



Inner change and sustainability initiatives: exploring the narratives from eco-villagers through a place-based transformative learning approach

S. R. Pisters^{1,2} · H. Vihinen² · E. Figueiredo³

Received: 31 January 2019 / Accepted: 18 December 2019
© The Author(s) 2020

Abstract

In an earlier work, we suggested that connection, compassion and creativity could be used as key analytical dimensions of transformative place-based learning (Pisters et al. in *Emot Sp Soc* 34(8):100578, 2019). This analytical framework was created to study processes of place-based transformative learning which evoke shifts in our consciousness. This inner change might well be critical in the development of regenerative practices and places. This article aims to critically investigate the framework empirically using life-story interviews with people living in three different ecovillages. Ecovillages are so-called intentional communities which aim to develop sustainable, regenerative ways of living. Methodologically, the research is grounded in an ethnography and narrative inquiry. Following the empirical results, we will reflect on the merits and shortcomings of the analytical framework. The article concludes that the framework proved useful for its purpose if it includes a fourth dimension of 'transgression' and portrays the dimensions as continua.

Keywords Transformative learning · Ecovillages · Place · Narrative inquiry

Introduction

How to address the 'wicked problems' of today's world concerning the interlinked issues of climate, water, food, energy and social justice is a pressing theme (Head 2014; Leal Filho and Esteves de Freitas 2018; Termeer et al. 2012). The wicked nature, characterized by inevitable complexity, ambiguity and uncertainty of these problems calls for new ways of organizing human societies which allow for the continuation of human life on earth in a way that is sustainable, socially just (Lotz-Sisitka et al. 2016) and respectful of

nonhuman forms of living. Moving in that direction requires a deep learning process that engages with and transcends the complexity of these nexus issues (ibid).

Transition studies and place-based research both indicate that rather than grand schemes based on a 'one size fits all' approach, transformative solutions emerge at the local level (Barca et al. 2012; Geels 2010; Haxeltine et al. 2013; Roep et al. 2015). It is at this level that the complexity and interlinked nature of these nexus issues can be grasped and solutions created that draw from, and are responsive to, particular place-based configurations. Transformative responses at this level drive wider social change and regime shifts (Geels 2010; Swilling 2013). The emergence of such 'niche' innovations does require a deep learning process where multiple dimensions are aligned and new relations are created (Sol 2018; Sol and Wals 2014). There is still, however, a lack of clarity of the nature of this kind of learning, how it occurs and what influences it (Lotz-Sisitka et al. 2016). Increasingly though, scholars are starting to explore the learning processes that give rise to these niche innovation, referred to from now on in this paper as 'sustainability initiatives', through the theoretical lenses of transformative and

Handled by Dirk Roep, Rural Sociology Group, Wageningen University and Research, Netherlands.

✉ S. R. Pisters
siri.pisters@luke.fi

¹ Wageningen University and Research Center (WUR), Wageningen, The Netherlands

² Natural Resource Institute Finland (LUKE), Helsinki, Finland

³ University of Aveiro, Aveiro, Portugal

transgressive learning (Lotz-Sisitka et al. 2015; O’Sullivan and Taylor 2004). These theoretical perspectives are based on the argument that emancipatory forms of learning are more effective in fostering a meaningful engagement with sustainability issues compared to persuasion or economic and legal incentives (Wals and Jickling 2002). Transformative learning explores deep shifts in perspective or consciousness (see Section “Connection, compassion and creativity”). Transgressive learning is understood as a type of transformative learning focusing on how transformative learning can translate in disruptive agency and the transgression of hegemonic systems (Lotz-Sisitka et al. 2015; Macintyre et al. 2018, 2019). This article uses these theoretical lenses, with a main focus on transformative learning, to explore the influence of more individual, inner learning processes in the context of ecovillages as sustainability initiatives which are characterized by their place-based character (Avelino et al. 2015; Wittmayer et al. 2015). We are concerned with learning processes that enable the creation of such ecological communities (Wals 2019). To do this, we mainly focus on inner learning at the level of the individual and include the learning processes that may have taken place before a community project might even have started in our analysis as well. In other words, we aim to understand how and why people commit to a life in an ecovillage, one that is often quite radically different from more conventional ways of living.

As sustainability research seems to be on a quest for understanding how individuals, communities and societies get motivated to embrace more sustainable ways of living (Batson and Thompson 2001; Kollmuss and Agyeman 2002; Sapiains et al. 2015), the value of understanding this learning process becomes apparent. Thus, we pose that to understand the emergence and character of sustainability initiatives like ecovillages, we need to understand the learning processes taking place, both overtly and covertly, tangible and less tangible, that foster these visible outer changes and have the potential to transgress dominant systems. To obtain such a deeper understanding, we developed a theoretical framework which presents all aspects of a (place-based) transformative learning process that drives regenerative practices as found in the literature (Pisters et al. 2019). With this framework, we recognize the transformative potential of place-based inquiries and the phenomenological experience of a learner where object, subject, place and person are not separate entities (Greenwood 2009; McKenzie et al. 2009). In other words, shifts in consciousness never take place in a vacuum but in the space between the self, the social and the material (Newman 2014; Pisters et al. 2019). We thus take a relational perspective towards transformative learning whereby we aim to go beyond categories of individual or social/collective learning as they are first of all complementary and mutually influence one another and secondly

these concepts tend to overlook the role of the material and nonhuman in such learning processes. Connection, compassion and creativity were suggested as key dimensions that can help structure, understand and approach transformative learning (Section “Connection, compassion and creativity”). This framework was based on the acknowledgement that sustainability transformations require change from the inside out (O’Brien 2013), including changes in the social-affective domains of values (Horlings 2015b), culture (Dessein et al. 2015), worldviews (Hedlund-de Witt 2013), beliefs and paradigms and associated cognitive and emotional capacities of actors (Abson et al. 2017; Meadows 1999) and, indeed, consciousness (Devall and Sessions 1985; O’Sullivan and Taylor 2004).

Processes of sustainability do not only require people to think differently, they require as well shifts in ‘being’ and ‘feeling’ (Daloz 2004). We can for example cognitively know that our life is connected to the life of a tree, but really sensing this connection ‘in our bones’ is a different thing (ibid.). This is what we mean by ‘consciousness’: a dynamic, relational dimension that is constantly shaped in the interaction between people and their social and physical environment (Pisters et al. 2019). Viewed as such sustainability can be considered a process grounded in people–place relationships (e.g. Calvo and De Rosa 2017; Roep, et al. 2015) as well as in the dialogue or negotiations amongst all those involved in a particular community concerning the kind of future(s) they desire (Miller 2013; Weaver and Rotmans, 2006). We suggest that what people desire is dependent upon the kind of consciousness they embody, which is related to the internalization of a particular worldview and (cultural) values and practices. Understanding what kind of consciousness people embracing ecological ways of living embody, and how such consciousness emerges, is what this research seeks to understand.

The aim of this article is then to critically investigate the framework with the aim of testing empirically its value as an analytical tool and to strengthen it in light of the inevitable shortcomings the framework has. For this, the main researcher conducted research in collaboration with and within ecovillages. We define ecovillages as place-based sustainability initiatives, referring to citizen initiatives aiming at conservation, transformation or regeneration of people–place relationships, embodying and materializing what sustainability means for them. Even though it is impossible to speak of ecovillages as one entity, many ecovillages have evolved, in one way or the other, from an ecological consciousness embodying alternative worldviews (Bokan 2015; Čarman 2015; Kasper 2008; Kirby 2003; Kunze 2015; Litfin 2009; Moore and Wight 2007; Tamm 2011; Wight 2008). Furthermore, in being actual places, ecovillages have shown to be able to turn such alternative understandings of our world into concrete places (Andreas and Wagner 2012;

Kasper 2009) and create a bigger movement by connecting in national, regional and global networks.¹

We explore the following questions: Do the experiences of ecovillagers reflect a learning process and if so how? Are the above-mentioned dimensions of connection, compassion and creativity central factors in this process? These questions are addressed by exploring narratives of meaningful experiences of people currently residing in ecovillages. By choosing a life outside the dominant structures and institutions of modern society in places that show radically different forms of organizing life, these people have intentionally and deliberately changed their lives in ways that are likely to expose them to a learning process. In such a context the learning process has also potentially been transformative.

