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Abstract

With the proposed dissertation, I want to contribute to sustainable development by examining how a departure from the prevailing discourse can help to reframe the overall approach and thus to find successful alternative strategies. The prevailing discourse usually takes place in the spectrum between the modernist eco-efficiency and the anti-modernist sufficiency strategies. However, the potential of both (and even of a compromise between them) has limited viability due to absolute economic and population growth and lack of voluntary renunciation. Too often, we are so involved in this discourse that we forget to question the overall approach, to which the result of the discourse is expected to contribute. We lose sight of the wood for the trees. Yet, there are communities who have departed from these preconceived options between efficiency and sufficiency and who found unconventional but highly successful new approaches. I coin these alternative approaches “Ulysses Innovations” because they bear resemblance to the innovative solutions proposed by Ulysses in the Trojan War – beyond weaponry and perseverance.

In this study, I will examine this phenomenon by developing a theory of Ulysses Innovations for sustainable development and to investigate two successful cases through a hermeneutic approach in order to better understand how and why these innovations emerged. An ideal outcome would be a set of arguments that increases the visibility of alternative approaches for sustainable solutions in communities. I will also produce a description and an analysis of the innovation process and of the environment that made it possible in two cases that may serve as a source of inspiration and recommendation for other communities. The Earth-Summit “Rio +10,” to be held in 2002, is likely to show the necessity of such alternative approaches to which this dissertation intends to contribute.

Introduction

Homer and Virgil report how the Greek army tried to conquer Troy for ten years with war technology and perseverance. However, their attempts remained fruitless until they followed Ulysses' creative proposal to pursue their goal in a completely different way, i.e. to build the Trojan Horse (See Virgil 1951, book 2 and Homer 1950). Modern society is in a similar predicament: We have been trying for many years to reach sustainability by using technology and preaching renunciation without a major breakthrough. The former concept is tantamount to the *eco-efficiency approach* and its modern¹ premises, the latter one is often referred to as the *sufficiency approach* and is based mostly on anti-modern² ideas.

The efficiency approach calls for new technologies that create more output with the same amount of input. However, several factors limit the hope suggested by this technophilic approach. For example, an increase in efficiency by 100% is consumed by a 3% annual growth within 37 years. According to the "rebound effect" (Radermacher 1999), increased efficiency even leads to a moral justification of increased consumption. In addition to improving existing technologies (incremental innovation), it is also possible to create completely new ones (radical innovation). Hydrogen-fueled cars are such an example but even those cannot prevent noise, accidents, sprawl, "asphalt-deserts," etc.

The technophobic³ sufficiency approach suggests a change of lifestyles to ensure satisfaction with less consumption. Although this approach is sometimes classified as "social innovation," I would call it "social change" because many sufficiency-related recommendations revive traditional lifestyles rather than creating generically new ones. For most people, this implies renunciation,

¹ In the teleological sense of completing the proper path of science (see Moore 2001, 13).

² A pre-industrial state in harmony with nature.

³ Interestingly, the 1999 compendium of the Institute for Social Inventions is entitled "Social Dreams & *Technological Nightmares*"; emphasis added. (Albery and Wienrich 1999)

which is why Katrin Gillwald claims that it is “not very likely that the majority of the population would practice strict ecologic lifestyles” (Gillwald 1995, 36).

The prevailing discourse concerning sustainability usually takes place in the spectrum between these two poles. We are often so involved in this discourse about the right strategy for the apparently self-evident problem that we forget to question the overall approach. We are stuck in our effort to find efficient technologies and to preach sufficiency-lifestyles that we lose sight for completely different approaches. Yet, there are communities who departed from these preconceived options between efficiency and sufficiency and who found unconventional but highly successful new approaches. I coin these alternative approaches “Ulysses Innovations⁴” because they bear resemblance to the innovative solutions proposed by Ulysses in the Trojan War – beyond weaponry and perseverance. The proposed dissertation wants to examine this phenomenon and to investigate two successful cases to better understand why and how these innovations emerged. This interest leads to the following research question.

Research Question

Under what circumstances and through what processes can communities find alternative approaches to sustainability?

