

ECO-AGENCY: THE SELF-EFFICACY, ACTION LOGICS AND INTENTIONS OF ECOVILLAGE INITIATORS IN THE NETHERLANDS.

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MSc Thesis



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Cover image: Ecovillage initiator imagining the realization of an ecovillage. Original photo made by 'frauelster' at Flickr.com under a Creative Commons Licence. Illustration made by Kim Peterse.



“People ask how I persevere, but I see it as a kind of hobby. You don’t ask people who play chess or badminton why they like that so much. It just grabs you. It’s been a kind of enormous jigsaw puzzle.”

– Initiator of an ecovillage in the Netherlands

ABSTRACT

In spite of the growing interest and increase in the number of ecovillages in the Netherlands, key factors and personal motivators driving the development of an ecovillage are under-researched. This thesis aims to provide a contribution within this under-researched field by exploring agency characteristics of ecovillage initiators in the Netherlands. Ecovillages are intentional communities, attempting to integrate ecological sustainability principles into construction and living experience. They are initiated in a bottom-up fashion through the effort of one or more individuals. Ecovillages can be viewed as inhabiting a sociotechnical niche aimed to provide an alternative to societal regime structures. The initiators are therefore regarded, in this thesis, as eco-agents of change.

By exploring the perceptions of selected ecovillage initiators in the Netherlands, this study analyses what are factors influencing agency characteristics of initiators in the development of an ecovillage. The study considers self-efficacy, intentions and action logics as key components of agency. Also, it takes into account contextual factors influencing initiators' agency and the development of an ecovillage. Semi-structured, in-depth interviews were conducted with initiators of nine different ecovillages in the Netherlands.

This study suggests that the interaction between the initiator and those joining the ecovillage initiative is crucial for the development of the ecovillage. Creating a sense of co-ownership and shared responsibility appears to be a key element enhancing the initiator's self-efficacy. Main initiators' intentions for developing and living in an ecovillage are of a social- and sustainability-related nature. Post-conventional action logic stages appear to reflect better the mind-set of the initiators. This study also briefly discusses main contextual factors impacting the development of an ecovillage.

ACKNOWLEDGEMENTS

In this section I would like to thank all those who contributed to the successful realization of this thesis, but before that I would like to spend some words on how this thesis initially came to be.

The topic of this thesis may appear rather unconventional to those familiar with the research at the Environment Policy Group. Single change agents within a social movement are indeed rarely the subject matter within this mainly sociological and policy-related field. However, thanks to the flexibility and broad-mindedness of my co-supervisor Bas van Vliet I was given the opportunity to study the agency of ecovillage initiators at the Education and Competence Studies (ECS) group, with Valentina Tassone as my daily supervisor. I had visited two Dutch ecovillages before, during the courses Environmental Education and Communication by Arjen Wals, and Empowerment for Sustainability by Valentina Tassone. During those visits I was struck by the friendly, organic atmosphere in these green residential areas. Ecovillages seemed to address many of the issues that are still prevalent in the current sustainability debate. After reviewing more literature, I came to the belief that ecovillages provide an inspiring outlook for the implementation of sustainable alternatives in the housing sector. They are the result of perseverance and a creative process enacted by the future inhabitants themselves. During this study I was constantly motivated to increase awareness of the social and ecological opportunities that ecovillages provide. This thesis is dedicated to those who commit themselves towards realizing their ecovillage dreams.

This thesis would not have been possible without exactly these people; the ecovillage initiators. I am extremely grateful to them for taking the time to answer my sometimes rather strange questions and to respond to puzzling propositions on small pieces of paper. The initiators were all very welcoming and enthusiastic about this study. I enjoyed the interviews immensely, and later on they provided extra motivation to continue and complete this study.

I would especially like to thank Valentina Tassone for providing excellent academic guidance throughout the research process. Her positive attitude towards the study and countless of helpful comments contributed greatly to my learning experience in writing this thesis. She always reserved ample time to discuss strategies, texts, and contribute to thought processes. I always felt supported and enabled, even empowered, to keep improving.

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1. INTRODUCTION

Throughout human history, groups of people have formed communities to provide survival opportunities and social contacts. Over time, villages and cities developed, forming societies. Some groups intentionally attempt to establish a shared, alternate way of living, apart from mainstream society. Such groups can be defined as intentional communities. Meijering, Huigen et al. (2007) have gathered the most frequently used criteria to approximate the meaning of this term:

1. No bonds by familial relationships only.
2. A minimum of three to five adult members.
3. Members join voluntarily.
4. Geographical and psychological separation from mainstream society.
5. A common ideology that is adhered to by all members.
6. Sharing of (a part of) one's property.
7. The interest of the group prevails over individual interests.

Box 1: Criteria characterizing intentional communities (Meijering, Huigen et al. 2007).

At the end of the 20th century, rapid economic growth and industrialisation followed by environmental degradation and resource depletion, sparked the call for sustainable development. This was defined as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (WCED 1987). In the Netherlands, numerous initiatives have been taken that aim to contribute to a more socially, economically, and ecologically sustainable environment. Within the area of housing, ecovillages are an example of such initiatives within an intentional community context.

In the Netherlands, these initiatives are typically found in urban settings. Environmentally motivated housing development can be an initiative of formal bodies such as local government (in the form of subsidies for e.g. renewable energy and unconventional permits), non-governmental, or housing organisations. In such cases, a formal body is taking an initiative and facilitates the process and implementation phase. Some ecovillages, however, come into existence simply by people who feel a vocation to found this specific type of intentional community. This kind of ecological neighbourhood emerges as a grassroots initiative and exists within a social movement (Ergas 2010, Miller and Bentley 2012). Miller and Bentley (2012) describe ecovillagers as those “who consciously choose to live their lives in an eco-friendly manner by accounting for, and minimizing their impact on the planet”. Ecovillages are environmentally motivated, intentional housing communities, or as Meijering, Huigen et al. (2007) describe them: “ecological communities”.

Ecovillages are mostly not retreated from society and do not operate in a social vacuum. Instead they actively engage with society to promote change towards sustainability (Kasper 2008, Ergas 2010, Miller and Bentley 2012). In this light, ecovillages play a role in changing structures in society. To explore this further, a multi-level perspective on system transitions is used (Geels 2002, Schot and Geels 2008).

When we want to understand what is behind this communal effort of creating an environment aimed at living a sustainable lifestyle, we must look at the origin of the ecovillage. Often a single individual or a small group decide to start an ecovillage. Building an entire neighbourhood in a bottom-up fashion is a difficult task that requires time, effort, cooperation, and other resources. It is not yet fully understood what reasons exist behind the decision to initiate an ecovillage and to persist in the process of development. To explore this, I make use of the concept of human agency. Agency can be literally described as ‘having the capability to do or to act’, but

more specifically personal agency is described as “the ‘spark’ that stimulates people to act in the interest of something and/or someone they care for in their life/lifestyle, in their family, in their community, in their environment, and in society” (Tassone and Wals 2014). In this thesis I specifically consider agency in three components: self-efficacy, intentions, and action logics. Self-efficacy is the belief in the capability to affect change by personal action. Intention explores the reason to act for the desired change. Actions based on a certain level of consciousness are explored in action logics. This study focuses on exploring those aspects and uses the concept of human agency to frame the analysis.

This research focuses on intentional ecological communities in the Netherlands. Interviews with initiators form the primary means of data collection. This research aims to find out what are factors influencing agency characteristics of ecovillage initiators influence the development of an ecovillage.

The main research question is defined as follows: ‘What are factors influencing ecovillage initiators capability to act and persevere in developing an ecovillage?’

Sub-questions are defined as:

- What are initiators’ agency characteristics and contextual factors that can influence the development of an ecovillage?
- What is the role of initiators’ self-efficacy level in the development of an ecovillage, and what factors have influenced initiators’ self-efficacy development?
- What are initiators’ intentions that lead to development of an ecovillage?
- Within which consciousness development stage is the process of developing an ecovillage enacted by initiators?
- Which contextual factors influence initiators’ agency in the development of an ecovillage?

This thesis starts by providing a conceptual background, followed by empirical results and concluding remarks. The present chapter contains an introduction. In chapter two, ecovillages and initiators are defined, after which past research is explored with ecovillages as a subject. In the next chapter, a background of theories and concepts is laid out, discussing ecovillages as sociotechnical niches and agentic action for ecovillages. The fourth chapter uses the notions discussed to form a conceptual framework for researching initiators’ agency characteristics. Here the first sub-question is addressed. It does so by defining self-efficacy, intentions and action logics as key components for agency, and also by addressing contextual factors relevant to those agency characteristics. Chapter five discusses methods used to explore the empirical results of this thesis. These mainly concern in-depth interviews at ten ecovillage projects in The Netherlands. Results of found agency characteristics within self-efficacy, intentions and action logics are discussed in chapter six. Experiences with the used methods are evaluated in the subsequent discussion chapter. Conclusions and recommendations for further research are presented in chapter eight.

2. ECOVILLAGES: DEFINITIONS

An ecovillage is defined by the network organisation 'Global Ecovillage Network' as "an intentional or traditional community that is consciously designed through locally owned, participatory processes to regenerate social and natural environments. The four dimensions of sustainability (ecology, economy, the social, and the cultural) are all integrated into a holistic approach." (GEN n.d.). A distinction is sometimes made between intentional ecological communities enclosed in an urban environment (ecodistrict, or *ecowijk* in Dutch) and 'real ecovillages' (Omslag 2013). The boundary remains undefined. This research includes both initiators from urban and non-urban ecological communities. Both can be treated as ecovillages. Therefore I propose that an ecovillage can be defined as '*a socially driven intentional community that aims to integrate sustainability principles into its development process and living experience.*'

In literature, no clear definition is found what it means to be an ecovillage initiator. To ensure that the research sampling is comparable, I provide a definition based on a number of assumptions.

An initiator is assumed to be responsible for taking the initiative to begin the development of the ecovillage, and/or have a predominant role in its continuation and the engendering of the network which will eventually encompass the social capital (Dale and Sparkes 2010) within the intentional community. The initiator is expected to contribute in the facilitation of building activities and the emergence of social practices in daily life at the ecovillage.

3. BACKGROUND: THEORIES AND CONCEPTS

This chapter describes the theories and concepts upon which this thesis is built. First, I present a meta-level perspective to show ‘the big picture’ around the agency of ecovillage initiators. This provides a background for understanding the line of reasoning in the following conceptual chapter. This section will briefly present theories and concepts that lead towards development of the conceptual framework on the agency of ecovillage initiators, which is the focus of this thesis. To understand why this focus may be valuable for studying ecovillage development, we need to understand the place of ecovillages in society - what they mean in a societal change context. This perspective is provided by focusing on socio-technical system transitions. Once the context of ecovillages in society is established, we zoom in on the drivers behind ecovillage development. To understand such drivers, and their relation to society, certain aspects of human action need to be touched upon. This is done by briefly summarizing the concept of agency and structure within the theory of structuration by Anthony Giddens. The duality between agency and structure (Baber 1991) has certain social practices as an outcome. This is described by Spaargaren & Van Vliet (2000). I intend to shed light on how agency influences and changes structure within the ecovillage niche. This brings us to the core of the theoretical part of this thesis, which will be discussed in the next chapter.

3.1 STRATEGIC NICHE MANAGEMENT

Systems in society are not static, but constantly subject to change. In this section I will expand on the conceptual background from which an ecovillage initiator as an agent of change can be viewed. The emergence of ecovillages can be viewed in a wider societal context by creating a perspective of its development, effects, and position in society. Strategic Niche Management presents an approach in which long-term societal changes are conceptualized. First, I will briefly address the multi-level perspective on sociotechnical system transitions. Secondly, I will discuss the role of ecovillages as sociotechnical niches.

3.1.1 MULTI-LEVEL PERSPECTIVE ON SOCIO-TECHNICAL SYSTEM TRANSITIONS

Societal functions such as housing are fulfilled by sociotechnical systems (Geels 2002), comprising of sociotechnical regime elements such as industry, culture, technology, policy infrastructure, etc. To gain insight in how regime-changes come about, a multi-level perspective (MLP) was developed by Geels (2002), see Figure 1.

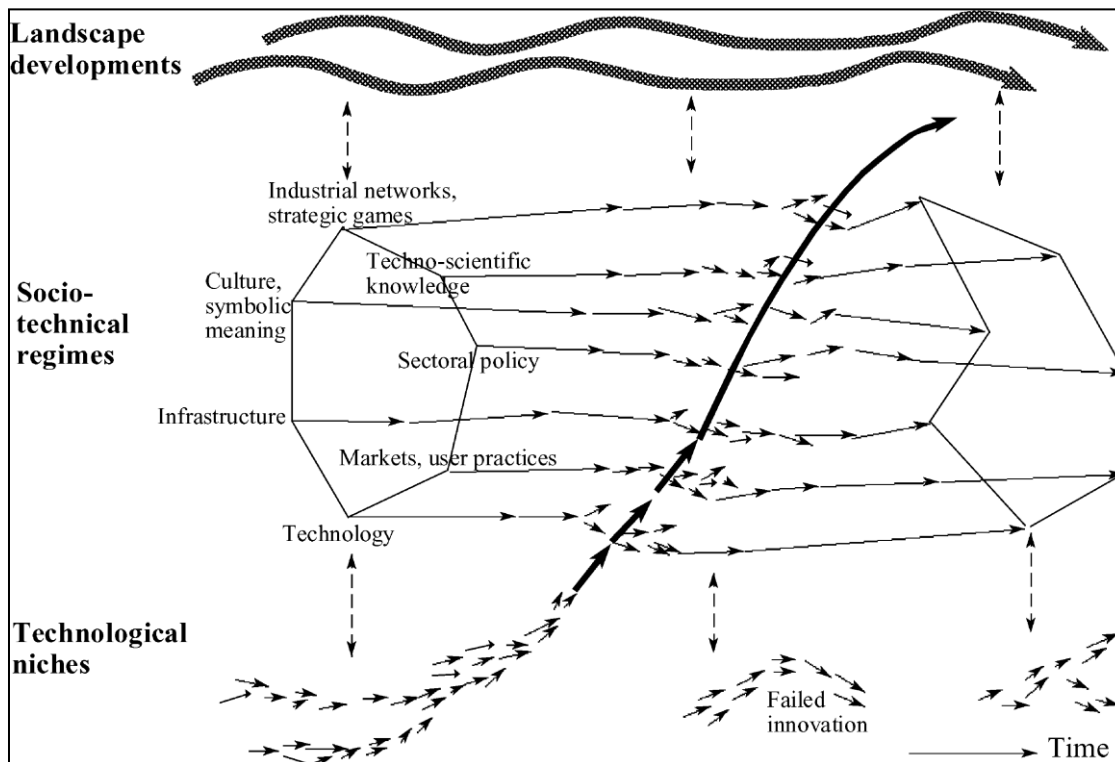


Figure 1: Dynamic multi-level perspective on transitions (Geels 2002).

The MLP consists of a macro, meso, and micro level, which are embedded in each other. The macro level is represented by the landscape developments, the meso level is equal to the sociotechnical regime, and in the micro level, technological niches are found. The regime level interacts with the higher - macro - landscape level, which comprises of the conditions within which the regime can function. For example, landscape developments comprise of an economic system, has embedded cultural values (for example individualism versus community, environmental awareness), and acts on availability of resources. Landscape developments are usually slow and cannot be influenced by single actors on their own. The sociotechnical regime is autopoeitic, meaning that it has become path-dependent. Its elements are interrelated and support each other. Developments in the landscape put pressure on the existing sociotechnical regime. Functions of the regime may eventually become unsuited for the changed conditions within the landscape. On the micro level, niches emerge that react to the changes and pressures of the landscape.

A particular branch within transition literature is focused on the development of niches: Strategic Niche Management (SNM) (Kemp, Schot et al. 1998, Schot and Geels 2008). Technological niches are defined by Schot and Geels (2008) as “*protected spaces that allow the experimentation with the co-evolution of technology, user practices, and regulatory structures*”. Most alternative technologies perform worse at introduction than their established counterparts, because the newly introduced technologies are not adapted to needs and socio-technical structures on the regime level. After an iterative process of adaption within a favourable environment, performance can be increased. Examples of technological niches are found within road transport systems and biofuel production (Ieromonachou, Potter et al. 2004, van Eijck and Romijn 2008), but also in physical locations where new technologies are introduced, such as passive houses (Mlecnik 2014). If the opportunity arises, such niches grow and evolve towards the regime level, eventually changing this structure altogether. This transitional path is by no means straight or totally controlled (Kemp, Schot et al. 1998). In the model, niche development is described as co-evolutionary; technologies which fit best in a certain environment survive, but also learn from and build upon other initiatives. A high degree of diversity within the niche is a key aspect.

While Geels (2002) and others describe such niches purely within a technological perspective - places where novel approaches are being applied and tested -, their reach may actually be much wider. The SNM approach has also been applied in a civil society context (Seyfang and Smith 2007, Seyfang 2010, Seyfang and Haxeltine 2011). They argue that niches cannot only be technological, but also social. In these articles, a perspective of grassroots initiatives as niches is proposed, in which social innovations are just as significant as the technological ones. These social innovations are not initiated by governing bodies but rather emerge from the bottom up, and are therefore called 'grassroots initiatives'. Instead of creating a protected space within the formal economy in the form of favourable economic conditions, grassroots initiatives are seen within the realm of the social economy. In this way, niches are connected to community action. *"In contrast to mainstream business greening, grassroots initiatives operate in civil society arenas and involve committed activists experimenting with social innovations as well as using greener technologies"* (Seyfang and Smith 2007). Here, incentives found in the market economy do not apply strictly, while cultural, ethical, and social values are emphasised. *"The benefits of grassroots innovations for sustainable development derive principally from their creating a space for: developing new ideas and practices; experimenting with new systems of provision; enabling people to express 'alternative' green and progressive values; and the tangible achievement of sustainability improvements, albeit on a small scale"* (Seyfang and Haxeltine 2011). An ecovillage is mentioned briefly by Seyfang (2010) as an example of community action for sustainable housing: *"Another leading light in this movement was the Findhorn Foundation's ecovillage in Scotland, founded first as a spiritual centre in the 1960s, then developed as a demonstration site for green building and sustainable living from the mid-1980s onwards."* Based on the above, I argue niches can be viewed as not only technical, but also in relation to social change: sociotechnical niches. I would like to explore the notion of ecovillages as sociotechnical niches further.

3.1.2 ECOVILLAGES AS SOCIOTECHNICAL NICHES

I will now apply the MLP to the concept of ecovillages. The main shared goal of ecovillage inhabitants - or 'ecovillagers' - is sustainability (Ergas 2010, Seyfang and Haxeltine 2011, Miller and Bentley 2012). An often heard credo within ecovillages is 'be the change you seek' (Ergas 2010). In other words, ecovillages are created to present an alternative to the sociotechnical regime for specifically the housing sector, and modes of production and consumption in general. An initiator initiates the change-seeking endeavour, and is therefore an agent of change. I will now describe how the three societal levels in the MLP regarding ecovillage development can be characterized. Note that ecovillages today only exist on the 'niche'-level; the landscape and regime levels are dominated by the housing sector.

