



PLACE ATTACHMENT *VERSUS* RESILIENCE

**A research in rural communities
about the influence of place attachment on resilience building**

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Master Thesis Cultural Geography
Faculty of Spatial Science
University of Groningen

Groningen, November 2012



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Groningen, 17 November 2012

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*But Wanlock, dear Wanlock,
I'll not leave thy waters;
My home is beside thee,
The home I lo'e best.*

(“Wanlock” by John McArthur
Mid-19th century – in Wanlockhead in Verse)

*Drummore, Drummore,
Come take a walk with me,
Down by the sand,
Along by the sea,
We'll stand on the pear,
Where sailors are waiting,
For the fisher boats and the catch they are bringing,
Sailing home to Bonnie Drummore.*

(“Bonnie Drummore” by Billy Davidson
1978 - in Sound of Scotland)



Preface

The moment is here, the end of my study years. I write this page in the University Library, my second home during these last months. What have I learned from this project? Deadlines. I need deadlines. I get an adrenaline rush from deadlines. Sometimes deadlines surprise me. There's no tougher deadline than an airplane that brings you home again or a job opportunity that suddenly appears. The energy this gives me offers the best creativity. The downside of rushing towards a deadline is the sudden end of it. The one day I'm still in beautiful Scotland, the next back home again: studying in the library. Even heavier: from being a student directly moving on in a having a job. The moments that I didn't feel a deadline, brought the philosopher in me alive. I've spent my whole summer wandering about sense of place, resilience and rural communities in the living memory of my time in Scotland without writing a word on my thesis. This freedom was a welcome change, after an intense final year. Now that the deadline is here, I managed to write over 28.000 words in one month; fascinating.

This research project has been a rollercoaster ride, following the characteristics of the Scottish landscape. Even with a strict planning in mind, Scotland kept surprising me. I am thankful for the opportunity to experience this country extensively in only one month. My thanks go out to Scottish Agricultural College and the University of Groningen, for providing the funding that made this journey possible.

The quotes in this report provide memories to wonderful, cosy and inspiring conversation with many interesting respondents. I would like to thank them for being open and trusting their stories to 'the two Dutch girls who walk around in the village'. It was a wonderful experience to be the gossip of the week.

I would also like to thank Hanneke, with whom I spent a great time in Scotland. Thanks for your patience and endlessly saying 'keep left!' when I was trying to drive us safely to our first research village. Marianna, special thanks also go out to you with your believe in us and your assistance at SAC. Your enthusiasm provided us with a warm welcome in cold Edinburgh. Dirk Strijker, a short thank you for being my supervisor and responding quickly and accurately on my requests. Your short email with the text "kop d'r veur" helped me through the last weeks.

Furthermore, I want to thank my fellow students and especially Wietske, who provided me with a tea and listening ear. As well as, a hug for Mufty who helped me focus and for blocking my Facebook and Twitter account.

In the last but certainly not the least place my thoughts and thanks go out to my boyfriend Eric, who is patiently waiting for me to finish my thesis so we can finally explore the world again together.

For the person who is about to start reading my report: I hope you will find these outcomes useful and inspiring. Look outside and explore the world, fascinating people/place relations are not restricted to the Scottish countryside.

Many thanks,

Saskia Zwiars

Groningen, 1 November 2012



Summary

Place attachment and resilience are two complex concepts that are both discussed in relation with community well-being. The community has proven to be a successful scale for both personal identification and local participation in building resilience. Community resilience is defined by Adger as *“the ability of groups or communities to cope with external stresses and disturbances as a result of social, political and environmental change.”* (2000, p.347). Literature on resilience acknowledges the importance of connection to place and claims that place attachment is often at the basis of community development; however prior to this study this relationship has never been explored in great detail. This research question of this paper is: *“What is the influence of place attachment on rural (community) resilience?”*

For this study in collaboration with Scottish Agricultural College, field research is carried out in two remote villages in the Dumfries & Galloway region. Questionnaires about resilience formed the basis for this research. In the next stage, a total of 21 respondents created mental maps that served as the foundation for interviews about place attachment.

With regards to place attachment, this research suggests that individual resilience consists of four dimensions: social, economic, physical and personal resilience. This research has revealed a direct connection between place attachment and individual resilience. This connection is a bilateral relationship as both place attachment can enlarge individual resilience as well as that individual resilience can strengthen place attachment. The results showed that this bilateral relationship is strongest on the social and economic aspects of place.

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There is however no direct positive relationship between individual- and community resilience. The connection between place attachment and community resilience is interfered by the personal history with the place. A strong connection to the land can have both positive as well as negative influences on place attachment, leading to the recognition of a division between preservative – and adaptive place attachments. The sort of place attachment influences individual resilience. In-migrants who have a short history with the place are more likely to have an adaptive place attachment. This type of place attachment has positive influences on individual resilience but not directly on community resilience. Preservative place attachment is best applicable for long-term residents who are ‘rooted’ in the place. For these people, strong place attachment has negative influences on both individual and community resilience. Resilience is about the ability to ‘bounce back after disruptions’. Preservative place attachment is not flexible and therefore not resilient.

When linking these results to the community level, there is no direct positive relationship with strong individual resilience. The relationship between place attachment and resilience is complex and influenced by several aspects. Place attachment can influence community resilience in both a positive as well as a negative manner. This study is the first to recognise that place attachment can have negative implementations for resilience building: a useful insight when policy is aimed at ‘managing for resilience’.



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Introduction

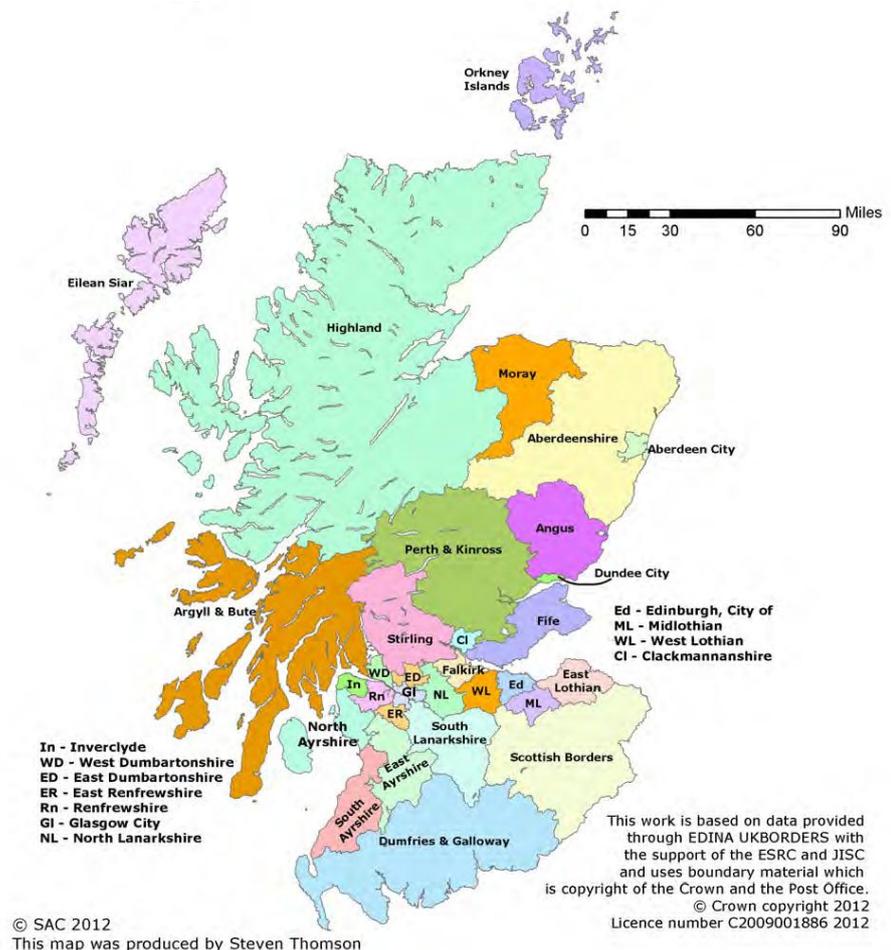
1.1 Background

Geographers have recognised the importance of rural areas already for several years. Much attention goes out to the impacts of increasing mobility, new communication methods and the dramatic change from the rural as a side of production to a side of consumption. In the current view, rural areas can fulfil various functions simultaneously: agriculture, rural services and nature (Heijman et al., 2007). Rural areas in Western Europe gain renewed attention from politics and scholars, as recognition for the problems in rural areas increases. More and more rural areas face similar problems concerning population decline, modernisation and agricultural renewal. Rural areas are vulnerable to economic factors such as employment opportunities and possible reductions of agricultural support. The rural services are seen as essential facilities for maintaining a good quality of life in the eye of the rural inhabitants. Not only do services provide essential goods and can the village hold on to its individuality and independency, but they also serve (like a supermarket or post office) as a place for social interaction (Been, 2012).

Increasing mobility and an ever-changing role of the rural also brought social change to the area. Wilkinson (1991, in Lewicka 2011) believes that this increased mobility of our modern society may increase the importance of geographic elements of community. People choose their place of residence more freely than in the past and demand more from this location. Furthermore, in the light of globalisation, the appearance of 'non-places' rises and the importance of real places increase. Lewicka (2011) believes that more people are in search for truly local places. The rural offers this in the form of the 'rural idyll'. Skerratt et al., (2012) notice this change in Scotland, with an increasing number of in-migrators and more cultural diversity in rural areas. Many of these in-migrators are couples with second homes, originating mostly from other parts of the United Kingdom.

The Scottish Lowlands, of which Dumfries & Galloway is part, is one of these regions that face drastic economic and social changes (Skerratt et al., 2010). The area in question is isolated and most villages are an hour's drive from main regional centres. Figure 1.1 shows a map of the regions in Scotland, with the region of Dumfries & Galloway in the bottom.

Figure 2.1 Maps of the regions in Scotland (source: Skerratt et al., 2012)



These social-demographic developments pose great challenges for inhabitants of rural communities, community organisations, rural businesses, management and policy.

1.2 Research collaboration

Several institutions focus on Lowland Scotland and try to maintain and improve the quality of life in rural Scotland. Numerous projects that encourage participation and capacity building are being performed in the region. Scottish Agricultural College is a leading research organisation specialised in the development of land-based industries and communities. Since 2011 Scottish Agricultural College (SAC) carries out a four-year research project in cooperation with Dumfries & Galloway LEADER, called the Capacity for Change program. The Capacity for Change (C4C) program targets less-resourced communities in the rural Dumfries & Galloway area, who have not dealt with rural community funding before. The programme aims to support the development of community resilience. The Rural Society Team of SAC state there is a need to gather evidence of impacts of community-based projects and on the readiness of institutions to engage with communities (Skerratt et al., 2010). The Capacity for Change program hopes to provide a successful contribution to this discussion.

The concept of 'Community Resilience' is the main concept on which the C4C programme is build. Community resilience recently receives a great deal of attention in academic literature. The C4C programme is the first investigation that intends to measure different components of resilience in villages, both on the individual and community level. Being able to measure resilience levels creates new opportunities for further research on quality of life and rural vulnerability. Furthermore, better understanding on community resilience can help communities in rural Scotland and elsewhere in Europe in their opportunities to 'bounce back from external stressors'. Planners and managers benefit from understanding possible stressors and help to anticipate correctly on future disruptions. 'Managing for resilience' becomes a central objective for policy, for which understanding the local community is necessary.

Whereas the C4C programme measures the effects of policy interventions on rural communities, their research does not strictly take the people/place relation in consideration. Several resilience scholars have shortly touched upon the subject of place when discussing individual resilience, but research has never directly explored the link between people, place and resilience. My study therefore intends to provide a useful contribution to resilience research, as the field of human geography has not been closely linked to resilience before.

This investigation has been conducted in cooperation with the SAC and aims to connect the well-known human geography concept of place attachment with the upcoming studies on resilience by building further on their research foundations. The collaboration with the SAC enables to uncover the influences of place attachment on the well-being of rural individuals and rural communities at large in Scotland and place these in a broader perspective. This study received funding from the University of Groningen, to support field research in Scotland.



1.3 Research questions and objectives

With respect to the previous sections, the following research objectives have been constructed for the purpose of this study:

- ❖ Analyse the relationship between place attachment and resilience on two points: the individual level and the community level
- ❖ Study how place attachment can be measured by using qualitative research methods
- ❖ Measure the level of resilience in two rural communities in Dumfries and Galloway, Scotland
- ❖ Making a fertile contribution to the discussion on resilient rural communities and the Capacity for Change program

This paper specifically answers the following question:

“What is the influence of place attachment on rural (community) resilience?”

In order to answer the research question, a number of sub-questions will be answered first:

- ❖ What is resilience? Which components enhance resilience?
- ❖ Which elements create place attachment for individuals and the community of Wanlockhead and Drummore?
- ❖ How is place attachment related to resilience components?
- ❖ Does length of residence influence resilience?
- ❖ How does place attachment influence the level of resilience of the individuals and the community of Wanlockhead and Drummore?