Background

The following section attempts to present briefly the literature concerning individual creativity, technological innovation, social innovation and radical innovation that is salient to this study. Given the topic of this dissertation, previous scientific claims will be carefully scrutinized.

⁴ My use of Ulysses as a model for the approach outlined in this dissertation has been criticized because Ulysses connotes conquest. Our attempt toward sustainability, however, does bear resemblance to conquest. It tries to overcome unsustainable structures, practices and dilemmas. In short, Ulysses is an appropriate icon for this way of thinking, through which it may become semantically graspable.

Alfred Whitehead (1943) is commonly credited with the first use of the word “creativity” as it is used today (Johan Siebers, personal email of Sept. 5 2001). Many authors have since focused on the idea of ‘the genius’ and on the variables that foster individual creativity. Robert Sternberg (1999) and Eleanor Glor (1999) outline the empirical approaches to and the applied research on this question, respectively. The most influential authors in this field seem to be David Feldman, Howard Gardner and Mihaly Csikszentmihalyi. The latter drew an analogy between evolution and the emergence of new ideas (Csikszentmihalyi 1994, 160). The heuristic model mentioned in my second working hypothesis, below, reflects this analogy. Csikszentmihalyi also challenged the colloquial ‘great man theory’ by introducing a concept that identifies domain, individual, field and interaction as crucial factors for creativity. The proposed dissertation strives to add to these works by putting them in the specific context of sustainable community development.

The vast majority of innovation-related research focuses on economically exploitable technical innovation. Joseph Schumpeter’s notions of the creative entrepreneur and of ‘creative destruction’ are early examples of theoretical approaches. Many scholars have since published about technical innovation and the environments fostering it. Many of these ideas meet in Charles Edquist’s seminal work “National Systems of Innovation” (1997), which has influenced the formulation of the first working hypothesis. Frank Moulaert and Frank Sekia (2000) summarize the discussion about “Creative Milieus,” i.e. local conditions fostering innovation, and they put it in the context of sustainability. Peter Nijkamp (1990) also addresses urban innovation and sustainability but only in its economic dimension. Friedrich Hinterberger and Jörg Meyer-Stamer’s (1997) notion of sustainability is more holistic, but their focus on national policy skirts my research question. Paul Hawken (1999), Friedrich Schmidt-Bleek (1998), Stuart Hart (1997) and Ernst-Ulrich von Weizsäcker (1997) address innovation and sustainability within the framework of the *efficiency approach*, whose claims are questioned by this dissertation.

A relatively small body of literature addresses social innovation. An early proponent of social innovation, William Ogburn (1923, 1937), prepared this academic field, but it remained more or less idle until the rise of social movements in the 1960s. Afterwards, the topic disappeared under the lid of economic usability, which made Rip (1993) complain that “social researchers tend to ignore social innovation.” The brevity of this academic discussion enabled Gillwald (2000) to write quite a complete overview of this field on only 50 pages, which contain a few references to sustainability. Peter Hall and Charles Landry’s “Innovative and Sustainable Cities” (1997) focuses more deeply on sustainability. In “The Creative City,” Landry (2000) develops a revealing matrix to systematize the circumstances that foster urban creativity. My dissertation tries to amend this thesis conceptually, by adding the idea of *departure from prevailing discourses*.

Even though “[f]or almost 30 years, innovations have been characterized as radical or incremental [...] the construct [of radical innovation] has not been precisely defined” (Green et al. 1995, 203). Schumpeter (1934) refers to “Basisinnovationen,” Robert Grudin (1990) chooses the term “*real innovations*,” and Perry Glasser (1999) identifies “discontinuous innovation.” Regardless of terminology, there seems to be an unspoken consensus that a radical innovation is not merely an improvement of an existing concept but the introduction of a completely new one (Hauser 1999; Grupp and Maital 1998). This understanding is tantamount to the notion of a *Paradigm Shift* (Kuhn 1970) and it is an integral criterion of Ulysses Innovations because they do not seek compromises within the prevailing discourse but rather depart from it altogether. Empirical research on radical innovation has mostly focused on its technical manifestation. The Rensselaer Polytechnic Institute, for example, has established a special Research Group for Radical Innovation (Wilson 2000). The mental mechanisms behind radical innovation are also subject to academic research. Feldmann, Csikszentmihalyi and Gardner (1994) dedicated some thoughts to this issue and David Perkins (2000) made a major contribution with his “The art and logic of breakthrough thinking.”