In the next section we will first elaborate on the theoretical underpinnings of this study, mostly summarizing Pisters et al. (2019) with some additional theoretical reflections. In the second section we will explain the research methodology. In the third we will present the results. In the final section we will discuss our findings and reflect on the framework and its value for understanding transformative learning processes that might lead to the emergence of regenerative practices and communities.

Theoretical background: a place-based approach to transformative learning

Transformative learning theory was first coined by Mezirow (1978) and described as ‘a deep shift in perspective, leading to more open, more permeable, and better justified meaning perspectives’ (Mezirow 1978 in Taylor and Cranton 2012).² The theory has since then developed into many different perspectives that all respond to various strands of critique (Taylor and Snyder 2012; Tisdell 2012). The theory has been critiqued for being too Western biased, too much centered around rational thinking, too focused on the individual and not shedding light on the link between individual and social change, leaving out structural elements and being de-contextualized. It has also been suggested that the concept of transformative learning is often misused, describing processes that are not necessarily transformative (Newman 2012). However, as O’Brien (2013) argues, we need to look at the role consciousness plays in our individual and collective approaches to climate change. This involves amongst other things to reflect upon our identities and upon the grounds on which they are built and confront our fears of change (ibid). For this reason, transformative learning seems to be a useful

concept to meet the aims of this research, despite the above-mentioned critiques. From the many different approaches to transformative learning, this research mainly builds on a planetary perspective, defining a transformative learning process as a shift in consciousness from a modern, instrumental towards an ‘ecological consciousness’ (O’Sullivan and Taylor 2004).

In responding to different points of critique, we have suggested that transformative learning, at least when researching sustainability initiatives, should first of all be understood as a place-based process (Pisters et al. 2019). Even contextualized perspectives to transformative learning usually refer to social, economic, and political contexts (for example in Clark and Wilson 1991), often overlooking geographical contexts and the role of material, including our bodies, and nonhuman factors in transformative learning. Understanding consciousness as evolving in the interaction between self, social and material (Newman 2014), transformative learning from a place-based perspective is a dynamic process that takes place in this space of interaction.

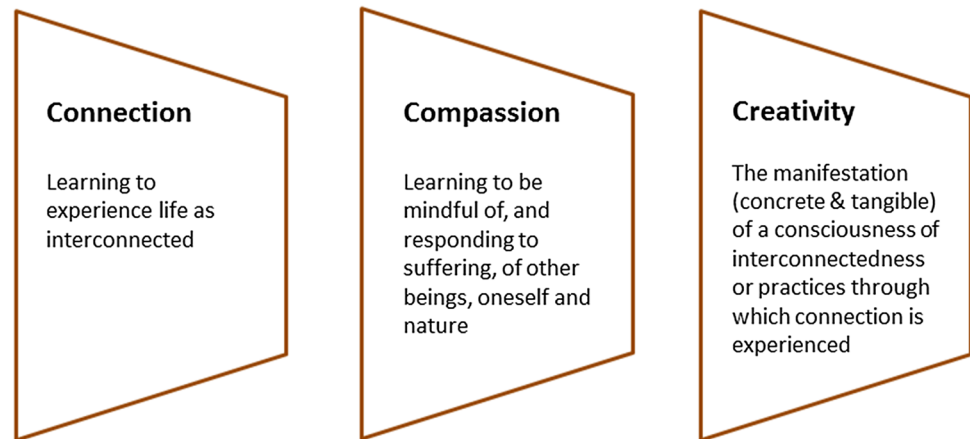
A transformative learning process should, we have argued, not be understood as transformative unless it unfolds or is grounded in the physical or material dimension, resulting in tangible change on the level of behaviour, social interaction and organization and material environment (Pisters et al. 2019). This supports the concept of transgressive learning and might partly solve Newman’s (2012) concern whether learning processes are actually transformative if they lead to no observable, tangible changes. A place-based approach thus acknowledges the *emplacement* of the learner and takes into account place-specific characteristics, including culture, local knowledge, spiritual practice and ontological views, besides the more material, geographical characteristics of a place. Spirituality for example has been acknowledged as a key factor in humans’ relations to their non-human environment (Kamitsis and Francis 2013) and thus should be considered in learning processes that shift people’s relationship to the nonhuman. Furthermore, consciousness studies and existing literature on transformative learning suggest that spiritual practice can be an important driver for shifts in consciousness (Chaves et al. 2017; Hart et al. 2000; Tolliver and Tisdell 2006; Vieten et al. 2008). As an addition to Newman’s three dimensions (self, social, material) we therefore acknowledge a fourth; the metaphysical dimension (Pisters et al. 2019).

Understanding transformation as rethinking the very foundations of how we currently live our lives and shape our societies, goes beyond seeing sustainability as something that we add to our ‘to do’ list. Transformative and transgressive learning assumes that we need to go beyond resilience, mitigation, adaptation or conservation, as these do not challenge the foundation of the current dysfunctional system nor work toward disrupting the foundations of this system

¹ For example the Global Ecovillage Network (GEN) <https://ecovillage.org/>.

² For a more extensive account on the theory of transformative learning and our approach, see Pisters et al. (2019).

Fig. 1 ‘Place-based transformative learning’, a theoretical framework adapted from Pisters et al. (2019)



and creating something better altogether (Lotz-Sisitka et al. 2015). We do recognize that a part of transformative and transgressive learning is about identifying what things from different cultures and worldviews we do wish to honour, preserve and integrate in the new things that we are creating, as discussed in Pisters et al. (2019) and Lange (2004). This involves honouring valuable knowledge, practices, rituals, of various (indigenous) cultures without over-romanticising them.

Connection, compassion and creativity

Building on the above, we developed a framework based on a literature review which shows (aspects of) the place-based nature of a transformative learning process and research that supports the theoretical thickness (Pisters et al. 2019). Key themes have been detected and clustered in three (analytical) dimensions: connection, compassion and creativity (see Fig. 1).

This first dimension reflects the core of an ecological consciousness; the interconnected nature of all life. Experiencing and acting from this sense of interconnectedness is said to be the basis of living from an ecological consciousness (Bateson 1994; O’Sullivan and Taylor 2004). Existing research discusses some experiences that can enhance learning towards a state in which one is able to sense this state of interconnectedness. These include experiences that trigger a ‘global consciousness’: realizing how one’s life is connected to places and people near and far and taking responsibility for them. Even though the theoretical framework is not to be understood as a linear model per se (Pisters et al. 2019), establishing a sense of connection is required to be able to develop compassion and for creative activity to be responsive of and in tune with its environment and aware of its impacts.

(Self)- Compassion, acting to alleviate suffering or do the least harm, naturally follows a sense of interconnection. This means that compassion cannot be experienced without

a sense of being connected (Bannon 1973) and when we feel our life is connected to the life of those or that which suffers, we feel an urge to alleviate it (Bannon 1973; Pfattheicher et al. 2016; Vieten et al. 2006). It is, we have argued, a key element in place-based transformative learning as it invites for: (1) our acting doing the least harm as possible to our immediate and distant surroundings (Bannon 1973; Massey 2004); (2) an active response when encountering suffering (Welp and Brown 2014); (3) being able to hold multiple perspectives and thereby embracing diversity (Gunnlaugson 2007); and (4) acting compassionate towards ourselves to not ‘burn out’ in responding to suffering around us (Sohr 2001).

Creativity is the materialization of a sense of interconnection and compassion or the means through which these can be experienced. This dimension is the least developed and often overlooked in research on transformative learning. This dimension involves the transformative impact of living a creative life based on *being* and ‘self-actualization’ (Maslow 1968) in contrast to living a less creative life in which one’s core activity is acquiring modern life securities, a life thus based on *having* (Cell 1984; Giddens 1991; Maslow 2012). Furthermore, creativity emphasizes that the ‘inner’ is not a separate entity from the ‘outer’, shedding light on the relation between inner transformation and social action or agency. Creativity thus involves the materialization of inner change processes which can be changes in behaviour, lifestyle decisions, involvement in practices and initiatives that disrupt existing systems or create new ones, like social movements and in the case of this paper, the manifestation of place-based sustainability initiatives, like ecovillages.