- **The landscape level**

The sociotechnical regime is influenced by certain landscape developments. Constructing a house is a specialized profession, not an individual or non-professional exercise. It is subject to strict rules and regulations, and mostly conducted by construction companies. The preference of transportation by car combined with economic development leads to residential areas that accommodate car use, and parking spaces for two cars per household. On the other hand the landscape is shifting. Evidence and predictions of climate change from anthropogenic sources is mounting, global population is increasing and resources are being depleted at unsustainable rates. Another landscape influence is the individual nature of the living experience. Social interaction with neighbours is often detached and sense of community is low in many neighbourhoods.

- **The sociotechnical regime level**

The Dutch housing sector is characterised by fossil energy use, generated at a distance from the place of use. Construction uses energy intensive and non-renewable resources. Carbon emissions from housing in the Netherlands in 2010 accounted for 11 percent of total carbon emissions, approximately 20 million tonnes of CO₂ ("Luchtemissie door de bouwsector" 2012). Sanitation is being carried out in centralized waste treatment plants, in which organic nutrients are often lost. Additionally, many conventional housing

projects in the Netherlands are uniform in nature. A limited number of building designs are used for an entire neighbourhood to save costs. This has social costs in terms of interaction and population diversity. House construction is subject to specific rules and regulations ("Integrale tekst van het Bouwbesluit 2012" 2013).

- **The sociotechnical niche level**

Ecovillages aim to fulfil a part of, or even their complete energy needs themselves by using renewable energy sources such as solar panels and solar boilers. Types of construction materials vary strongly, but are often locally sourced and made from renewable materials such as straw, wood or loam. Some ecovillages are exploring different ways to manage organic waste, and emphasis is put on community building. Community building has a double meaning in this case. On the one hand, construction is often done partly by the ecovillagers themselves, and social ties within the project group are strengthened. Every grassroots initiated ecovillage has its own approach.

3.2 THEORY OF STRUCTURATION

Within the ecovillage, people strive towards a more sustainable way of living. They aim to create an environment that answers to their perception of landscape developments as presented in the MLP. The development of an ecovillage can be viewed as a social action: starting with an initiator or group of initiators finding participants and interacting in the social environment to reach a set goal. Sociology has seen an on-going debate on how to understand social action. This centred around the concepts of agency and structure. Anthony Giddens (cited in Baber (1991)) has attempted to create a conceptual model in which these two factors, and how they influence each other, are explained. In psychological sciences, agency is seen as the ways in which people attempt to impact their own life path, including influencing events that are beyond their immediate reach (Bandura 2006). Structure can be seen as rules and resources defining possible actions for the individual, but at the same time also a product of social action (Baber 1991). Structure can be summarized as the rules and resources within a social system. Structuration theory argues that agency draws on structure to create action, and this action also reproduces the structural factors it was drawn from: *"Giddens emphasizes that structures are produced by human agency and, simultaneously, are the reproduced conditions of human agency"* (Baber 1991).

3.3 SOCIAL PRACTICES MODEL

Spaargaren and Van Vliet (2000) have applied ecological modernization theory and the theory of structuration to sustainable consumption practices (see Figure 2). Living in an ecovillage can be seen as a collection of social practices. While the question if initiating an ecovillage can be regarded as a social practice remains open to discussion, however, this is not the point to be made here. This model provides a revealing perspective on the way ecovillage initiators influence and are influenced by agency and structure. Ecovillage initiators attempt to change structure by applying discursive and practical consciousness not only to lifestyle, but also by influencing rules and resources to accommodate the implementation of those practices. Ecovillage initiators aim to adopt a certain lifestyle (living in an environment in which certain ecological, social, and sometimes economic values are shared) that is often not provided by the conventional systems of provision.

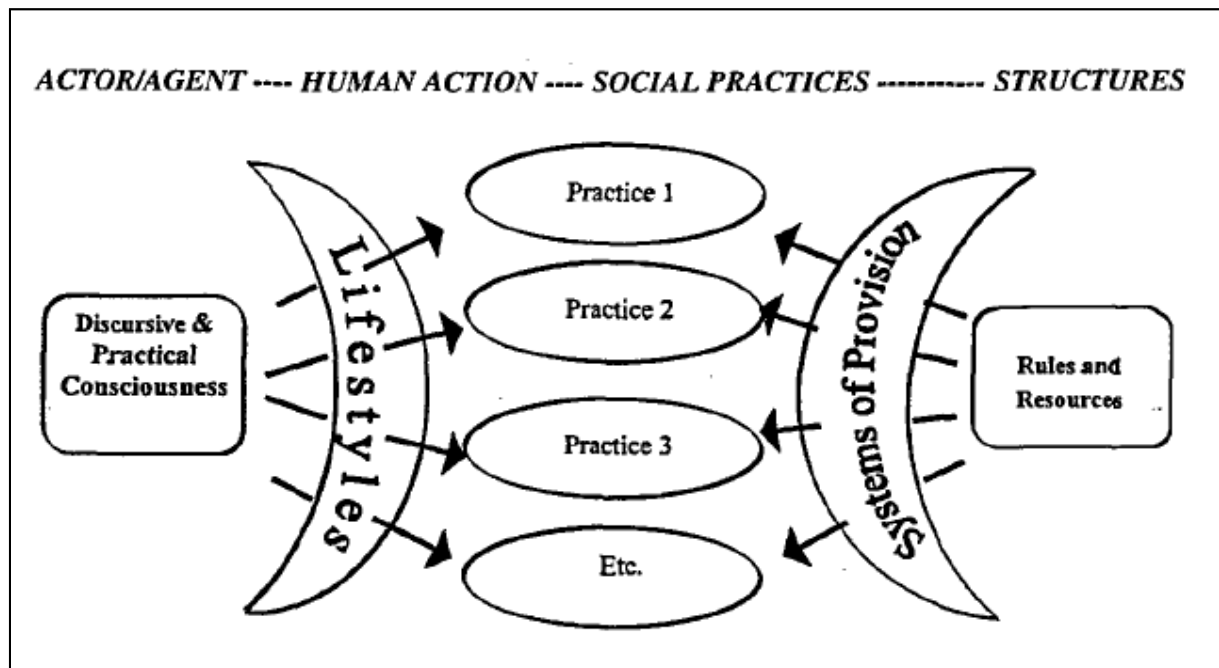


Figure 2: A conceptual model for studying social practices (Spaargaren and Van Vliet 2000).

Since ecovillages are a community-supported effort, the lifestyles, practices and systems of provision are not 'governed' by the initiators alone. In the same sense, rules and resources which determine the capabilities of ecovillagers are not determined independent from society. However, the development of an ecovillage can be seen as an attempt to create favourable conditions for developing more sustainable social practices, and this development has its origin with the initiators (see Figure 2). In this sense, two types of structure can be discerned: the one that is already there, part of the sociotechnical regime; and a new structure; part of the niche that is being formed by the initiator. Guided by the reasoning of how social practices in ecovillages develop, the following section will explore the initiators agency side, at the left side of the model.

4. CONCEPTUAL FRAMEWORK

Next, I will focus on the concept of agency. I will propose a conceptual framework of ecovillage initiators' agency, consisting of self-efficacy, intentions and action logics.

4.1 AGENCY

In this study ecovillage initiators are viewed as agents of change. They use agency to promote the creation of a new structure, centred around the ecovillage. Initiators have the goal of developing an ecovillage, and take action to reach this goal. In literature, numerous definitions of agency are found. For example, the concept was used by Dale and Sparks (2010), who investigated pro-environmental behaviour in local community development. They see agency as a determinant for the building of social capital, which makes community members act, and is needed to address environmental issues. It can also be defined more broadly as "the capacity of persons to transform existing states of affairs" (Harvey, 2002 in Dale and Sparks, 2010). Agency is described by Dale and Sparks as the force behind social action. In social cognitive theory, agency is seen as the ways in which people attempt to influence their life path, including events that are beyond their immediate reach (Bandura 2006). This focuses on personal agency, viewing individuals as agents of change. Tassone and Wals (2014) address empowerment for sustainability in education, and include personal agency as part of an 'awakening' phase: *"personal agency can be understood as the 'spark' that stimulates people to act in the interest of something and/or someone they care for in their life/lifestyle, in their family, in their community, in their environment, and in society."*

There is no readily available method to study or characterize the complete agency of an ecovillage initiator. Ling and Dale (2013) have studied the role of agency in existing communities striving towards sustainable development. They focus on agency on the community level, as well as on the individual level. To illustrate characteristics of individual agency and its perceived effects, a heuristic was developed:

"Agency = (will to act + reason to act + access to networks) – barriers at the individual level." (Ling and Dale 2013). When agency is lower than 0, the individual refrains from action. A positive agency level causes action to occur. This heuristic shows what is needed to establish action. Its components are a will to act, a reason to act, establishing networks, and barriers which require a certain effort to overcome. This concept can now be adapted for application to perceived agency for initiating and developing an intentional ecological community.

This thesis considers self-efficacy, intentions and action logics as key components of agency, and contextual factors as an influence on agency. The characteristics of agency are used to build an interview guide in the next chapter. Below I will briefly introduce the considered agency characteristics and the differences with the approach of Ling and Dale (2013).

First, access to networks is not considered as an agency characteristic in this thesis. In the case of Ling and Dale (2013), community members need to access networks with other inhabitants or external parties. In the case of an intentional community and perceived initiator's agency, network formation is inherent to ecovillage development as others join the initiative and external contacts are made. For the purpose of this thesis, access to networks can therefore be seen as an action emerging from agency and not a characteristic in itself.

- **Self-efficacy**

The will to act, also mentioned by Ling and Dale (2013), is rooted in the concept of self-efficacy. According to Bandura (2006), the belief in the capability to achieve a personal goal is the foundation of agency. *"Whatever other factors serve as guides and motivators, they are rooted in the core belief that one has the power to effect changes by one's actions"* (Bandura 2006).

- **Intentions**

The intentions for initiating and developing an ecovillage are analogous to the reason to act (Ling and Dale 2013). Developing an ecovillage requires a belief in the capability to achieve this goal. Similar to sustainable community development (Ling and Dale 2013), awareness of the need to initiate such an endeavour can be seen as a prerequisite to take action. To find out what characterizes the ‘spark’ that drives ecovillage initiators, the reason to act must be found.

- **Action logics**

Action logics are added as a third key component. In this thesis, agency is seen from an initiator perception perspective. The way an initiator perceives actions regarding ecovillages is explored. Agency is closely related to the way an individual perceives and addresses a given situation. The way the outside world is perceived can differ among individuals and depends on the development of consciousness of every individual. Cook-Greuter (2004) presents action logic stages, which reflect levels of consciousness. In this thesis I want to describe what ecovillage initiators find a logical course of action within the frame of developing an ecovillage. Action logics provide a way to characterize consciousness stages and possibly find similarities and differences between initiators.

The components above are applicable to all agentic action. In this thesis, agency is viewed as an umbrella term encompassing self-efficacy, intentions, and action logics. Next to this view on agency itself, this thesis considers factors in the context of personal agency. These contextual factors can be seen as analogous to the barriers at the individual level as defined by Ling and Dale (2013), although this thesis also includes possible factors encouraging ecovillage development. Ecovillage initiators may or may not possess certain skills, have access to financial means, or may have experienced certain events or processes during childhood. See Figure 3 for a conceptual representation of the agency concept in this thesis.

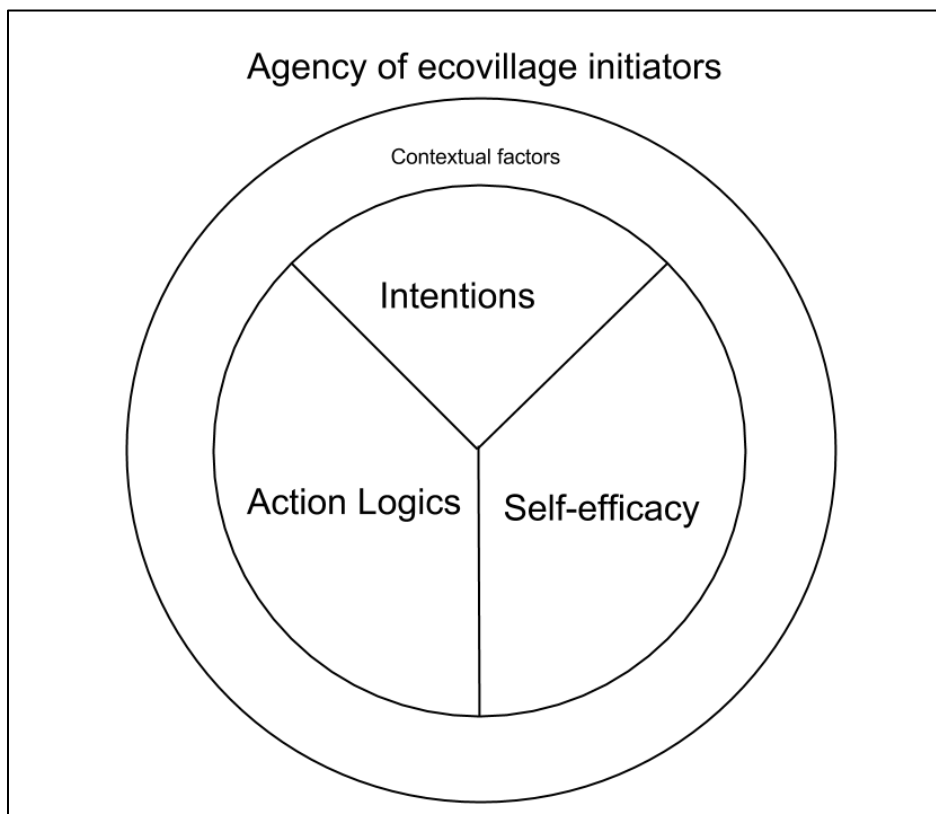


Figure 3: Characteristics of ecovillage initiators’ agency. Agency consists here of the three components self-efficacy, intentions, and action logics. These are influenced by contextual factors.

I will now expand on the three considered key components of agency. Additionally, a number of contextual factors influencing agency of ecovillage initiators will be discussed.

4.1.1 SELF-EFFICACY

The belief in one's capabilities is defined as self-efficacy. In the context of this study self-efficacy is understood as the capability to commit to the personal goal of realizing an ecovillage. This commitment includes cooperating with other participants and fulfilling the desire to complete the initiated project.

I distinguish two levels of self-efficacy: high and low. High self-efficacy means strong belief in one's capabilities, low self-efficacy means that this belief is less or not at all present. High levels of self-efficacy have been proven to increase performance, motivation and well-being. A person of low self-efficacy is easily convinced on the futility of his actions and will less likely persevere in the face of adversity. It is important to note that what is studied here is *self-perceived* efficacy. The belief, rather than the actual capability to perform, is subjected to study.

Within the view of social learning, Bandura (1982) identifies four sources of self-efficacy:

- Enactive attainments: past achievements as proof of ability to achieve;
- Vicarious experiences: observing peers;
- Verbal persuasion: being influenced by people who express a level of trust;
- Psychological state: actively reducing stress reactions and encouraging a positive emotional state.

Now I will briefly describe these sources and point out the connection with the thesis subject.

Mastery experiences are believed to be the strongest source of self-efficacy. With experiences of success, self-efficacy for future experiences becomes higher. Experiences of failure will cause a lower self-efficacy. However, a deeper layer exists, as Bandura (1989) explains: *"Self-doubts can set in quickly after some failures or reverses. The important matter is not that difficulties arouse self-doubt, which is a natural immediate reaction, but the speed of recovery of perceived self-efficacy from difficulties. Some people quickly recover their self-assurance; others lose faith in their capabilities. It is resiliency of self-belief that counts."* This 'resiliency' is an important determinant for the agentic action of ecovillage initiators. The reasons behind it are studied within this thesis.

Observing peers achieve mastery experiences teaches subjects about what could happen, and therefore they can better predict consequences of their actions. The person that is being observed acts as a model on what could be the best strategy to follow. Finally, the observer identifies with the other person and, if successful, will raise self-efficacy by that identification alone (Bandura 1982). This thesis will focus on observational experiences of ecovillage initiators.

Being encouraged or convinced by people who express trust in the subject's capabilities can influence the level of its self-efficacy. This persuasion seems to have the greatest impact for people who have some reason to believe that they can produce effects through their actions (Chambliss & Murray 1979 in Bandura 1982). Within this study, respondents will be asked in what way and by whom they were supported in founding the ecovillage.

When people are under pressure while trying to achieve their goals, their belief in the possibility for success is tested. *"People's beliefs in their capabilities affect how much stress and depression they experience in threatening or taxing situations, as well as their level of motivation"* (Bandura 1989). When applying this notion to ecovillage initiators, it would be meaningful to understand how they cope with stress, and in what way they are affected by stressful situations.

4.1.2 INTENTIONS

Within socio-cognitive theory, self-efficacy influences the degree of motivation to achieve a certain goal. The following characteristic is not meant to address the degree of motivation, as this is already dealt with in the section on self-efficacy. Instead, here I will focus on the reasons to act.

The central issue here is to pose the question: ‘What motivated you to act?’ I study different reasons for developing an ecovillage. Ergas (2010) notes many ecovillage inhabitants whom he interviewed and observed declare themselves to be some type of activist, broadly speaking. The interview guide includes preselected categories of social intentions, such as forming a group of like-minded people, reasons purely based on (ecological) sustainability mind-sets, financial intentions, or the intention of spreading a political message. Initiators may have varying degrees for which such intentions apply, or may even have unforeseen intentions. The latter will become apparent during the interviews.

4.1.3 ACTION LOGICS

Boiral et al. (2009) argues that consciousness development associated with action logics stages can describe features of effective environmental leadership. The way people think, act, and react is a result of a lifelong development process, consisting of horizontal and vertical development (Cook-Greuter 2004). Horizontal, or lateral development is related to expanding knowledge and skills, while vertical development is more related to integration of perspectives (see Figure 4). Vertical development becomes apparent when we examine the meaning-making system, or action logic, of an individual. Cook-Greuter (2004) base their developmental perspective on the Leadership Development Framework (LDF). This is a model that describes mental growth in adults and has been applied to managers and leaders in corporate situations (for example Brown 2011a, Brown 2001b). The framework is based on research on transformative development.

Rather than increasing knowledge, consciousness development is expressed by changing perspectives through experience. To illustrate the concept of consciousness development, I will present a metaphor.