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1.4 Introduction to the region

Figure 1.2 shows a map of the region in which the C4C programme is implemented. Dumfries and Galloway is the third largest region in Scotland and covers 6000 square kilometres. The estimated population is 148,060 in 2012. The region has a low population density, with merely 50 people per kilometre compared with the Scottish average of 150.

Most of these inhabitants live in small communities of 4,000 or less. Dumfries is the biggest town with a population of around 31,000, followed by Stranraer, which has around 10,000 inhabitants (Dumfries & Galloway Council, 2012).



Around 75% of the population were not born in Dumfries & Galloway, with 20% having lived in the area less than 5 years and 52% for more than 10 years. Dumfries & Galloway is characterised by a self-contained labour market. In 2010, 43% of the working population was in full-time employment, while 23.7% of the population were retired. Approximately 6.5% of the working population commute outside the region to work.

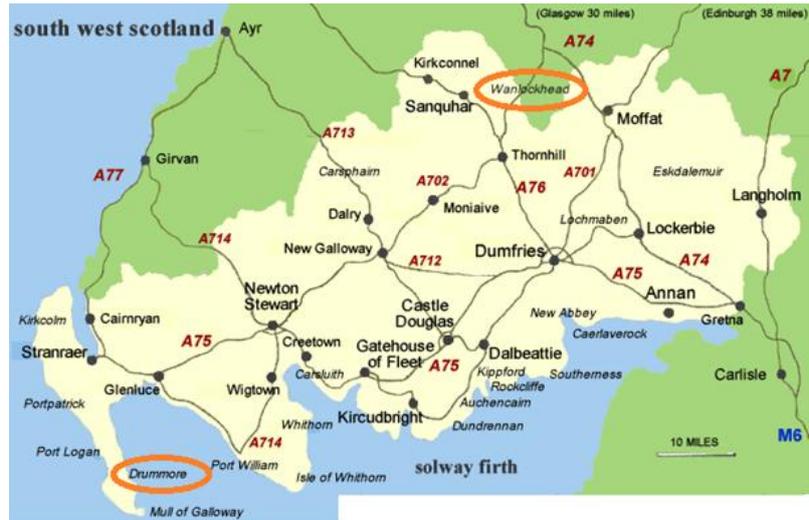


Figure 1.2 Map of Dumfries & Galloway, Scotland - Research areas marked orange (Source: Google Images)

For this study, SAC appointed us two small communities in different areas of the region. The first village is Wanlockhead, in the north of the region, directly on the border with the neighbouring region of South Lanarkshire. The second research village is Drummole, based on the far west of the country. Both villages are marked on figure 1.2. The following section will explore both villages in more detail.

Skerratt et al. (2012) define a difference between accessible rural and remote rural. Their definition tells that assessable rural are those places from which you can travel to a town with over 10,000 inhabitants within 30 minutes. In this definition, the first research village Wanlockhead is classified as remote rural. The nearest largest town is Dumfries, which is a 45-minute drive from Wanlockhead. The second research village, Drummole, is just qualified as accessible rural. From Drummole the travel time to Stranraer is approximately 30 minutes.

1.4.1 Introduction of Wanlockhead

The first research area is the village of Wanlockhead, situated in the north of Dumfries & Galloway. The village has approximately 155 inhabitants and is the highest village in Scotland (see figure 1.4).

The village has only a few facilities: a pub, which is the highest pub in Scotland, a part-time doctor's surgery and the Museum 'Hidden Treasures' which is the Museum for Lead Mining. Leadhills is a village just one mile from Wanlockhead, which has a population of 315.

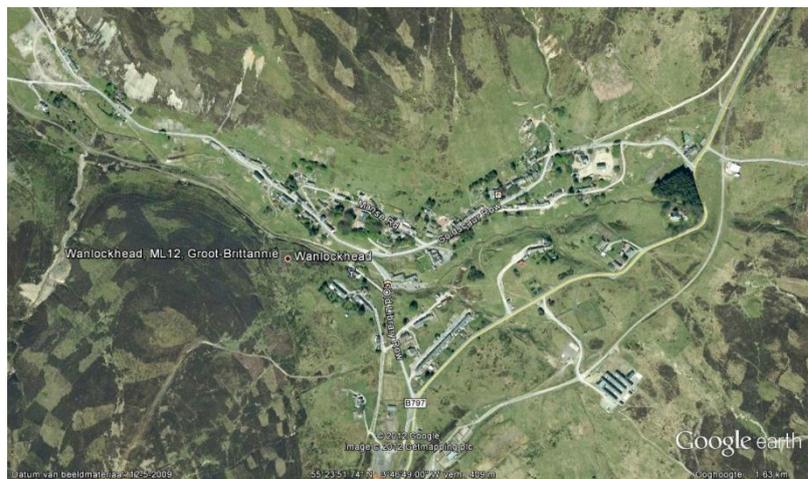


Figure 1.3 View of Wanlockhead from above (Source: Google Earth)



That village has a primary school and a village shop, which are used by inhabitants from Wanlockhead. Other facilities are in Sanquhar, 8 miles away, such as a post office, shops and schools. The road through Sanquhar leads through the Mennock Pass, which is a popular destination for gold panners. The 'Southern Upland Way' an important walking route through Scotland crosses through the Mennock Pass and Wanlockhead. Walkers, gold panners and the lead mining museum bring tourists to the village.

The museum has several facilities spread out in the village, among which the old library, which is the second oldest subscription library in Europe. Up to the 1950'ies Wanlockhead was a mining village. The village was a settlement of miners who worked one of the many lead mines. After the mine closure the government wanted to close the village, but it has been remained by a small group of locals. Now the village and its typical miner's houses are home to many holiday houses.

Figure 1.4 Picture of the researcher next to the sign of Wanlockhead - Highest village in Scotland (picture: Hanneke Kuipers)



1.4.2 Introduction of Drummore

The second research village is proud to be the most southern village of Scotland. The village has a population of approximately 300 inhabitants and for its population size still has quite some facilities. The village shop, a post office, a garage (which stopped selling diesel since 2012, now repairs only), a volunteer tourist office, a coffee shop, primary school which currently educates 20 to 25 children, doctor's surgery and pharmacy, a bowling club, two caravan sites and two hotels with pub facilities.



Despite the many facilities, the village is geographically very isolated. The nearest hospital is in Dumfries, a two hours' drive. The cities Glasgow and Edinburgh are 3,5 hours from Drummore.

Drummore is a harbour village with its own harbour. This is a tidal harbour, which is used scarcely at the moment due to a lack of maintenance. There are only three active fishermen left in the area, which used to be a thriving fishing town. Agriculture is another

important industry for the village with still several large dairy and potato farms.

Drummore lies in the area of the 'Mull of Galloway', the land tong and most southerly point of Scotland. The lighthouse at the Mull of Galloway is the region's largest tourist attraction.



Figure 1.5 View of Drummore from above (Source: Google Earth)



Figure 1.6 Drummore Post Office and the Queens Hotel (right)
(Source: www.walkhighlands.co.uk)

1.5 Chapter overview

Chapter 2 explores the concepts of place attachment and resilience and provides a theoretical foundation for the empirical research. Chapter 3 discusses the research methods that are used for the data gathering in Wanlockhead and Drummore. The outcomes of this data will be disclosed in chapter 4, which focuses on the dimensions of individual resilience in relation to place attachment. Chapter 5 will discuss the implications of these outcomes for community resilience. Chapter 6 will summarise the outcomes of this research while simultaneously serving as the conclusion of this paper. Finally, implications for future research on the relationship between place attachment and resilience will be provided in chapter 7.



2. Theoretical framework

The research question is composed of two concepts that both receive extensive attention by a wide range of intellectuals. The concept of 'place attachment' finds its roots in geography whereas the concept 'resilience' originates from ecological principles. Both concepts have been subject to paradigm shifts and are currently receiving a lot of attention in the field of environmental psychology. This chapter starts with discussing the concept of place attachment as connected to resilience issues followed by an overview of place-related resilience issues, which will lead to a practical set of resilience components.

2.1 Place attachment

The concept of place attachment has received attention from scholars in the field of geography and environmental psychology. Many definitions have been provided and studies have been carried out in a wide range of fields. In short, place attachment can be defined as the emotional bond between a person and a place. Place is a multifaceted phenomenon of experiences and occurs at several levels simultaneously. For the purpose of this research the focus of place attachment is both on the individual level as well as that of communities (i.e. villages). Research on place attachment on communities has focused on issues concerning environmental behaviour and planning purposes, of which the main outcomes will be discussed below.

2.1.1 The history of place attachment

Place attachment is a term first coined in 1960 by Lynch who defined it as something that provides its individuality or distinction from other places and serves as the basis for its recognition as a separable entity. Only when man can actually identify a place as a definable and unique location place attachment can occur. Tuan (1974) first coined the word 'topophilia' for this connection, meaning 'love of place'. One decade later, Proshansky (1983, p.61) was the first to use the concept of 'Place Identity'. According to his philosophy this concept can be seen as the result of "an individual's strong emotional attachment to particular places or settings". Place attachment is something that develops before place identity. This can be explained by the notion of length of residence influencing attachment. In the beginning, a resident can feel attached to his new home (place) without deriving his identity from this place. Deriving one's identity from a place is something that develops at a later stage of residency or sometimes does not occur at all (Hernández et al., 2007).

Twigger-Ross & Uzzell (1996) write that residential place attachment can transform into feelings of pride in the residential area and its appearance. These principles are similar to the outcomes of Altman & Low (1992, p.10). Their work reveals that "*place attachment plays a role in fostering individual, group and cultural self-esteem, and self-worth and self-pride. Also, place attachment contributes to the formation, maintenance and preservation of the identity of a person, group or culture*".

Jorgensen & Stedman (2001) are the first to use the overarching concept of 'sense of place' to encompass three main place concepts in the environmental psychology, namely: place attachment, place dependency and place identity. Place dependency concerns how well a setting serves for achieving goals. In many ways, place dependency can be seen as the economic component



of sense of place. This research only focuses on place attachment and therefore neglects the economic components. Jorgensen and Stedman introduced a Likert scale measurement model for defining an individuals' sense of place, which has been referred to by many scholars in later studies.

Jorgensen & Stedman view sense of place only from the individual perspective and neglect the social relations that affect ones relation to place. Gustafson (2001) created a model in which he used the three principles of 'self', 'other' and 'environment' to conceptualize the meaning of places. His model shows that both the social and the natural environment are essential for the construction of personalized attachments to places. The concept of 'place' classified into self, other and environment has proven to be highly successful and is used in several later studies. Raymond et al. (2010) based their three-pole conceptual model for measuring place attachment partly on Gustafson's 'place meaning' triangle. Raymond et al. (2010) identifies the three poles: personal context (including place identity and place dependency), natural environment and social bonding. By placing dependency within attachment, the economic aspects become closer related to resilience. The three poles of Gustafson and Raymond et al. serve as the conceptual foundation for this research.

2.1.2 Place attachment and environmental behaviour

The social dimension of place attachment has received far more interest from scholars than their economic and physical counterparts (Scannell & Gifford, 2010). This is not surprising since human activity at a locale is needed to create places (Relph, 1976). Eisenhauer et al. (2000) emphasizes that there are both social and environmental grounds to why people feel attached to places. Places can be special for different reasons: because of the activities carried out on that location or because of the personal memories with that location. On the other hand, places can be special because of the enjoyment of the environmental features of that place. An individual's reason for place attachment influences one's choices for sustainable behavior. Stedman (2002) explains how these different place attachments can lead to a variety in behavior. He discovered that people who value a place for its environmental assets would fight to maintain the 'peace & quiet'. People who value the culture of a place instead, will not fight for the nature there.

Community attachment also focuses more on the social dimensions, neglecting the influence of environmental aspects on attachment. Literature stresses fact that length of residence influences the strength of place attachment. However, Brehm et al. (2004) discover that length of stay only has positive effects on social place attachments and not on the natural aspects of place. Newcomers almost always move to rural communities for the rich environment and might even appreciate this more than long-term residents. Natural place attachment in naturally rich communities is not influenced by any personal factor. Brehm et al. (2004) therefore call for acknowledging the importance of natural place attachment and its importance for community attachment. The shared interest in the natural place aspects can bridge differences between newcomers and long-term residents and serve as a common ground for further community initiatives.

Devine-Wright & Howes (2010) found significant positive relationships between place attachment and willingness to engage in pro-environmental behavior and place-protective actions. The so-called NIMBY-behavior occurs when peoples place identity and place attachments are threatened. With regards to natural disasters, Norris et al. (2008) argues that place attachment can have two implications with regards to people's reactions. In one hand, place attachment promotes healing and increases the likelihood to rebuild one's surrounding after a natural disaster. On the



other hand, a strong place attachment can impair rather than facilitate resilience because of the emotional damage that has been caused to people's place identity and attachment.