Methodology

This research generally followed an ethnographic approach (see for example Dewan 2018) informed by many aspects of a new materialist social inquiry. Social inquiry from a

new materialist ontology aims to transcend dualism between mind and matter, culture and nature and understands any studied reality as relational, ever evolving assemblages (Fox and Allred 2015), reflected in our place-based understanding of transformative learning.

The methodology used for this research aimed at understanding the learning processes of participants as relational processes that evolved in the constantly changing and dynamic assemblages the participants moved in and out of in the course of their life. To support this perspective, the first author conducted life-story interviews to get a story as rich as possible of participants learning journey's seeking meaningful relational experiences that triggered shifts in consciousness. Besides these interviews, participatory photographic mapping (PPM) (Dennis et al. 2009) group sessions were organized to again elicit meaningful learning experiences within their relational context and to allow narratives to emerge in a relational manner. Although this article mainly drew from the interviews, a few excerpts that emerged from PPM are used. The data collection process and methods will be discussed in more depth after the following description of the three communities that participated in this research.

Selection and description of cases

Resulting from an extensive phase of orientation including short visits to six ecovillages in Finland, one in Sweden, two in Estonia and participation in the European annual conference of the global ecovillage network (GEN) in a community in Spain, three communities were found for an ethnographic study. In Finland, two communities which both responded positively to the research and were willing to accommodate the main researcher for some time in their community were selected. In both communities it was possible to conduct the research in English, in some cases through the support of a Finnish speaking person. These two communities had very different reasons for existence, a different core focus and different demographics. 'Väinölä',³ a theosophical community, located in central Finland, was founded in 1978. Its inhabitants are mostly, with some exceptions, above 50 years old. There are no children currently living in the community. Väinölä has a shared economy and all its members live in the same building, sharing all meals and living spaces together except for a single individual room per inhabitant. Kurjen Tila⁴ is a rather new community. The community is centred and located around a biodynamic farm and families live in separate houses, most of them ecologically built by themselves. They are both open to and in interaction with the

'outside' world. As both Finnish communities are relatively small (<40 members), the Portuguese community—Tamera⁵—was selected as it is one of the biggest communities in Europe and one of the pioneers. Tamera was found in 1978 by three visionary leaders and has since grown into a community of around 150 permanent members and hundreds of visitors every year. Tamera's members include children as well as 'elderly' and everyone in between. Community members live in smaller sub-groups, often around a particular theme or work domain, including amongst others (solar) technology, permaculture and artistic and creative work. It has an influential and inspirational role in the European and Global Ecovillage Network and proliferates itself as Peace Research and Education Centre. Although all three communities are very different, this research does not intend to do a comparative analysis, as it focuses on individual learning journeys.

Methods of data collection and analysis

Nineteen life-story interviews were conducted with participants from the three communities, seven from Kurjen Tila, six from Väinölä and six from Tamera. These interviews were recorded, transcribed and uploaded to an online data analysis software platform (DEDOOSE⁶). Sampling of participants was done in a pragmatic manner. As the interviews required quite some time and willingness to speak openly about rather personal matters, a more structured selection procedure was not deemed suitable, even though there was a general aim to keep a balance between young and older participants, male and female and, when applicable, different nationalities. Some participants were personally approached by the main researcher or by the contact person in the community, while others subscribed to a list after an invitation email and introductory meeting.

The interviews had the form of dialogues between researcher and participant. They were unstructured, although some guiding topics were used to start the conversation. Typical opening questions included asking after participants background: places and family in which they were born and grew up, characteristics of their childhood and potential meaningful moments, and from there moving onto to early adulthood, usually getting to the phase where more conscious lifestyle choices are being made or struggles and tensions arise in finding one's own path. Other sub-themes that were brought up included the motivation for joining a community project, the experience of the first period in community, difficult moments, decisive moments leading to their commitment to stay, and biggest

³ <https://www.ihmisyydentunnustajat.fi/en/>.

⁴ <https://kurjentila.fi/>.

⁵ <https://www.tamera.org/>.

⁶ <https://www.dedoose.com/>.

lessons learned during their time in community. Once participants started talking, the researcher, when needed, asked for clarification of, or elaboration on, experiences that seemed potentially interesting.

The life-story interview transcripts have been analysed as ‘narratives’ by the first author. Narratives are accounts of subjective personal experience, where the teller gives his or her point of view toward what happened and points out what he or she considers significant (Smith 2000). A thematic approach was used (Riessman 2002) thus mainly focusing on the content of what had been told. The analysis focused on finding what Singer and Salovey (1993) defined as ‘nuclear episodes’: memories that play a conscious role in determining individuals’ life choices and goals. The analysis looked for turning points, peak experiences, low points or insights participants described that, in retrospect, seemed to have guided the participants towards a life in an ecological community. Narrative analysis has been used to look at significant turning points in the course of people’s lives, (McAdams et al. 2001; McLean and Pratt 2006), the meaning of peak-experiences in youth in the process of personality development (Hoffman and Muramoto 2007), and lastly narrative analysis was used to explore the role of sense of place in navigating a transition process after a traumatic life event (Crossley 2001).

The narratives have been mostly vertically analysed, searching for types of experiences that were identified by several participants as meaningful, albeit the different narratives reflected different variations. These nuclear episodes were coded and this process involved several rounds:

- The three dimensions and of the theoretical framework developed in Pisters et al. (2019) and the themes representing them were used as starting point for formulating codes. More codes and sub-codes were added in the process.
- Once all interviews were coded, all codes created were retrieved and re-grouped, re-formulated, merged or split. Furthermore, code charts were retrieved that indicated the occurrence of codes.
- Codes and sub-codes were compared and organized through the initial dimensions in the theoretical framework, adding and complementing wherever needed.
- Preliminary findings were shared with the two co-authors and fellow researchers who provided critical feedback, pointing out, amongst other things, different perspectives and other angles from which the results could be interpreted. This resulted in another round of analysing in which it was critically assessed whether initial codes reflected also these other perspectives and whether certain themes were overlooked in coding (which involved going back to the interviews and creating some more codes).

As mentioned above, a few excerpts were taken from the transcribed narratives that emerged from participatory photo mapping (Dennis et al. 2009) group sessions. For this article, we only used these written transcriptions, which were analysed similarly to the life-story narratives, as just described. For this exercise, the first author asked community members willing to participate to take pictures based on four guiding probes: ‘a meaningful moment’, ‘a difficult moment’, ‘your favourite place’ and ‘what are you proud of’. These pictures were discussed in a group setting or, in one exceptional case, in a pair.

Results

The result section is organised along the three dimensions of the theoretical framework plus an additional dimension describing an element of the transformative learning journeys of participants that was not yet explicitly covered by the initial framework: transgression. We then describe the different themes that emerged for each dimension using four categories: triggers, meta-cognitive learning processes, affective learning processes and challenges.

Connection: becoming aware of disconnection and seeking connection

The learning journey of many was initiated by one or more *triggers* or realizations that evoked a critical attitude towards hegemonic structures, the nature of which we will discuss in the last section of the “Results”. These initial triggers which made participants aware of disconnectedness on various levels, evoked a search for connection, to places and people that shared participants’ critical attitude or amongst which participants felt a sense of belonging. This process involved connecting to inspiring people, books and philosophies, travelling and learning about various ways of living and various philosophies of life trying out different professions or educations and engaging in spiritual or personal development work. What followed for many was an experience of community: finding like-minded people, either in political activist, spiritual or ecological living spheres (food sharing, environmental work), ‘accidentally’ through travelling, co-housing projects or even mental health related spaces. For many these initial experiences of a sense of community created a longing for community, reflecting an *affective learning process*, and led to joining a community initiative or searching for one. For a few, the choice for joining the community was a more pragmatic one as it would allow them to carry out their activist, environmental or technological work in a way that aligned with their values: aspiring self-sufficient life and farming in the countryside in a social setting, creating a better work and life balance as environmental activist, taking

political activist work to a next level and working on innovative eco-technologies without being confined by economic incentives, amongst others.