Consider an astronaut aboard a space shuttle ready to leave Earth. He is looking outside the window. Prior to launch he sees the details on the ground, such as technical appliances on the launch pad. After launch, the rocket gains altitude and as a result the view outside widens. Soon, he can see the terrain surrounding the launch pad, a moment later the whole region, with road systems, river basins, towns and forests. The astronaut could not have envisioned this while on the launch pad. With increasing altitude he gains a wider perspective on the world around him. Others, who are not joining him in the spacecraft, might say he is ‘losing touch’ with his immediate surroundings. Finally, the astronaut reaches orbit, can no longer distinguish individual events but is deeply aware of the processes that govern them. It turns into a sensation of interconnectedness of the Earth and the universe. For many, this is seen as a profound experience which has lasting effect on the astronaut. This is called the overview effect (Krukin 2008).

I attempt to uncover these action logics within the perspective of ecovillage development. Brown (2011b) has researched sustainability leaders with late-stage action logics, also called post-conventional development. These action logics are characterized by an integrative approach, transformation of self and others, and even “being” as well as witnessing events and states of mind (Brown 2011b). He also identified a number of abilities that were central to the leaders’ functioning. Post-conventional consciousness is illustrated according to Brown (2011b) through some examples: awards deep meaning to sustainability practices, embraces uncertainty with trust, inhabits multiple perspectives, and holds dialogue with the system (that must be changed).

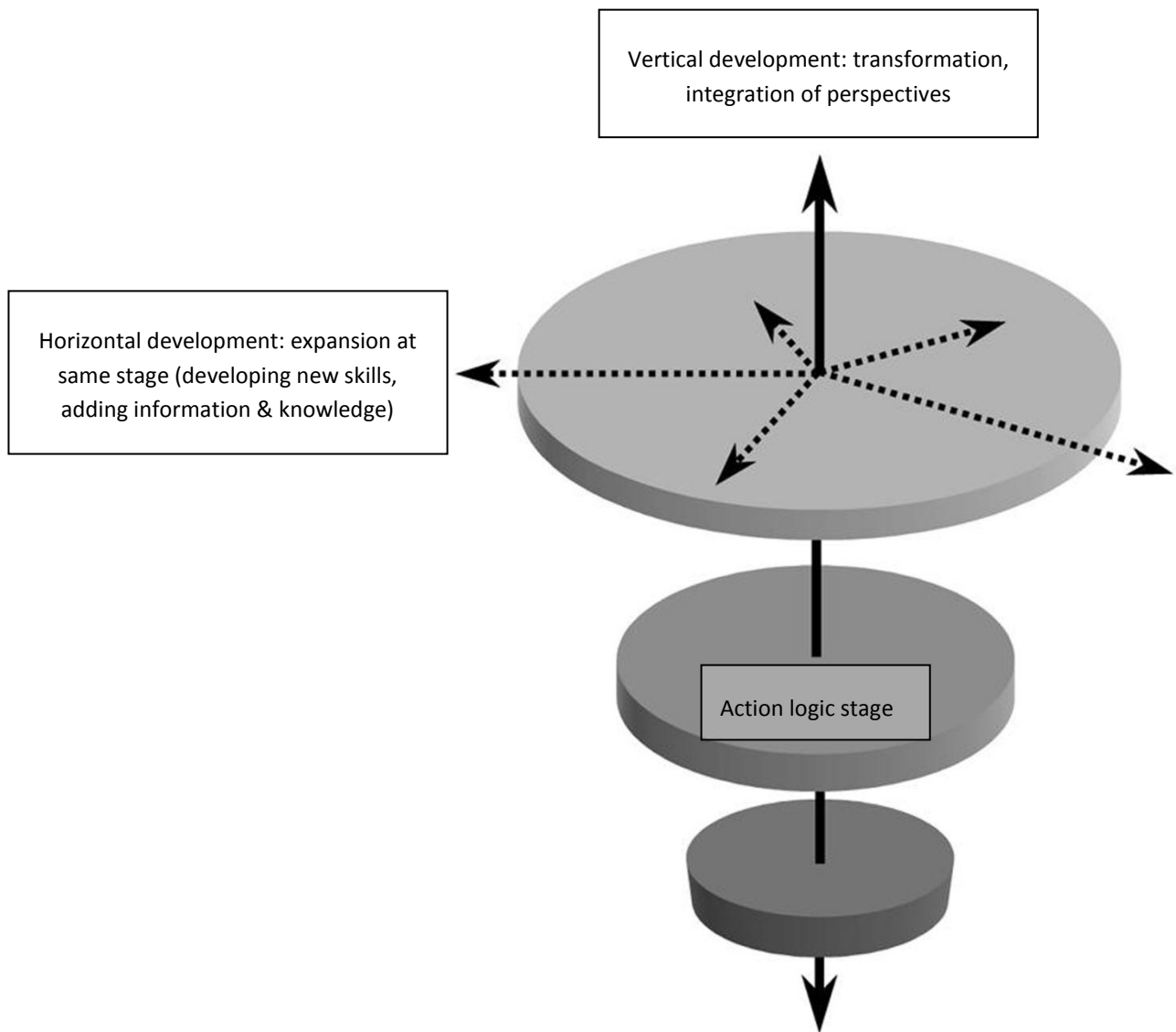


Figure 4: Lateral or horizontal growth and vertical transformation (Cook-Greuter 2004).

Here I present a brief summary of action logic stages, drawn from Brown (2011a), Cook-Greuter (2004) and Boiral et al. (2009):

1. **Opportunist:** The first stage of consciousness development is characterized by the direct needs of the individual. Action is ruled by impulses and will only be taken if a direct advantage exists for the person itself. Feedback is seen as a personal attack. Arguments are seen as contests that need to be won.
2. **Diplomat:** Action is governed by rules. Encourages others to follow the rules as well. Conflict is seen as 'disapproval, or as a reminder of norms' (Cook-Greuter 2004).
3. **Expert:** Action is governed by expertise. Wants to find the most efficient way to get a task done. Will only accept feedback from those he considers knowledgeable.
4. **Achiever:** Action is governed by optimizing system efficiency. Will accept feedback if it helps to improve performance.
5. **Individualist:** Can see system in relation to own actions. Adapts or breaks rules when it seems necessary.
6. **Strategist:** Is governed by principles and development of self and others. Aims to increase knowledge and own worldview.

7. Alchemist: Governed by self-consciousness and integral system thinking. Creates conditions for people of diverse backgrounds to flourish. *'This is the first time in development that the ego becomes transparent to itself'* (Cook-Greuter 2005 in Brown 2011b).
8. Ironist: Is governed by a universal, holistic experience that goes beyond social conventions and institutions. *'Holds cosmic or universal perspective'* (Brown, 2011b). Research on this action logic was done only recently, and information on this stage is very limited.

4.1.4 CONTEXTUAL FACTORS

No ecovillage is developed under exactly equal circumstances. Therefore, factors that play a role in the way an ecovillage is developed can also influence agency. To better understand the difference of what is a result of initiator's agency to create new structure within a niche, and what is the influence of 'old' regime structure, random events and personal factors on the ecovillage development, contextual factors are briefly addressed in this thesis. This will mainly serve as a background for comparison, and it is by no means complete. A fully detailed analysis of external or contextual factors that might influence agency is beyond the scope of this research. Here, I will briefly point out possible contextual factors that were included in this study. I consider personal factors such as significant life experiences and skills and factors related to societal structure. Additionally, other factors are considered that emerge during interviews and cannot be categorized.

Research in significant life experiences (SLEs) indicate that past experiences may have an influence on current behaviour (Chawla 1998). The question asked in this thesis is: 'What events took place in the lifespan of the initiator, prior to initiating ecovillage development, that served as a trigger to make the ecovillage a reality?' These kinds of events are described as 'significant life experiences' (Chawla 1998, Miller and Bentley 2012).

Differences that reside within the structural part of the sociotechnical regime (Geels 2002), such as government involvement or financial capabilities, are often beyond the reach of an initiator. Research in other ecovillages has pointed out the dual relationship with local and regional government (Ergas 2010), which is sometimes beneficial to and sometimes impeding the ecovillagers' efforts.

Having or lacking certain skills influences the ability of the initiator to carry out goals as well as desired, for example the ability to communicate effectively or to form a large social network. Skills that are found to be relevant to the development of ecovillages are linked to agency characteristics. The appearance of a fortuitous event (Bandura 2006) might shift the balance for initiators towards or against development. Lastly, the ability of investing a significant amount of time (for example full time working hours) on the ecovillage could change the role of the initiator within the project, as more can be done by one person compared to what can be done in the limited hours that can be invested when only working outside regular working hours.

5. METHODOLOGY

5.1 INTRODUCTION

In this chapter, I will expand on the way the research for this thesis was constructed for determining the agency characteristics and agency related factors of ecovillage initiators. To reach this goal, qualitative research methods were applied by studying academic literature, searching through ecovillage sources on the internet, and by in-depth interviews. In the following sections I present the methods applied in this empirical research. Section 5.2 contains the research design which provides the selection procedure for the interviewed initiators. Methods of data collection, including the setup of the interview guide are presented in section 5.3.

5.2 RESEARCH DESIGN

5.2.1 QUALITATIVE RESEARCH

Academic research can broadly be characterized as predominantly qualitative, quantitative, or a combination. The choice for a qualitative study can be supported by literature about doing research: *“The study is classified as qualitative if the purpose of the study is primarily to describe a situation, phenomenon, problem or event (...)”* (Kumar 2005). This thesis contains an in-depth exploration on the perception of agency in individuals. The number of ecovillage initiators is very limited and agency characteristics vary widely. These unique stories cannot be translated in the structured approach characterized by quantitative research, but require a less structured approach which allows for more flexibility. Therefore, a qualitative research design is preferred to quantitative methods.

5.2.2 CASE STUDIES

For this thesis ten Dutch ecovillage initiators were interviewed to explore their perceived agentic and agency related characteristics; nine were used for analysis. Detailed information on the selection process for the ecovillages can be found below. The first interview was a pilot version with a different structure compared to the other interviews, and therefore not further analysed. Instead, it served as a useful source of information on how subjects responded to the questions and what topics seemed relevant to study in the later interviews. The initiators are considered to be case studies, according to the definition presented by Kumar (2005): *“The case study method is an approach to studying a social phenomenon through a thorough analysis of an individual case. The case may be a person, group, episode, community, society or any other unit of social life”*.

All considered ecovillage projects are based in the Netherlands. Interviews were carried out in Dutch; this was the first language of the researcher and interviewees. Quotes relevant for this research and other interview materials were only translated into English for this report. The decision to interview ten ecovillage initiators was based on compromise between limited time and resources available for this Master thesis study and the desire to explore as many perspectives on ecovillage initiator’s agency.

IDENTIFYING ECOVILLAGES

Before determining which ecovillages would be selected for the interviews, an overview was made of known ecovillages in the Netherlands (see Annex I). This was done by contacting ecovillage initiators, internet search and a subsequent snowball approach using links on ecovillage websites. The overview includes finished ecovillages, ecovillages under development, and a number of cancelled projects. It is unknown how complete this list is, as initiatives might exist with limited ties to other initiatives, with no or limited internet activity. Websites may be outdated, so some projects may have been abandoned without further notice.

SELECTING ECOVILLAGES

For this thesis it is important to obtain a wide spread of information and perspectives across a range of ecovillages. At the same time a clear boundary on which projects could be selected needs to be implemented to maintain relevance and comparability of the results. Next to the presented definition of urban ecovillages, I implement a number of selection criteria to aid in this goal.

Selection criteria were:

- **Ecovillage development stages**

To keep in mind the agency and agency related factors through various stages of development, I distinguish seven stages of ecovillage development. In this thesis I aim to study ecovillages which belong to at least one of each stage. These do not have to be completed one by one, although a certain order is to be expected. For example, it would be convenient to acquire a building permit before starting construction. Besides, stages may occur simultaneously, for example, an initiative may be open to receive new participants during more stages. Multiple stages could then be identified for one ecovillage.

- Initial idea/concept development: setting up goals and organising thoughts on what is needed;
- Gathering participants/inhabitants: recruiting participants through public channels;
- Acquiring location and building permits: contacts with local government or housing organisation;
- Planning and design stage: specific designs (usually made by architect) take shape;
- Construction stage: the ecovillage is physically being build;
- Post-construction stage: the ecovillage housing construction is finished and houses are inhabited;
- Discontinuation stage: The project did not reach post-construction stage and all activity has ceased. Also applicable when the particular initiator does not participate in the project anymore.

- **Elapsed time since last development activity**

For interviews about the development process and the personal development before that, it is important the experience is somewhat recent. Therefore, no finished ecovillage older than 8 years was considered.

- **(Planned) Ecovillage size**

The selected ecovillages need to have a minimum of 10 (planned) households to ensure initiators deal with similar challenges in developing the ecovillage.

- **Origin of participants/inhabitants**

The inhabitants of the ecovillage at the time of founding do not originate only from the initiator's inner circle prior to the conception of the initiative. Each considered ecovillage had the possibility to apply for a membership.

5.3 DATA COLLECTION

In this thesis two qualitative methods of data collection were applied:

- Literature, document and media review; and
- In-depth interviews.

The literature study was mainly used to prepare the interview guide. Literature on agency lead to the conceptual framework of self-efficacy, action logics and intentions. This differentiation provided the initial structure for the interview blueprint, which was a basic list of subjects that needed to be touched upon to address the main research question. Once the blueprint was established, the subjects were developed into interview questions, which formed the interview guide. In this section, an overview is presented of the used methods of data collection. The interview blueprint, and especially the interview guide, will be explored in detail.

5.3.1 LITERATURE, DOCUMENT AND MEDIA REVIEW

Examining academic literature and other sources is a powerful method to gain insight in theories and concepts on agency and its components, as well for gathering information on ecovillages and surrounding topics. Academic articles, papers, conference papers, and government documents were consulted. Information on ecovillages was gathered in two ways. Firstly by studying academic articles, but also by using ecovillage related websites, blogs of ecovillagers, and news reports.

5.3.2 INTERVIEWS

For this thesis, interviews were used to collect qualitative, empirical data. This choice was not made without considering what it means to conduct a small amount of interviews to record largely unique stories. Some may disqualify such studies as invalid because of their small size. Crouch and McKenzie (2006) propose a different viewpoint, while pointing at some important realizations. Interview data is not an “objective fact”, nor should it try to be. Interviews will not produce objective facts by their very definition. An interview produces statements which are influenced by interviewer and respondent, and are interpreted by the interviewer. Without the interview, the story from the respondent might not have been told or might have been told in a different way (Crouch and McKenzie 2006). The described reality is therefore inherently constructed. *“It is in the nature of exploratory studies to indicate rather than conclude”* (Crouch and McKenzie 2006).

Agency is a broad subject, which makes interviews the preferred method. Using interviews allows data collection to be flexible and opens the way for new and deeper understanding of the viewpoint of the respondent. The method of data acquisition is inherently linked to the way the results are analysed and what conclusions can be drawn. Comparability for example is very limited. Using a small sample means that adding or leaving out one interviewee has an impact on compared results. Summing up types of responses or comparing variations in statements and experiences is therefore useless in most cases. As Davies (2007) describes: *“(…) don’t fall into the trap of counting numbers. It’s almost always inappropriate to refer to the fact that ‘six people said this and four said the opposite’, however seductive the idea may feel”*.

Ten interviews with ecovillage initiators were held, of which nine were analysed. The first interview was a ‘testing’-version to ensure understandability of the questions and a good ‘flow’ of the interview. Respondents were interviewed anonymously; their names and the names of their ecovillage are not mentioned in this thesis. This gave respondents more freedom to bring up relevant topics, and comments that refer to others in a negative way cannot be linked to the initiator directly.

During the interviews, the interview guide was used as a leading structure. In addition, follow-up questions arose and we took different paths if deemed relevant. This meant that interviews were only semi-structured.

All interviews took place in January 2014, except for a pilot version of the interview guide that was used for the first interview in December 2013. This interview was not analysed further. The interviews were performed in person.

INTERVIEW BLUEPRINT

This section briefly describes and presents the interview blueprint (see Box 2) from which the interview guide was developed.

The blueprint below is derived from the thesis research questions other than the first, which is formulated for literature research and concept generation purposes. For each research question, subsequent objectives, topics, and aspects were formulated. Every level goes into more detail on the information needed to answer the research question as accurately as possible. The second research question (*What is the role of initiators' self-efficacy level in the development of an ecovillage, and what factors have influenced initiators' self-efficacy development?*) aims to explore the initiator's self-efficacy mechanism. This mechanism can be of a positive, but also of negative influence on the outcome of the ecovillage project. Self-efficacy within and outside of the ecovillage is discussed. As a final part in the self-efficacy inquiry, influences on self-efficacy formulated by Bandura (n.d.) and (Bandura 1982) will be explored. Next to this, possibilities are provided to explore unexpected self-efficacy aspects. The third research question is "*What are initiators' intentions to develop an ecovillage?*" From the literature and media search several categories of reasons to start an ecovillage were already identified. The third research question (*Within which consciousness development stage is the process of developing an ecovillage enacted by initiators?*) gives room for presenting propositions on action logic stages. The final research question on contextual factors (*Which contextual factors influence initiators' agency in the development of an ecovillage?*) deals with perceived personal skills, structures which influence ecovillage development, and other factors that are seen as important in context of ecovillage development in relation to the initiator.

Research question 2: What is the role of initiators' self-efficacy level in the development of an ecovillage, and what factors have influenced initiators' self-efficacy development?

Objective 1: To find out how the initiator's self-efficacy level has developed in the context of ecovillage development.

- **Topic 1:** Life path developments
 - **Aspect 1:** Significant events inside personal sphere
 - **Aspect 2:** Significant events outside personal sphere
- **Topic 2:** Sources of self-efficacy
 - **Aspect 1:** Mastery experiences
 - **Aspect 2:** Observing peers achieve mastery experiences
 - **Aspect 3:** Social persuasion by peers
 - **Aspect 4:** Actively reducing stress reactions and encouraging a positive emotional state
- **Topic 3:** Other ecovillage related developments that contributed to self-efficacy
 - **Aspect 5:** Other ecovillage related developments that contributed to self-efficacy

Research question 3: What are initiators' intentions that lead to development of an ecovillage?

Objective 2: To explore possible intentions for initiating the development of an ecovillage

- **Topic 4:** Possible intentions

- **Aspect 1:** Social
- **Aspect 2:** Environmental
- **Aspect 3:** Economic
- **Aspect 4:** Political
- **Aspect 5:** Spiritual/metaphysical
- **Aspect 6:** Unexpected intentions mentioned by the initiator

Research question 4: Within which consciousness development stage is the process of developing an ecovillage enacted by initiators?