Davenport & Anderson (2005) state that insight in place attachment and place meanings can help with understanding people's perceptions and attitudes towards landscape change. *"Place-protective behaviours are especially likely to result when attachment and satisfaction are based on preferred meanings that are threatened by potential changes to the setting"* (Stedman, 2003, cited in Davenport & Anderson 2005, p.630). Understanding the people-place relationship can help to increase the awareness of diverse perspectives and facilitate public engagement in planning processes, which is an important aspect in building resilient communities.

2.1.3 Place attachment and the community

Around the same time as the influential work of Tuan, Kasarda & Janowitz (1974) conducted research on community attachment in mass society, revealing that length of residence is an important factor for enhancing the level of community attachment. Brown et al. (2003) also researched place attachment and community attachment, focusing on revitalizing neighbourhoods. The study showed that place attachment was higher for people who lived there longer, which corresponds with the earlier findings of Kasarda & Janowitz (1974). The study of Brown et al. (2003) lists several predictors of place attachments, namely: length of residence, number of social relationships, home ownership, presence of incivilities, sense of trust, collective efficacy and fear of crime. Understanding place attachment and sense of community is important for neighbourhood revitalization.

Besides neighbourhood revitalisation, place attachment also contributes to civic activity on behalf of one's place of residence, sustainable behaviour and ecological behaviour (Lewicka, 2005). This shows that place attachment is beneficial to both the individual and the community at large. The study of Lewicka (2005) showed that residents of villages reported a higher place attachment, stronger neighbourhood ties, more interest in roots and lower cultural capital compared to larger communities such as towns and cities.

Manzo & Perkins (2006) write that place-related actions influence the social environment of a community and simultaneously social actions influence the physical well-being of a place. A community member with a strong place attachment will (in ideal conditions) also create a strong sense of community. Place attachment and sense of community are closely connected concepts because both involve social and physical aspects (Tartaglia, 2006). Community attachment implies a sense of being bound to a geographic community, having a social bond to the community of place (Sundblad & Sapp, 2011). Studies on communities have shown that there is a significant relation between people's bond to the communities in which they live and quality of life. Results are that people with a high community attachment enjoy lower rates of incivility and violence (Brown et al., 2003), stronger mental health, higher rates of philanthropy, better physical health and greater civic engagement (Sundblad & Sapp, 2011).

Place attachment often underlies citizen's efforts to revitalize a community and thus may be essential for community resilience. Both a sense of community and place attachment can therefore be seen as attributes of resilience (Norris et al., 2008). This idea will be explored in the current study.

2.1.4 Place attachment and rootedness

According to Matarrita-Cascante & Luloff (2008) community participation is essential for maintaining community viability. A 'participative resident' is: more educated, grew up in smaller towns, had lived



longer in the community, lived full-time in the community, interacted more frequently with their neighbours and participated in local organisations or committees. This profile suggests that long-term residents are more participative than newcomers and part-time residents. Pretty et al. (2003) state that this romantic image of place attachment is wrong, as a strong community sentiment can have negative implementations. This feeling of 'rootedness' can make it that people stay within their safe community and do not develop as well as they should. Because of the scarcity of higher-educated jobs people do not have the opportunity within the village for self-actualization. For self-actualisation, people do have to leave the area, what can be an issue for 'rooted' people. The idea of rootedness can therefore be seen as a contributing factor why less educated people tend to live in small communities. On the other hand this can also explain the idea that higher educated people who did leave the area to gain education are less rooted.

The relationship between civic activity and place attachment is created through the interest in roots. An interest in one's own roots may build on the natural place attachment and contribute to a strengthening of neighbourhood ties since neighbours are a valuable source of information regarding the history of the neighbourhood (Lewicka, 2005). According to Hay (1998) the development of place attachment is regulated by rootedness and length of residence. Individuals who grew up and lived most of their life at one place (called 'insiders') have strong ancestral and cultural connections to a place. Having a history with a place and being aware of the place history has a positive influence on place attachment. Schein (2009, p.812) reinforces the importance of history of place by stating that *"telling stories about ourselves and our places is central to identity and community and to creating and maintaining a sense of belonging."* By telling stories about the past of a place, people become more aware of their environment. Communities have used story-telling for many years to justify their right of belonging to a certain location while strengthening communal bonds and place attachment.

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According to Relph (1976) a sense of belonging is based on having roots. The word 'roots' is one of many botanical-inspired terms that are often used to conceptualize the relationship between people and place. Malkki (1992) writes that this naturalization of the people/place link assumes rootedness of people to a certain place, a feeling of belonging. People who are uprooted and displaced have lost their connections to their home soils and roots and will struggle to survive, like a plant taken out of its pot will have difficulties growing. For a person to live healthy, one must have roots.

2.1.5 Contemporary view on place attachment

Lewicka (2011) offers a critique to Relph and Malkki and labels them under scholars with a 'traditional view'. According to the traditional view, only those who have been raised in a place or whose family lived there for many generations can develop a true sense of place. Scholars have contested this view by researching recreation sites in relation to place attachment. The paradigm shift in place attachment theory will be discussed in this section. It is therefore important to understand where this critique is based on.

Place attachment, according to this contemporary view *"may develop independently of residence time, although it may have a different quality than attachment of more permanent residents."* (Lewicka, 2011, p.215). This view keeps into account that people are mobile, move houses voluntarily and start a new life elsewhere. The contrast between the traditional and contemporary view on place attachment shows clear links to the idea of Thissen & Fortuijn (1998) that there are



two frames of reference for looking at rural settlements. Historically, the village is seen as an 'autonomous village' where people both live and work. People are born in the village and spend most of their life here. From the 1970's onwards, when consumption patterns changed and mobility increased, this view changed (Woods, 2005). The idea of 'the residential village' becomes more accepted. This idea is based on the notion that people genuinely choose to live somewhere for its characteristics instead of people residing in a village because they have ancestral ties with that place.

The traditional view on place attachment is related to the idea of an autonomous village, whereas both concepts are based upon rootedness. Both the contemporary view on place attachment and the 'residency village' reject the idea of rootedness and assume that people can get attached to a place without having roots in that locale. This frame of reference influences the perceived quality of life in the village. Those who regard the village as 'autonomous' base their quality of life mainly on the presence of functions whereas the 'residency' villagers base their quality of life on their residential attributes (Thissen & Fortuijn, 1998). In terms of resilience, autonomous villages will experience a decline in resilience when services and job opportunities fall out. Residency villages are not influenced by these factors. Their level of resilience is based on residential attributes and environmental aspects.

Part of this research is to reveal which view on place attachment is applicable to rural communities. As insiders as well as newcomers live within the same community, it is likely that this leads to contradicting views and might even lead to friction between the two community groups. When researching place attachment it is important to be aware of the autonomous and residential perception on villages.

2.1.6 Summary place attachment

The factors that influence place attachment can be summarised into three groups: personal, social and physical context (model adapted from Gustafson, 2001 and Raymond et al., 2010). Figure 2.1 shows how these groups are connected. In summary, the following topics can be placed within these three groups of place attachment:

Personal context =

- Length of residence
- Feeling safe and sheltered
- Rootedness

Social context =

- Feeling part of the community
- Strength of local ties
- History with the place

Physical context =

- level of mobility/distances
- perception of the natural environment
- Interest in roots

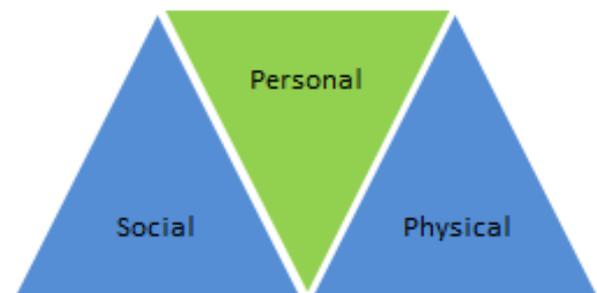


Figure 2.1 place attachment perspective



2.2 Resilience

The concept of resilience is placed in the discipline of ecology. This ecological term was first used by Holling, who defined it as a *“measure of the persistence of systems and of their ability to absorb change and disturbance and still maintain the same relationships between populations or state variable.”* (Holling, 1973 cited in Brand & Jax, 2007, p.1). Many years later, Adger is the first to use the term resilience in relation to social situations. He defines social resilience as *“the ability of groups or communities to cope with external stresses and disturbances as a result of social, political and environmental change.”* (Adger, 2000, p.347). Social resilience therefore signifies the ability of individuals or communities to withstand external shocks to their social infrastructure. The concept of resilience is used in many situations. Besides academic attention, ‘managing for resilience’ became a central objective for managers and planners. For this study, the focus of resilience is on rural resilience, individual resilience of rural people, community resilience and social resilience.

2.2.1 Resilience and disruption

Later on, Adger’s notion of social resilience has been transformed by popular scientific literature into an alternative term: community resilience. The author continues by stating that *“a loss of resilience is associated with negative impacts on livelihoods.”*(2000, p. 348). Resilience is closely related to vulnerability, disruption to livelihoods and loss of security. Resilience is also seen as a condition for sustainability. For example Gwimbi (2009, p.72) indirectly writes about resilience when talking about livelihoods, as he mentions that *“a livelihood is said to be sustainable if it can cope with and recover from stresses”*. Therefore in the broad sense, resilience is about dealing with the external shocks that attack livelihood.

Much resilience literature focuses on dealing with disruptions due to natural disasters such as global warming, hurricanes, flooding and earthquakes. Literature on place attachment sometimes focuses on disruptions too, for example in the case of Devine-Wright & Howes (2010) concerning a wind-farm and Boğaç (2009) concerning forced relocation to foreign settlements. In these cases, disruption to place attachment occurred because of changes in the physical environment.

2.2.2 Rural resilience

Heijman et al. (2007) claim that since the introduction of the term resilience it has been studied in a wide range of fields such as natural disasters even though surprisingly little is known about the extent to which the concept of resilience can be applied to rural development. Rural resilience is about how well an area is able to balance its economic, ecological and cultural functions. Wilson (2010, p.368) claims that *“for rural communities to be ‘sustainable’ and resilient in economic, social and environmental terms, they need to develop strongly multifunctional characteristics”*. Rural communities should develop themselves in more than one quality. The core for a resilient community lies in the heart of this multifunctional character.

The majority of scholars in the field of community resilience support the idea of the three pillars as the components that create resilience. Both for the community level as the individual level, the physical, social and economic environment play a role. However, in literature about rural communities, the aspect of economic resilience receives the most attention, while the importance of the social and cultural drivers is underestimated (McManus et al, 2011). McManus et al. (2011) stated that individual rural resilience is *“an outcome of people’s perceptions of the physical environment, their sense of belonging and job opportunities”* (p.9). He affirms that resilience is not



based on economic issues or social issues separately, but dependent on all three simultaneously. With including the importance of the physical environment and sense of belonging in the concept of resilience, McManus reveals a clear link with place attachment.

2.2.3 Resilience at different levels

Rural resilience has both an individual and a community implication. Resilience is often measured at the community level because of the scale and uniqueness of this type of entity. Communities have their own local needs, resources and experiences on dealing with different types of disruptions. Longstaff et al. (2010) reveals that community-level resilience management results in local participation, ownership and flexibility in building resilience.

On the other hand, a rural community consists of individuals and the sum of the behaviour of these people can lead to a resilient community. However, there are many intervening factors. Schwarz et al. (2011, p. 1128) reminds managers to be aware of the fact that *“communities are not homogenous, either in terms of exposure to threats or in peoples’ individual resilience and ability to adapt.”* This suggests interaction and communication between community members, because only acting together will lead to resilience building. Furthermore, Hegney et al. (2007) revealed that not all community members are resilient. Within a community, more and less resilient people are present. Resilience is not a steady state; an individual’s level of resilience varies over their lifetime.

2.2.4 Resilience and community participation

Schwarz et al. (2011) stresses that leadership, participation and community self-support play a critical role in creating a suitable social environment that can function as a foundation for resilience building among community members. A social supportive environment helps to engage individuals and creates a better community spirit on which resilience can be build. Leadership here refers to grass-root leadership by strong, effective leaders within the community (Longstaff et al., 2010). Gwimbi (2009) adds that local people have local knowledge that is essential for good policy measures. Community participation is also important because it will empower members and their capacity to contribute to development. The importance of leaders can be applied to the concept of place attachment since community leaders are usually those with a high level of place attachment. As place attachment is often at the heart of revitalisation and community action, this again can play a role in community resilience.

2.2.5 Components of resilience

Cutter et al. (2008) were the first to create a set of indicators for place-based community resilience with the use of qualitative research methods. The presence of social networks, health and wellness and high quality of life satisfaction in this framework witnesses that, even for disaster resilience, personal and social factors play a role in resilience building. Hegney et al. (2007) explored the factors that influence the development of resilience among individuals further and make a division between intrapersonal and environmental factors. Qualitative research in rural communities revealed that intrapersonal factors include: positive outlook, being innovative and proactive, having a vision, embracing differences, resourcefulness, early experiences, social networks and support. The environmental context consists of family, culture, being part of a rural community and community spirit, the environment and connection to the land.