These first points of contact with alternative ideas and paradigms evoked a *meta-cognitive learning process* in which participants reflected upon their own identity, background, history, culture and position in the world and connected with the consequences of modernity and one's own lifestyle and actions. This involved critically reflecting on what dominant discourses, values and beliefs they had unconsciously internalized and learning how those affected their relationships, communities, and societies. Realizing there is a relationship between their inner worlds and the state of the outer world was something that for many participants came ones they actually joined or got involved in community initiatives. One participant, having grown up in Palestine, described how she came to understand that, even as a peace activist, she also carried the patterns of war she was fighting against, inside of herself. This realization came sometime after the community of Tamera approached her to join their project and she recalled it took her quite a while to actually realize that political activism also is about 'daring to go inside' and unravel patterns of, for example, war that are ingrained in ourselves and affect our relationships with each other.

Realizing the need to go within and exploring alternative and more communitarian life-styles required the development of certain *capacities and skills*. First of all, turning to their inner worlds for almost all of the participants involved learning about and developing a positive spiritual practice, if this was not already part of participants' lives. One participant described how she learned a new kind of spirituality, that unlike the conventional religious practice she was familiar with, did suit her: "I did not have any contact with spirituality; this did not mean anything to me. I wanted to change the society ... I had the feeling that religion is opium for the people, like Marx said. Prayer never sounded true to me, if somebody prays, he is just too lazy to do something. This was my understanding. But this changed." (Tamera 6). She also described how this new kind of spirituality for her is closely related to embodied experiences, often as well in nature. For some, it also involved getting more in touch with the wisdom of the body and re-connecting to their feminine nature. One participant reflected upon the value of spiritual practice and inner work in a community setting, stating that through a shared process, so much more could be accomplished in very little time compared to doing the same process as an individual.

Then, another capacity involved developing a different relationship to the nonhuman world. For many participants this was in some way or another related to spiritual practice or experiences. For example, for some working with nature was experience as a spiritual practice: "this handwork

this is very spiritualif you are working with soil you are not going into your thoughts too deep. You have this soil, this something concrete, you can be there and feel the elements'" (Kurjen Tila 6).

Another theme under capacities and skills includes learning to re-connect to other humans in an authentic way. A compelling example is the story of a participant sharing how she used to be fond of photographic nature scenes and how at some point during her first experience in a community she realized she no longer only wanted to photograph nature, but instead turned to taking pictures of other people around her, as she started to see the beauty in them, the same way she used to in natural scenery. Furthermore, the development of capacities and skills was always complemented with a *meta-cognitive learning process* to place the need and longing for developing these capacities in a historic, political and social context. Learning the capacity of being in touch with the intelligence and wisdom of the body and its sensual and sexual nature was complemented by learning about the history of our bodies, how historically and in different times and places on earth the body and sexuality was approached and either celebrated or repressed, and what impact that has on our relationship to our bodies in present day and hence how the quality of this relationship impacts the way we relate to each other. Likewise, learning to connect to otherness was embedded in a meta-cognitive process of understanding how a sense and even fear of otherness has come about historically, politically and culturally. A simultaneous *affective learning process* served to confirm the need and benefits of developing these capacities, skills and new relationships with the self, the body, others and the nonhuman and spiritual environment. For example, by experiencing how nature responds with abundance when we learn how to work with it, experiencing a sense of belonging and purpose through community, experiencing the impact of bodywork and experiencing how connecting to our femininity and sexual nature unlocked creative energy and experiencing the positive impact of spiritual practice.

Challenges around the dimension of connection lie in having to make constant efforts to move away from states of disconnection. Apart from a sense of disconnection that triggered participants to look for a life in connection, a sense of disconnection can also be present while living in a community, for example, in the process of finding one's place in a community during the first year(s), in times of conflict or concerning certain aspects of community life about which one has different ideas from others. Overcoming a state of disconnection was described as a learning process in several narratives and can mean different things, including: learning honest and open communication in a community setting which may involve being confronted with parts of yourself you try to hide; learning to accept criticism as an opportunity to grow and unlearning the tendency to compete with

others; learning to make decisions together; realizing the need for tools to work through conflicts with others; dealing with emotions, fears, trauma's from the past that are triggered when faced with conflict; navigating the space between stability versus change, also in confrontation with other community members' reluctance to change. Working through such states of disconnection showed to require the ability to practice self-compassion as will be discussed in the next section.

Compassion: from emotional detachment and boundaries to relating to self and others compassionately

The dimension of compassion showed to be mostly about developing *capacities and skills*: developing and nourishing the ability to be compassionate towards self and others. Cultivating the ability of compassion and self-compassion started with participants becoming aware of the suffering of self and others, described in more detail in the section 'Transgression'. As a result, participants started a search for connection to like-minded people, ideas and initiatives as described above, and started experimenting with different kind of actions to address the suffering. In many cases though, taking action initially stemmed from a sense of anger, frustration and was sometimes characterized by overburdening oneself and sacrifice. Developing compassion was reflected in participants' accounts of learning not to judge or even 'hate' people who continued living in those ways that participants challenged. This involved learning not to judge, for example, neighbour farmers who do things differently, but instead focus on what you have in common while at the same time inspire those others by showing that a different way of doing things is possible. Similarly, some went through a *meta-cognitive learning process* of accepting that not everyone feels the urge for action and change, or recognizes the need but does not act upon it. As one participant noticed, reflecting a complementary embodied affective learning process, she had to learn not to "hate people whose behaviour is environmentally destructive. This first of all drains you and can literally make you sick" (Tamera 1). Another participant realized that being angry with others for their misbehaviour can show you that "you forgot that those structures are also inside of you.... And you realize that everyone has a different path, not everyone might be able to do what you do" (Tamera 2).

Furthermore, developing self-compassion appeared to be valuable for many participants in navigating change to stay committed to a community project and have patience with others and themselves as "we don't change from one day to another" (Tamera 6), referring to the transition to a communitarian lifestyle coming from a highly competitive society. Similarly, being successful at change also

showed to require learning to cope with the inconsistency and messiness of living 'sustainably' and letting go of perfectionism and rigidity.

The analysis showed the presence of a continuous process of balancing creating (manifesting ecological values, either in the form of creating community or in other ways before joining community) with well-being and self-compassion. For some joining a community project partly was an act of self-compassion by choosing a place where one can create a life aligned with one's values in a supportive environment which also respects individual wellbeing and self-care. This opposed to for example a career as environmental activist in a high-pressure work environment. Joining a community showed to offer this balance for some, at least most of the time. Finding this balance can be *challenging*, especially in times of conflict community can be an extra 'burden' to one's wellbeing: in this case, as the data reflects, the question is whether a person individually and the community as a group will take the situation as a burden or as a learning opportunity, an opportunity for growth. In any case, living and working through conflict, showed to require a lot of innovative creativity at both individual and community level, in addition to the capacity for self-compassion to give oneself the needed perspective and self-care to stay healthy and sane in challenging times. This can take various forms from in depth therapy sessions to work through unresolved trauma, to taking enough time to retrieve to silence, to find support amongst peers, find support in broader community networks, taking a holiday or simply going for a walk every day. Furthermore, for some participants conflict situations led to a partly *affective* and partly *meta-cognitive learning process* in which participants learned to figure out how to give authentic expression to themselves in difficult situations, find ways in which to positively influence the situation and step into their own power, as opposed to hiding, leaving or letting oneself be intimidated. At the same time, it served as a *meta-cognitive learning process* in which they questioned or sharpened their motivations for being part of a community project thereby getting more clarity on their visions, dreams and ideas and whether or not these could possibly be part of the bigger community vision. In this way, dissonance and conflict can be drivers for transformative learning (Wals and Heymann 2004), both at the more individual level as well as at the community level, as also shown in the study by Chaves et al. (2015). As one participant described, "a result of such a conflict is that you are invited to look at things within yourself that are unresolved, which you otherwise would probably not have done as we all tend to not get too far out of our comfort zones if not necessary.... And in this process, it's important to not forget to be kind and loving towards yourself and others wherever possible" (PPM Kurjen Tila).

Creativity: from converging and sameness to authentic divergence

The last dimension, creativity, is about the possibility of creating something different, diverging from the norm and the creative expression of one's authentic self. Participants described the possibility of creating something different, and learning (*capacities and skills*) how to do this, as essentially the biggest 'benefit' of community. To be part of an experiment that works towards creating different, counter hegemonic structures in the areas of family life and relationships, technology (energy, housing, water), food production, education, decision making, spirituality and religion, work and profession, health, culture and social justice. The community brought participants the opportunity to create something that they would not have been able to do alone, it made it easier to integrate ecological habits into daily life and it allowed many to manifest their alternative vision to profession and work. Joining a community gave one participant the opportunity to experiment with new technologies without being limited by financial pressures and incentives. As this participant realized, "when you start creating, making, and shaping without a pressure of money or economic reasoning behind it, you create very different things as it is not just cost-efficient products and services that will survive" (Tamera 3).⁷ How creativity further manifests in transgressive practices at the collective level is beyond the scope of the present paper. For now, we will discuss some examples of the role of creativity at the individual level of transformative learning processes.