Objective 3: To approximate the stage of meaning-making in which the initiator is acting in ecovillage development

- **Topic 5:** Affiliation with action logic stages
 - **Aspect 1:** Opportunist
 - **Aspect 2:** Diplomat
 - **Aspect 3:** Expert
 - **Aspect 4:** Achiever
 - **Aspect 5:** Individualist
 - **Aspect 6:** Strategist
 - **Aspect 7:** Alchemist
 - **Aspect 8:** Ironist

Research question 5: Which contextual factors influence initiators' agency in the development of an ecovillage?

ecovillage**Objective 4:** To uncover personal, structural and other contextual factors which play a role in the development of an ecovillage

- **Topic 6:** Personal factors
 - **Aspect 1:** Perception of needed skills
 - **Aspect 2:** Acknowledgement of skills
 - **Aspect 3:** Perceived development of skills
 - **Aspect 4:** Upbringing
- **Topic 7:** Structural factors
 - **Aspect 1:** Governmental cooperation
 - **Aspect 2:** Pilot project status
 - **Aspect 3:** Other structural factors
- **Topic 8:** Possible other contextual factors
 - **Aspect 1:** Financial capabilities
 - **Aspect 2:** Fortuity
 - **Aspect 3:** Time investment
 - **Aspect 4:** Unforeseen contextual factors

Box 2: Interview blueprint

INTERVIEW GUIDE

Below, I describe the interview guide questions and add clarification where needed. The interview started with requesting permission to record the interview, information on anonymizing the results, introduction of the interviewer, and the goal of the study. First some questions about the development of the ecovillage were asked, after which the first part of the interview questionnaire was addressed.

5.3.2.1 SELF EFFICACY

○ **Topic 1:** Self-efficacy development within ecovillage initiative

▪ **Aspect 1:** Execution of self-generated concept

1. When your idea to start an ecovillage took shape, to what extend was it clear to you how it should look like?

This question is added because we need to know the self-efficacy of the initiator towards the realisation of his/her idea of the ecovillage. For interpretative purposes, we must know how clear the idea was in the first place:

- Very clear = picture of total ecovillage on paper or in mind
- Reasonably clear = specific techniques and designs are contemplated
- Somewhat clear = direction to where the design and features should go is clear
- Totally unclear = Only intention such as “I want to live sustainably” is clear

The scale above is not presented to the respondent.

2. To what extend do/did you think this idea can be attained?

▪ **Aspect 2:** Extent of attribution to outcomes

3. Could you tell me something about the extend you think you can contribute/have contributed to the successful realisation of the project on a scale from 1 to 10?

Respondents could place their choice on an unmarked scale from 1 to 10.

○ **Topic 2:** Life path developments

▪ **Aspect 1:** Significant life experiences

4. How did you get the necessary confidence in yourself to take the initiative and start the project?

Follow up: Where do you think lies the origin of this?

5. Are there points in your life that you would define as being crucial in your decision to start development of an ecovillage?

Follow up: Did you think about ecological building before that time? (If so) When and why was that?

▪ **Aspect 2:** Significant events outside personal sphere

6. Was there an influence outside of your personal life that contributed to the idea for ecological building development?

Follow up: How important was this influence?

Topic 2: Ecovillage related developments that contributed to self-efficacy

▪ **Aspect 1:** Mastery experiences

7. Do you have previous experience in ecological housing projects? *Did this strengthen your confidence in taking up this initiative?*
- **Aspect 2:** Observing peers achieve mastery experiences
 8. Were you aware of ecological housing projects before you initiated the project?
 - (if yes): *Did you draw lessons from observing these projects?*
 - (if yes): *Did observing those people inspire you in some way? In what way?*
- **Aspect 3:** Social persuasion by peers
 9. Were there people in your private life that supported or even persuaded you in a non-material sense? *Who were they? How did they support you? Do you feel you could have done it without them?*
- **Aspect 4:** Actively reducing stress reactions and encouraging a positive emotional state
 10. Could you estimate your ability to cope with stress on this scale from 0 to 10?
 11. What is your attitude towards stress?

Follow up: How do you perceive stress, is it good, bad, or indifferent?
 12. How do you react to stress?
 13. Have there been stressful factors in the development of the ecovillage? Could you give an example of how you coped with them?

5.3.2.2 INTENTIONS

- **Topic 1:** Possible intentions
 14. What is the main reason for you to start an ecovillage? *And the main reason to live there?*
 15. Could you rank the following intentions to start an ecovillage by dividing a 100 points?
- **Aspect 1:** Social
 - **Aspect 2:** Environmental
 - **Aspect 3:** Economic
 - **Aspect 4:** Political
 - **Aspect 5:** Spiritual/metaphysical
 - **Aspect 6:** Other, namely

The respondent gives an interpretation and explanation to each aspect.

5.3.2.3 ACTION LOGICS

As mentioned in chapter 4 'Conceptual framework', I want to describe in this thesis what ecovillage initiators find a logical course of action within the frame of developing an ecovillage. There are standardized methods

with questionnaires and analysis for determining the range of action logic stages an individual adheres to most (see for example: Brown 2011b). Normally, ascertaining the action logic stage of an interviewee in such a way would take more time than is available for the total interview time. It is also a very costly affair. As this thesis research has limited means, financially and time-wise, I have developed and applied a different method more appropriate for this exploratory study, which may give a rudimentary insight in action logics. From the descriptions given by several authors (Cook-Greuter 2004, Rooke and Torbert 2005, Simcox 2005, Boiral, Cayer et al. 2009, Brown 2011a, Brown 2011b), I selected behavioural elements that would translate into propositions applicable to an ecovillage initiator. Much of the used literature has a background in environmental management, or can be regarded as fundamental to the developmental perspective. Because the action logic stages describe causes of behaviour, I made a distinction between perspectives on the self, other individuals such as co-workers or participants, and how the individual reacts to feedback from the other. The latter is also seen in Cook-Greuter (2004) p 279 table II. In the development of the propositions I made an effort to give the sentences neither a positive, nor a negative connotation. Total neutrality is however not guaranteed, because the propositions needed to be based on the original sources as closely as possible. Neutrality is an emotional and social value, and is therefore subjective to the reader. The given explanation of the answer of the interviewee is thus, as with any semi-structured interview, important for interpreting the results of this part of the questionnaire.

Below, I describe the development of the used propositions. Per action logic stage I present quotations from the original sources and the derived proposition. Only the text shown in boxes was shown to the respondent. The presented quotations are only shown in this thesis, as an explanation on how the propositions were created. The propositions were presented in random order to the interviewees. The interviewees could express their affiliation with the proposition through an unmarked ranking scale with a range from 'disagree' to 'agree'.

16. Could you please mark down to what extend you agree with the following statements?

▪ **Aspect 1: Opportunist**

- *"May seize certain environmental opportunities or react quickly in a crisis; superficial actions may be showcased in opportunistically"* (Boiral et al. 2009). This is an action regarding the self.
- *"Takes matters into own hands, coerces, wins fight"* (Cook-Greuter 2004) This can be regarded as behaviour towards others.
- *"Reacts to feedback as an attack or threat"* (Cook-Greuter 2004).

"When I see an opportunity, I will seize it. I often win in an argument. Others are often trying to put me down by pointing at my mistakes."

▪ **Aspect 2: Diplomat**

- *"Reactive attitude with respect to environmental pressures; consideration of regulatory constraints and the impact on the organizational image"* (Boiral et al. 2009). This describes the internal thought process, and can thus be regarded as relating to the self.
- *"Enforces existing social norms, encourages, cajoles, requires conformity with protocol to get others to follow"* (Cook-Greuter 2004). As the text mentions, this is about behaviour directed to others.
- *"They tend to avoid conflict at all cost and cannot yet reflect on their behavior and its consequences."* (Cook-Greuter 2004). The same source also states a Diplomat-type receives feedback as disapproval. However, translating this to an ecovillage-type, neutral sentence proved not possible. Considering the statement, one can consider the reaction to feedback as

a cause for conflict. Trying to avoid conflict is a more neutral statement compared to receiving feedback as disapproval, because it focuses on behaviour instead of thought.

"I play by the rules, and encourage others to do the same. I try to avoid conflicts as much as possible"

▪ **Aspect 3: Expert**

- *"Considers environmental issues from a technical, specialized perspective; reinforcement of expertise of environmental services; seeks scientific certitude before acting; preference for proven technical approaches"* (Boiral et al. 2009). This considers the personal viewpoint.
- *"Gives personal attention to detail and seeks perfection, argues own position and dismisses others' concerns"* (Cook-Greuter 2004). This considers a personal viewpoint as well as its relation to behaviour towards others.
- *"Teamwork helps, provided that every individual adheres to the rules"* (Simcox, 2005). This engages specifically how an Expert views working with others.
- *"Takes feedback personally, defends own position, dismisses feedback from those who are not seen as experts in the same field (general manager)"* (Cook-Greuter 2004).

"I'm a perfectionist and prefer to work with methods that are proven. Working in a team is fine as long as everybody adheres to the rules and does their job well. If you don't know about a subject it's better not to comment on it."

▪ **Aspect 4: Achiever**

- *"Main focus: Delivery of results, effectiveness, goals, success within system"* (Cook-Greuter 2004 pp 279). This would be a personal perspective.
- *"Achievers tended to cultivate and mould subordinates to their own perspective. With respect to superiors, Achievers often try to get them to concede to the "correct" course of action"* (Brown 2011). In the proposition, I operationalized this statement about others by choosing 'coordinate team members' and connect this to achieving maximum performance as if this is the individual's own responsibility.
- *"Accepts feedback, especially if it helps them to achieve their goals and to improve"* (Cook-Greuter 2004 pp 279).

"I work by setting clear and attainable goals. I coordinate team members in a way that ensures everyone achieves maximum performance. Giving and receiving feedback can help to improve that performance"

▪ **Aspect 5: Individualist**

- *"Adapts (ignores) rules where needed, or invents new ones, discusses issues and airs differences"* (Cook-Greuter 2004). This seems to be mostly related to a perception on the self. The latter part also seems to express a desire to interact with the other to discuss meaning making. I integrated this in the proposition by connecting 'doing the right thing' to 'involving others'.

- *"I act as an enabler/ developer - a coach rather than a technical specialist. I'm learner, leader, teacher - to assist and enhance people's powers of observation and experimentation"* (Simcox, 2005). Simcox' remark is about the interaction with the other and clearly describes the difference with the Expert-level.
- *"Welcomes feedback as necessary for self-knowledge and to uncover hidden aspects of their own behaviour"* (Cook-Greuter 2004). I decided to integrate this statement into the second sentence of the proposition because it signals readiness to involve others in discussion.

"I will sometimes break the rules to do the right thing. I tend to involve others in discussions on what actually is the right thing to do. I'm more like a coach than a boss."

- **Aspect 6: Strategist** (see Brown 2011 pp 42 table 4 for a complete summary of capacities)
 - *"Leads in reframing, reinterpreting situation so that decisions support overall principle, strategy, integrity and foresight"* (Cook-Greuter 2004). This statement refers to the self.
 - *"Invites feedback for self-actualization, conflict is seen as an inevitable aspect of viable and multiple relationships"* (Cook-Greuter 2004). Interactions (and feedback) are interpreted as opportunities for self-actualisation, and in turn helping others to improve.
 - *"(...) they are often committed to helping others develop. This comes from a conviction that higher development is better and closer to truth (Kegan, 1982), as it provides a less distorted and more realistic view of oneself and the world"* (Brown 2011).
 - *"Empathize more deeply, be more tolerant of, and show interest in, other perspectives (Joiner & Josephs, 2007)"* (Brown 2011). To emphasise the empathic perspective of the Strategist, I added the final sentence of the proposition.

"My aim is to better myself and to enable others to do the same. Conflict is an opportunity for development, and I do my best to reconcile different views. I consciously make an effort to see the world through someone else's eyes and to see the interconnections with others."

- **Aspect 7: Alchemist** (see Brown 2011 pp 47 table 5 for a complete summary of capacities)
 - *"Recognition of ego's clever machinations at self-preservation; recognition that all cognition is constructed and split from non-dual truth"* (Brown 2011).
 - *"This is the first time in development that the ego becomes transparent to itself. Final knowledge about the self or anything else is seen as illusive and unattainable through effort and reason because all conscious thought, all cognition is recognized as constructed and, therefore, split off from the underlying, cohesive, non-dual truth..."* (Cook-Greuter 2005 in Brown 2011). The 2 points here regard the self as being able to observe itself.
 - *"Ability to empathetically attend to the views and interests of another, and also maintain awareness of one's own bodily presence"* (Brown 2011). This refers to the ability to empathise with others, while keeping own thoughts and feelings present.
 - *"The objective of this senior-peer mentoring is not, in conventional terms, to increase the chances of success but to create a sustainable community of people who can challenge the emergent leader's assumptions and practices and those of his company, industry, or other area of activity"* (Rooke and Torbert 2005). This statement says the goal is not to lead and be successful (and take feedback in such a way), but to create an atmosphere in which people can contribute to the higher goal. The second sentence of the proposition is now related to feedback.

"I observe my own process of thinking, acting and rethinking. I actively seek out people that challenge my assumptions and practices. I know how I can communicate with others indiscriminate of their level, and at the same time unite this perspective with my own."

- **Aspect 8:** Ironist (see Brown 2011 pp 53 table 6 for a complete summary of capacities)
 - *"At times, reality for Ironists is deeply experienced as an undifferentiated phenomenological continuum. Use of language, or any form of objectification, is an abstraction that filters raw, subjective experience"* (Cook-Greuter 2005 p. 34, in Brown 2011b). The impression that language and other ways of description are filters to 'organize' subjective experience is expressed in the first sentence of this proposition.
 - *"Ironies are, not surprisingly, a hallmark of the Ironic style. The distances and tensions between the ideal and the actual, between one's inner awareness and outer performance, between self and others are accepted as an essential condition of life, to be transformed in particular instances but never obliterated..."* (Torbert 1987 p218, in Brown 2011b p50). This vision implies a distance between a desired and actual situation, which needs to be accepted and sometimes transformed. This has an impact on the way one communicates with others and the way feedback is dealt with. This transformative approach is expressed in the second sentence of the proposition.

"Every object, word, thought, feeling and sensation, every theory is a human construct, creating boundaries where there are none. I create an atmosphere in which the tensions between the ideal and the actual, between one's inner awareness and outer performance, between self and others are transformed to workable challenges for all group members within their diversity ."

5.3.2.4 CONTEXTUAL FACTORS

Next to the self-efficacy, intentions, and action logics, I explore possible other reasons that could influence the agency of an initiator. These reasons are divided into fortuity, personal capabilities, resources, and structural factors. Resources are defined as possessions by the ecovillage project or initiator, such as money or time investment. Structural factors can be described as social, economic and technological boundaries which interact with the ecovillage initiator and the project itself.

- **Topic 1: Personal factors**
 - **Aspect 1:** Perception of needed skills
 - 17. What kind of skills do you think are important if you want to develop an ecovillage?
 - **Aspect 2:** Acknowledgement of skills
 - 18. Do you possess those skills?
 - **Aspect 3:** Perceived development of skills
 - 19. How, where and when did you develop those skills?
 - **Aspect 4:** Upbringing
 - 20. Were you interested in nature or sustainability at an early age? *Where did that come from?*

- **Topic 2: Structural factors**
 - 21. What do you think are factors that helped or hampered the development of the ecovillage?
 - **Aspect 1:** Governmental cooperation
 - 22. Did the initiative have a good relationship with the municipality or regional government? Did they help or impair you in some way?
 - **Aspect 2:** Pilot project status
 - 23. Did the initiative receive a status of pilot project or something similar? Did this have consequences for the initiative? What kind of consequences?
- **Topic 3: Possible other contextual factors**
 - **Aspect 1:** Financial capabilities
 - 24. Did you or other members of the initiative make a large investment from private capital?
 - **Aspect2:** Time investment
 - 25. How much time were you able to invest in the initiative?
- **Topic 4: Fortuity**
 - 26. Could you mention instances in development of the ecovillage in which you could describe luck or fate to be the main cause?

5.3.3 EMPIRICAL DATA ANALYSIS

After an interview was finished, a complete transcript of the recording was made. Quotes which contributed to answering interview questions were selected and grouped per question, per initiator. Analysis of transcripts and selected quotes was done in two ways. The first was by interpreting the answers. For each selection of quotes a brief interpretation was made on what was the core issue. The second way of analysis was done by studying both the transcripts and grouped selections. Through deduction, recurrent themes emerged. These themes, along with structured interpretations from interview answers, are presented in the following chapter on the results.

6. RESULTS

6.1 INTRODUCTION

This chapter presents the results of the semi-structured in-depth interviews that were conducted with nine ecovillage initiators. Interviews took place in January 2014. First, I will briefly introduce and categorize the selected ecovillages. A distinction is made between discontinued ecovillage projects on the one hand, and ecovillages under development or completed ecovillages on the other hand. This distinction is maintained where possible throughout this chapter, and it aims to provide insight in the way agency characteristics influence ecovillage development. The chapter is structured according to the interview blueprint combined with themes which emerged during analysis, while considering the aforementioned distinction. Section 6.3 is dedicated to the results on self-efficacy. Section 6.4 considers the intentions, and section 6.5 contains the results on action logics. The final section deals with contextual factors.

6.2 OVERVIEW OF ECOVILLAGES AND THEIR INITIATORS

As discussed in chapter 5 ‘Methodology’, the ecovillages were selected according to six development stages: initial idea/concept development, gathering participants/inhabitants, acquiring location and building permits, planning and design stage, post-construction stage, and discontinuation stage. These phases are here condensed into three categories (see Table 1). These categories will enable a clear distinction between projects for which found agency characteristics were apparently not sufficient to continue and complete, and projects for which this was the case. Numbering of the ecovillage was established in chronological order of the interviews.

Table 1: Ecovillages per category.

Discontinued	Under development	Completed
<ul style="list-style-type: none">• Ecovillage 5• Ecovillage 9	<ul style="list-style-type: none">• Ecovillage 1• Ecovillage 2• Ecovillage 3• Ecovillage 7• Ecovillage 8• Ecovillage 10	<ul style="list-style-type: none">• Ecovillage 4• Ecovillage 6

Discontinued ecovillages

Ecovillage 5

The dream of this initiator to develop an ecovillage never saw the light of day. The initiative took off when a local political party organised a brainstorm evening on how to redevelop an urban area. A group was formed and intensive contacts with the municipality and other third parties were made. Eventually regulations, changed zoning plans, and dependence on two 3rd parties who could not cooperate with each other meant the project was to be abandoned. The initiative ended at the acquiring location phase. For about five years the initiator was chairman of the project. He felt he was the main force behind developments from the group. At the time of interviewing, he had joined a nearby ecovillage group which is under development. The interview took place at the interviewee’s residence.

Ecovillage 9

After living in an ecovillage for some years, the interviewee decided to start a similar housing experience himself. The initiative ended after the gathering participant's stage. At the moment, he has joined an existing developing ecovillage project. The interview took place at the interviewee's residence.