Although much research has been conducted about creativity and technical innovation, fewer publications can be found about radical innovation and about social innovation. The synergistic combination of all of these issues in the context of sustainability remains underresearched. Landry and Gillwald touch on these issues but both explicitly state the enormous need for further research.

The selected cases

The search for appropriate case studies focused on best practice databases (esp. www.globalideasbank.org & www.bestpractices.org), on the study of the literature and on personal communication with Charles Landry and other peers and experts in that field. This search produced the following list of potential candidates for in-depth case studies. Soldier's Grove (USA), Hasselt (Belgium), Curitiba (Brazil), Fürstfeldbruck (Germany), Chattanooga (USA), Helsinki (Finland), Huddersfield (UK), IBA Emscher Park (Germany) and Project Row Houses, Houston (USA).

To further narrow down this list, I set up the following criteria, which are “interrelated with and directed by the research problem” (Erlandson et al. 1993, 56). The cases should be exemplary of what I call “departure from the prevailing discourse,” they should be counterintuitive to the conventional notion of progress, they should have made a significant step toward sustainability and they should have positive ecologic, social and economic effects. Furthermore, the cases to be selected should cover many planning-related sustainability issues such as transportation, urban renewal, economic development, creation of jobs, landscape planning and environmental protection. The selected cases should also represent a diversity of the circumstances that fostered the creative solution and of the process that led to it. Lastly, the cases should be methodically comparable in terms of time-frame and scale, they should be accessible and I have to be able to understand the language spoken there. This selection procedure revealed Hasselt and Fürstfeldbruck as the two best-suited case-studies for this dissertation.

During the 1980s, traffic problems in Hasselt, Belgium, had escalated, increasingly demanding a fundamental solution. The planned new loop around the city represented the trajectory of the conventional notion of progress. A technological innovation may have been the application of low-friction-asphalt or a high-tech traffic steering system. A social, sufficiency-based approach may have been an awareness campaign to persuade people to use their bike instead of their cars. Neither of these options was chosen. Instead, the newly elected mayor, who previously was the owner of a coffee-house chain and who is reported to be a very charismatic person, proposed to narrow the existing loop, to massively increase public transportation services and to make them free to everyone. As a result, the use of public transport rose by 800% and the solution was less expensive than the construction of the previously proposed new loop would have been. (See appendix 2 for further information)

In the second case, the German county of Fürstfeldbruck, global agricultural politics has caused more and more farmers either to quit or to intensify their farming operations with serious economic or ecologic consequences. An example of a technophilic approach to these problems may have led to the application of genetically modified organisms. A non-technological option may have been an awareness campaign to persuade people to make the extra effort and the additional expenses of buying their groceries from organic farmers. As was the case in Hasselt, such options were not chosen in Fürstfeldbruck. Instead, a group of church representatives, farmers, craftsmen, environmentalists and consumers gathered to search for a loophole out of this dilemma. They came up with the idea to create a new trademark, BRUCKER LAND™, which is granted only to products produced in the county, under very strict ecological standards, and which can be sold only within the county. The concept has helped avoid tons of pesticides and fertilizers, keep jobs and revenues within the county and it created 20 new jobs. (See appendix 2 for further information)

In both cases, the salient events happened in the mid 1990s, so that a comparably settled interpretation can be expected today. Interviews were conducted at both sites in order to verify that these sites would be appropriate, “to gain permission for entrée and to establish trust between researcher and respondents” (Harris, quoted in Erlandson et al. 1993, 55). Representatives of both cases also expressed interest in participating in the inquiry

Some other cases of remarkably creative sustainability strategies will be examined as reference cases to challenge the findings from Hasselt and Fürstenfeldbruck, and to enrich them through anecdotal evidence. I will not visit all of these reference cases in person, but I will take into consideration important literature about them.