First of all, creative living came forward in the interviews as making, divergent, non-confirmative, non-conventional but authentic life-choices and a continuous process of self-actualization: shaping a life in which one can be one's best self (Cell 1984; Maslow 2012; Richards et al. 1988). Reflecting an *affective and meta-cognitive learning process*, this involved anything from not following the dominant narrative of financial security and stability by quitting ones secure job, to searching for ways of living beyond the model of nuclear families, rejecting external expectations with regards to major life choices in the area of education, profession and civil duty and instead learning how to give authentic expression to oneself. Some participants described how they felt slightly unfit to 'normal' social situations or expectation. Their resistance to converge resulted in a search for spaces and professions that did feel right. What appeared helpful for many in this process was a change in environment: physically moving to a different place, either living or travelling to a different country, moving from rural to

urban or from village lifestyle to anarchistic student realms and even a period in jail, as a result of refusing army service were mentioned as important, valuable and refreshing experiences. These shifts in environment and getting away from the familiar allowed participants to 're-invent' themselves. This learning process continued, and for some intensified in a community setting.

Furthermore, many participants described the value of arts-based creativity as practice for expressing oneself, to make sense of inner learning processes or as a way through which connection was experienced, all of which are *affective learning processes*. The almost sacred act of making music (together) or writing poetry appeared crucial for some participants wellbeing, "through music I can express things of myself that I can not in any other way" (PPM, Väinölä). Creative work, also served as a kind of healing tool throughout some participants journeys, for example as a way to connect to people through photography; using writing in group settings to explore confusing emotions around love and sexuality; experiencing one's creative workshop as a meditative place to be alone and at peace; making sense of inner and spiritual learnings by expressing it in any form of art and using music as a way to live through as well as navigate and give space to intense emotions.

Other participants experienced a sense of connection through creative practices. One participant mentioned experiencing a true sense of connection with nature when witnessing how nature responded to their community's intervention in creation of natural lakes. Seeing this intervention result in an abundance of plant and animal species returning to a once deserted area. For some creative work evoked a spiritual experience of connection, such as experiencing an almost spiritual connection to life by creating technologies based on life's energy sources. Another participant realized that learning to be more in touch with her feminine and sensual nature 'unlocked' her creative energy, which led her to create for example theatre shows. Another participant described the connection to others through a creative process: "in designing, planning and building something together, as simple as a compost deposit, something more evolves out of this than just the compost deposit itself, something that lies in the connection that was fostered between each other in doing this together" (PPM Kurjen Tila).

Transgression: from complacent to critical

In the empirical analysis it became evident that the theoretical framework lacked one aspect that seems to be a prerequisite for connection, namely the will and initial motivation to transgress current dysfunctional systems. Many participants identified one or more 'realizations' or 'triggers' that resulted in a critical attitude towards dominant hegemonic structures. The triggers they described included first of all,

⁷ An elaborate discussion on the development of solar technology in the community of Tamera can be read in Sareen et al. (2018).

witnessing suffering, in some cases directly related to political events. One participant for example grew up as a young woman in Palestine, realizing at some point in her adolescent years the situation she and her fellow Palestinians were in. Before becoming aware of her own precarious situation, she recalled being deeply touched by images on television of starving people in Rwanda. Another participant recalled being appalled by the stories of the second world war, and as a child growing up in Germany wanting to know from her parents how this could have happened. Yet another example is witnessing the damage that had been done to a piece of land due to industrial activity. Even though all these situations triggered an awareness in participants, the question why they felt an urge to act upon this awareness while others witnessing the same things do not remained unresolved. Part of the explanation might lie in the nature of their character and their apparent ability to allow difficult emotions that surface when confronted with suffering. More importantly for participants learning journey however appeared to be to get to terms with the realization that not everyone seems to have the urge to take action, which in some cases led to feelings of anger and frustration. Another related trigger was being confronted with the inhibitions that come with one's given identity, for example feeling inhibited by being a woman in Portugal during the dictatorship or expected to join army forces as a young man in Finland. This relates to many participants mentioning a sense of uncomfortableness with external expectations, economic incentives and a competitive spirit they experienced in education, work and family environments. Lastly, meeting role models in the form of either visionary persons or social initiatives, who opened one's eyes to new perspectives and embodied a 'promise of transgression' as well as offered tangible actions to manifest it, was often identified as marking a turning point. These triggers led to partly affective, partly meta-cognitive learning domains as they evoked feelings of frustration and hence a process of questioning dominant morals, cultural values and beliefs. For some, the motivation or will to transgress was more subtle expressed by a feeling of confusion about who to be and a general sense of being 'out of place', nothing that was offered in terms of education, work, family or future prospect felt truly meaningful.

Discussion

The paper started by asking if and how the (analytical) dimensions of connection, compassion and creativity are part of a transformative learning process towards an ecological consciousness. The analysis showed that these dimensions were indeed reflected in people's life-stories. The analysis also showed that the initial framework lacked a dimension that seemed to be a prerequisite for embarking

on a transformative learning journey, namely the motivation or 'will to transgress' by moving away from complacency and develop and voice a critical perspective. This both initiated and complemented participants' learning journeys. Developing this ambition to challenge and disrupt normalized unsustainable systems, a part of transgressive learning (Peter and Wals 2016), can be understood as the fuel that started and keeps the fire of commitment to change burning throughout participants' learning journeys. A prerequisite for moving from complacency to developing and voicing a critical perspective is being mindful of, and having the ability to, let oneself be touched by the suffering one witnessing in self and others, instead of resorting to emotional 'numbing' (Brown 2012) as a result of feeling powerless or overwhelmed. Furthermore, as Brown (2012) states, we cannot selectively numb emotions. By numbing negative emotions, we will also numb joy, gratitude and happiness. This suggests that the ability to face suffering and handle emotions that surface when doing so may also enhances our capacity for experiencing positive emotions like joy and happiness.

Moving on to the dimension of connection, another kind of inner fire appeared to have an important role. Interviewees shared how they came to understand that spirituality can be a driver for change and that inner work is a crucial aspect of a transformative change process. This supports the work of, amongst others, Napora (2017) and Vieten et al. (2008) who show the role of contemplative practice in manifesting a more compassionate, socially just and inclusive society. Part of this spiritual work included the realization that all the things one dislikes in the outer world, and would like to change, are also deeply ingrained in one's own inner structures. This asks for overcoming the illusion of separateness in which the self is seen as different from the, potentially 'evil', other and reflects the need to look beyond the dichotomy of the inner and outer dimension of places and understanding the meaning of change from the inside out (Horlings 2015a; O'Brien 2013). These insights also raise questions about the nature of spirituality when linked to social change and the will to transgress collective systems. Does spiritual practice have a different character and meaning when linked to a larger purpose of social change rather than mere individual transformation? Integrating this in a place-based perspective to transformative learning might counter the risk of transformative learning becoming just a theory of 'personal development' in the spirit of a neo-liberal culture of self-development and wellbeing (Newman, 2014, p 347).

The data reflect that an important part of people's learning journey is to learn through and cope with challenges. Life in communities does not always reflect a state of connection and compassion. The ability to deal with conflict, for example, is an inherent part of being able to live in a community. Given the observation that nine out of ten

community initiatives fail in achieving a successful community due to mainly social problems (Christian in Joubert and Alfred 2014), the need for social and inner work as the basis for shaping our places into ways that allow for harmonious and cooperative ways of living together, including the human and non-human, seems apparent. As Joubert and Alfred (2014, pp xi–xii) state: “most of us have been educated in a way that has made us believe that we are fundamentally greedy and selfish”, which is not a particularly fruitful base for building communities and social movements for a peaceful world. Rewiring these built-in structures seems to be the basis for any kind of sustainability initiative (ibid).