Ecovillages under development

Ecovillage 1

The first ecovillage initiator is not included in the final thesis because the interview was used as a test case for the interview guide. After careful review some questions and the order of questions were slightly altered in the final questionnaire. A transcript of the interview was made. This ecovillage is in the phase of legally acquiring a building permit for their location (acquiring location phase). The interview took place at the interviewee's residence.

Ecovillage 2

The second ecovillage group is looking for ways to fund their multi-million euro housing project. Many participants have no significant income, thus the funds for construction must come from elsewhere. The municipality has signed a letter of intent with a favourable property lease option which lasts five years. I categorized this as the planning and design phase. On this property, temporary and permanent housing may be built. The organisation also intends to include small scale wind energy generation and a permaculture garden. At the time of interviewing the board consisted of 4 members, whereas 15 people had shown serious interest in participating in the project. The initiator was the chairman, and responsible for external contacts such as the local municipality. The interview took place at the interviewee's residence.

Ecovillage 3

The organisation of the ecovillage now owns the property on which construction is being planned over the coming years. Plans are kept as open as possible to accommodate (technological) developments over time. Therefore, this ecovillage is at the planning and design phase as well. Seven people live at the property in temporary housing, another 15 are involved. The initiator keeps an eye on activities, but does not see himself as a leader. He is a member of several committees, responsible for zoning, soil remediation and public relations. He expressed clearly that *"one should set [your own idea] on the side and make it a common dream"*. The interview took place in a room in the common barrack on the future ecovillage property.

Ecovillage 7

The initial core group took a very technical vision of realizing sustainable housing, with energy-neutral housing at the centre. The group first developed a plan and later 'went public' to attract future residents. Focus shifted to include a social element of sustainability, allegedly because people think that is important as well. At the time of interviewing, the organisation is deliberating with the local municipality on property pricing, thus the current development phase is 'acquiring location'. The initiator is officially the treasurer, but also claims to guard the general development process. Around 20 households are involved, of which around half is actively contributing to the development. Another 10 have not fully committed to participate in the project. The interview took place in a university lecture room.

Ecovillage 8

The idea to build an ecovillage started with three housemates living at a cooperative living arrangement or cohousing. After a while, the idea became serious and a group of 8 people was formed, of which 3 remained until the now and the others were replaced. The project is completing the planning and design phase at the

time of interviewing, and construction was scheduled to start around one month later. Eventually, the ecovillage will provide room for 24 households in various forms, for example one-person homes, family homes, and cohousing (Iewan 2014). The initiator is a member of the 'steering committee' (similar to executive board, used to be originally core members), and the building committee. The interview took place in the café area of a hotel.

Ecovillage 10

The final ecovillage initiators in this study were very busy building their own house in the ecovillage in development. So far, the project had been a process of more than 8 years. The initiators were actually a couple. I interviewed the wife mostly, but some helpful comments came from her husband who was then busy building in the half-finished house. For the largest part of the 8 years of ecovillage development, the couple was one of the driving forces behind the project. The interviewees husband was the chairman until 1.5 years before the interview. After stepping down, they are still member of several committees including external communications and green infrastructure. The interview took place at the interviewees' future residence.

Finished ecovillages

Ecovillage 4

This ecovillage was finished more than five years before this interview, thus in the post-construction phase. The original initiators had left before that time, but other participants persisted. I interviewed a member of the ecovillage board who also had been present during most phases of development. The reasons for the departure of the initiators were, according to him, threefold. Costs of the ecovillage were increasing and less affluent participants left the project. Besides, many sustainable measures had to be left out because of restraints. Furthermore, the increasing time for development caused many participants to leave. Now the ecovillage has more than 40 households. The interview took place at the interviewee's ecovillage residence.

Ecovillage 6

After a development period of approximately 10 years, this ecovillage was completed approximately five years before this study took place. It is categorized as post-construction phase. The property initially had no zoning plan for housing. Regulation limitations and various legal issues had to be overcome. Many people had left and others joined the project, but the initiator and some others were a continuous driving force up until completion. The initiator communicated with the municipality in particular. The ecovillage houses approximately 20 households. The interview took place in the common room of the finished ecovillage.

6.3 SELF-EFFICACY

In the following subsections, factors influencing self-efficacy are explored. These are: 1) individual action; 2) creating a sense of co-ownership and shared responsibility; 3) self-efficacy as a gradual development; 4) idealism; 5) mastery experiences; 6) observing peers achieve mastery experiences; 7) social persuasion by peers; and 8) ability to cope with stress. The first four factors were uncovered by deduction of the interview results. The remaining factors were derived from Bandura (1982) and applied in the interviews.

6.3.1 SELF-EFFICACY DEVELOPMENT WITHIN ECOVILLAGE INITIATIVE

- **Individual action contributes to self-efficacy**

All initiators of continuing and finished ecovillages tended to grade themselves high on their contribution to the successful outcome of their ecovillage project. What being successful contained was in this case individually interpreted, so it can be defined as each individual initiator reaching their goal. On a scale from 1-10, none scored their own contribution lower than a 7.5 (see Figure 5). The most mentioned reason for the scores was invested time and time spend from the start of the initiative, which was in most cases respectively the highest and longest of all participants. Attribution to outcomes does not appear to be a direct indicator for self-efficacy level. The initiator of ecovillage 10, for example, showed signs of lower self-efficacy (stepping down from board, doubts on execution of original idea), but graded a “10” because “*without us it wouldn’t have existed in the first place. (...) We are somewhat of the guardians for the implementation of ecological measures*”. The initiators being ‘guardians’ is a contribution to the belief in their capacity to succeed, although their self-efficacy level might be lower than desired. The results show that initiators regard their contribution to the project as being of high importance for reaching their goal. In this way, individual contribution to the ecovillage project - regardless of any collective effort - contributes to self-efficacy.

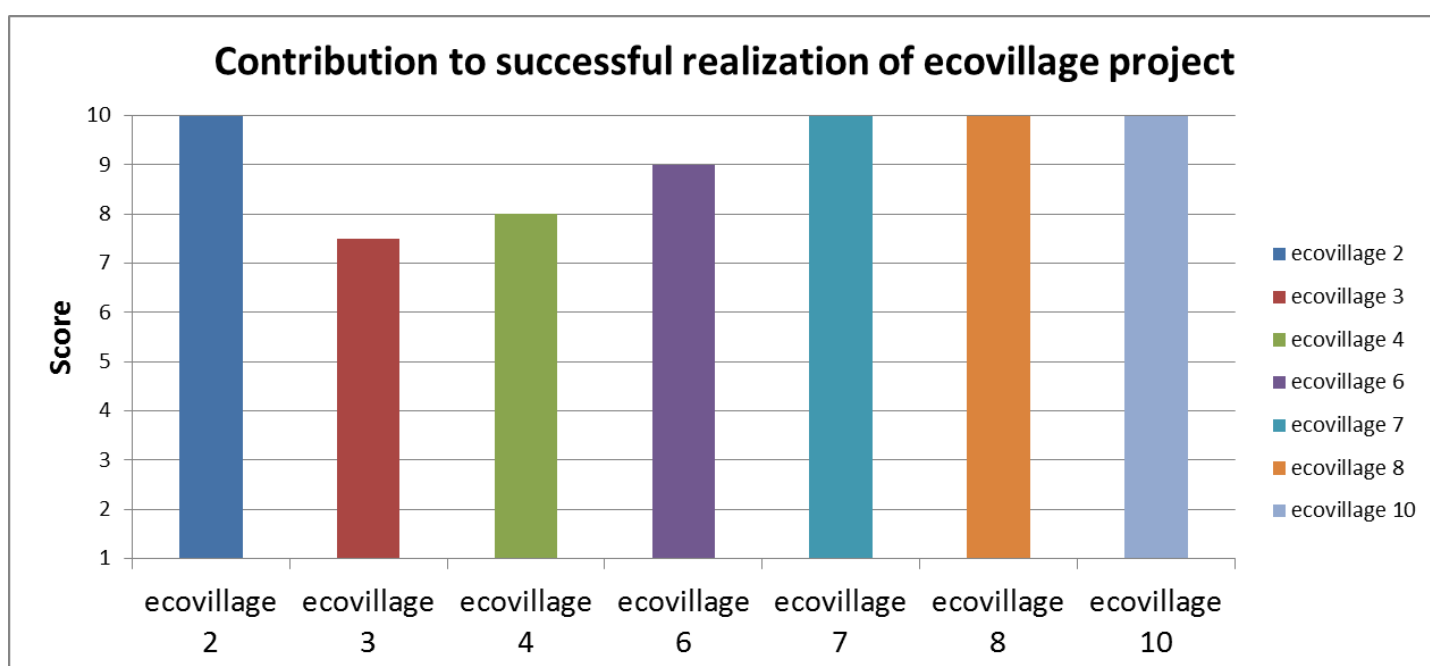


Figure 5: Scored contribution to a successful realization of the ecovillage project, according to the initiators. Ecovillage 9 is excluded because of early discontinuation of the project.

- **Creating a sense of co-ownership and shared responsibility**

Within the ecovillage initiative, a sense of co-ownership and shared responsibility was found to be a major influence on self-efficacy.

In all continuing and finished ecovillages, initiators have - whether consciously or subconsciously - been influenced by the social environment of the group of participants. In order to succeed, a shared vision on the future ecovillage needed to be developed and maintained. A shared vision creates a sense of co-ownership and common responsibility. The interview results indicate that a lower personal feeling of responsibility for success results in a higher perceived self-efficacy. To illustrate the indicative connections, I present the clearest examples in detail and others in Table 2.

From the outset, the idea of what an envisioned ecovillage should look like is not established by the initiator alone. Most respondents recalled they only had a somewhat to a reasonably clear idea of the most ideal design for them. As a source of inspiration initiators mentioned other ecovillage designs. In particular the so-called 'earthship'-design was mentioned by four out of nine initiators. The earthship was - in most cases - later abandoned because it was not found to be suitable for the Dutch climate. Eventually, the final ecovillage design is the outcome of group deliberation and practical (often financial) constraints. Another example of efforts to establish co-ownership and shared responsibility comes from the initiator of ecovillage 3. He believed it was necessary to let go of his ownership of the project to allow the newly formed group of participants to take over and establish equal co-ownership of the project. He quoted a consultant in the field of Ecologically Sustainable Community Economic Development (Croft n.d.), saying: *"This is also from John Croft: every initiative starts with one person. And that one person needs to make his dream common"*. The initiator quit the project for one month, and came back to see if the group had taken over. It turned out they continued the project. He felt relieved that this had happened, as he did not feel comfortable with the pressure of being solely responsible for the project's success. This indicates an increased self-efficacy to continue with the project as part of a collective effort. Throughout the interview, the initiator of ecovillage 3 emphasised the importance of the group decision making system, known as sociocracy. This method can be described as decision making based on consent of the participants. Preponderant concerns are voiced within the group and may be adopted based on argumentation. Sociocracy is viewed by the initiator as a way to maintain co-ownership. Other ecovillage initiators did not temporarily quit their project to establish co-ownership, although the initiator of ecovillage 7 mentioned he would welcome the opportunity to step out of the project for a limited time. However, the initiator did not perceive this as feasible, because he thought the project would be delayed without his input.

These two cases suggest at least two underlying reasons for creating a sense of co-ownership and shared responsibility. The first is the creation of a shared vision, the second transforming individual action into a collective effort. Developing an ecovillage is an intrinsically social activity. The initiator's perceived self-efficacy is influenced by the social characteristics of the group.

Upon further study of the interview transcripts, expressions of these reasons were found in all continued and finished ecovillages. This was despite the fact no specific question on this topic was posed in the interviews. Table 2 illustrates the role of co-ownership and shared responsibility in continuing and finished ecovillages, using a selection of interview transcripts translated from Dutch to English. Discontinued ecovillages are discussed separately.

Table 2: Evidence of creating a shared vision, and transforming individual action into a collective effort for continuing and finished ecovillages.

Initiator of...	Translated transcript segment	Interpretation
Ecovillage 2	"We launched the website in August and three months later we had 100 people. We divided them into groups and we said: we will do this together. People began to follow courses, read books and visit other projects to see how they do it."	By letting participants seek knowledge on ecovillages, the initiator enabled them to piece together the ambition of the ecovillage. While working together, responsibility became shared by taking collective action.
Ecovillage 4	"We explicitly wanted to live in a social neighbourhood. We already had strong ties before we started building. We had a lot of meetings. It was finished eventually, but we had to work for it. Trust, perseverance in each other."	The initiator emphasises the shared wish for a social neighbourhood and a collective action to reach this goal.

Ecovillage 6	<p>"We have never had any big arguments. That's really important to me, doing it together." "Also for the group, I keep saying that because I did a lot but also couldn't have done it alone. Also the people here, almost always I had the feeling 'there is trust.'" "You constantly have to ask yourself, when do I serve the individual, when the collective and when do I have to make a compromise. I would never have chosen this house. But it was the only design that was allowed and possible."</p>	<p>The initiator emphasises collective action and trust from other participants. She highlights the inconsistency between working on a collective vision and having individual desires as well.</p>
Ecovillage 7	<p>"If you want to buy a certain lot on your own, you need a lot of money. I'm a poor wretch, so you find more people to do it together. It's a financial motive." "As time passed we found out that people think liveability, we call it social sustainability, is more important." "Many projects seek out participants instantly; we wanted to make a good plan with a small team." "It takes me 10, maybe 8 hours per week. It needs to get less, but I've been saying that for a long time now. (...) that has to do with me, but also when the pace goes down, the distance [between group members] becomes less. You get too far ahead at some point."</p>	<p>1) The initiator was focused on technical sustainability at first, but social sustainability became part of the shared dream to be able to continue.</p> <p>2) The initiator invests more time and effort in the project than others. An imbalance in collective effort is the result. This is not a desirable situation for to the initiator, because he feels more responsibility without having backup.</p>
Ecovillage 8	<p>"I think the danger lies in demotivation or in serious disagreements. Projects can fall apart when people get demotivated because nothing is happening. Or people can make a huge effort but they all have this grand ideal, which all differ slightly. You can get internal conflicts."</p>	<p>The initiator argues a shared vision is important, otherwise internal conflicts could arise. Also waiting a long time without activity is a demotivating factor. No activity is a contrast of collective effort decreases self-efficacy.</p>
Ecovillage 10	<p>"It is easy to say: non-ecological materials are cheaper, let's use those. There's a pretty big chance that will happen. Our task is taking care all alternatives are considered. That's what determines success." "We were warned, but we still noticed how many concessions were necessary. We were getting tired of that. (...) We are probably the biggest environmental 'freaks'. And at some point we had to compromise so much that we were fed up. There have been moments in which we wanted to quit."</p>	<p>Differences in shared vision caused ponderings on leaving the project.</p>

For ecovillage 10, a divide between individual and the combined group vision resulted in lower self-efficacy. The initiators claimed they had clearly framed ideas for ecovillage design. Their vision was to build an earthhouse using no-impact, low-tech, locally available, second-hand, or renewable materials such as straw. However, they resigned from their board functions about 6.5 years into the project. Primary reason was the continued disappointment about many compromises that needed to be made. The respondent noted on several occasions that she often wondered what was even left of the project's initial ideals. The project continued as a collective effort, and the initiators are still participating. On a side note to the conclusion on the effect for self-efficacy, it needs to be recognized that more reasons existed which fuelled the decision to

abandon the ecovillage board; for example the formation of a stable group which made it possible to step down, a high workload during construction of the ecovillage, setbacks in construction, and the burdens accompanied with raising children.

For the two discontinued ecovillages, it is less evident that a shared vision and collective efforts were established. The initiator of ecovillage 5 had been the main driver of the project for five years until it was discontinued. He claims that during this time he has put in most time and effort. After the originally intended location was not possible, a core group searched for alternatives. The other participants waited for their findings. The core group of five participants was eventually reduced to three for different reasons, such as “people were busy” and people claiming they were not able sell their house in the housing crisis. After an unsuccessful attempt to start an ecovillage together with the housing corporation and a developer, the initiator decided to join a different ecovillage project in the vicinity of the original municipality. *“That was the moment I thought, I put a lot of time and effort in this and we already had contacts with [ecovillage] to exchange ideas. Then I thought, let us join them and continue there.”* In this ecovillage, a shared vision was established up to a certain limit. The vision could not be made specific because a location was not found, and collective effort ceased. After some years of fruitless effort of the core group, participants were demotivated and left. The existence of and contacts with a nearby ecovillage project which had gained momentum, made a transfer the most logical option. The initiator of ecovillage 9 discontinued the project at an earlier stage. After launching a website, around 20 interested participants applied. During analysis of the interviews, no evidence of a shared vision or collective effort was found. Participant visions on the ecovillage may have been different from the vision of the initiator. Quoting the initiator: *“I didn’t take sides on whether it would be rental or resale housing. I preferred resale, because involving a housing corporation gives a lot of hassle and uncertainty.”* The current participants did not seem to live up to the initiator’s expectations. *“You need to bring at least 180,000 euros. If you want to build something reasonable. And they said, we’re very interested and we want to do something in this area, but actually we have no money.”* He acknowledged the other ecovillage project he joined later has an approach consistent with his reasoning. *“I notice that [ecovillage] has set up clear communication. That kind of prospective members don’t sign up.”* No collective effort between the initiator and participants was mentioned in the interview. The initiator remarked he had no perceived capability in dealing with political aspects of ecovillage development. He remarked others should be found within the group to deal with this. The apparent absence of collective effort in solving this issue resulted in lower self-efficacy.

6.3.2 SELF-EFFICACY DEVELOPMENT OUTSIDE ECOVILLAGE

- **Self-efficacy as a gradual development**

Self-efficacy beliefs appear to develop gradually. To understand the development of self-efficacy, interview questions on life path developments and activities related to ecovillage development are examined. First, interviewees are directly asked about what gave them their confidence to start the project. With this question I aimed to uncover their primary reason on what sparked their self-efficacy belief. Seven out of eight initiators (question was skipped for initiator of ecovillage 4 due to time restrictions) could not name a particular activity or development that directly contributed to their confidence to initiate the project. In this section and in section 6.3.3, examples of gradual self-efficacy development are presented.

- **Idealism supports self-efficacy**

For one ecovillage, an indication exists that idealism was directly related to self-efficacy belief. The initiators of ecovillage 10 stated that their self-efficacy belief started as a combination of optimism, naivety, political knowledge of local government, and a strong belief the project is needed in society. This led them to believe the time was right. *“From the beginning we never doubted it would be realized.”* While other self-efficacy influences seem to be less present in this particular ecovillage, the desire to realize their ideals may have supported their self-efficacy. All initiators except two also expressed ideals such as mitigating climate change

and resource depletion or generally striving towards sustainable changes in society as drivers. However, those drivers could not be directly linked to their belief in their capabilities and the possibility of success.

6.3.3 SOURCES OF SELF-EFFICACY

This section explores the four sources of self-efficacy, as identified by Bandura (1982).