Colombia, Nuevo León, Mexico: A small town in northern Mexico is being developed into a transportation hub for NAFTA trade. Its population is expected to grow from currently 600 inhabitants to about 300,000 over the next 30 years. According to the official rhetoric, Nuevo Colombia is supposed to become a *sustainable* city. (See <http://www.fidenor.com.mx>)

Soldier's Grove, Wisconsin, USA: In 1978, the town of Soldier's Grove decided to stop fighting the futile battle against the floods of the Kickapoo river, and moved itself to higher grounds. “In rebuilding, the community incorporated energy conservation and passive solar design, resulting in a reinvigorated local economy and a model community of energy efficiency.” (See <http://hem.dis.anl.gov/eehem/95/950108.html>)

Curitiba, Brazil: All reports about Curitiba center around Jaime Lerner, its charismatic, innovative and asserting mayor. He is said to have turned the city into an example of sustainability through small, inexpensive and participatory methods. The results are efficient bus systems, mobile schools for the poor, a recycling rate of over 60% and a green city with ample pedestrian zones. (See <http://www.globalideasbank.org/BI/BI-262.HTML>)

Working hypotheses

A working hypothesis is a tentative answer to a research question according to the pre-research state of personal experience, the relevant literature and theoretical reasoning (Lincoln and Guba 1985, 124). It is a “general guiding notion” (Erlandson et al. 1993, 60) for the entry in the hermeneutic process and will be continuously updated to reflect the understanding and insight gained during the research phase. This procedure allows previous versions of the working hypothesis and new findings to inform each other in a hermeneutic sense and to eventually close in on a most consistent understanding of the subject matter as a final thesis. The methodology section (pages 10-14) shows how I intend to assure this disciplined flexibility. The following initial working hypotheses have been developed as tentative answers to the two parts of the research question:

1) Under what conditions ... can communities find alternative approaches to sustainability?

No single condition is sufficient to trigger the finding of alternative approaches to sustainability. Rather, it necessitates a constellation of several conditions and only few of them are necessary conditions.

Conditions in this sense can be external factors, characteristics of individuals and community-internal factors. The graphic in Appendix 1 shows these categories and their disaggregated conditions, which I consider important with my current pre-understanding.

2) Through which processes can communities find alternative approaches to sustainability?

The process through which communities can find alternative approaches to sustainability can be described in a heuristic model with elements that center around communicative actions, which are influenced by the conditions mentioned in the working hypothesis (1).

The graphic in Appendix 1 shows this heuristic in a flow-chart form. This chart is a projection based on my current pre-understanding.

Expected Outcomes and Potential Benefits

This research project is expected to have the following two main outcomes.

1) A description of one or more constellations of conditions that increase the likeliness of communities to find alternative approaches to sustainability. This may serve as a mirror in which other communities can reflect upon their own situation and as a source for applicable recommendations.

2) A heuristic description of the process, through which communities can find alternative approaches to sustainability. This may help to identify strengths and weaknesses of the elements of this process in other communities.

Methodology

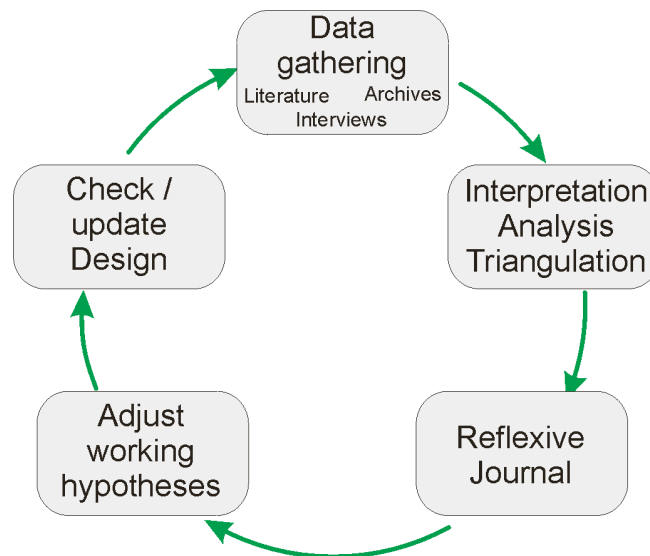
My personal ontological premise is that an objective reality exists. I see the global atmospheric level of Carbon dioxide, for example, as a manifestation of this reality. However, I think that humans do not have an awareness of *all* manifestations of this reality and that those manifestations we do take notice of (which we call ‘facts’) do not bear only one ‘proper’ intrinsic meaning for humans. One implication of these premises for the proposed dissertation is that human beings can not only focus their perception on different facts, but also interpret them differently. (Beck 1992; Mugerauer 1981, 64) The combined result of these two effects can lead to different and sometimes incompatible perceived realities among different people and at different times.