Compassion was furthermore reflected in learning to acknowledge and respond to suffering through environmental, social and political activism and alternative lifestyle choices, while at the same time not undermining or sacrificing emotional, mental and physical wellbeing. This involves being patient with oneself, embracing the messiness and imperfect nature of the learning process and as well becoming compassionate towards ‘the other’ who does not seem to act or care. This transcending of frustration and anger might be an important aspect of a transformative learning process to avoid more separation, disconnection and misunderstandings between ‘activists’ and those who feel intimidated or attacked. Even though community can be a space where it becomes easier to prioritize self-care and personal wellbeing in a process of working towards change, and in fact understand these two as related in line with Belton (2014), Grinde et al. (2017) and Hall (2015), intense situations in the community like conflict do pose a challenge to individual wellbeing. The data showed how leaning into conflict and the ability to use conflict as an opportunity for growth requires compassionate care for oneself to stay healthy and sane. These findings support that self-compassion helps to resolve conflicts in an authentic way, balancing the needs of oneself and others (Yarnell and Neff 2013) and may help to prevent ‘compassion burnouts’, a well-known phenomenon among environmental and political activists (Kasper 2008; Kovan and Dirx 2003; Pines 1994; Sohr 2001).

Creativity emerged from the data as a process of ‘self-actualization’ (Maslow 1968), a resistance to converge and instead seek ways to give authentic expression to life. Furthermore, the process of diverging involved making non-confirmative and non-conventional life-style choices and creating the space for creative and purposeful work that is not bounded by financial incentives or external expectations. Joining a community for many provided the opportunity to do this, to a certain extent. Creativity practice also showed to be a way to experience connection, pointing at the crucial difference between authentic connection and converging. An interesting avenue for further research in this regard would be to dive deeper into the topic of diverging in contrast to alienation. Lastly, the results showed the importance

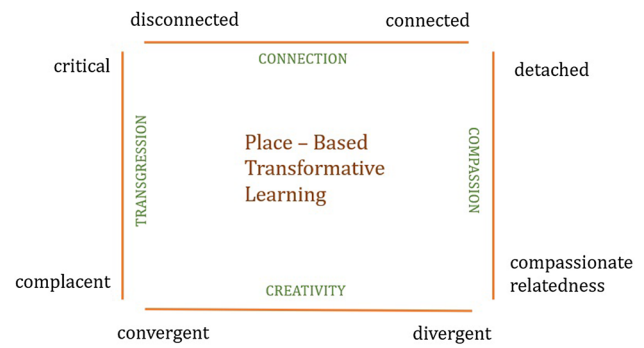


Fig. 2 ‘Place-Based Transformative Learning’, a theoretical framework reflecting place-based transformative learning as a four-dimensional process

of arts-based creative practices for participants to express themselves. This may support their sense of agency, following Scanlon and Mulligan (2007) who state that creative expression can help people construct self-narratives that provide a sense of meaning in a changing, and often threatening, world). At their best, Scanlon and Mulligan (ibid.) argue these self-narratives give people a stronger sense of agency relating to Giddens’ (1991) analysis of the role of self-therapy in modern societies.

Based on the results, we realized the need to place more emphasis on the dimensional character of the theoretical dimensions of the framework we developed in Pisters et al. (2019). As the results show, the learning journey of participants is a continuous process of consciously moving towards the favourable side of a certain dimension and overcoming obstacles and challenges that interfere with this process. All four dimensions then embrace two sides of a continuum. Together, the dimensions then make up a four-dimensional space in which learning takes place, visualized in the new visual representation of place-based transformative learning in Fig. 2.

Conclusion

In conclusion, the theoretical framework developed in Pisters et al. (2019) appeared useful to describe and understand the learning journeys of ecovillagers. The framework did however lack a comprehensive category describing the development of a critical perspective that ignites a will to change, triggering, complementing and underlying individuals’ transformative learning journeys. This will and ambition to transgress manifests in a search for, and attempt at manifestation of, alternative sets of practices and social, material, spiritual configurations which are rooted in connection and compassion. This possibility of creating a place that

embodies counterhegemonic practices, structures and discourses is what drew participants into a life in an ecovillage.

As this paper showed, consciously working towards transgressing dominant systems and structures requires a process of inner change as well, in which internalized patterns, values, beliefs and behaviour that foster disconnection and hence an inability for compassion are identified and transformed, both at the level of the individual and consequently in social relations. This process of transformation starts before joining a community project, ‘priming’ participants for this adventure through a gradual chain of experiences and learnings. This process often starts with a will to transgress, complemented or followed by experiences that evoke a sense of connection upon which it is possible to develop the ability to cultivate compassion and live creatively. Different aspects of this learning process included *triggers* which led to an awareness of unfavourable circumstances, followed by *meta-cognitive and affective learning processes* in which initial insights were unravelled, alternatives were considered and in which participants experienced the potential of alternatives to the dominant moral. At the same time, they developed certain *capacities and skills* which allowed them to change their relations towards, self, other, the material, non-human and spiritual as well as to cope with *challenges*. In this process, participants moved in the space between four dimensions, as visualised in Fig. 2.

This learning process furthermore turned out to have a place-based character through the various influences of place related experiences: moving through culturally and geographically different places; the influence of cultural, political and historical aspects of places in evoking the will and ambition to transgress and a critical perspective upon one’s own identity; developing a different relationship to the material, nonhuman dimension of ones environment; spiritual experiences in nature and lastly the challenges that come with literally sharing a place with others in more intimate ways. In addition, participants showed to embody or develop over time a consciousness that embraced a sense of responsibility for places both near and far.

Moving on from the key insights of this research to questions of applicability, the question arises whether spaces can be created in which people are introduced to the kind of practices and experiences identified in this article that are potentially transformative and open up or shift people’s consciousness. Such spaces could for example be created in (higher) education settings (Napora 2017) and in public spaces or institutions. This calls for more research on how to create the right conditions and governance action to manifest it. Moreover, a better understanding of these inner processes that underly places like ecovillages can contribute to better understand what Bendell (2018) defines as the capacity for ‘creative adaptation’ that refers

to acknowledging the possibly catastrophic consequences of climate change and finding the courage to respond while being able to take care of and enhance our individual and collective wellbeing. In fact, the results and theory discussed in this article give several clues with regard to the beneficial effects on individual and collective wellbeing as a result of the learning experiences people go through on the path towards a more ecologically consciousness lifestyle. Recognizing and becoming conscious of our own ‘shadow’ site (identified as a necessary process in Jungian psychology in psychological wellbeing and in relating to the perceived ‘evil other’ or enemy (Zweig and Abrams 1991)), developing self-compassion, integrating positive spiritual and contemplative practice in daily life, using creative ways to express oneself, finding ones authentic self through confrontational situations, the ability to lean into the full spectrum of emotions instead of numbing difficult ones, and developing an intimate relationship with nature. All of which have been identified, as discussed in this article, as positive influences on people’s wellbeing and happiness, and thus suggest that the process of transformation towards a different kind of society is nothing like a sacrifice but an opportunity to become more fully human and increase our wellbeing. Further research would be needed to critically explore this argument.

Another aspect that requires more research is the potential of transgression at the community level, a part of the dimension of ‘Creativity’ that was beyond the scope of this article. This article showed how a will to transgress triggered or nudged participants toward transformative learning journeys which led them to life in an ecovillagers. The article then discussed some aspects of community life that further impacted participants individual learning journeys. We did not however, discuss how these individual journeys feed into collective learning journeys at community level that may result in materialising transgressive social-material structures, new social material configurations that counter current hegemonic structure and are models for new, alternative ones.

Acknowledgements The authors want to thank the financing institutions who made the 3-year research project Sustainable Place Shaping (SUSPLACE) possible: the European Union’s Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie grant agreement No 674962. Furthermore our sincere gratitude goes to the communities that committed to participate in this research and the reviewers that dedicated time and effort to give their valuable comments on this manuscript.

Compliance with ethical standards

Conflict of interest The authors declare no conflicting interest with regard to the publication of this article.

Open Access This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/4.0/>.