Wiles et al. (2012) adds to this that the division between internal and external factors is different for each person. Some people can draw on their internal resources, but others need external resources to maintain or build resilience. According to that research, resilience is understood as being embedded in social and physical contexts. For example: having a positive attitude or experiencing a good quality of life is not merely an internal state but is connected to relationships with others, to the resources available and other opportunities from a wider external environment. Both Wiles et al. (2012) and Pukeliene (2011) argue that resilience is multidimensional and therefore compensation can occur. This disputes the statement of Wilson (2010). Wilson argues that communities can only be strong when they are multifunctional and equally strong on each component (economic, social and environmental).

This research follows the idea of Wiles and Pukeliene about the multidimensionality of resilience. For community resilience it is important to be aware of the three external components of economy, social and environment. However, this internal context should not be underestimated. Negative aspects of a community can be compensated by positive impacts produced by other factors. Thus it is important to measure resilience as a whole while being aware of both internal and external contexts.

2.2.6 Summary resilience

McManus et al. (2011, p.9) write that “perceptions of the local economy, environment and community are inter-related and resilience is dependent on all three simultaneously”. Their research results, in combination with other above mentioned scholars leads to a list of community aspects that generate resilience. At the individual level or resiliency, the personal context is added. Community level resiliencies not able to focus on these aspects; however they should not be ignored.

Social context=

- Community spirit
- Feeling part of a community
- Social networks and support

Economic context =

- Economic independent resources
- Services available
- Employment opportunities

Environment =

- Connection to the land
- Belonging
- Quality of the physical environment

(Personal context=)

- Positive outlook
- Being innovative and proactive
- Resourcefulness

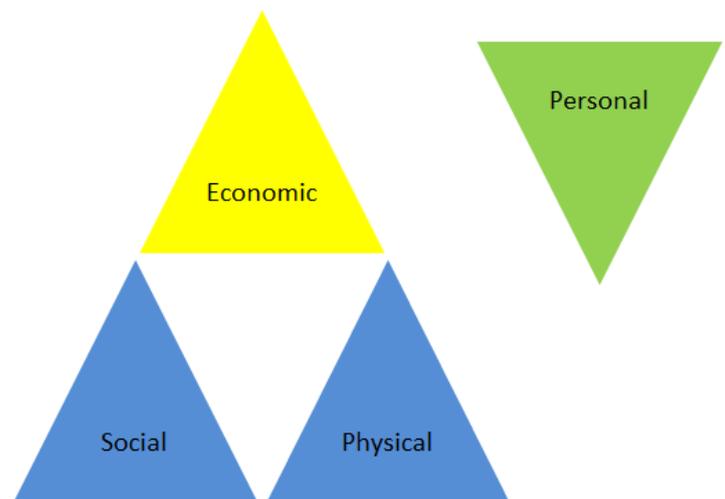


Figure 2.2 – Community/individual resilience perspective



2.3 Place attachment in relation to resilience

This chapter provides two perspectives towards the people-place relation. The first figure shows the three poles of place attachment, focusing on the social, environmental and personal aspects. The concept of resilience also consists of three poles, of which the social and physical poles are similar to those of place attachment. The difference is the personal pole of place attachment against the economic pole in resilience. Place attachment is mostly based on personal perceptions of situations, whereas resilience is mostly researched from an outsider's perspective and focuses on the community level.

In place literature the economic components are mostly placed in the linked concept of 'place dependency' and therefore receiving less attention in place attachment literature. However, since one's financial situation can have far-reaching implications for the social- and place situations, the influence of economic factors on place attachment should not be ignored.

Another factor that should not be ignored is the place-based component of resilience. Several scholars plead for more integration of place perceptions in resilience literature. Hegney et al. (2007) mentions several environmental factors, including a person's connection with the land. McManus (2011) understands this connection to the land as a sense of belonging to a specific locale. The mind-set that comes with the feeling of 'I belong to this community' facilitates resilience. McManus writes (2011, p.3): *"Belonging, in short, is a positive attribute of rural communities that contributes to resilience"*.

The intrapersonal component of resilience starts to gain more attention in the field and is an aspect whose importance should not be underestimated. By acknowledging the significance of individual resilience, researchers are more likely to relate to place attachment theory. Place attachment can have positive implications on the community level and contribute to community resilience. Place attachment can result in pride for the village and enhance civic engagement and sustainable behaviour. Consequently this intensifies resilience, as community resilience is best organised through grass-root leadership, by which active citizens play a key role. This is acknowledged by Norris et al. (2008, p.139) states that *"place attachment often underlies citizens' efforts to revitalize a community and thus may be essential for community resilience."* From another perspective, knowledge on place attachment helps in understanding individual's reactions to disruptions in their environment. Because resilience building is based on dealing with disruptions, understanding place attachments can help in structuring and reducing negative reactions to changes in people-place relations.

2.3.1 Conceptual model for place-based resilience

When integrating the concepts of resilience and place attachment, both show the same components: personal, social, economic, and environment (or physical). Figure 2.3 below shows how these concepts are related in a framework.



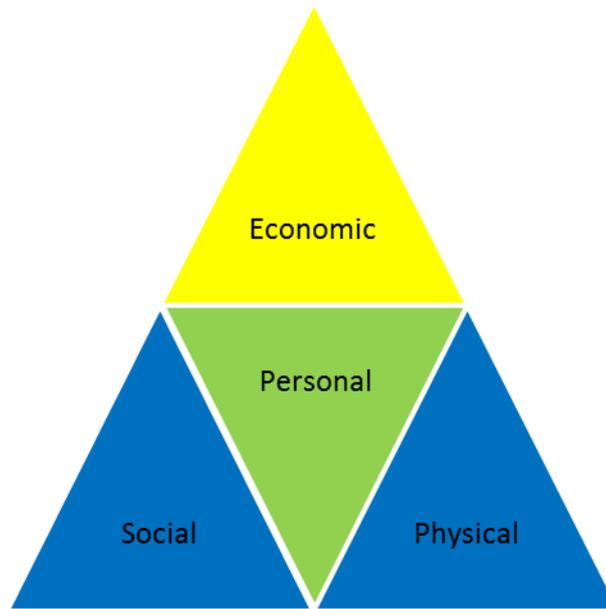


Figure 2.3 – Integrated framework for place attachment and resilience

As mentioned before, place attachment and resilience have several overlapping components and a few differences. The two figures show the different approaches towards the integrated framework. Figure 2.1 approaches the model from a place attachment perspective. This perspective focuses on the personal, social and physical aspects of resilience (blue/green in figure 2.3). Place attachment neglects the economic attributes of a person-place relation. Figure 2.2 approaches resilience from the perspective of community resilience (blue/yellow in figure 2.3). Community resilience is mostly studied by its external factors while neglecting the personal values that influence individual resilience levels. This personal component (green colour in figure 2.3) includes the intrapersonal qualities of people such as the experienced internal quality of life. The other three components account for the environmental factors influencing quality of life. The integrated framework as shown in figure 2.3 is aware of all four attributes that are present in a person-place relation. When measuring place attachment as related to resilience, it is important to be aware of all factors. Therefore, the framework as shown in figure 2.3 should be applied when studying placed-based resilience.



3. Methodology

This research has been carried out in cooperation with the Scottish Agricultural College (SAC), based in Edinburgh, Scotland. The Rural Society Team of SAC carries out a four-year research for Capacity for Change (C4C programme) led by Dumfries & Galloway LEADER Programme (D&G), which aims to enhance the resilience of rural communities. The programme is directed at rural communities with less than 500 inhabitants, which did not apply for rural development subsidies in the past. The SAC intends to measure the rural resilience of 10 communities in the province of Dumfries & Galloway. The results of the SAC questionnaire will lay the foundation for the C4C programme, which aims to engage communities in activities and processes in an attempt to enlarge the level of resilience (Skerratt, *et al.*, 2011).

The aim of this research is to investigate the connection between place attachment and resilience. Both concepts have specific approaches for measurement. Often place attachment is measured by means of a Likert scale model (Jorgensen & Stedman, 2001). Whereas place attachment has been extensively investigated in the field of rural community studies, resilience has often been overlooked in empirical research. Schwarz *et al.* (2011) blame this lack of empirical studies on the complex and competing definitions and approaches towards the theory of resilience. Forgette & Boening (2009) were the first scholars to successfully create an empirical model to measure resilience. Research by Scottish Agricultural College, which forms the backbone of this research, is on their turn mainly based on this four-point model of Forgette & Boening.

The current project makes use of the existing SAC research, which method consists of a large questionnaire survey. The results of the questionnaire serve as the information basis and population sample for further research. Semi-structured interviews based upon cognitive maps were used to extend data on the participants' resiliency and place attachment. A more detailed explanation concerning the research methodology will be provided in the following section.

3.1 Data collection in Scotland

The most straightforward method of measuring place attachment is by using clearly defined unities. Research revealed that generally villages are places with a strong, stable and comprehensive environment to which people can easily relate their identity to (Lewicka, 2010). Furthermore, a village forms an identifiable and measurable community. The focus of resilience is often at the community level because most disruptions are local and affect communities differently (Longstaff *et al.*, 2010) As stated before, resilience is often measured at the level of villages (Cutter *et al.* 2008; Hegney *et al.*, 2007). The SAC conforms to this standard.

The C4C programme focuses on the Dumfries & Galloway province in the south of Scotland. Within this region, a total number of 10 villages will be analysed by the use of the SAC questionnaire. For this research, two of these villages were assigned by the Capacity for Change programme leaders. Together with a fellow student (Hanneke Kuipers, Master Cultural Geography: see Kuipers, 2012) we covered data collection for SAC and our own research projects during two weeks of fieldwork in Wanlockhead and Drummore. The data of the SAC questionnaire formed the basis for researching the influence of place attachment on resilience.



3.1.1 Participants

Because this study is based on the sample size of the SAC participants, there are also two categories of participants. Firstly, the SAC questionnaire has been conducted out in two villages. Wanlockhead has approximately 155 inhabitants. The second village, Drummore, has approximately 300 inhabitants. These numbers are based on the formal number of those entitled to vote. Both villages are characterised by a population dominated by adults above the age of 40.

For the SAC questionnaire relatively 18 inhabitants from Wanlockhead and 22 inhabitants from Drummore participated. The second part of this study has been formed by an in-depth interview including cognitive mapping. For this, approximately half of the participants from the survey were interviewed a second time. Figure 3.1 shows the exact numbers of each research aspect in comparison to the population size. This shows that for Wanlockhead a larger share of the total population was interviewed than in Drummore.

Village	Inhabitants (Estimated No.)	No. of Participants C4C survey	% of inhabitants	No. of Participants cognitive mapping	% of inhabitants	Cognitive mapping participants as % of C4C participants
Wanlockhead	155	18	12%	11	7%	61%
Drummore	300	22	7%	10	3%	45%

Figure 3.1 – Participants overview both villages

When contacting the participants, we asked them what would be a convenient location for the interview. Most participants invited us to their home. The place of residence is also for the researcher convenient, as this is a place where interviewees are likely to feel safe and speak freely. The data gathering is anonymous but a tape recorder is used for the convenience of the researchers. The tape recorder was only used with the participant’s permission. Most of the SAC questionnaires were conducted in cooperation with Hanneke. Our mutual collaboration arose out of common interest in the results. The follow-up interviews of both Hanneke and myself however were mostly carried out individually.

3.1.2 Sampling method

Respondents for the SAC questionnaire were all inhabitants of the villages. The C4C project manager, who forwarded us five contact persons per village, made initial contacts for identifying possible interviewees. These contact persons served as a starting point for identifying more respondents by using the snowball sampling method. *“Snowball sampling identifies cases of interest reported by people who know other people involved in similar cases” (Hay, 2010, p.75)* Snowball sampling is a useful method for accessing research groups who are not easily attainable since the references from the villagers are based on trust. The disadvantage of snowballing however is the danger of getting stuck within one community group, in which people all refer to one type of inhabitant. When asking



respondents to refer us other people, we emphasized on the importance of speaking to a wide range of community members. This was done in order to ensure a broad accumulation of data across different community groups. Even though we stressed the importance of analyzing a wide range of community groups, we did not succeed on every aspect.

A selection of the SAC respondents was asked to participate in a so-called follow-up interview. Due to the collaboration with SAC, we were not entirely free to select our participants from the village, as we were restricted to the list of SAC participants. This strategy was used in order to prevent confusion among the inhabitants about our field of interest. The socio-demographic information, which was collected by the SAC questionnaire, helped to identify a wide range of different community members.