I believe that Cartesian procedures are a valid epistemological means to approach ‘facts’ about known and/or expected manifestations of reality but they fail to detect unexpected manifestations. In addition, I think that our challenge as researchers and humans is not completed when we know all these facts. Understanding people’s interpretations of the facts that are visible to them is an indispensable complementary step. This task is best performed through a hermeneutic interaction between one’s own interpretation of facts, other interpretations of the same facts, one’s own interpretation of other interpretations and others’ interpretations of one’s own interpretation

(member checks); and so forth. The primary data I will use to analyze this process are language-based statements, such as newspaper articles, minutes of meetings, or actively solicited interviews. I will take it as an epistemological criterion to stop this hermeneutic “process of interviewing, analyzing and identifying new respondents [when] information becomes redundant.” (Erlandson et al. 1993, 124)

Methods

In this study, I will pursue a hermeneutic approach in a Gadamerian sense, where the researcher's perception, the research sub-questions, the sources and types of data all constantly challenge and adjust each other. Glaser and Strauss call this the method of “constant comparison” (quoted in Erlandson et al. 1993, 112), which is a “means for deriving (grounded) theor[ies] [...] – that is, theories that follow from data rather than preceding them.” (Erlandson et al. 1993, 112) This is the only way that allows unexpected data to be perceived and processed. In the language of this dissertation: It is the only way to minimize the imposition of pre-conceived perception spaces upon the research process.



Therefore, this dissertation will not attempt to verify or to falsify a pre-defined static hypothesis. Rather, a dynamic working hypothesis will be used as the entry point into a hermeneutic circle, which describes the iterative and interactive process between the five elements as shown in Figure 1 and as described on the following pages.

Data Gathering

Triangulation (see below) will be an integral methodical part of this dissertation, which is why it will rely on three types and sources of data; the theoretical literature, interviews and archival records.

I have already read many publications as preparation for this dissertation. This step can be seen as the first circle of the hermeneutic spiral. The result helped me define the research question, the working hypothesis and select the case studies. As I come across further publications, I will continue reading them and I will be able to place them in a more and more empirically informed context.

My initial working hypotheses encompass issues ranging from ‘civic milieu’ to the financial mechanisms of Ulysses Innovations. Therefore, I will need to talk to ‘average citizens’ as well as to experts in a variety of fields. I will prepare a protocol for each interview, which will help to keep the interview focused, but I want to preserve the flexibility to elicit non-expected information as well. Provided the permission of the interviewee, I will record each interview on a micro-cassette. Its transcription and other person-related data will be linked to the original respondent through pseudonyms unless the person is a member of the public sphere. The selection of the informants and the content of the initial interviews will be guided by the accessibility of the interviewees and by the initial working hypothesis respectively. I expect to get much more contact information through a *snowball method*, which enables me to sample later interviewees more purposively. (See Erlandson et al. 1993, 147-148) After the “gap analysis” (see proposed timeframe) a second round of interviews will be launched, which will have to be telephone-based.

I will approach the following experts first in Hasselt and Fürstentfeldbruck for their reportedly crucial role in the innovation process, expected expertise in the respective issue and / or for their supposed role as point of entrée into the respective network.

Hasselt	Fürstfeldbruck
Steve Stevaert: Former mayor of Hasselt and most often mentioned as ‘father’ of the innovative transportation policy	Elsbeth Seitz: Chair of the BRUCKER LAND association and most commonly referred to as its ‘mother.’
Fred Peeters: Public Relations officer of the city of Hasselt with an apparently enormous network of contacts in Hasselt.	Ludwig Karg: CEO of the consulting company B.A.U.M. GmbH, who helped BRUCKER LAND with his expertise.
Willy Miermans: Professor at the College for Transportation Planning and Architecture in Diepenbek, near Hasselt.	Joseph Dippold: Professor at the University of Munich, who helped BRUCKER LAND in its initial phase.