References

- Andreas M, Wagner F (2012) Realizing Utopia—ecovillage endeavors and academic approaches. Rachel Carson Center for Environment and Society, Munich
- Avelino F, Dumitru A, Longhurst N, Wittmayer J, Hielscher S, Weaver P, Cipolla C, Afonso R, Kunze I, Dorland J, Elle M, Pel B, Strasser T, Kemp R, Haxeltine A (2015) Transitions towards 'New Economies'? A transformative social innovation perspective. TRANSIT working paper #4
- Bannon BE (1973) From intrinsic value to compassion: a place-based ethic. *Environ Ethics* 35(1):259–279
- Barca F, McCann P, Rodriguez-Pose A (2012) The case for regional development intervention: place-based versus place-neutral approaches. *J Reg Sci* 52(1):134–152
- Bateson MC (1994) *Peripheral visions: learning along the way*. HarperCollins, New York
- Batson CD, Thompson ER (2001) Why don't moral people act morally? Motivational considerations. *Curr Dir Psychol Sci* 10(2):54–57
- Belton T (2014) *Happier people healthier planet: how putting well-being first would help sustain life on Earth*. Silverwood Books, Bristol
- Bendell J (2018) *Deep adaptation: a map for navigating climate tragedy*. <https://www.lifeworth.com/deepadaptation.pdf?fbclid=IwAR3R4mgmgFSkX5VGJRu5CmToTsdIf2QUk6fN94OqJqxCFonKjs5wWAYXuAE>. Accessed 20 May 2019
- Bokan N (2015) *Living Utopian Community? Ecovillages Contesting. In: Places of possibility? Rural societies in a neo-liberal world*
- Brown B (2012) *Daring Greatly*. Penguin Group, New York
- Calvo M, De Rosa A (2017) Design for social sustainability a reflection on the role of the physical realm in facilitating community co-design. *Des J* 20(sup1):1705–1724
- Čarman P (2015) *Seeding the Spirit of Ecovillages: Tensions within the Representation of the Human-Nature Relationship*. Sapienza University of Rome, Rome
- Cell E (1984) *Learning to learn from experience*. State University of New York Press, New York
- Chaves M, Macintyre T, Riano E, Calero J, Wals AEJ (2015) Death and rebirth of Atlántida: the role of social learning in bringing about transformative sustainability processes in an ecovillage. *S Afr J Environ Educ* 31:22–32
- Chaves M, Macintyre T, Verschoor G, Wals AEJ (2017) Towards Transgressive learning through ontological politics: answering the 'Call of the Mountain' in a Colombian network of sustainability. *Sustainability (Switzerland)* 9(1):21
- Clark MC, Wilson AL (1991) Context and rationality in Mezirow's theory of transformational learning. *Adult Educ Q* 41(2):75–91
- Crossley ML (2001) Sense of place and its import for life transitions: the case of HIV-positive individuals. In: McAdams DP, Josselson R, Lieblich A (eds) *Turns in the Road. Narrative studies of lives in transition*. American Psychological Association, Washington, p 310
- Daloz LA (2004) Transformative learning for bioregional citizenship. In: O'Sullivan E, Taylor M (eds) *Learning toward an ecological consciousness: selected transformative practices*. Palgrave Macmillan US, New York, pp 29–45
- Dennis SF, Gaulocher S, Carpiano RM, Brown D (2009) Participatory Photo Mapping (PPM): exploring an integrated method for health and place research with young people. *Health Place* 15(2):466–473
- Dessein J, Soini K, Fairclough G, Horlings L (eds) (2015) *Culture in, for and as sustainable development. Conclusions from the COST Action IS1007 investigating cultural sustainability*. University of Jyväskylä, Finland
- Devall B, Sessions G (1985) *Deep ecology: living as if nature mattered*. Gibbs Smith Publisher, Layton
- Dewan M (2018) Understanding ethnography: an 'Exotic' ethnographer's perspective. In: Mura P, Khoo-Lattimore C (eds) *Asian qualitative research in tourism perspectives on Asian tourism*. Springer Singapore, Singapore, pp 185–203
- Fox NJ, Alldred P (2015) New materialist social inquiry: designs, methods and the research-assemblage. *Int J Soc Res Methodol* 18(4):399–414
- Geels FW (2010) Ontologies, socio-technical transitions (to Sustainability), and the multi-level perspective. *Res Policy* 39(4):495–510
- Giddens A (1991) The trajectory of the self. In: *Modernity and self-identity*. Stanford University Press, Stanford
- Greenwood DA (2009) Place: the nexus of geography and culture. In: McKenzie M, Hart P, Bai H, Jickling B (eds) *Fields of green: restoring culture, environment and education*. Hampton Press, Cresskill, NJ, pp 271–281
- Grinde B, Nes RB, MacDonald IF, Wilson DS (2017) Quality of life in intentional communities. *Soc Indic Res* 137:1–16
- Gunnlaugson O (2007) Shedding light on the underlying forms of transformative learning theory. *J Transform Educ* 5(2):134–151
- Hall R (2015) The Ecovillage experience as an evidence base for national wellbeing strategies. *Intellect Econ*
- Hart T, Nelson PL, Puhakka K (2000) *Transpersonal knowing: exploring the horizon of consciousness*. State University of New York, Albany
- Haxeltine A, Avelino F, Wittmayer J, Kemp R, Weaver P, Backhaus J, O'Riordan T (2013) *Transformative Social Innovation: A Sustainability Transitions Perspective on Innovation*. In: Paper Presented at NESTA Conference Social Frontiers: the next edge of social science Research. London.
- Head BW (2014) Evidence, uncertainty, and wicked problems in climate change decision making in Australia. *Environ Plan C Govern Policy* 32:663–679
- Hedlund-de Witt A (2013) Worldviews and their significance for the global sustainable development debate. *Environ Ethics* 53(2):133–162
- Hoffman E, Muramoto S (2007) Peak-experiences among Japanese youth. *J Hum Psychol* 47(4):524–540
- Horlings LG (2015a) The inner dimension of sustainability: personal and cultural values. *Curr Opin Environ Sustain* 14:163–169
- Horlings LG (2015b) Values in place; a value-oriented approach toward sustainable place-shaping. *Reg Stud Reg Sci* 2(1):256–273
- Joubert KA, Alfred R (2014) *Beyond you and me. Inspirations and wisdom for community building*. Gaia Education, Edinburgh
- Kamitsis IL, Francis AJP (2013) Spirituality mediates the relationship between engagement with nature and psychological wellbeing. *J Environ Psychol* 36:136–143
- Kasper DVS (2008) redefining community in the ecovillage. *Human Ecol Rev* 15(1):12–24