- **Mastery experiences**

Respondents were asked if they had any experience in initiating other ecovillage development projects. Only one initiator had this kind of experience. The initiator of ecovillage 2 initiated three other ecovillage development projects himself, which were all discontinued for different reasons. In the first attempt, high real estate costs were a problem. In the second project this was no problem, but the number of active participants was low, plans were on a large scale, and building permits were uncertain. For the third project, the initiator stated the municipality viewed the ecovillage group as a project developer, and communications were strained. Despite the history of setbacks, the initiator is optimistic on the outcome of the current project.

The initiator of the discontinued ecovillage 5 had experiences that might have supported him in developing an ecovillage. He had worked on a communal housing project, which was being co-developed with the housing corporation, an architect, and future inhabitants. Even though he had no experience in developing an actual ecovillage, the initiator could have gained mastery experiences through co-developing a communal housing project because it is similar in for example goal and used external contacts.

- **Observing peers achieve mastery experiences**

Observing peers achieve mastery experiences is a source of self-efficacy according to Bandura (1982), so this was also examined directly in the interviews. Seven out of the nine respondents visited one or more ecovillage projects or projects in development. These respondents include the initiators of the discontinued ecovillages 5 and 9.

The initiator of ecovillage 2 did not familiarize himself with other projects. *“I did not feel a need to do so. When we felt the need to live sustainably, we started building a website.”* The website attracted many future participants. The initiator of ecovillage 4 doubted that the finished ecovillage projects he witnessed will be repeated in the future. *“They have the same problems as we have now. There’s always someone else who wants something different, who rejects it”*. The husband of the initiator of ecovillage 10 helped constructing an ecovillage abroad. He said: *“That was the prevalent extra trigger to say we want this also in the Netherlands”*. He and his wife organized a presentation; many of the participants became the first participants in the project.

Strikingly, initiators of four ecovillages - again including discontinued ecovillages 5 and 9 - had a background in alternative forms of housing. The initiator of ecovillage 3 had lived for ten years in an African community, to which he referred as practically being an ecovillage. Before this experience he studied architecture and he developed an interest in designing energy neutral housing. The initiators of ecovillages 5 and 8 had experience with living in a cohousing community before they initiated development of their ecovillage projects. The initiator of ecovillage 6 had a relative who lived in a cohousing arrangement. Her upbringing seemed to encourage the principles associated with this form of living: *“creating your own project and community spirit are common within the family”*. Later, she developed her self-efficacy by visiting other ecovillages.

For the initiator of ecovillage 9, examples of other ecovillage projects led to a decrease in self-efficacy rather than growth. During conversations with a befriended expert on ecological construction and after a course on envisioning a personally ideal living environment, the desire to develop an ecovillage increased. After exploring various developing ecovillage projects, self-efficacy decreased. *“I had underestimated [time and effort required]*

enormously.” *“Maybe I oriented myself insufficiently; you start with an idea and a dream. (...). I had little notion of what awaited me.”*

- **Social persuasion by peers**

Social persuasion could play a role in self-efficacy development. The initiators mentioned close friends, family, other participants and the group as a whole as being supportive to them in the ecovillage development. The initiator of ecovillage 8 started the project with a group of four people from the beginning. She said it took a long time before there was enough confidence, and that it built up gradually through taking time with the group and through gaining the required knowledge. When she interacted with parties needed for ecovillage development, such as the housing corporation and municipality, she realized that her knowledge had increased. She also mentioned that encouragement from others helped to gain confidence.

The initiator of ecovillage 2 reported a boost in self-efficacy when he deliberated with experts in biobased building. *“They said what [ecovillage 2] is doing could be crucial for the construction sector. You feel stronger; they don’t say that for nothing. I want to make sure it happens.”*

- **Ability to cope with stress**

As mentioned in chapter 4 ‘Conceptual framework’, it would be meaningful to understand how ecovillage initiators cope with stress and in what way they are affected by stressful situations. In Figure 6, the perceived capacity to deal with stress is graded by initiators on a scale from 1-10.

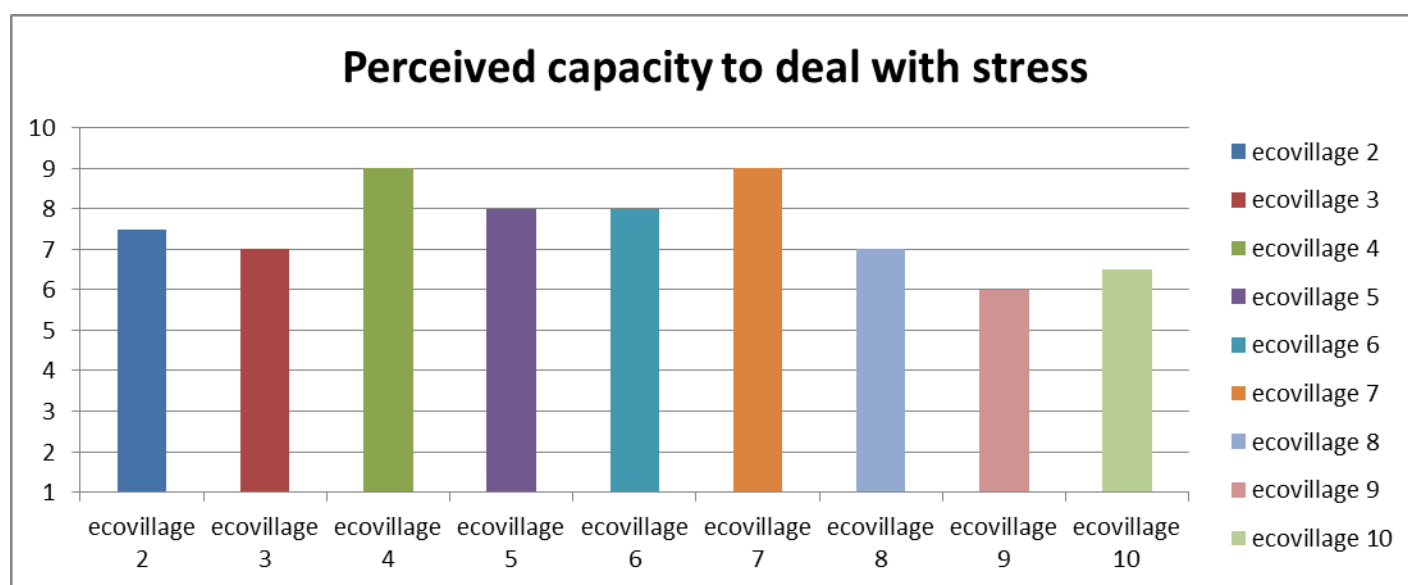


Figure 6: Perceived capacity to cope with stress, graded by ecovillage initiators on a scale from 1-10.

Grades ranged from 6 to 9. In the education system in the Netherlands, a grade of 6 is regarded as sufficient and a 9 as outstanding. The initiator of ecovillage 10 scored only half a point higher than the previous initiator. The cause for stress is, however, different. She associated stress mainly with disagreements and frustrations in the group process. She mentioned an example where the group had decided the common building tasks should be completed before completion of individual houses could begin, even though the former had been delayed. As the couple and their children had been living in a mobile home for the past three years, they did not want to wait any longer to prepare their own home. *“At that moment I just had to yell, to release my frustrations”*. She acknowledged that eventually there should be rapprochement, exchange of ideas, and acceptance of the situation. Furthermore, she remarked the couple works together and her husband is better capable in handling such situations. He marked his ability to cope with stress with a grade of 9.

The initiator of the discontinued ecovillage 9 associated stress mainly with an excess workload. He regards stress as motivating and stimulating efficiency, but after a certain level he perceives it as limiting, causing a blocking effect. With a fulltime job including deadlines, the initiator doubted his ability to cope with the added stress caused by developing an ecovillage.

6.4 INTENTIONS

During the interviews, I explored the topic of specific intentions to start an ecovillage. I first posed the open question 'What is your most important reason to start an ecovillage?'. This was done to avoid steering the respondent into a certain direction or category. The respondents were asked to rank their intentions according to five categories: *social*, *sustainability*, *economic*, *political* and *spiritual/metaphysical*. They also had the opportunity to add other categories that did not fit the prescribed ones. Then, they could divide 100 points onto each category according to importance. The results of this ranking are presented in Figure 7. This section is divided into subsections, each describing initiator's explanations for a particular category. The provided additional categories, along with results from the first open question, are presented in subsection 6.4.6.

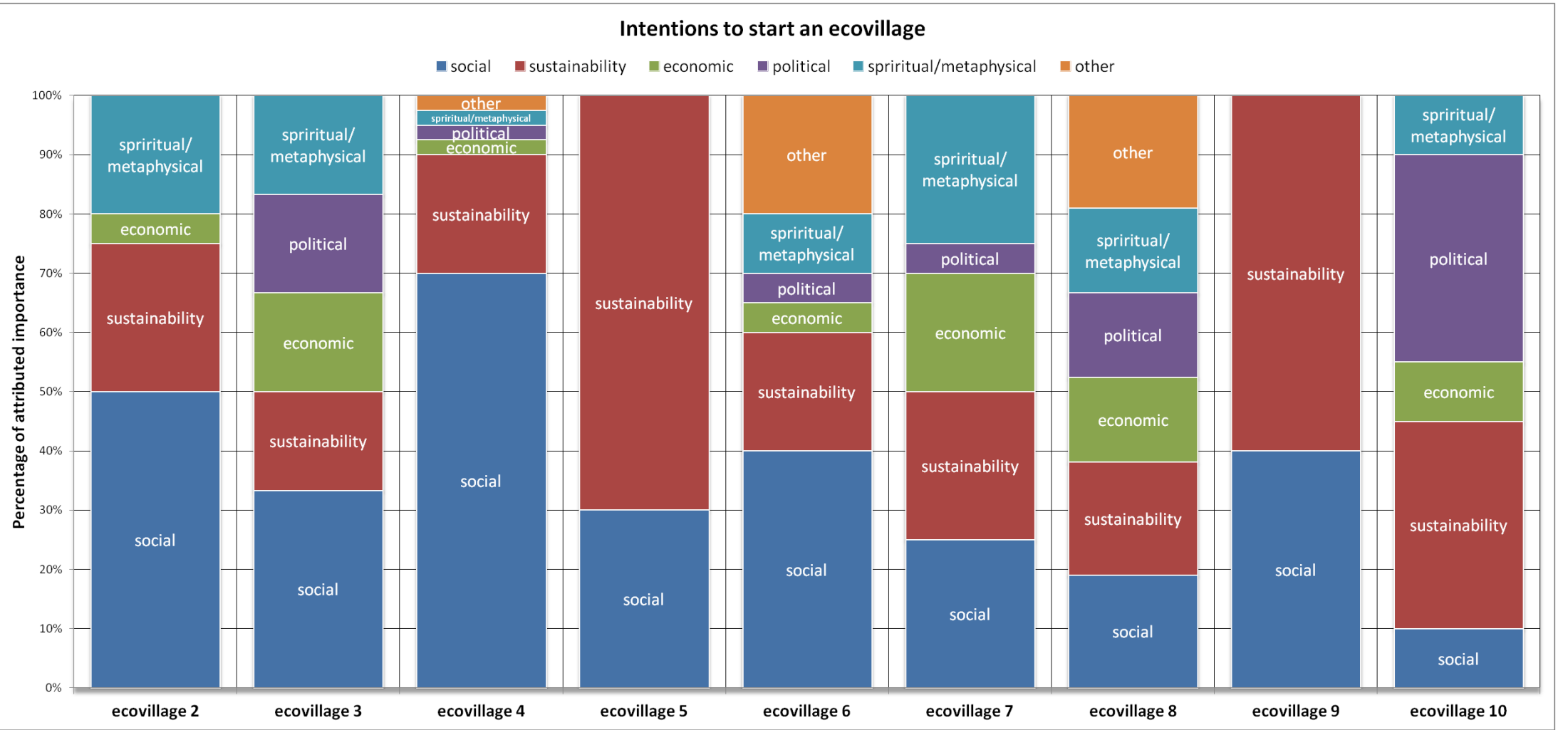


Figure 7: Cumulative stacked graph of ranked intentions to start an ecovillage, scored by ecovillage initiators on importance.

The social nature of living in an ecovillage and ecological sustainability goals seem to be the strongest drivers for initiators (see Figure 8). They cover two-third of weighted intentions. Where social intentions do not take first place, the main motivator tends to be sustainability awareness. The initiator of ecovillage 8 did not make a difference in importance between intentions, even though a primary reason might still exist. We now explore what reasons exist for the given scores of intentions. The intentions are ranked from the highest to lowest overall score.

6.4.1 SOCIAL INTENTIONS

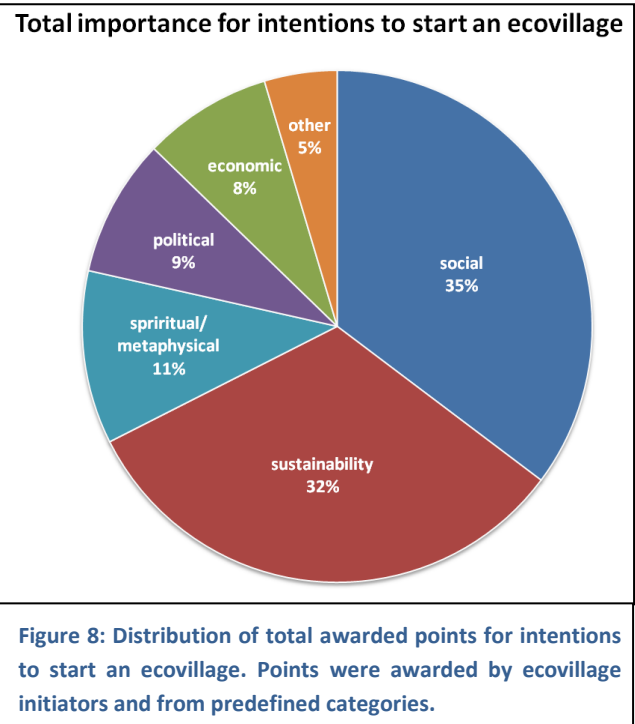
The social aspect of living in an ecovillage appeared to be highly important to most respondents. Social intentions accounted for a total of 35 percent of all ranked intentions. The following aspects were mentioned as being regarded as positive by most initiators:

- **The prospect of living together as a community;**
- **Seeking out participants who share the desire to actively engage in their living environment; and**
- **The shared experience of developing the ecovillage.**

To contrast this desired way of living, several initiators mention undesirable social conditions in standard Dutch neighbourhoods and so-called ‘vinexwijken’, a type of uniformly build neighbourhood. The initiators who mentioned them perceive these neighbourhoods as ‘anonymous’; where contact with neighbours and demographic diversity is low. The initiator of finished ecovillage 4 awards 70 percent to social intention, the highest of all interviewed initiators. He gave examples of activities that maintain social relationships within the community, such as buying groceries for the elderly, visiting neighbours when they are in the hospital, and organising leisure activities in the communal building. He framed the goal of social cohesion as a group-determined goal. The initiator of ecovillage 2 mentioned social intentions as important for raising his offspring: *“I want him to grow up as healthy as I did, in an environment where everyone is positive”*.

6.4.2 ECOLOGICAL SUSTAINABILITY INTENTIONS

With 32 percent of the total awarded points, sustainability was seen as an important motivator to start an ecovillage. Almost all interviewed ecovillage initiators expressed concerns regarding the state of the planet and society. Initiators of ecovillage 7 and 10 and discontinued ecovillages 5 and 9 viewed sustainability goals as their main intention. The initiator of ecovillage 5 awarded the highest score of 70 points to sustainability out of all initiators. He made a distinction between technical and ecological sustainability: *“Technical is about water, energy and installations. Ecological is about living on the edge of a forest [referring to another ecovillage] and not damage the forest but to create value for the birds and animals.”* The initiator of ecovillage 7 has a background in the construction industry: *“(…), [among civil engineers] sustainability is approached from a technological perspective. What kinds of wood are used, etcetera.”* He viewed technical sustainability as a responsibility to preserve the earth. For the initiator of ecovillage 10 and her husband, sustainability is an integrated part of their lifestyle. They have increasingly integrated sustainability aspects in their lifestyle since their university study; they purchased mainly second-hand products and consumed only organic foods. The



sustainability aspects of earthships caught their attention because these aspects fitted within this lifestyle: *“The idea to reuse materials was very appealing to us. We wanted no extra input in terms of non-renewable resources. Straw can be regrown. We work with existing materials.”*

The initiator of ecovillage 2 originally had ecological sustainability intentions that ultimately resulted in his pursuit for ecovillage developments. These intentions originated first when he followed a course on personal development, aimed to gain more fulfilment in his life. In the course, he realised that he had an interest in nature rather than culture, and inward rather than outward development. He started to work for a nature conservation organisation, learned about sustainability issues, and through this development the desire to start an ecovillage formed. With regard to direct intentions for developing the ecovillage, the initiator of ecovillage 2 mentioned integrating sustainability aspects in the ecovillage as a foregone conclusion. *“It’s like writing down: breathing is important”*. This might explain why sustainability receives only 25 percent importance. The initiator of ecovillage 6 expressed a similar attitude towards sustainability. At the start of development, the suggestion to make the housing ecologically sustainable was perceived as self-evident.

6.4.3 SPIRITUAL OR METAPHYSICAL INTENTIONS

Spiritual or metaphysical ideas can play a role to initiate an ecovillage. 11 percent of the total points has been awarded to this intention. The definition of spiritual and metaphysical was intentionally left open to the initiator’s interpretation, to achieve a deeper understanding of ecovillage initiator’s beliefs in the supernatural. Some initiators had extensive explanations on how spiritual or metaphysical ideas relate to ecovillages, and some initiators rejected these kinds of ideas. Initiators of ecovillage 4, 5 and 9 had no intentions of a spiritual nature.

The explanations of the initiators of ecovillage 2, 6 and 10 had some similarities. They framed spiritual and metaphysical ideas as worldviews, within which an ecovillage fits. They expressed a belief in the interconnectedness of life on earth, saying that ‘everything is one’. The initiator of ecovillage 2 identified spirituality as a sense of purpose which binds and drives people. This is caused by a ‘godly’ or universal energy. The initiator referred to the belief that ‘everything is one’, with ‘universal energy’ as its origin. The sensation of being inspired by something is an effect of this energy. An ecovillage is believed to be a mean to express oneself, to develop to one’s full potential: *“An ecovillage presents no limits”*. Additionally, the idea of connections and causality within ecology has a spiritual meaning to the initiator. *“In the end, everything is connected, everything is one. Also everything is in one cycle. A squirrel and the acidity in the soil are not very far apart.”* The initiator of ecovillage 10 adds to the oneness idea that all life on earth has equal value, and humans do not have the right to decide on the destruction of it.