Participants for the follow-up interviews were selected on the basis of their willingness to participate in another interview (this was asked at the end of the SAC questionnaire), availability in the next few days and based on a selection of socio-demographic data. These criteria were mainly based on the length of residency, to ensure that both old-time residents and newcomers were equally heard.

3.2 SAC questionnaire: a quantitative basis

The SAC questionnaire is based on on-site information received from the Dumfries & Galloway LEADER programme and a review on community resilience literature. The questionnaire aims to identify a way to measure the impact of different rural development interventions and potential (Skerratt et al., 2011). The research questions and investigated areas are based on a combination of existing models which together with the insights of D&G and SAC form a new matrix for measuring a community’s capacity for change. The questionnaire follows structure as proposed by Forgette & Boening (2009), which is shown in figure 3.2.

Nature of Resilience	Basis of Resilience	
	Individual	Community
Social	(1)	(2)
Economic	(3)	(4)

- (1) Individual Social resiliency
- (2) Community social resiliency
- (3) Individual Economic resiliency
- (4) Community Economic resiliency

Figure 3.2 – Measurement model for socio-economic resilience (Forgette & Boening, 2009)

The questionnaire is based on self-assessment, in which the respondents analyse their personal situation and that of their community. The survey consists of a total of 32 questions, of which 12 concern demographic aspects and 20 scale questions about resilience-related issues. The resilience questions contain a mix of open and closed questions. The closed questions are placed within the



Likert scale method, asking the respondent to rate their opinion on a scale from 0 to 10. Five questions are directed at each of the four resilience segments.

Whereas the SAC questionnaire focuses on the resilience aspects of the community and half of this questionnaire on economic aspects, it does not provide complete information on place attachment. Answers given in the surveys to the social segments (1) and (2) however did provide a useful basis for further research on place attachment issues. For the purpose of this research, Hanneke and I were allowed to make small adjustments to the SAC questionnaire so that we could gather more details from the respondents that correspond with our individual research topics. I added 8 questions, of which 6 were added to the demographic details. The demographic questions concern information about the history with the place. The other two questions were added at the end of the questionnaire, within the segment of 'community social resiliency'. The last two questions are about the place identity of the villages with the intention to gain stories about the village history. The exact questions are described in appendix 1.

3.3 Follow-up: qualitative research

The addition of the quantitative questions to the SAC questionnaire provides more insight in the relation between people and place but do not tell us why this relationship exists. Qualitative research can help to find an answer to the why-question. Davenport & Anderson (2005) state that qualitative research should be applied more often in people-place relation research, as it provides more detailed information than quantitative methods are able to reveal. They write (2005, p. 629): *"By examining people's connections to places as expressed through their own words, these studies capture the subjective, lived experiences people have with nature. Compared to traditional research approaches, managers can learn more about stakeholder perspectives from qualitative research because what is shared extends beyond what interviewees would have been willing to express in the context of more traditional public involvement frameworks and quantitative research."* Furthermore, Eisenhauer (2000, p.424) states that *"Most works on special places have recognized the need for depth and richness in data about connections with special places, and have subsequently incorporated qualitative research methods."* Therefore a qualitative research method was chosen in addition to the existing quantitative data.

However, the existing SAC questionnaire is long and time-consuming as it takes roughly 45 minutes to complete. Therefore, another 30-minute interview within a few weeks would probably lead to unwillingness to participate. To avoid negative reactions and a lack of interest among the participants, therefore a slightly different approach is used. The in-depth interview is build up around a cognitive map that the participants draw at the start of the interview. Drawing is a creative research method and asks the participants to think in a different way than the previous resilience issues as proposed by the SAC questionnaire. For this interview, the focus is only on place attachment. Thus interference by previous statements on resilience should be avoided as much as possible. A creative research method helps to lower the possibility of attaining socially desirable answers in the second interview, as it will approach the issue from an entirely new perspective.

In the place attachment interviews including cognitive mapping, relatively 11 and 10 people participated. Figure 3.3 and 3.4 provide an overview of these participants with socio-demographic data. The participants are numbered including a letter in front of the number. W corresponds with participants from Wanlockhead, whereas the D stands for participants from Drummore. To



guarantee anonymity the age and length of residency of respondents are sampled in different categories.

Both villages have an elderly population; the majority of the inhabitants are retired. Drummore primary school currently educates 35 children, which indicates that several families live in the village. Unfortunately we have not been able to interview inhabitants younger than 48 in Drummore. A few people between the ages of 25-45 participated in the SAC questionnaire but stated that they did not have time for a follow-up interview.

Figure 3.3 - Interviewees Wanlockhead

No.	Gender	Age	Residency time	Category
W1	Male	70 - <75	20 - <30	Newcomer
W2	Male	65 - <70	0 - <10	Newcomer
W3	Male	65 - <70	0 - <10	Newcomer
W4	Female	45 - <50	20 - <30	Long-term
W5	Male	60 - <65	0 - <10	Newcomer
W6	Female	65 - <70	10 - <20	Newcomer
W7	Male	45 - <50	45 - <50	Long-term
W8	Female	35 - <40	0 - <10	Newcomer
W9	Male	50 - <55	50 - <55	Long-term
W10	Male	45 - <50	0 - <10	Newcomer
W11	Female	45 - <50	0 - <10	Newcomer

Figure 3.4 - Interviewees Drummore

No.	Gender	Age	Residency time	Category
D1	Male	61 - <65	10 - <20	Newcomer
D2	Male	55 - <60	55 - <60	Long-term
D3	Male	70 - <75	10 - <20	Newcomer
D4	Male	65 - <70	0 - <10	Newcomer
D5	Male	55 - <60	55 - <60	Long-term
D6	Female	60 - <65	0 - <10	Newcomer
D7	Female	65 - <70	65 - <70	Long-term
D8	Female	55 - <60	55 - <60	Long-term
D9	Male	55 - <60	20 - <30	Newcomer
D10	Male	45 - <50	45 - <50	Long-term

3.3.1 Cognitive mapping

As mentioned in the previous section, the follow-up interview started with cognitive mapping. Cognitive mapping has been successfully applied in the field of environmental psychology. *“Cognitive mapping is an activity that enables us to collect, organize, store, recall and manipulate information about our everyday spatial environment”* (Downs & Stea (1977, p. 7).

Both Boğaç (2009) and Lee & Abbott (2009) have applied cognitive mapping in their research on place meanings and write the following: *“using visual methods assists in forming an understanding of how the spaces within physical environments become places that are personally significant in different ways for different people”* (Lee & Abbott, 2009, p. 194) And: *“since a mental maps is based upon personal experience within an area and an individual’s selective representation of their known world...it helps to better understand the direct experience of people and their settings with respect to their attachment.”* (Boğaç, 2009, p. 271).

Sketch maps are a reliable research method (Blades, 1990) but it is important to be aware of its limitations. Trell (2009) discusses the complications with the interpretation of mental maps. There are several layers through which the researcher can analyse the mental maps. Because this research is built upon a background of human geography, the deeper psychological dimensions (such as drawing style, colours and image sizes) are not analysed. The mental maps mainly served as a creative method to start an interview on the topic of place attachment. Still, the mental maps do



provide an insight on the village and its community from an interesting new perspective. Trell (2009) adds that mental maps function as a good starting point for discussions about specific places and their meaning. Some details of the mental maps will be discussed later in the results.

The exact assignment that was given to the participants was to draw a map of the village that only shows places which are important for the interviewee. The exact question that was asked to every participant is: *“Can you draw a map of your village that shows places of importance for you?”* With this question in mind, the respondents could draw on a blank sheet of paper and could choose from several colour pencils and markers which were provided by the researcher. After the drawing process the respondent and interviewer together analyse the mental map. Questions that are asked concerning the map are: Can you tell me exactly what this part of the drawing represents? What do I see here? Why did you choose to draw this item, why is it on your map? What is the importance of this item for you? How is your relationship with what you have drawn? The interview was unstructured and could focus on many subjects, depending on where the interviewee would be enthusiast about. The open and unstructured set-up of these interviews gives the researcher the freedom to ask questions regarding the participants’ sense of place, without falling back to the same interview style as used for the SAC questionnaire.

Unpredictably, some participants were not enthusiast about the creative research method and felt blocked by the idea of having to draw. This lack of creativity or ability to draw is taken into account for the analysis of the results. Focus is therefore more on the transcript instead of the drawings.

3.4 Data analysis

The data from the SAC questionnaire is analysed in Excel and SPSS, according to a method designed by the Rural Society Research team. For the purpose of our follow-up interview, we wrote down the important comments that people made in the questionnaire for our own records. These comments were structured in an Excel-database responding to the correct interview question. For the purpose of this research, all in-depth interviews are recorded. These recordings are all transcribed (see appendixes overview) and analyse by using MAXQDA10; a qualitative text analysis program that helps the researcher to structure qualitative research results. Figure 3.5 shows a print screen example of how MAXQDA10 is applied in the analysis of this study. MAXQDA10 makes it possible to clearly see connections between different aspects. For the purpose of this research, the place attachment statements are linked to resilience theory.



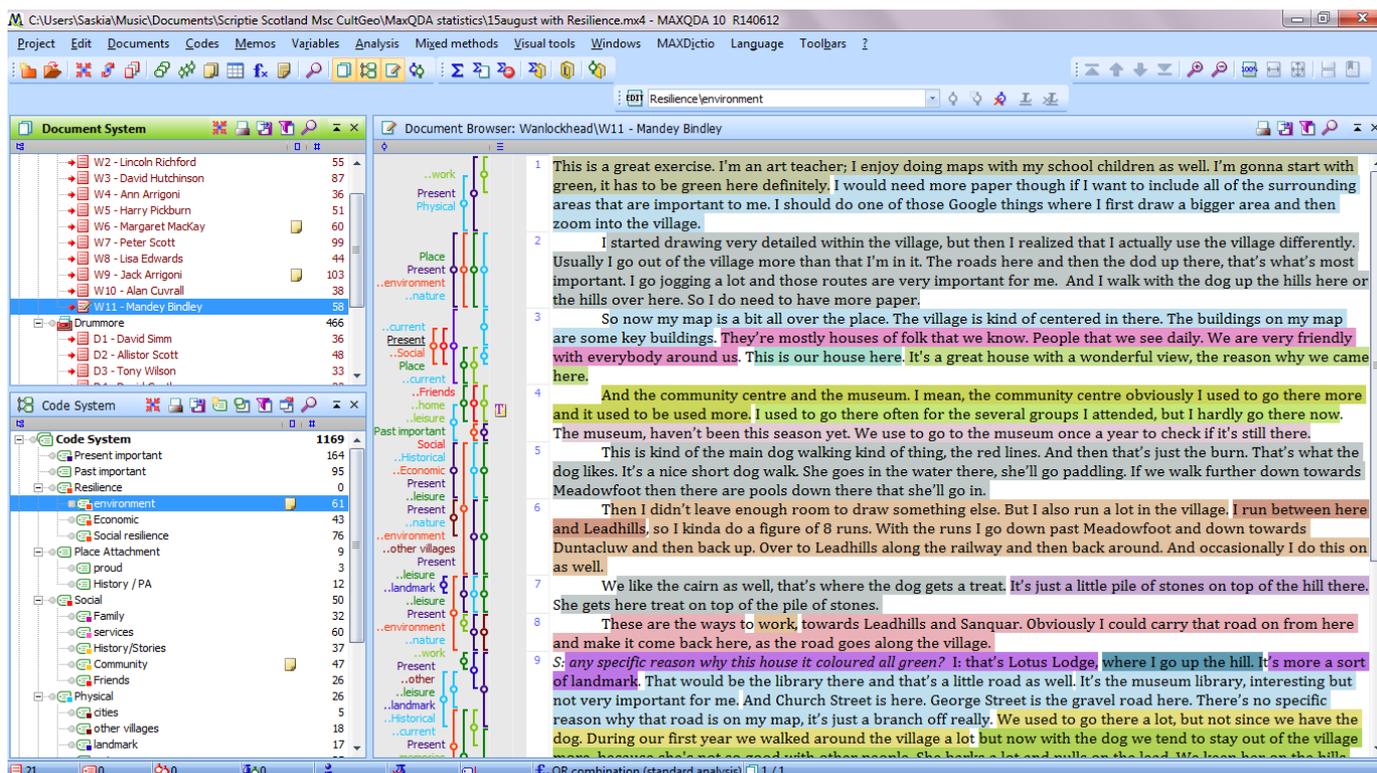


Figure 3.5 example of analysis with MAXQDA10

Each interview was analysed and coded with an attribute that described the context of the sentence. The final coding system is shown in figure 3.6. The interviews are analysed by both the resilience and place attachment codes. The codes for both correspond with the codes that were found in the literature for the theoretic framework. In addition, the interviews are analysed by their focus on past experiences (memories/place history). This is done because place attachment has a strong focus on past experiences.

The different layers of analysis are compared with each other in several ways. MAXQDA10 offers the possibility to analyse each case individually but can also compare the two villages with each other. The results of these different types of analysis can be found in the next chapter.