If structural conditions in a community play a crucial role for the emergence of Ulysses Innovations, the opinion of ‘average’ citizens about local conditions prior to the innovative event can be very important data. Their subjectivity does not devaluate the relevance of their statements because it is exactly the *perceived* and the *interpreted* reality that leads to action - even if it is ‘wrong’ in a Cartesian sense. Therefore, I will hold informal conversations with bus-drivers, bus-riders, purchasers of BRUCKER LAND products, restaurant patrons, etc. No explicit sample of these non-experts has yet been defined, but I will ensure that the number of supporters and of antagonists of the project is balanced.

Archival records cannot be retrospectively varnished, which is why I will make use of them to investigate the local social, economic and environmental conditions prior to the innovative event. I expect to find valuable information about these issues in the local newspaper archives and in old newsletters and documents of citizen groups. Important sources of information about the concrete steps undertaken are minutes of meetings of the city council in Hasselt, of the BRUCKER LAND Solidargemeinschaft and very likely of other groups yet to be identified.

Interpretation, Analysis, Triangulation

The *constant comparison method* can only work if all types of data are constantly and systematically assessed. The analysis-element in the hermeneutic circle is designed to serve this purpose. Analysis during the fieldwork phase will mostly be performed through the writing of a *reflexive journal* (see below). After the first round of data collection (see timeframe below) and at the very end of the data-collection phase, an intensive analysis procedure will be conducted. For this purpose, all relevant data collected by then will be unitized and printed on 3 x 5" index cards (See Erlandson et al. 1993, 117). The subsequent content analysis will be performed as described by Hodson through several rounds of sorting and re-sorting to search for “consistencies, discrepancies, anomalies and negative cases.” (Hodson 1991, 50-51). What is called the “First systematic analysis” in the timeframe below will help to identify gaps, which need to be tackled through a telephone-based second round of interviews. Eventually, a synopsis of all data makes it possible to triangulate for different insights into the same events or relationships, thereby furnishing validity and credibility to the data and results (See Erlandson et al. 1993, 115 and 137-139)

Reflexive Journal

Early working hypotheses often tend to create self-momentum toward a constant provisional arrangement. In order to obviate this trend, I will keep a *reflexive journal* (See Erlandson et al. 1993, 143-145). In it, I will explicate the patterns I will have perceived by that time on a weekly basis. It will also contain explicit statements about evidence that does *not* fit into the current working hypothesis. Every week before I start writing, I will re-read the entries of one, four and ten weeks before. At the outset of the research, the initial working hypotheses will serve as the horizon against which new pieces of evidence are assessed. I expect the reflexive journal to help me

challenge prior perceptions and their interpretations - including the doubtful ones that might evolve over time into meaningful ones (and vice versa).

Adjustments to the Working Hypothesis

It is more than likely that insights gained from initial circles of the hermeneutic spiral make it possible to find a better, but still tentative, answer to the research question. Therein lies the main idea of the hermeneutic circle. These iterative adjustments of the working hypotheses will be recorded in the reflexive journal on a weekly basis. Major adjustments are expected after the “first systematic analysis,” whose results will be subject to close examination in the second round of data gathering. Unless crucial new information is obtained during this second phase, it is expected that only minor adjustments will be necessary the further the research project matures. If this is the case, it can be taken as an indicator that one is closing in on a meaningful final thesis.

Emergent Design

Any adjustment of the working hypotheses is likely to require the research design to be revised, since a modified hypothesis may easily necessitate a new focus of attention, the need for a specific interviewee, or a change in the data collection procedures (Erlandson et al. 1993, 114). The idea of a constant adjustment of the research design is called “emergent design” because it is not statically defined at the outset of the project but emerges as the research project evolves. I will render account for any such adjustment in the reflexive journal in order to avoid blames of arbitrariness.

