, 66, 67, 68, 69, 71, 74, 76, 77, 79, 80, 81, 82, 85, 87, 90, 96, 101, 103, 105, 106, 107, 108, 112, 117, 118, 119, 121, 123, 124, 125, 127, 133, 135, 136, 138, 140, 141
- socialism, 16, 104, 105, 106, 119, 128
- sociology, 9, 39, 53, 127
- Sorenson, 24, 25
- sports, 76, 81, 85, 86, 87, 102, 113, 119, 120, 123, 139
- Stalin, 104
- state, 3, 6, 13, 15, 16, 20, 35, 52, 58, 61, 70, 81, 85, 90, 98, 100, 101, 103, 104, 105, 112, 113, 114, 118, 119, 120, 121, 122, 125, 128, 132, 134, 138, 155
- statism, 7, 90, 92, 111, 113, 124, 132, 133, 134, 141, 144, 145, 147, 155
- Stockholm, 3, 105, 107
- Strijbos, 53, 54
- suicide, 18, 32
- sustain, 8, 14, 15, 29, 32, 33, 66, 95, 143
- sustainability, 78, 87, 89, 92, 111, 117, 129, 130, 132, 133, 134, 135, 136, 138, 142, 143, 145, 147, 155
- sustainability, 5, 7, 8, 11, 12, 13, 14, 15, 17, 21, 22, 23, 25, 27, 29, 30, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 47, 68, 95
- Sweden, 18, 19, 119, 121
- systemic, 10, 40, 47, 51, 70, 74
- Talcott, 127
- Tan, 103
- taxpayer, 114
- Taylor, 16, 103, 121, 122
- teaches, 23, 36, 37, 38, 40, 67, 87, 96, 98, 99, 101, 102, 109, 113, 116, 117, 124, 125, 126, 127, 128, 130, 133, 141, 146, 147
- technology, 2, 4, 10, 20, 26, 27, 37, 39, 49, 50,

- 
- 56, 76, 107, 115, 116,  
118, 135, 145
- teleology, 53
- theism, 6, 44, 58
- theology, 6, 46, 58, 61, 62
- totalitarianism, 15, 16
- tourism, 97, 109, 142
- traditions, 103, 104, 106,  
143
- transcendental, 103
- trans-disciplinary, 39, 41,  
44, 61, 70
- transportation, 82, 86
- tribal, 13
- Tritter, 99, 101
- Turner, 18, 21, 32
- UK, 21, 28, 31
- unemployment, 2, 9, 79
- university, 21, 23, 38, 39,  
40, 87, 99, 100, 101,  
102, 107, 115, 119, 128,  
141
- unsustainable, 32
- unsystemic, 44, 46, 64
- USA, 19, 23, 39, 97, 104,  
107, 126, 127
- USSR, 16, 103, 123
- utilitarianism, 6, 13, 25,  
33, 114, 115
- value-free, 103, 104
- values, 20, 35, 36, 50, 54,  
59, 66, 67, 70, 71, 98,  
99, 102, 103, 109, 127,  
130
- viability, 42, 62, 64, 65,  
66, 67, 69, 71
- Viable System Model,  
65, 66
- village, 1, 2, 7, 8, 9, 25,  
28, 63, 78, 79, 80, 81,  
82, 84, 85, 86, 87, 88,  
89, 97, 98, 99, 106, 112,  
113, 116, 117, 118, 119,  
122, 123, 126, 128, 129,  
131, 132, 133, 134, 135,  
136, 138, 139, 140, 141,  
142, 143, 145, 146, 147,  
148, 155
- violence, 16
- virtue, 100
- vision, 16, 17, 20, 35, 38,  
48, 63, 67, 71, 90, 98,  
124, 134, 136, 143, 147,  
155
- vocation, 39, 66, 68, 69,  
77, 102
- volunteer, 5, 16, 20, 23,  
25, 120, 138, 139
- Volvo, 19
- Voroshilov, 104
- Williams, 106
- Wilson, 18, 19, 20
- wisdom, 45, 107
- Wolf, 20, 38
- worldview, 52, 65, 71
- Wray, 20, 22
- York, 39, 101

---

youth, 18, 19, 36, 38, 80,  
97, 99, 101, 107, 109,

116, 124, 125, 130, 138,  
139, 141