The initiator of ecovillage 3 emphasized openness towards individual views and remarked that a room of silence is available at the location. *“I very much believe in introversion, paying attention to that which you don’t see.”* The surprise of a fortuitous event seems to evoke a spiritual experience to the initiator of ecovillage 6. This experience of the tangible and less tangible matters plays a role in the context of initiating an ecovillage, according to the initiator. The intention of the initiator of ecovillage 7 has a religious aspect. He expressed belief in having a responsibility for the earth, combined with the temporary nature of existence before passing on to ‘the next world.’ He acts on this belief by attempting to lead a parsimonious way of life.

6.4.4 POLITICAL INTENTIONS

The provided definition with respect to ecovillages was provided by the question whether they initiated it with a political statement in mind. Political intentions were not found to be a primary reason to start an ecovillage. However, during development interaction with political entities can result in politically motivated action within the ecovillage context. The initiator of ecovillage 3 intended to influence national politics to improve

regulations relevant to ecovillage development in the Netherlands. The initiator of ecovillage 2 stated the organisation had a neutral political preference during development, but he deemed it likely that members of the ecovillage will become active within local political decision making and join a political party in their municipality in the future. Below, I present four found perspectives that contain political intentions. They are ranked by number of times mentioned from high to low.

- **Stakeholder perspective**

Nearly all initiators viewed politics and government from a stakeholder perspective. Depending on initiator's experiences, local politics are regarded either as an unavoidable and potentially limiting factor, or as a helping hand. The political message is then limited to convincing the local municipality council to support development of the ecovillage. The initiator of ecovillage 8 had little experience with local politics because their main stakeholder was the housing corporation. Ecovillage 9 had not reached the development stage of contacting local government.

- **No faith in politically driven innovations regarding ecovillages**

Initiators of ecovillage 2, 3 and 7 stated that in their view the political arena is not relevant in society. The initiator of ecovillage 7 added to this that he carried *"no illusions of being able to change the world"*.

- **Political statement to increase sustainability in housing**

The initiator of ecovillage 8 wants to urge housing corporations to provide ecological housing for low income households. The initiator of ecovillage 10 also saw the project as a statement for a more sustainable development in the housing sector. They attached more importance to this than other initiators, possibly because their idealism in sustainability was more pronounced.

- **Civilian initiatives can succeed**

The demonstrated fact that civilian initiatives with a 'practical idealism' can succeed, is viewed as a political message by the initiator of ecovillage 6.

6.4.5 ECONOMIC INTENTIONS

Economic intentions did not score high regarding importance to start an ecovillage. From the total awarded points this aspect was awarded 8 percent. No ecovillage initiator was interested in monetary gains regarding the ecovillage. Instead, they focused on economic solutions to make the project possible considering sometimes limited financial means. Additionally, economics were sometimes included in the initiators vision of the ecovillage. Below, three mentioned solutions and one vision are discussed.

- **Implementing a socio-economic vision**

The initiator of ecovillage 8 integrated economic aspects in a total vision on life in the new ecovillage, which falls under regulations of subsidized housing. An income limit is in effect to be eligible to live there. In her vision, sharing resources translated to increased free time that can be spend within the ecovillage itself. Another ideal that contains economic intentions is the presence of a broad range of incomes without segregation, as the initiator of ecovillage 6 described. Ideally, living in such a community should be affordable for everyone.

- **Avoiding project developer costs**

The economic advantage of self-building an ecovillage in this respect is that the costs of a project developer are avoided. The saved expenses can then be used to provide sustainable materials and other features without letting the house become more expensive than a regular build house. Initiators

of ecovillage 5 and 7 framed this as a solution to build a house for a competitive price but with added sustainability provisions.

- **Using combined resources for development**

The initiator of ecovillage 7 initially saw the ecovillage as a group effort that was necessary to reach his goal of self-building a sustainable house. *"I'm a poor wretch, so you find more people to do it together. It's a financial motive."*

- **Low energy costs**

The prospect of a zero net-energy house - no energy costs in the long term - sounded appealing to the initiator of ecovillage 9, although this intention did not seem important enough to score. Other initiators did not seem to perceive economic benefits from possible low energy costs.

6.4.6 OTHER INTENTIONS

Here, intentions mentioned by initiators themselves are presented.

- **Joyful experience**

Working on an ecovillage development project is experienced as joyful by many initiators in this study, despite hardship and difficulties. The initiator of ecovillage 6 described her viewpoint towards the ten years of development as a leisure pursuit: *"People ask how I persevere, but I see it as a kind of hobby. (...) You don't ask someone who plays chess or badminton why he likes that so much. It grabs you. It's been a kind of enormous jigsaw puzzle"*. Keeping joy in the process of development is important for success, according to the initiator of ecovillage 8. She explained that a sense of humour keeps the project from becoming a burden.

- **Avoidance of work outside ecovillage**

The initiator of ecovillage 8 stressed the importance of low housing costs, so that inhabitants could spend less time outside the ecovillage working on a job and have more time available for contributing to the community. Tasks that otherwise are outsourced, such as maintenance tasks, can then be executed by the inhabitants themselves. This would result in added social value according to the initiator.

- **Interaction with like-minded people**

While the initiator of ecovillage 7 did not award much score to social contacts as an intention, he referred to other participants as a type of people with a similar mind-set but with different backgrounds. Other initiators mentioned seeking out like-minded participants, but this was not mentioned as a specific intention, but simply as a means to achieve cooperation in development of the ecovillage.

- **Freedom in living experience and house design**

The initiator of ecovillage 7 referred to the opportunity to be free from other influences when developing his own house: *"It's a piece of freedom, building your house by yourself, independent from governments and developers who dictate how you should live. You want to shape it yourself."* The initiator of finished ecovillage 4 had an ideal image of his 'dream house', which accommodated his passion for plant life. Likewise, the initiator of ecovillage 5 expressed a desire to design his living environment: *"I would like to - instead of just my own house - form my surroundings. That is only possible if you do that in a group at the same time."*

- **Architectural statement**

The initiator of ecovillage 6 is motivated to show a different kind of creative design in architecture and landscape planning. She questions the assumptions of real estate developers on what is a desired design and poses the question why not more districts are designed like the ecovillage, emphasizing the atmosphere of a holiday park and parking space on the edge of the ecovillage. She argues against vinex districts and in favour of more diversity in design of the urban area as a whole. The ideals of an initiator may not be confined to realizing an ecovillage.

- **Exemplary function**

Most initiators in this study expressed a desire to set an example and interact with various parts of society. The initiator of ecovillage 8 states: *“The idea behind it is not to be a little island on its own, a retreated community in which we experience the ideal world, which has to get away from the rest of the world because the rest of the world is bad. We want to be open towards the rest of the neighbourhood. We want a space that is open for everybody, not just inhabitants. We want to set an example for other projects.”*

- **Being self-sustaining**

Knowledge on providing basic necessities such as housing and food, and passing this knowledge on to the next generation is viewed as the ultimate goal for some ecovillage initiators. The initiators of ecovillage 3 and 10 specifically mention being self-sustained as a goal. The latter believes that in the Western world the outsourcing of these necessities creates a disconnect in daily life.

6.5 ACTION LOGICS

In this section the results of the scored propositions on action logics are presented. These results are visualized in Figure 9.

During the interviews and analysis, it appeared that initiators had difficulty interpreting the idea behind the proposition. They did not seem to compare the complete proposition to their own perspective, but, instead, the propositions were decomposed in parts and individual words, and then related to the initiator's perceived behaviour. To interpret these results, I will consider the perception of the initiator. Furthermore, in some cases the initiator did not understand a proposition. He or she would then mark down either a 'neutral' or 'disagreed' score. To avoid this possibly distorting factor I consider only propositions that were agreed with, and thus got more than a neutral score.

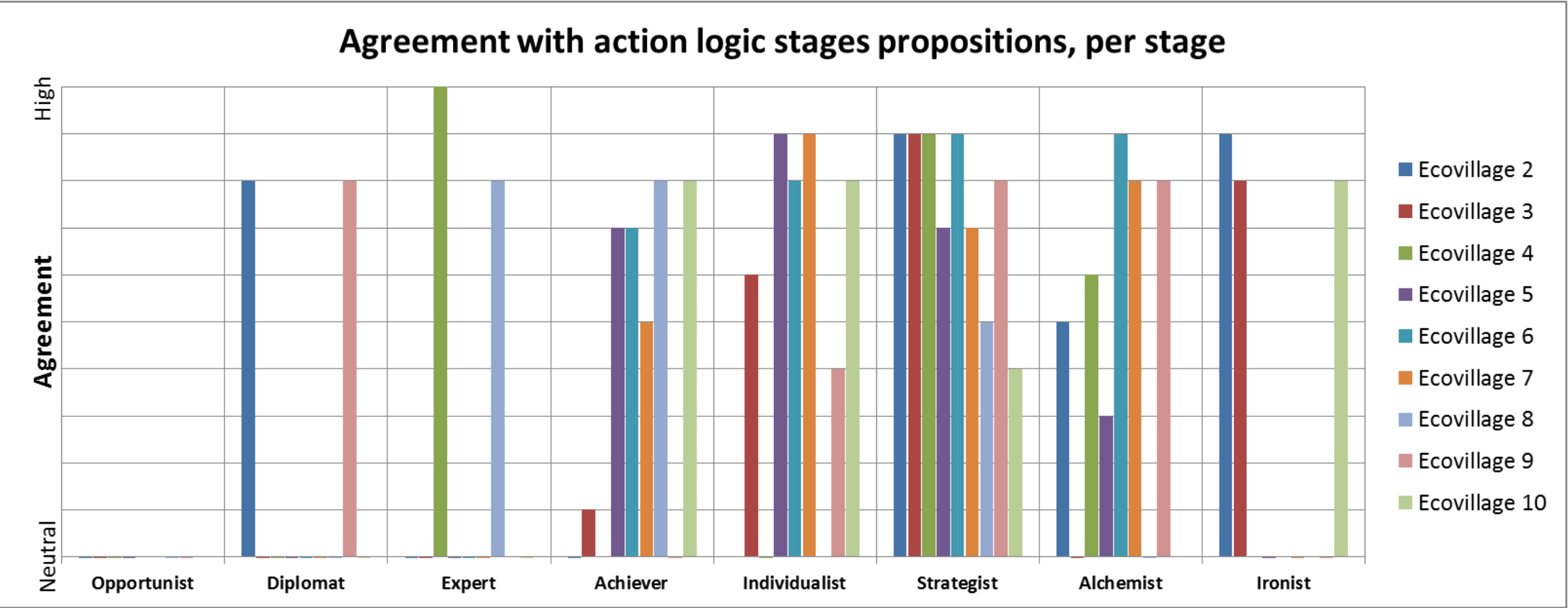


Figure 9: Graph containing agreement per action logic stage proposition. Only agreement scores of neutral and above are shown.

6.5.1 ANALYSIS OF SCORES

When examining Figure 9 in a helicopter view, we see the (pre-)conventional consciousness development - Opportunist, Diplomat, Expert and Achiever - receive low scores, except for the Achiever stage. High scores are awarded for post-conventional stages. Agreement reaches from Achiever to Alchemist. The Strategist action logic proposition is the centre of gravity. An explanation for this can be found when combining the results from the previous chapter - intentions to start an ecovillage -, with the characteristics of the consciousness development. This leads to the following observation:

- **Socially oriented propositions take preference**

The Opportunist stage is an example of pre-conventional action logics. *“Opportunists seek personal gain through manipulative conduct and conflictual relationships resulting from non-compliance with established norms”* (Boiral, Cayer et al. 2009). When the main intentions of ecovillage initiators are of a social and sustainability oriented nature, encountering Opportunist initiators would be unlikely. Similarly, it can be argued why conventional action logic stages as a primary consciousness level are less likely to be found in ecovillage initiators. Conventional action logic stages suggest conformity with social institutions: *“The conventional stages are marked by the integration of the dominant social conventions and the search for efficacy within a framework of established social norms”* (Boiral, Cayer et al. 2009). An ecovillage does not adhere to the established social norms of housing. Forming a social group to actively design and partially self-build a collection of specialized houses does not conform to the established social institution of housing. This institution contains the norm that housing is a supply-driven individual activity and building is outsourced. Therefore, conventional action logics do not coincide with initiators’ main goal, which is to develop an ecovillage. This reflects in the used propositions. All propositions belonging to the Opportunist, Diplomat and Expert stage are geared towards individual rather than cooperative leadership oriented goals. Feedback itself is seen as criticism or something to be weighed rather than be seen as an opportunity. Within the Achiever proposition, feedback is seen as inherently helpful. A cooperative attitude may be vital in an ecovillage development setting where more or less voluntary cooperation is required and hierarchical structures are limited. The same argument holds for post-conventional action logic stage propositions: they propose deliberation, understanding and development through feedback. The Strategist-proposition *“My aim is to better myself and to enable others to do the same. Conflict is an opportunity for development, and I do my best to reconcile different views. I consciously make an effort to see the world through someone else’s eyes and to see the interconnections with others”* seems to be most non-committal of all propositions; it requires little knowledge or expertise, and suggests an open and positive mentality. The contents could also describe a favourable way of operating in the development of an ecovillage.

Lastly, socially desirable answers cannot be ruled out. When observing the propositions, one cannot ignore the possibility of unintentionally and inevitably provoking socially desirable answers. For example, an Opportunist action logic may portray characteristics associated with asocial behaviour and would thus be less likely to score high.

6.5.2 ANALYSIS OF INITIATORS’ EXPLANATIONS

As described before, initiators gave diverse interpretations and deconstruct propositions in parts or words. Most likely this is done because the context is not known to them. While studying the explanations given at each proposition, three themes emerged on how initiators conduct themselves. These themes were found by comparing answers from the interviews.

- **Emphasis on social behaviour**

Initiators emphasize the need to confront challenges together. The Opportunist-part *"I often win in an argument"* was reacted upon negatively. For example, a quote of the initiator of ecovillage 7: *"I would go for win-win situations, then you have truly won."* A metaphor for this was presented by the initiator of ecovillage 6: *"You're a fleet of ships and you make sure as many as possible reach the opposite shore. I don't want to win in the exact sense, I want a sense of winning together."*

Conflicts - which seem likely to occur at some point in ecovillage development projects - are seen as situations that need to be resolved instead of avoided. The highest scoring, 'Strategist'-proposition contained the sentence *"Conflict is an opportunity for development, and I do my best to reconcile different views."* Apart from the high scores the proposition received little opposition. Although, the initiator of ecovillage 8 remarked that conflict is not needed to achieve development. Conflict is *"something that got out of hand and could have been prevented by communicating in an open and respectful way"*.

The initiator of ecovillage 8 states most propositions are based on leadership while she does not recognize the project as having a single leader. She remarked that discussions are done as a group, in contrast to involving people in discussions.

The initiator of ecovillage 10 showed a propensity to put less emphasis on social aspects. For post-conventional stages she acknowledged its importance, but also difficulty to achieve such behaviour. Instead, she emphasised to realize her goals in terms of ecovillage sustainability and involving participants to support these goals.

- **Perfectionism**

Perfectionism was mentioned as a trait by six out of nine respondents, but for five it is not part of an 'Expert-like' role. They are usually comfortable to work with people of different expertise levels, and like to experiment. This is not surprising because multiple participants with different backgrounds are involved in development, and ecological building is often site-specific and not part of regular building methods. Only the initiator of ecovillage 8 seemed to conform to Expert-like behaviour: *"I'm rather perfectionistic and I tend to get impatient with people who want to discuss matters they have no knowledge of"*. She mentioned not being proud of it. One initiator rejected perfectionism, saying it works inhibiting.

- **Persistence**

A persistent attitude is characterized by the drive to make progress towards a set goal. This becomes apparent in the answers to the action logic propositions. Rules seem to be perceived as structural factors which can inhibit the pursuit towards the goals of developing an ecovillage. Ecovillages encounter strict regulations on building permits for example. Initiators express a desire to bend, create exceptions for, or change rules to achieve their goal. Persistence is mentioned by the initiator of ecovillage 10 as looking for possibilities to achieve a desired goal: *"I will always make an attempt, I won't quit."*

6.6 CONTEXTUAL FACTORS

The ecovillage projects and their initiators portrayed in this thesis all have their unique stories. Only evaluating and assessing their agentic properties would be inadequate. While discussing the complete history of each initiator would not result in a coherent report, some common contextual factors were identified.

6.6.1 CHILDHOOD

Research in significant life experiences indicate that past experiences may have an influence on current behaviour (Chawla 1998). Each respondent was asked about nature or sustainability experiences in childhood.

Results were diverse. For some, only the parents liked to spend leisure time in nature. The initiators of ecovillage 6, 8 and 10 were raised with a strong sense of **societal involvement**. They were challenged to think critically on societal developments. These initiators showed detailed societal ideals. The initiator of ecovillage 6 stated that for her this played a minor role, but it appeared to be self-evident to her until she started development of the ecovillage. During this development more awareness grew. The initiators of ecovillage 2, 3, 4 and 9 were interested in **nature** from an early age. Awareness of nature and sustainability was **not prevalent** at an early age for the initiators of ecovillage 5 and 7. Strikingly, these latter initiators tended to show a more technical intention towards the ecovillage than other initiators.

6.6.2 SKILLS

Initiators were asked which skills they found relevant for initiating and developing an ecovillage. Most mentioned by initiators - though sometimes in different wordings - are **conviction** (6 of 9), **communication** (6 of 9) and **persistence** (4 of 9) as necessary skills. Perceptions on how initiators had developed their skills differed. Mentioned sources of skills were life experience, intrinsic qualities which are developed over time or during development of the ecovillage, experiences from the working place, and static unchanging properties.

6.6.3 RESOURCES

Presented in no particular order, the following resources that appear to affect ecovillage initiators' agency became apparent were mentioned by ecovillage initiators.

- **Nearby advanced ecovillage project**

For ecovillage initiators who are experiencing high barriers, a factor is the presence of an (advanced) ecovillage project in the area. If values match and contact is already established, shifting projects turns into an attractive option. The goal of living in an ecovillage becomes reachable faster and through fewer costs. This happened to the two discontinued ecovillages 5 and 9.

- **Cooperative governing body and third parties**

According to all initiators, local governing bodies have a large influence on the chances for success of an ecovillage project. In this case, a governing body can also be a housing corporation which has financial and legal responsibilities. Political parties, companies and individuals can either have a detrimental, or a stimulating effect on ecovillage development depending on their institutional behaviour. For example, the municipality for ecovillage 7 approached housing in a supply-centred perception: finding customers for a particular number of houses that can be build. The ecovillage operated the other way around, houses are build by number of participants who want to build a house. It depends on the individuals involved whether a solution can be found. The resiliency of self-efficacy beliefs can be tested by processes that hamper successful ecovillage development as more time and effort is required by participants and initiators to develop an ecovillage.