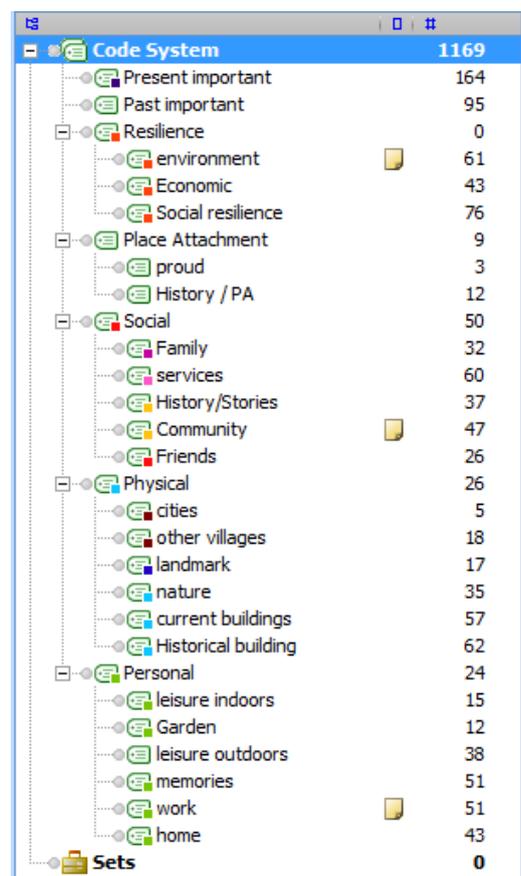


Figure 3.6 code system in MAXQDA10

4. Results – individual components

This chapter discusses the results of the questionnaires, in-depth interviews and mental maps. The chapter starts with a brief overview of socio-demographic data to provide background information on the interviewees and the community. After this, results on place attachment items are provided and the chapter continues with results on resilience. Results are discussed both on the individual and the community level.

4.1 Socio-demographic overview

An overview of gender, age and length of residence in the area was already provided in figure 3.3 and 3.4. The youngest participant was a 37-year old woman from Wanlockhead and a 48-year old male in Drummorie. The oldest participant in both villages is a 74-year old male. The respondent from the villages have a different background, as only 3 respondents from Wanlockhead were actually born in the village. In Drummorie this distribution is more balanced. Figure 4.1 shows this in detail.

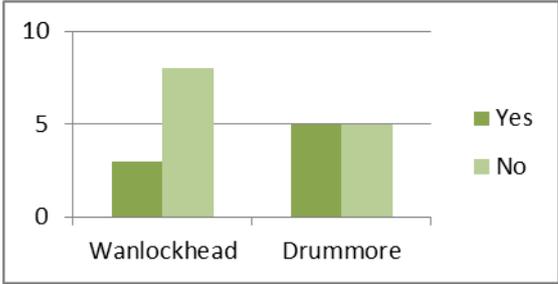


Figure 4.1 Were you born in this village?

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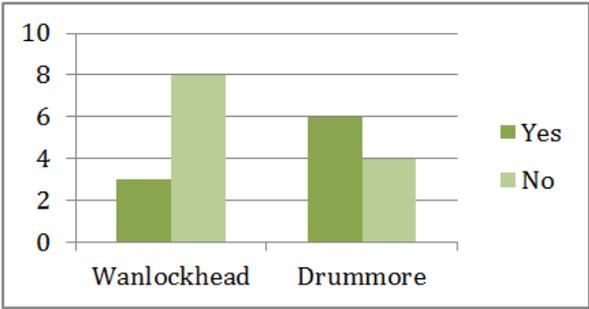


Figure 4.2 Do you still have relative living in this village?

From the respondents in both villages, only 4 respondents had family members who lived there in the past. This indicates that someone has a long history with that place. For the other 6 and 7 respondents, their roots are elsewhere. The respondents from Drummorie currently have family members living here, meaning that afterwards they reinforced their settlement after more family members came to reside in the village. In Wanlockhead this number decreased, no new villagers came after their family members. Figure 4.2 shows this in detail.

The two figures below give an impression of people’s first association with their village. Figure 4.3 reveals that ‘peace & quiet’ is often mentioned. The gross of the associations are positive. The list of Wanlockhead shows several negative associations: remote, isolation, cold and turbulent was revered to by people in a negative sense. In Drummorie there were less negative associations about the village (see figure 4.4).The codes ‘ignored’, ‘unknown’ and ‘isolated’ are revered to as negative aspects which are mostly related to its geographical position. For both Drummorie and Wanlockhead, ‘peace & quiet’ is regarded as a positive association in relation to their village. From the data we can discern that both villages mention the community or friendly as an important attribute of the village.



Free association Wanlockhead	
Association	Times mentioned
Peaceful	5
Quiet	4
Remote	3
Beautiful	3
Community	3
Isolation	2
Cold	2
Safe	1
Individuality	1
Relaxing	1
Home	1
turbulent	1

Figure 4.3 Free association Wanlockhead

Free association Drummore	
Association	Times mentioned
Peace	3
Quiet	3
Friendly	3
Home	2
Ignored	2
Scenic	1
Pleasant	1
Safe	1
Heaven	1
Isolated	1
Seaside	1
Unknown	1

Figure 4.4 Free association Drummore

4.2 Place attachment results

As mentioned by Gustafson (2001), place attachment is divided in three sections: personal, social and physical context. In appendix 2 two figures show the codes for each segment in regard to their respective importance in the conversation. The next sections will discuss the meaning of these codes on the community level. Moreover, the differences between these three sections of place attachment will be illustrated in more detail.

4.2.1 Place attachment codes in Wanlockhead

From appendix 2 we can determine that in Wanlockhead, in all three segments, historical codes are applied the most in all three place attachment sections. 'Historical building', 'personal memories' and 'social history' receive a lot of attention from all participants. Respondents are acutely aware of the unique history of their village and are able to narrate enthusiastic stories about their mining history. The presence of the Lead Mining Museum, which is the only touristic attraction of Wanlockhead, plays a large role in the awareness of this history. The impact of these historic place attachment components will be discussed in more detail in paragraph 4.4.1.

Apart from these historic codes, the codes of 'other villages', 'work' and 'home' are often mentioned. During the interviews the neighbouring village of Leadhills is often mentioned as the inhabitants of both villages work closely together. The community in Leadhills offers several services such as a primary school, a church and a village shop. Inhabitants from Wanlockhead realise that having these services in both villages would not be feasible thus abided by a two-mile travel for



services. Because these villages share many services, inhabitants of Wanlockhead have social connections with inhabitants of Leadhills.

The code 'work' is often mentioned since most respondents work or have worked in the village. The Lead Mining Museum provides many employment opportunities for numerous people and a lot of them have a part-time function as tour guide. The museum plays an important role in the community. Working for the museum helps newcomers to integrate in the village whilst the museum helps to keep the place history alive.

Finally, respondents frequently mention the code 'home'. With no exception, the respondents are exceedingly content with their homes. Houses in Wanlockhead are unique and each has a rich history (most of them being former mining cottages), which is highly valued by its residents. The owners also appreciate the location, setting and view from their houses. The code 'garden' on the other hand is hardly ever mentioned. The soil in Wanlockhead is not suitable for plants and also the presence of sheep throughout the village is unfavourable for gardening. For some respondents this is even referred to as being the only negative aspect of the physical environment. Respondent W5 refers to the house as the main reason for living here:

That's where I live, that's quite important. It is more important than the rest of the map. Our main reason to come to Wanlockhead is the cheap house. We wanted to live closer to the boarder where our son lives but it's much more expensive there. We liked it right away because of the big house; we bought it within 2 hours. We'd never been here before. Where we come from you can't get such a house for this money.
(Respondent W5, male, age 60 - <65, newcomer)

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For many respondents, the house is the main factor for living in this village, as they highly value having a spacious house in a natural environment on a good location. This reasoning fits with the concept of 'residential village' (Thissen & Fontuijn, 1998) as people purposely choose to live here. For these people, their place attachment is mainly based on the residential attributes. The SAC questionnaire and interviews indeed show that people perceive a high quality of life and are pleased with their decision to reside in Wanlockhead.

Inhabitants of Wanlockhead do not relate the village to the code 'family', which is obvious due to the lack of family members living in the village, as mentioned in section 4.1. Some people do however choose to live in this region as it provides them easy travel access to visit family or live more near to them. Furthermore, as the village hardly provides any service, this code also receives minimal attention within Wanlockhead itself. Respondents do often draw on their mental maps roads that lead to villages where they go for shopping. Access to these services is important for the respondents. The available services (community centre, pub and doctor surgery) are highly appreciated because they function as social meeting places outside the houses.

4.2.2 Place attachment codes in Drummorie

Appendix 2 shows some similarities between Wanlockhead and Drummorie. In both villages, the codes 'friends' and 'community' receive attention. The home again receives a lot of attention, however not as specific as in Wanlockhead. The garden on the other hand, is more emphasised by Drummorie residents. Some respondents even drew the garden as a separate unit from their house on the mental maps (see appendix 5 for examples D6 and D8). Drummorie has a mild climate unlike



the rest of Scotland. The community even organises an annual flower show in which many inhabitants exhibit, signifying a more suitable climate for such activities. Many people are actively involved with their gardens. 'Work' also receives attention from many respondents, even though in Drummore the impact of work related issues on social aspects is smaller than in Wanlockhead. In Drummore, work is restricted to being a personal aspect of place attachment. For example respondent D5 owns a large farm south of Drummore, which receives a large deal of his attention on the mental map (see appendix 5). The farm is very personal for him, as he states:

This is my farm you see, this is my land. That's heaven.

(Respondent D5, male, age 55 - <60, long-term)

Work plays a smaller social role in this village; most probably the activities carried out are less connected to the village. D2, D5 and D8 do work in the village, but these activities do not concern interaction or cooperation with other community members. Only a few respondents actually carry out work that concerns the community. D1 and D7 state that through their work, they attempt to benefit the community. Respondent D1 for example runs the local post office. He enjoys the work and makes a decent living from it. Apart from these personal benefits, his position at the post office is also socially beneficial. During the SAC questionnaire he states:

We're providing a service. Most of the villagers appreciate that. We are appreciated for being here. That makes me feel part of the community.

(Respondent D1, male, age 60 - <65, newcomers)

Most respondents are retired and have worked elsewhere. Not many people are involved in voluntary work in the village. Voluntary work is more connected to the social benefits than its economic implications, which is another explanation why Drummore respondents hardly discuss the issue of work in relation to the village. This contrasts with Wanlockhead where many inhabitants have worked in the museum for social reason or carry out voluntary work.

Unlike in Wanlockhead, residents of Drummore do not discuss other villages or cities. This village is more remote but are also more independent and self-sufficient. Thissen & Fortuijn (1998) would categorise this village as 'autonomous'. Furthermore, the historical aspects receive less attention in Drummore. Several respondents refer to the 'Old Kirk' as being the only built heritage in the village. People only discuss history with regards to how the village and the community have changed over time. Respondents in Drummore focus particularly on the current services in the village. They discuss these services as being important for the community as a whole. Respondent D3 stresses the importance of the local shop as a social meeting place:

The shop is here too [on the mental map]. In the morning I take a walk up to the shop to get my newspaper. I go there on a daily basis. It can take me an hour or so to get back because I talk to everybody on the street, neighbours, friends.

(Respondent D3, male, age 70 - <75, newcomer)

This links to the theory about rural services mainly serving social needs (Been, 2012). Getting the newspaper is more a social attraction rather than serving an actual need. Most inhabitants only buy limited items in this shop, but still use it daily because of this social component. Other



respondents stress the importance of the actual services that the shop and the post office provide. These services are seen as important factors for the quality of life in the village.

The shop, I go there daily to get my newspaper and stuff. That's another social meeting place as well. Then the post office is across from it. That's important. I think the place would really die without the post office. I mean, they have the money machine first of all. What would we do without the money machine?

(Respondent D7, female, age 65 -<70, long-term)

Other than respondent D3, who values the shop for its social aspect, respondent D7 sees the shops as an important aspect for the quality of life in the village. Respondent D7, being a long-term resident, repeatedly mentioned how the services used to be when she was younger. For her, the quality of life will most likely decrease when services disappear. Respondent D7 is someone who views the village from an 'autonomous' perspective. Respondent D3 views the services rather as an added value instead of an essential attribute of the village, which corresponds with a 'residential' perspective on village life.

4.2.3 Place attachment influences from an individual perspective

Place attachment consists of three components, but one cannot say that only those people who have strong connections in all three components are strongly attached. Figure 4.5 and 4.6 represent the amount of time people discussed issues regarding one place attachment component. The size and brightness of the dots show how strong the segment is present. Looking at these figures, those with the larger dots on all three levels (Respondent W7, W9, D5 and D6), are attached to the village on all segments of place attachment. However, other respondents only show large dots on one or two components. Because of the multifunctionality and compensation as mentioned in chapter 2.2.5, these people can still perceive a high quality of life.