Validity

In a Bayesian-like move, I admit my bias toward sustainability and my desire to find quicker steps for its implementation. This admission may help to discipline and to critically assess my own work and to facilitate a corrective perception of my findings for the reader. Given this bias, it is even more important to ensure the highest possible levels of credibility and trustworthiness (Erlandson et al. 1993, 132). The main strategy to ensure this goal is to make every move of my research

transparent in the reflexive journal. Maintained this way, it “supports not only the credibility but also the transferability, dependability and confirmability of the study.” (Erlandson et al. 1993, 143) All parts of this journal that are not subject to ethical concerns will be made publicly available along with other documents such as “interview guides, notes, documents, notecards, peer debriefing notes, journals, etc.” (Erlandson et al. 1993, 148) All these documents then become a part of the “audit trail” for the study. (See Erlandson et al. 1993, 143)

The following table provides an overview of these and other techniques I will employ to ensure the highest quality of my proposed dissertation.

Criterion	Conventional Term	Naturalistic Term	Naturalistic Techniques
Truth value	Internal Validity	Credibility	Triangulation (p. 13) Peer debriefing (esp. with members of my dissertation committee) Member checks (p. 10) Reflexive journal (p.13)
Applicability	External validity	Transferability	Rich description Purposive sampling (p. 11) Reflexive journal
Consistency	Reliability	Dependability	Audit trail Reflexive journal
Neutrality	Objectivity	Confirmability	Audit trail Reflexive journal

Table adjusted to my particular dissertation project from Erlandson et al. 1993, 133.

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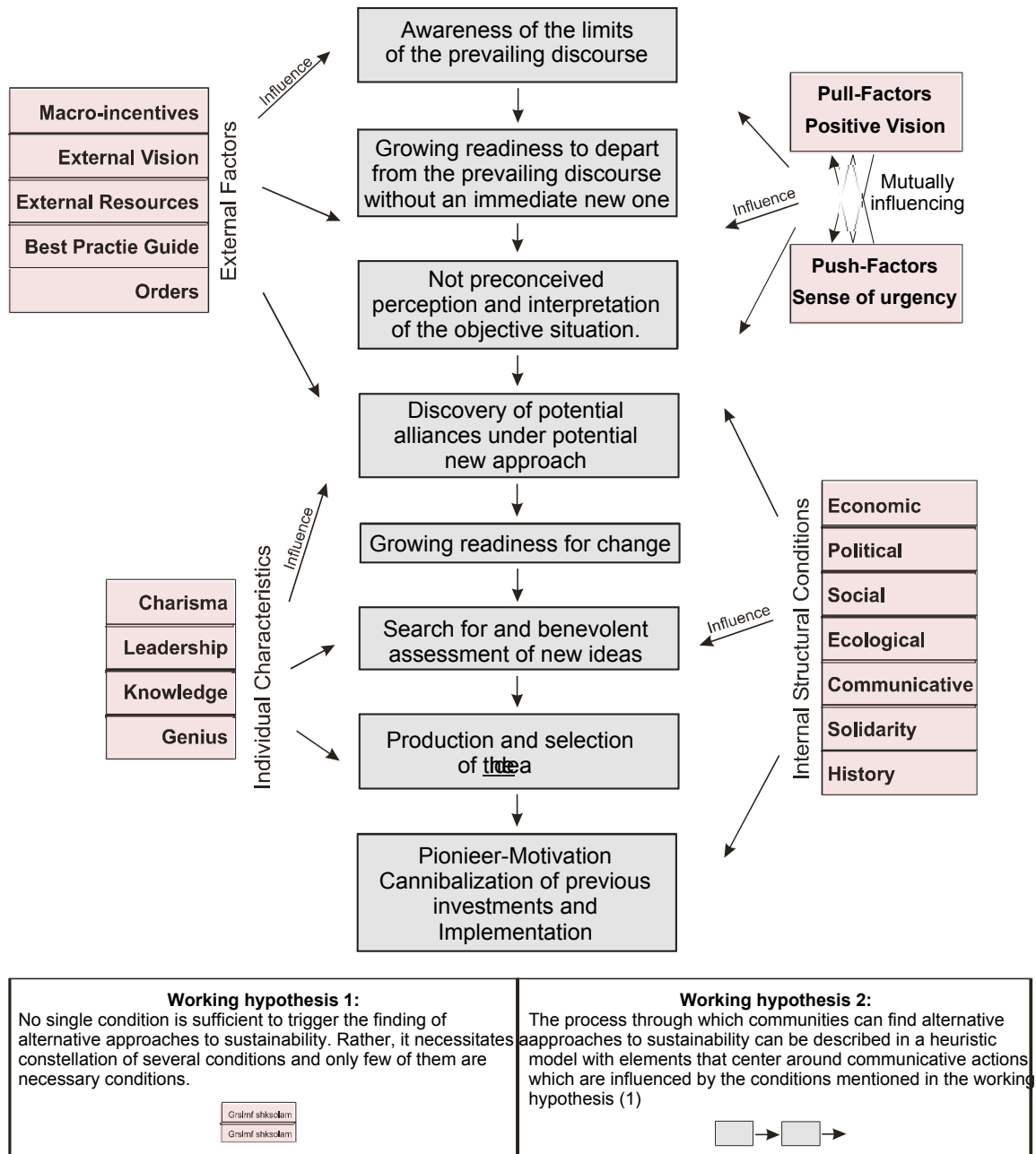
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Appendices