- **Financial resources**

The amount of finances at the disposal of an initiator and group members seems to vary. Many different subsidies are available for projects like ecovillages, but amounts vary between regions according to the initiator of ecovillage 6. No initiator invested private funds in an ecovillage project, but most projects required buying a house. Alternative solutions for high cost measures are needed for participants with limited financial means. It depends on initiators' self-efficacy level and intentions - mainly social in the sense of inclusiveness - whether the initiator is willing to persevere. Popular solutions are self-building and subsidized housing arrangements. The initiators of ecovillage 2, 6 and 8

especially aimed at including low income households, while the initiators of ecovillage 7 and 9 excluded this group because it is seen as a complicating factor.

Financial resources of initiators and participants could also play a role in the way an ecovillage develops. Ecovillage 4, at some point during development, cost substantially more than expected, causing a change in initiators - and presumably also in participants - who could afford a house there.

- **Time resources**

Initiators invest different amounts of time in their project. Estimated time spend ranged from a few hours per week (ecovillage 4 and 5), a workday of 8-10 hours (ecovillage 7 and 8), to almost fulltime devotion (ecovillages 2, 3, 6 and 10). Usually time investment is limited by part-time or full-time jobs and other activities. Collective effort often seems to disconnect time investment from the likelihood for success. Some initiators did not see the possibility of spending less time on the project, even though they would have liked to.

6.6.4 FORTUITOUS EVENTS

The occurrence of unexpected events was sometimes mentioned as detrimental or stimulating for development. The economic crisis that started in 2008 and is perceived to have altered the housing market significantly was often mentioned. The crisis made municipalities more receptive to alternative forms of housing, because it provided an opportunity to sell property. At the same time, financial resources such as subsidies were less available than before. Other fortuitous events mainly concern people who happened to be at the right place and at the right time, and financial resources becoming available at a time they are most needed. The initiator of ecovillage 2 was searching for a location when he met a mayor at a conference who was receptive to the idea to let the ecovillage be developed in his municipality. A similar event happened for ecovillage 10.

7. DISCUSSION

In this chapter, the methods used in this study will be evaluated using experiences and results.

7.1 USING PROPOSITIONS FOR ACTION LOGICS

In this thesis, propositions were used to explore development stages in ecovillage initiators. This method was chosen because resources to do a full study on action logics were not available. Some results and observations during the interviews created awareness of restrictions towards using propositions based on available literature.

One of these restrictions became clear while interviewing the initiator of ecovillage 8: *“These are propositions about leadership. With [ecovillage] we’re very clearly a group effort in which everyone has their part. (...) I don’t involve people in discussions, we have discussions together. (...) If you ask ‘more a coach than a boss’, its neither. I’m not in the position to be coach or boss of [ecovillage].”* The comment of the initiator of ecovillage 8 could indicate that the current literature which was used to create faithful propositions, is biased towards hierarchical, entrepreneurial organizations. Decision making structures differ between ecovillages. Other initiators did not have similar comments.

All initiators interpreted the proposition in their own way, by deconstructing sentences. This is logical, because initiators had no further information. However, the original meaning could easily have been lost. Propositions were not always understood. In some cases initiators were not able to link the statement to their position as ecovillage initiator. I did not provide background information to the propositions because this could influence the perception of the initiator.

7.2 INTERVIEWING

I had the impression some interviewees preferred sticking to stories they were used to telling. This made it difficult not to deviate and to have them reflect on questions.

All interviewees who participated in this research were made anonymous. This was done because I suspected sensitive topics could come up during the interviews. To decrease the probability of interviewees withholding or altering valuable information, their names and their ecovillage would not be mentioned in the final thesis. Mentioning details on the initiator or ecovillage needed to be avoided to preserve anonymity. While this served a logical purpose, not bringing out more detailed information about the studied ecovillages that identify the specific ecovillage may have an impact on functionality of results for future research to ecovillages in the Netherlands.

7.3 AGENCY CHARACTERISTICS AND CONTEXTUAL FACTORS THAT INFLUENCE THE DEVELOPMENT OF AN ECOVILLAGE: FAILURE AND SUCCESS

Based on the information retrieved from interviews, causes of initiator’s actions can be approximated or at least speculated upon. This section aims to piece together a comprehensive picture on what caused success or failure within the studied ecovillages.

First, I distinguish factors that contributed to initiating an ecovillage, and factors that are needed to persevere in the development. Factors contributing to a sufficiently high self-efficacy level needed to initiate an ecovillage project may also support the initiator in endurance for the development of the ecovillage. The initiators of ecovillage 5 and ecovillage 9 did not continue their project. In these cases their self-efficacy level was by definition not sufficient to support continuation of the project in its existing form. Therefore, the self-efficacy

level of the mentioned two ecovillage initiators is regarded insufficiently high. This does not necessarily mean that either of these initiators was easily deterred from persisting in development. As demonstrated by the heuristic from Ling and Dale (2013), certain barriers may have been perceived higher than the will and reason to act. The following discussion is aimed at getting a clear picture on why agency characteristics of ecovillage 5 and 9 did not lead to further development, and those of other ecovillages did. I will start by discussing some ecovillages that were under development or were already finished.

The initiator of ecovillage 2 showed resiliency in the face of adversity, as he had been involved in numerous ecovillage projects which all had failed. Nevertheless, he expressed optimism at his chances for success. This points to high self-efficacy beliefs (Bandura 1982). Although he did not know what the ecovillage should physically look like, he had boundary conditions which corresponded with his reason to act. He wanted to live sustainably, especially in an ecological and social way. By working on community building, a sense of co-ownership and shared responsibility was established. Contextual factors did not appear to contain high perceived barriers. Government cooperation was positive and the initiator could invest a fulltime occupation on the ecovillage.

The initiator of ecovillage 3 successfully established co-ownership and a shared responsibility for the project with the group of participants. Combined with the sociocratic decision making system, this gave him confidence the project would continue without him being the driving force. Before initiating the ecovillage, he had awareness of sustainability, experience in sustainable house designs and in living in a different socio-cultural environment. These experiences gave him a high self-efficacy and a reason to act.

The initiator of ecovillage 5 stopped the initiative because of structural factors, and low sense of co-ownership and shared responsibility within the group of participants. The initiator saw a chance to develop an ecovillage because some property in his municipality would be scheduled for redevelopment. Due to changed regulations this proved not possible. The initiator and a core group searched for a different way to realize the ecovillage. There was little or no collective effort (there was little to be done collectively), and a limited shared vision due to a lack of a specific location. After some years, group members left for diverse reasons, and a last attempt of the initiator to start ecovillage development failed. It seemed the initiator was mostly alone in persevering in the initiative. Others seemed to be depending on the initiator to announce progress. Another ecovillage project was developing in a nearby city and did seem to have good chances of succeeding. Contacts between the projects had already been made. The initiator joined the nearby ecovillage project.

The development for ecovillage 9 seemed to have been started rather unconsciously. The initiator had the desire to live in an ecological community because he had positive experience living in one. Reasons to act were social and sustainability awareness. The initiator used the previous ecovillage characteristics (social conditions, use of sustainable materials) as a reference point. Contacts in ecological construction 'got the train rolling' in terms of ecovillage initiating. When he made contact with more ecovillage initiatives, he became aware that more time and effort than expected was needed to succeed. Structural factors were perceived as barriers. Although there was a group of interested participants, social cohesion was not established enough to create a sense of co-ownership and shared responsibility. If this would have been established they may have influenced the perceived barriers.

8. CONCLUSIONS

This thesis aimed to study personal agency characteristics and influences related to agency of ecovillage initiators in the Netherlands. By using academic literature and media sources, in-depth interviews were held to reach this goal. First, I present concise answers to the sub-questions that lead up to the final research question which will be addressed subsequently. Finally, some recommendations for future research are presented.

What are initiators' agency characteristics and contextual factors that can influence the development of an ecovillage? In this thesis, I provide a meta-level perspective on ecovillage development in the Netherlands. Ecovillages are intentional ecological communities that aim to integrate sustainability principles into development processes and living experience. They are initiated in a bottom-up fashion by small social groups or individuals. By using a multi-layer perspective on societal transitions (Geels 2002), I adopt a view on the transformative role of ecovillages as sociotechnical niches. Certain developments in the landscape and by rejecting structures within the sociotechnical regime, cause ecovillages to have change-making potential. By focusing on contributing to knowledge on how these niches come to be, this thesis regards ecovillage initiators as agents of change. The concept of agency and its interrelation with societal structure was explored and operationalized. By reviewing literature and considering ecovillage initiators' conditions, a conceptual framework was made in which agency is characterized by self-efficacy, intentions, and action logics. Contextual factors are also considered because of their influence on total agency.

- **What is the role of initiators' self-efficacy level in the development of an ecovillage, and what factors have influenced initiators' self-efficacy development?**

Within the case studies, initiator self-efficacy level has been defined as the belief in the ability to accomplish the goal of realizing an ecovillage. To distinguish the role of self-efficacy level in the development of an ecovillage, two groups of initiators are considered: those within continuing or finished ecovillages and those of projects which had been discontinued. Two initiators did not continue in their pursuit; their initiatives had been abandoned and they had joined other ongoing projects. This study could not directly assess their level of self-efficacy or self-efficacy characteristics that gave evidence on why they could not persist. The study did uncover several influences on self-efficacy: individual contribution, co-ownership, and shared responsibility. All interviewed initiators perceived their individual contribution to be high. Co-ownership and shared responsibility were not studied directly, but from analysis they appeared to be directly related to ecovillage development. Absent co-ownership of the project or absence of shared responsibilities can both act detrimental to initiators' self-efficacy. This study suggests that idealist intentions regarding sustainability and society may influence self-efficacy beliefs.

- **What are initiators' intentions that lead to development of an ecovillage?**

From the interviews it appeared the main intentions to start an ecovillage were centred around social aspects and ecological sustainability. Initiators want to seek out like-minded participants and build a community to form active social relations. Ecological sustainability concerns and aspirations take up an almost equal share of initiators intentions. Goals can be to reduce impacts on resource use and greenhouse gas emissions. This results in energy efficient house designs in which natural materials are used as much as possible. Certain initiators mentioned sustainability more as a self-evident, integrated element of their ecovillage vision than a separate, specific motivator. Other intentions are mostly secondary or additional in nature. Some are the result of experiences during development, such as political or economic intentions to support realization of the ecovillage. Likewise, many ecovillages are intended to set an example for an alternative way of living.

- **Within which consciousness development stage is the process of developing an ecovillage enacted by initiators?**

From the concept of action logics in consciousness development, eight propositions were presented to the initiators. From agreement alone, it appears that post-conventional consciousness development contains the most favourable associations for most initiators. Particularly the 'Strategist'-stage received high agreement. I propose that this can be explained by the increasing socially inclusive nature of the action logic proposition, which is demonstrated to be a key influence on self-efficacy level and a main motivator to start an initiative. The initiators gave very diverse interpretations on the propositions, which signals the original meaning behind the propositions was not clear.

- Which contextual factors influence initiators' agency in the development of an ecovillage?

The following personal and structural factors that influence development of an ecovillage were investigated.

- Childhood experiences and upbringing might be relevant for initiators to develop a will and reason to act for developing an ecovillage, but uncertainty on this matter outweighs the information gathered in this thesis. In any case, early-in-life experiences in nature, the outdoors, or awareness of societal sustainability as a child does not seem to be an indispensable aspect because it seemed to have a minor role for some initiators, and is unclear in most cases.
- Initiators frequently mention conviction, communication and persistence as relevant skills to initiate an ecovillage.
- Nearby ecovillage projects that seem more advanced can be seen as a resource for initiators who struggle with their own project.
- Cooperation with governing bodies influences the development and ultimate shape of the ecovillage. Ecovillages experience different attitudes towards their projects.
- Financial resources influence the development process and search for alternative solutions. Agency characteristics - intentions in particular - determine how this is dealt with.

The main question 'What are factors influencing ecovillage initiators capability to act and persevere in developing an ecovillage?' can now be answered.

This thesis has uncovered many influences behind ecovillage initiators' action logics, reasons to act, and will to act. A few of those factors are believed to be highly influential throughout all agency characteristics. Social ties, as well as sustainability concerns, appear to be pivotal to initiators' drive towards achieving the goal of realizing an ecovillage. Interactions with the group of participants play a major role in agency, combined with a shared vision on how a sustainable community should look like. This is seen in self-efficacy, intentions and action logics. When a sense of co-ownership and shared responsibility is not or partial present, it affects initiators' perception on the feasibility of the endeavour. This perception is also established by contextual factors that are viewed as barriers. Examples are ecovillage 5 and 9, and partially for the initiators of ecovillage 10.

8.1 FUTURE RESEARCH

During this study, a number of issues were identified that could be valuable for further study.

- This was an exploratory study. For better understanding of ecovillage initiators and to support agency development facilitation, it would be valuable to focus on one of the explored aspects of agency and how to improve those. The effect of co-ownership and shared responsibility on ecovillage development was found during analysis. Therefore, no specific questions on this could be asked. Similarly, the interrelations between the found characteristics of self-efficacy, intentions and actions logics must be better understood. This research identified several characteristics in each but could not investigate them in-depth.

- This study explores initiator agency and its development from a specific point in time: the moment of the interview. A more detailed insight in the agency development process may be obtained from a longitudinal study during ecovillage development.
- This research aims to contribute to understanding what is the role of agency for ecovillage initiators to develop an ecovillage. The role of the group of participants and future inhabitants for maintaining a shared dream and collective effort appears pivotal to strong self-efficacy and successful realisation of the ecovillage. Additional research on necessary actions - to be taken both by initiators and group members - to reach this goal would contribute to understanding on successful ecovillage development.
- This thesis placed emphasis on the role of initiators and their agency. From the results it appeared the collective nature of an ecovillage is a key factor for success. More research is needed to define the role of social processes in ecovillage development and its influence on agency processes. The role of collective self-efficacy, social capital and network capital(Dale and Newman 2008, Ling and Dale 2013) may be an interesting starting point.

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ANNEX I

Ecovillages and ecological community housing initiatives in the Netherlands

Last update November 2014

#	<u>Name</u>	<u>location</u>	<u>start -finish*</u>	<u>households</u>	<u>website</u>
1	Zonnespreng	Driebergen	1999-2010	20	http://www.zonnespreng.nl/index.php
2	De Bongerd	Zwolle	1993-1997	30	http://www.mmwzdebongerd.nl/
3	De HooiPolder	s Hertogenbosch	/-1987	16	http://www.bwwb.nu/inspiratie/de-hooipolder/
4	De Vuurplaats	Heerhugowaard	/-1994	14	http://www.de-vuurplaats.nl/
5	De Kersentuin (Leische Rijn)	Utrecht	/-2003	94	http://www.kersentuin.nl/
6	Pentakel	Zeewolde	/-2013	8	http://www.pentakel.nl/index.html
7	t Heem	s Hertogenbosch	1987-1990	26	http://www.bwwb.nu/inspiratie/t-heem/
8	Het Groene Dak	Utrecht	1989-1993	66	http://www.groenedak.nl/
9	Drielanden	Groningen	1989-1995	166	http://www.drielanden.nl/3/index.php/nl/duurzaam-wonen
10	GLW-Terrein	Amsterdam	1989-1997	600	http://www.gwl-terrein.nl/
11	De Groene Marke	Zutphen	1991-1995	50	http://www.omslag.nl/wonen/ecodorpen.html#groenemarke
12	De Goedemeent	Purmerend	1993-1998	33	http://www.ruudenmieke.nl/DE%20wijk%20entree.htm
13	Eva-Lanxmeer	Culemborg	1995-2002	300	http://www.eva-lanxmeer.nl/
14	Woonderij EOS	Zutphen	1997-2005	29	http://www.woonderijeos.nl/home
15	Meanderhof	Zwolle	1998-2008	53	http://www.meanderhof.nl/
16	Het Carré	Delfgauw	2000-2003	49	http://www.hetcarre.nl/index.html
17	De Buitenkans	Almere	2000-2007	55	http://www.debuitenkans.nl/
18	Alminde	Almere	2001-	n.a.**	n.a.**
19	De Groene Hoek	Arnhem	2005-	60	http://www.degroenehoek.nl/en-us/home.aspx
20	Aardehuis Project	Olst	2006-	23	www.aardehuis.nl
21	ecodorp Boekel	Boekel	2008-	n.a.**	http://www.ecodorpboekel.nl/

22	Meergeneratie Woonproject Nijmegen	Nijmegen	2008-	n.a.**	http://www.meergeneratiewonen.nu/
23	Ecowijk Het Hout	Houten	2009-	n.a.**	http://www.ecowijkhouten.nl/
24	ecodorp Bergen	Bergen	2009-	n.a.**	http://www.ecodorpbergen.nl/
25	Vereniging Duurzaam wonen Overbetuwe	Hemmen	2009-	24	http://www.duurzaamwonenoverbetuwe.nl/
26	Boddegat	Ede	2010-	n.a.**	http://www.boddegat.nl/
27	Ecodorp groeningen	Groningen	2011-	n.a.**	http://www.ecodorpgroeningen.nl/
28	Ecohof Texel	Texel	2011-	n.a.**	http://www.ecohoftexel.nl/
29	De Groenlingen	n.a.**	2012-	n.a.**	http://degroenlingen.nl/
30	Ecodorp Zwolle	Zwolle	2012-	n.a.**	http://www.ecodorpzwolle.nl/index.htm
31	Bewust Wonen & Werken Boschveld	s Hertogenbosch	2012-/	n.a.**	http://www.bwwb.nu/
32	Ecowijk Arnhem	Arnhem	2013-	n.a.**	http://www.ecowijkarnhem.nl/
33	Strowijk Nijmegen	Nijmegen	n.a.	70	http://www.strowijknijmegen.nl/
					http://www.ecologischwonenvossenpels.nl/
34	Ecodorp Gaasterland	Rijs	n.a.	12	http://www.ecodorpgaasterland.nl/
35	Ecowijk de Dreijen	Wageningen	2009-/	n.a.**	http://www.dedreijen.nl/ig-ecowijk/
36	Ecodorp Wijnbergen	Wijnbergen	2001-/	n.a.**	http://www.ecodorpwijnbergen.nl/index.htm
37	Anastasiadorp Drenthe	Valthe	n.a.	n.a.**	http://www.anastasiadorp.nl/
38	Ecotribe Teuge	Teuge	/-2001	n.a.**	https://www.facebook.com/ecotribe.teuge/about?section=bio
39	Levensland (Anastasia Winterswijk)	Winterswijk-Kotten	n.a.	n.a.**	http://www.manenschijngroep.nl/
40	Schoonschip	Amsterdam	2011-/	30	http://www.schoonschipamsterdam.org/
41	Soesterhof	Amersfoort	2010 -2017 (est.)	20-40	http://www.soesterhof.nl/
42	Anastasiadorp Twente	Losser	2014-/	n.a.**	http://www.ecodorptwente.nl/

* estimated from initiative website anecdotes. Start is first sign of conceptual development, finish is final delivery of houses

**presently unknown or not apparent from initiative website