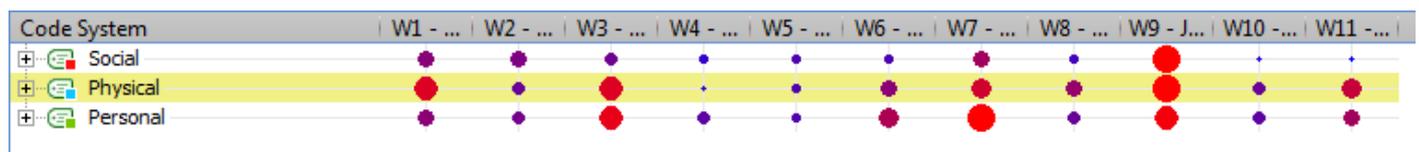


Figure 4.5 Division place attachment codes per respondent Wanlockhead

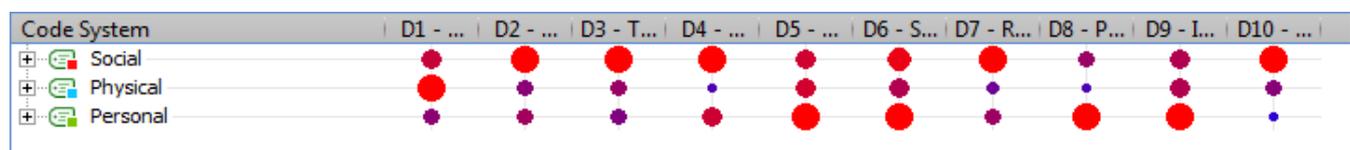


Figure 4.6 Division place attachment codes per respondent Drummore

For example respondent D4 mostly discusses the social component of Drummore. Together with his wife he moved up to Drummore from England after his retirement and started a bed and breakfast. They choose Drummore specifically because it was peaceful but still had all the services they needed. The respondent in question also enjoys the social community life in Drummore and stresses the enjoyment of 'knowing who you live with' during the interview. His mental map (see appendix 5)



shows only social meeting places and services, whereas the physical environment other than the harbour receives minimal attention. When asking about the environmental aspects, he replies:

Because we're always out and about we probably don't use the green spaces as much as we should. Maybe that's why I didn't put it on here [on the mental map].
(Respondent D4, Male, age 65 - <70, newcomer)

Since respondent D4 came here for the social aspects, these social items are the place aspects that matter for him. The actual environment is of less importance for him, even though he does enjoy the tranquillity of Drummore. This example illustrates that what people are looking for in a place is also what they are willing to invest in. The respondent offers a helping hand for many enquiries of community members, by which people now know him as 'Mister Fixer'. This helping hand created many social relations for D4, which he enjoys a lot. Eventhough respondent D4 is not specifically attached to the environmental aspects of Drummore, he is pasioned about the place. Therefore, one can not convincingly state that a person who it not expressing himself on all three aspects of place attachment is not strongly attached.

Figure 4.5 and 4.6 tell us by which components a person is attached to a place. At first sight it seems that the social aspects are far more important for Drummore residence than for those in Wanlockhead. For the physical aspects of place that are important for the participants, these results are reversed and receive more attention in Wanlockhead. Several respondents referred mostly to physical aspects in their drawing. Respondent W11 for example claims to be an 'outdoors' person. She moved to Wanlockhead to escape the hectic and anonymous life in the city and enjoys living in Wanlockhead mainly for the peace and quiet and the beautiful natural environment. After finishing her drawing (see appendix 5) the respondent expressed that:

I started drawing very detailed within the village, but then I realized that I actually use the village differently. Usually I go out of the village more than that I'm in it. The roads here and then the Wanlock dod [main hilltops] up there, that's what's most important. I go jogging a lot and those routes are very important for me. And I walk with the dog up the hills here or the hills over here [pointing at the drawing].
(Respondent W11, Female, age 45 -<50, newcomer)

Respondent W11 came here for the outdoor opportunities that the environment of Wanlockhead offers, which is important and takes up a lot of her leisure time. This happens at the expence of social interaction in the village. The respondent in question does have friendly contact with all villagers, but she is not actively involved in activities since she rather spends her time outdoors.

There are also respondents who mainly enjoy the village for personal reasons. People enjoy living in a place because it provides them with a good self-estimate. This is often related with physical aspects of place attachment. Respondent D8 (for mental map see appendix 5) for example has lived all her life in Drummore but doesn't overly interact with others. Still she is very happy with her life, because she has a nice house and a wonderful garden. During the interview she said:



I don't mix in with others on activities. I like to keep things to myself. [...] I like living here; I wouldn't want to live anywhere else. Maybe it's because I've always lived here, but I'm just happy with what I have here. When I've finished working I'm either baking or in the garden or I go for a walk. That's what I enjoy here.

(Respondent D8, Female, age 55 - <60, long-term)

Respondent D8 can actually be seen as an example of what Pretty et al. (2003) refer to as negative consequence of rootedness. This respondent stays safe within the community and has never explored the world. She's not interested in going anywhere, because she's so happy here. The theory of Pretty et al. suggest that she is therefore not a very beneficial for community development, as she is likely to be reluctant towards developments or further community involvement.

The above examples confirm the notion that people value places for different reasons. Even when not all components of place attachment are covered, people can still feel very attached to a place and experience a high quality of life. Compensation and the fact that one component results to positive effects on other components lie at the root this imbalance. What influences these different individual place attachments have on community resilience will be explored in the following section.

4.3 Resilience results

Community resilience also consists of three components: social, economic and environmental resilience. When analysing resilience on the individual level a fourth component should be added: personal resilience. This section discusses all four resilience components separately. However, it will become clear that these components are never independent units because aspect from one dimension can also influence other components.

The follow-up interview and mental map drawing was based on place attachment issues. These interviews were analysed through searching for resilience components in the statements of respondents. The figures below (Figure 4.7 and 4.8) show per respondent to which extent their place attachment are linked to each of the resilience components. The interview statements about place attachment are analysed and linked to resilience theory. This analysis is also conducted at the community level. These figures can be found in appendix 2. To explore the exact meaning of the three pillars of place attachment in relation to resilience, all three will be discussed in more detail in the following sections.



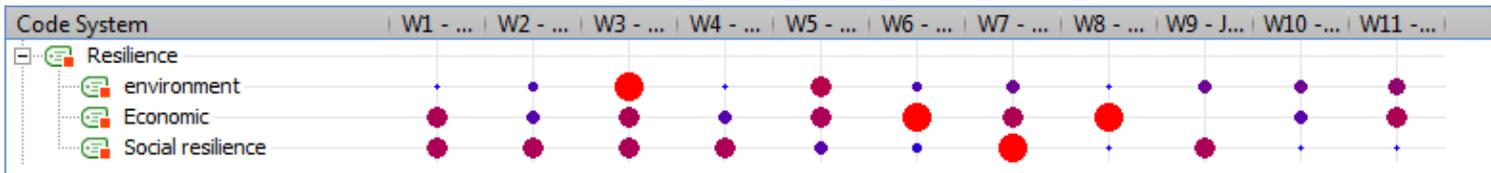


Figure 4.7 - Resilience components per respondent - Wanlockhead

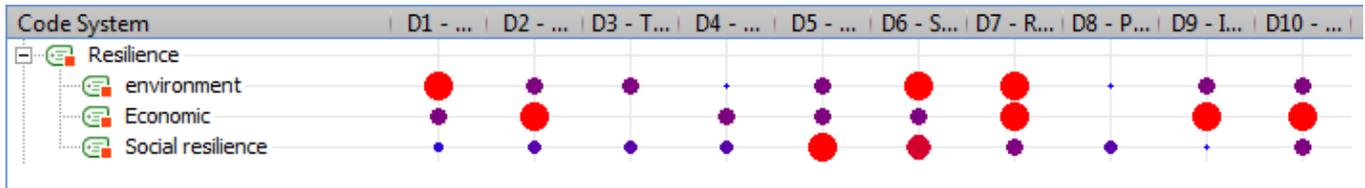


Figure 4.8 - Resilience components per respondent - Drummore

4.3.1 Social component results

For the analysis the social aspects of place attachment are linked to the SAC results on social individual resilience and social community resilience. In both Wanlockhead and Drummore, those people whose place attachment is mostly based on social aspects (friends, community, family, etc.) also showed the highest results for individual social resilience. In Drummore this difference only occurred on the individual level, where the average showed a difference on 9.0 (on a scale from 0 to 10) for those with a strong focus on social aspect, against 7.9 for those with low social values. In Wanlockhead the difference is strong both on the individual and community level. The difference between the social resilience of those with strong social values and those without is 7.9 against 6.2.

Social components in Wanlockhead

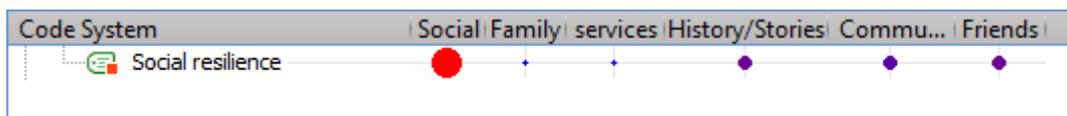


Figure 4.9 Social Resilience in relation to Social Place attachment codes in Wanlockhead

Figure 4.9 shows that in Wanlockhead the social resilience is mainly focused on the social place attachment codes 'community' and 'friends'. Unique for this village is the importance of friendship. Many respondents claim to really have friends in the village. For some people this can even be seen as the main reason for living here. Respondent W3 tell, while drawing his mental map:

The house nearby is what I call Scone Palace, that's where we have our heritage club meetings. That's where our friends live. There is another little track going up there and there. If we're looking at friends and so forth then these houses is where our friends live. In many ways that's the reason we stay in the village: because of that group of friends. (Respondent W3, male, age 65 -<70, newcomer)



When asking more about these friendships the importance of these social contacts it becomes clear that the implications stress further than just having good local contacts. Friends trust each other in a strong way and support one another greatly. For example they exchange house keys, do groceries for the group, dig people out of the snow from each other driveway. Respondents repeatedly stated that because of these friendships it is easier to live in such a remote village. People have to live with whatever is available and are therefore depending on each other. Villagers have found social structures to work together and be efficient. Each of the friends offers a speciality which he or she shares with others.

Respondent W6 felt how strong these friendships are when her husband got ill. The respondent received great support from the community. After he died she decided to stay in Wanlockhead because of these strong social connections and wanted to do something in return for the community. For this reason she is now a very active as a member of the community council. The place attachment of respondent W6 is strongly focused on friendship and the community. This is an example that proofs that a strong place attachment transforms into community activity and investment in the place.

In Wanlockhead, many respondents state that these friendships are an important factor for their resilience. Respondent W3 even states that this is the main reason for staying here longer than their usual length of residency in communities. Personal and social place qualities are independent from environmental or economic place aspects. Most respondents who focus strongly on friendship and social contacts are not depending on economic opportunities within the village. Their individual resilience is in that sense not depending on place, as social contacts can exist separately from place. The community centre and the pub are mentioned as important social meeting places. Several respondents stress the importance of the community centre for its social function.

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The pub is on there because I go to the pub yes. And I meet people in the pub. We got to know the people here when we moved into the village. It's easy to get to know people here. (Respondent W2, male, age 65 -<70, newcomer)

This respondent later explains that the important friendships, which he now has, originate from the pub. From this point of view, social place attachment cannot be seen separately from place, as meeting places are essential for creating new contact. These friendships also lead to more community interaction in Wanlockhead, as the friend groups carry out joined activities and organise community events. Friendship is therefore not only beneficial for personal resilience but also adds to a sense of community and eventually might increase community resilience.

Social components in Drummore

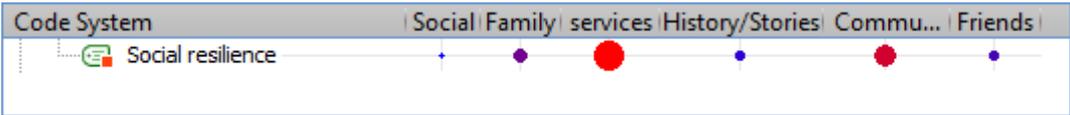


Figure 4.10 social resilience in relation to social place attachment codes Drummore



Figure 4.10 shows that the social resilience of Drummore is focused on other place attachment aspects of the village, which is mainly on 'services' and the 'community'. In section 4.2.2 the importance of the local shop and post office is already stressed. These locations serve as meeting places for the community. From one perspective it is great that the services serve as a social place because you can meet all sorts of people there. The downside of this freely based interaction is that it's not obligatory and doesn't bond people to the place. Respondent D8 is aware that the social interaction that comes from these services is not always that strong:

[The shop]... it's also more a social thing. I know everybody there that I meet. If I know the person well we'll get into a conversation about something or another. Sometimes you can walk in and just talk to the ladies of the shop and there won't be anybody else in the store. But some days you walk in, meet people there and get into a conversation out for half an hour. It depends really. But in the winter time, you could go in the streets and not see a sole other than the girls in the shop. Then you're in, get your paper and be home again. But other days you can be out for at least half an hour. The same counts for the post office really.