1. Graphic for the Working Hypotheses



2. Selected Cases

Hasselt, Belgium

Hasselt is the capital of the Belgian province of Limburg with a population of about 68,000 (www.hasselt.be). During the 1980s, traffic in Hasselt had increased significantly, demanding more and more a fundamental solution. Faced with rising debt and traffic congestion, the mayor in 1996 proposed a previously un-thought solution: "He abandoned plans to build a third ring road around the town. Instead, he closed one of the two existing ring roads, planted trees in its place, laid more pedestrian walkways and cycle tracks, increased the frequency and quality of the bus service and announced that public transport would be free of charge." (Dauncey)

Four years after this decision had been realized the evaluation speaks a clear language: Individual traffic has decreased to a tolerable level, the use of public transport has risen by 800 percent, the citizens are pleased, retailers are happy about the people strolling again through the inner city, Hasselt is famous all over Europe and the solution chosen is still cheaper than the conventional alternative. Thus, the Hasselt case is a clear evidence that sustainable development does work since it reconciles ecological, social and economic considerations.

In the summer of 2000 I visited Hasselt for one week, where I was able to establish valuable contacts to several city officials, including the current mayor, as well as to two advisors of the previous mayor, the initiator of the innovation in Hasselt, who is now vice-president of the Flemish government.

Fürstfeldbruck, Germany

Increased global competition in the last decades has been causing a more and more difficult economic situation for European farmers and craftsmen. The range of options articulated by politicians as well as by farmer's representatives was: "Grow or Die". A group of church representatives, farmers, craftsmen, environmentalists and consumers was searching for new ways

to break out of this vicious circle. In 1994 they came up with the idea to create a new trademark BRUCKER LAND. Under this name and logo they started to produce, market and sell products grown and processed exclusively within the county of Fuerstenfeldbruck under their own strict standards. By now, the following products are available in grocery stores as well as in regional supermarkets: bread, milk, flour, pasta, cheese, meat, honey, juice, mustard, potatoes, meat, vegetables, and even beer.

Many people in the county of Fuerstenfeldbruck buy BRUCKER LAND products even though they are slightly more expensive than conventional products. This allows BRUCKER LAND to survive economically and led to attempts in five neighboring counties to create similar initiatives.

3. Proposed Timeframe

The following timeline is only a tentative outline because it has to remain adaptable to new insights and recommendations, to the availability of the interlocutors and in order to minimize travel expenses.

Nov. 2001	Dissertation Proposal Defense
Nov. - Dec. 2001	Field Research in Hasselt, Belgium
January 2002	Evaluation of data
Feb. - Mar. 2002	Field Research in Fürstfeldbruck, Germany
April 2002	Evaluation of data
May 2002	First systematic analysis and gap analysis
Jun. – Jul. 2002	Second round of interviews (telephone based)
Aug. – Oct. 2002	Second systematic analysis, member checks, 1 st draft of dissertation
Nov. 2002	Review of dissertation draft
Dec. '02 – Feb. '03	Final editing and proofreading
Mar. 2003	Final Dissertation Defense