- Kasper DVS (2009) Ecological habitus: toward a better understanding of socioecological relations. *Organ Environ* 22(3):311–326
- Kirby A (2003) Redefining social and environmental relations at the ecovillage at ithaca: a case study. *J Environ Psychol* 23:323–332
- Kollmuss A, Agyeman J (2002) Mind the gap: why do people act environmentally and what are the barriers to pro-environmental behavior? *Environ Educ Res* 8(3):239–260
- Kovan JT, Dirkx JM (2003) ‘Being Called Awake’: the role of transformative learning in the lives of environmental activists. *Adult Educ Q* 53(2):99–118
- Kunze I (2015) Transformative social innovation narrative of the ecovillage of Schloss Tempelhof. *TRANSIT: EU SSH.2013.3.2-1*, Grant agreement no: 613169
- Lange EA (2004) Transformative and restorative learning: a vital dialectic for sustainable societies. *Adult Educ Q* 54(2):121–139
- Leal Filho W, Esteves de Freitas L (2018) Climate change adaptation in Latin America: managing vulnerability, fostering resilience. Springer, Cham
- Litfin K (2009) Reinventing the future the global ecovillage movement as a holistic knowledge community. In: Kütting G, Lipschutz R (eds) *Environmental governance: power and knowledge in a local-global world*. Start Publishing LLC
- Lotz-Sisitka H, Wals AEJ, Kronlid D, McGarry D (2015) Transformative, transgressive social learning: rethinking higher education pedagogy in times of systemic global dysfunction. *Curr Opin Environ Sustain* 16:73–80
- Lotz-Sisitka H, Ali MB, Mphepo G, Chaves M, Macintyre T, Pesanayi T, Wals AEJ, Mukute M, Kronlid D, Tran DT, Joon D, McGarry D (2016) Co-designing research on transgressive learning in times of climate change. *Curr Opin Environ Sustain* 20:50–55
- Macintyre T, Lotz-Sisitka H, Wals A, Vogel C, Tassone V (2018) Towards transformative social learning on the path to 1.5 Degrees. *Curr Opin Environ Sustain* 31:80–87
- Macintyre T, Monroy T, Aldeafeliz E, Coral D, Zethelius M, Tassone V, Wals A (2019) T-labs and climate change narratives: co-researcher qualities in transgressive action-research. *Action Res* 17(1):63–86
- Maslow A (1968) Creativity in self-actualizing people. In: Maslow A (ed) *Toward a psychology of being*. Wiley, New York, pp 21–30
- Maslow A (2012) *Toward a psychology of being*. Start Publishing LLC
- Massey D (2004) Geographies of responsibility. *Geogra Ann Ser B Human Geogr* 86(1):5–18
- McAdams DP, Josselson R, Lieblich A (eds) (2001) *Turns in the road: narrative studies of lives in transition*. American Psychological Association, Washington
- McKenzie M, Hart P, Bai H, Jickling B (2009) Introduction. Educational fields and cultural imaginaries. In: McKenzie M, Hart P, Bai H, Jickling B (eds) *Fields of green: restorying culture, environment and education*. Hampton Press, Cresskill, NJ, pp 1–9
- McLean KC, Pratt MW (2006) Life’s little (and Big) lessons: identity statuses and meaning-making in the turning point narratives of emerging adults. *Dev Psychol* 42(4):714–722
- Meadows D (1999) Leverage points places to intervene in a system. Sustainability Institute, Hartland. http://drbalcom.pbworks.com/w/file/attach/35173014/Leverage_Points.pdf. Accessed 6 Jan 2020
- Mezirow J (1978) Perspective transformation. *Adult Educ Q* 28:100–110
- Miller TR (2013) Constructing sustainability science: emerging perspectives and research trajectories. *Sustain Sci* 8(2):279–293
- Moore K, Wight A (2007) *Nature, culture and machines in the ecovillage movement*. University of Cincinnati, Cincinnati
- Napora L (2017) A contemplative look at social change: awareness and community as foundations for leading. *J Contempl Inq* 4(1):188–206
- Newman M (2012) Calling transformative learning into question. *Adult Educ Q* 62(1):36–55
- Newman M (2014) Transformative learning. *Adult Educ Q* 64(4):345–355
- O’Brien K (2013) The courage to change, adaptation from the inside out. In: Boykoff MT, Moser SC (eds) *Successful adaptation to climate change: linking science and policy in a rapidly changing world*, chap 18. Routledge, London, pp 306–319
- O’Sullivan E, Taylor MM (2004) *Learning toward an ecological consciousness: selected transformative practices*. Palgrave Macmillan, New York
- Peters MA, Wals AEJ (2016) Transgressive learning in times of global systemic dysfunction: Interview with Arjen Wals. *Open Rev Educ Res* 3:179–189
- Pfattheicher S, Sassenrath C, Schindler S (2016) Feelings for the suffering of others and the environment. *Environ Behav* 48(7):929–945
- Pines A (1994) Burnout in political activism: an existential perspective. *J Health Human Resour Admin* 16(4):381–394
- Pisters SR, Vihinen H, Figueiredo E (2019) Place based transformative learning a framework to explore consciousness in sustainability initiatives. *Emot Sp Soc* 34(8):100578
- Richards R, Kinney DK, Benet M (1988) Assessing everyday creativity: characteristics of the lifetime creativity scales and validation with three large samples. *J Personal* 45(3):476–485
- Riessman CK (2002) Analysis of personal narratives. In: Gubrium JF, Holstein JA (eds) *Handbook of interview research*. Sage Publications, Thousand Oaks, pp 695–710
- Roep D, Wellbrock W, Horlings LG (2015) Raising self-efficacy and resilience in the Westerkwartier: the spin-off for collaborative leadership. In: Woods M, Nienaber B, McDonagh J (eds) *Globalization and Europe’s rural regions*. Taylor and Francis, Surrey
- Sapiains R, Beeton RJS, Walker IA (2015) The dissociative experience: mediating the tension between people’s awareness of environmental problems and their inadequate behavioral responses. *Ecopsychology* 7(1):38–47
- Sareen S, Baillie D, Kleinwächter J (2018) Transitions to future energy systems: learning from a community test field. *Sustainability* 10(12):4513
- Scanlon C, Mulligan M (2007) Arts, agency and community engagement. *Local-Glob Identity Secur Community* 3:72
- Singer JA, Salovey P (1993) *The remembered self: emotion and memory in personality*. Free Press, New York
- Smith C (2000) Content analysis and narrative analysis. In: Reis HT, Judd CM (eds) *Handbook of research methods in social and personality psychology*. Cambridge University Press, Cambridge
- Sohr S (2001) Eco-activism and well-being: between flow and burnout. In: Schmuck P, Sheldon KM (eds) *Life goals and well-being: towards a positive psychology of human striving*. Hogrefe and Huber, Seattle
- Sol AJ (2018) Reflexively stumbling towards sustainability understanding social learning in regional governance networks. Wageningen University
- Sol J, Wals AEJ (2014) Strengthening ecological mindfulness through hybrid learning in vital coalitions. *Cult Sci Educ* 10(1):203–214
- Swilling M (2013) Economic crisis, long waves and the sustainability transition: an African perspective. *Environ Innov Soc Transit* 6(3):96–115
- Tamm K (2011) On Some aspects of the Lilleoru Community. *J Ethnol Folklorist* 3(1):95–107
- Taylor EW, Cranton P (2012) *The handbook of transformative learning: theory, research, and practice*. Jossey-Bass, San Francisco. ISBN 978-0-470-59072
- Taylor EW, Snyder MJ (2012) A critical review of research on transformative learning theory, 2006–2010. In: Taylor EW, Cranton

- P (eds) *Handbook of transformative learning*. Jossey-Bass, San Francisco, pp 37–55
- Termeer CJAM, Dewulf A, Breeman G (2012) Governance of wicked climate adaptation problems. In: Knieling J, Filho WL (eds) *Climate change governance*. Springer, Berlin, pp 27–41
- Tisdell EJ (2012) Themes and variations of transformative learning. *Interdisciplinary perspectives on forms that transform*. In: Taylor EW, Cranton P (eds) *Handbook of transformative learning*. Jossey-Bass, San Francisco, pp 21–36
- Tolliver DE, Tisdell EJ (2006) Engaging spirituality in the transformative higher education classroom. *New Dir Adult and Contin Educ* 109:37–47
- Vieten C, Amorok T, Schlitz M (2006) I to We: the role of consciousness transformation in compassion and altruism. *Zygon* 41(4):915–932
- Vieten C, Amorok T, Schlitz M (2008) Many paths, one mountain: an integral approach to the science of transformation. In: Johnson DH (ed) *The meaning of life in the 21st century: tensions among science, religion and experience*. iUniverse, Bloomington, pp 183–202
- Wals AEJ (2019) Sustainability-oriented ecologies of learning: response to systemic global dysfunction. In: Barnett R, Jackson N (eds) *Ecologies for learning and practice emerging ideas, sightings and possibilities*, 1st edn. Routledge, London.
- Wals AEJ, Jickling B (2002) “Sustainability” in higher education. *Int J Sustain High Educ* 3:221–232
- Wals AEJ, Heymann F (2004) Learning on the edge. Exploring the change potential of conflict in social learning for sustainable living. In: Wenden A (ed) *Educating for a culture of social and ecological peace*. Sunny Press, pp 123–144
- Weaver PM, Rotmans J (2006) Integrated sustainability assessment: what is it, why do it and how? *Int J Innov Sustain Dev* 1(4):284
- Welp LR, Brown CM (2014) Self-compassion, empathy, and helping intentions. *J Posit Psychol* 9(1):54–65
- Wight RA (2008) ‘We are nature’: exploring ecovillagers’ perceptions of nature and uses of technology. University of Cincinnati, Cincinnati
- Wittmayer JM, Backhaus J, Avelino F, Pel B, Strasser T, Kunze I (2015) *Narratives of change: how social innovation initiatives engage with their transformative ambitions*. Rotterdam, The Netherlands
- Yarnell LM, Neff KD (2013) Self-compassion, interpersonal conflict resolutions, and well-being. *Self and Identity* 12(2):146–159

Publisher’s Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.