(Respondent D8, female, age 55 -<60, long-term)

More people realise that in the wintertime there is less social interaction in the shops than in the summertime. Respondents say that people close the shutters in October and they will not open before April. During these months, many residents of holiday houses leave Drummore for a warmer place and others stay in their homes. At first it seems that a lot of interaction takes place within the village. However, this social interaction is restricted to the public meeting places such as the pubs and shops. Respondents in Drummore hardly mention friends or draw friends' houses on their mental maps. Respondents are afraid that the decline of services will also mean that the social interaction will decrease. For this community there is no community centre available to organise activities or get together. The post office and the shop are seen as the most important social meeting places in the village. Drummore has two pubs which both attract their own visitors. The village does have a common room in the local information centre, but this room is hardly used by the inhabitants as this woman explains:

[I work at the information centre and use it] for yoga off course. We just rent it privately and then all we do is make up the cost of the room hire. It means that we have a nice space. [...] It makes me sad that the arts & crafts group moved out of the area, because they didn't consider this hall as an option. They had a bad impression of the time it was dirty and that image sticks. I'm afraid that if we don't use it, we'll lose it. The council does talk about it sometimes, to take down the building and put flats up. A community space can be a wonderful thing for so many events. It's a shame really that it's not really used now.

(Respondent D6, female, age 60 -<65, newcomer)

Other respondents also acknowledge this lack of a good central meeting place for the whole community. Drummore does provide more social meeting places than Wanlockhead. This leads to the notion that social interactions in Drummore are more casual and based on personal preferences, because people have more options. In Wanlockhead the mind-set of 'working with whatever is available' applies more.



To summarize both villages, people use the local facilities for social interaction with other villagers, help each other and create friendships. These social relations help people to feel accepted and included in the community. This is in agreement with the social concepts as mentioned in the place attachment and resilience theory. For example Schwarz et al. (2011) write that a supportive social environment can lead to more community participation. The ones who are mostly attached to the social aspects of place are also show a higher level of individual social resilience. However, they are not necessarily more resilient in general. Their individual resilience does not automatically increase community resilience, as there are several other aspects in between. The next section explores the other place aspects that can facilitate resilience.

4.3.2 Economic component results

The theoretical framework indicates that place attachment lacks an economic component, as this is placed within the concept of place dependency. Consequently it is not possible to show a direct connection via MAXQDA analysis between economic resilience and economic place attachment codes. The two figures below (Figure 4.11 and 4.12) therefore show the relation between economic resilience and all place attachment codes on the community level. These figures show that people in Wanlockhead link economic resilience with the codes ‘social connections’, ‘historical buildings’ and ‘work’. In Drummore the focus is also on ‘work’ but besides that attention goes out to ‘current buildings’ and ‘services’.

Economic aspects in Wanlockhead



Figure 4.11 Economic resilience in relation to place attachment codes – Wanlockhead

Respondents from Wanlockhead mentioned aspects of economic resilience, which have narrow connections to social resilience. Half of the participants has worked for the museum, either as tourguide or member of the trustee. Respondent W2 explains:

The mine can be drawn here. It was important for me. I used to take people in to the mine until last year. Also to the library and the cottages for my work. It was good work, I'm glad I did it. Because you learn a lot. I've you're interested as I am, you learn a lot more yourself. I worked as a tour guide for the museum until last year. It helped us to get involved in the village.

(Respondent W2, male, age 65 -<70, newcomer)



Working in the village is seen by newcomers (in both villages) as an investment in social acceptance. Most respondents did not carry out the work for the financial benefits, but see it as a way to integrate in the village. Respondent D3 for example was the post-headmaster for several years until his retirement. Joining local committees or having a local job does not only benefit individual well-being but also enlarges community social resilience because of these social interactions.

Employment opportunities influence individual and community resilience in two ways. Besides the positive aspect of having a job within the village, which is mainly good for social resilience, employment opportunities also have a negative implication. Higher educated jobs are not available in either of the villages. In the case of Drummorie, the majority of people who do not work in the village but instead commute 30 minutes by car to Stranraer for their workplace (source: SAC questionnaire). In the case of Wanlockhead, employment opportunities are further away and several people travel daily to Glasgow or Edinburgh, both of cities being more than one-hour drive from the village. Respondent W6 explains during the SAC questionnaire how this influences his connection to the village:

I'm away for my work half of the year. I can't attend a lot of meetings or events because I'm away during summer time and that's when a lot of events take place. If I could get a local job I would definitely do more for the community. In the winter I have time, but not in the summer. I have the ideas but not the time. [...] Better broadband would only help a little. I could start up my own travel shop here because it's all online nowadays. But, it's crisis time so I don't imagine that a lot will happen here.
(Respondents W7, male, age 45- <50, long-term)

Despite the many hours spent on commuting, many of the respondents in Wanlockhead state to be happy living in the village, accepting the travel time, and experience a high quality of life. Respondent W10 explains:

We wanted to get out of the hectic city life. Living here costs us a lot more money on fuel and energy costs, but mentally it's beneficial to live here.
(Respondent W10, male, age 45 -<50, newcomer)

Because those who work outside the village spend less time in the community, they are less involved in the community life. Respondents W6 would like to get more involved in the community but he does not see future opportunities. Higher educated people can have interesting perspectives on community development and it would be beneficial for the community if they could include their perspective. Unfortunately full-time employed people only have limited time to get engaged in community life. In the case of economic resilience this leads to the notion that those who are economically individually resilient, do not benefit directly to the social or economic resilience of the community.



Economic aspects in Drummore

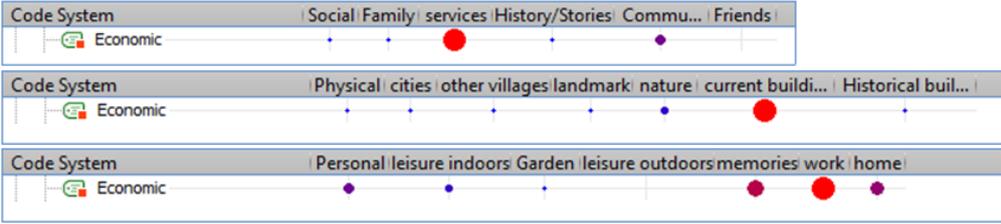


Figure 4.12 Economic resilience in relation to place attachment codes - Drummore

Many Drummore participants state in their drawing that the local shops are important to maintain a high quality of life. Respondents do their shopping purposely in the village shops to keep the local business alive. People are aware that the goods there are expensive, but realise that it supports the local community and provides employment. On top of that the village shops are a place for social interaction. Respondent D5 however, along with other long-time residents in Drummore, states that newcomers do not support the local businesses enough:

Many of the newcomers don't accept that the cost of things in shops here are more expensive than what they are used to. It's more expensive here because we are isolated and so far out from everything. But they don't realise that and don't accept the higher costs for everything, they don't support the shops as much as they should do. It's only when they lose then that they start to complain.

(Respondent D5, male, age 55 - <60, long-term)

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This respondent states that newcomers do not add to economic resilience building, because they do not support the local economy enough. A village shop owner cannot make a living from people who only buy their daily milk and newspaper for the reason of having social interactions at this location. People only add to community resiliency when they actually spent money in the village. Services provide employment, which in turn offers people opportunities to integrate in the community. However, community members often underestimate this economic component of the local services. Several Drummore shopkeepers mentioned during personal communication to struggle financially. The head postmaster (age 61) mentioned that he would like to retire in a few years and he doubts if there will be a replacement, because the business reaps little financial rewards. The disappearance of these services will have several implications on the community level. Firstly, the disappearance of jobs will affect several employees. These people in turn have to find a new job most likely outside of the village, which affects their readiness for community involvement. Secondly, the village becomes less independent, an issues which will be explained below. The disappearance of services will also affect the level or personal resilience of several respondents in Drummore. More on this will be explored in section 4.3.4.



Village pride and resilience

The availability of community services such as a ‘first responders’ team or a doctor surgery is another aspect that deserves extra attention. In Drummore the community tries hard to keep existing services available for the benefits of the village. In both villages, people drew items on their maps, which are not directly related to personal benefits, but for that of the community. Many people drew these items on their mental maps, because they seem to feel some sort of responsibility or connection with these items. Respondents drew some of these services on their mental maps (See appendix 5 for mental map D7 and D10), even though they are not personally involved with these services. They explain:

I mean there are important places. We have a little fire station, have you heard about that? They are all volunteers. We’ve got a voluntary coastguard as well. And we’ve got first responders. But they are not in my life, but they are important to the village. You know, the Queens went on fire on one Saturday morning two years ago. [...]Something had set fire. One is a farmer, you know, they are just al drawn from the village. So they are important but not in my life, if that makes sense. Other people might tell you they are important to them.

(Respondent D7, female, age 65 -<70, long-term)

On the other side of the harbour you’ll find the fire station and the coastguard station. They are both voluntary. I think that makes us different from other villages, we try to keep these things running.

(Respondent D10, male, age 45 - <50, long-term)

These respondents feel pride for having these services. It gives the village self-sufficiency and independency. The fire station and coastguard are for the benefits of the whole community. This idea is in line with that of Wilson (2010) who argues that having economic independent facilities is an important aspect of rural community resilience.

In Drummore people drew the harbour, which used to be the economic heart of the village. Many respondents drew the harbour on their mental maps, even though they would not use the harbour themselves. The harbour is positioned centrally in the village, therefore people see daily how neglected it looks. It’s a pain point for many inhabitants. Respondent D1 explained why he drew the harbour on his mental map (for drawing see appendix 5):

This is the harbour, this area here. Which as you see is pretty horrible, maybe that’s why I gave it a brown colour. I think business wise it’s important for the village, certainly. If we could get it respectable with some benches around it then I think we would be able to attract more people to the village.

(Respondent D1, male, age, 60 - <65, newcomer)

Both villages have unique physical aspects that could potentially be economically beneficial for the village. The Lead Mining Museum in Wanlockhead mentioned due to its possibilities to increase economic resilience. Respondent W5 mentions several times that the history of Wanlockhead should be exploited more. The history of the mining community is unique and worth visiting. According to



him (and other respondents) the museum could do more with this history and bring more tourists to the village. While drawing his mental map the respondent explains:

Up here is the Library. We don't go very often but we feel that it's an important part of the village. It's a place of national importance. There are great book in there. It's not utilised enough. [...]Close to where we walk the dog is the mine entrance. That is unique, that is very important. That is linked to the museum. You can go inside the mine, which is a unique facility. Same counts for the Cottages [...] it's fantastic; this place is just all brilliant. They should do more with that, it should be utilised more. I enjoy it personally as well as that it's a good tourist attraction.

(Respondent W5, male, age 60 -<65, newcomer)

The rich mining village left many traces in the village and remains alive through the Lead Mining Museum and the residential mining cottages. The history of Wanlockhead is often hidden from outsiders. Respondent W1 drew several of these historic places on his mental map (see appendix 5) and explains why 'The Old Manse' is important:

Yes, because of the steam engine. That man was the first one to build a steam engine for a boat ever, anywhere in the world. That is part of the Scottish history and of the local history. You wouldn't see anything. Anybody walking past can't see it. But people in the village know about it. A lot of people who originate here take a pride in these things. That is a pride to the village.

(Respondent W1, male, age 70 - <75, newcomer9)

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Several respondents, especially those who are higher educated and newcomers to the village see economic opportunities for better exploitation of this unique local history. Better exploitation could lead to more employment opportunities in the village and increase community resilience. However, these sorts of thoughts leads to conflict with the long-term villagers, who would like to keep their hidden gems saved from too much tourism, which would distract the peace & quiet in the village. When inquired during the SAC questionnaire, none of the long-term residents saw reason for improvements of the current museum or increasing the tourism opportunities in the village. This leads to a division between newcomers and long-term residents, as this last group does not dare to risk possible disturbance of their peaceful residential environment.

Besides being proud of the unique place history and the presence of the Lead Mining Museum and the old library, people from Wanlockhead also take pride in being the highest village in Scotland. Drummore residents show a similar kind of pride, being the most southern village in Scotland. The post office is the most southern post office and the shop the most southern village shop. Villagers of Drummore also showed pride towards their independency and their effort to maintain essential services, such as the coastguard mentioned in section 4.3.2. The theoretical framework indicates that pride is a result of place attachment and can be seen as something that enhances resilience. In line with Brown et al. (2003), this feeling of pride leads to more community participation and protective behaviour to sustain these unique qualities. In both villages these unique economic place aspects enhance community resilience.



Both the museum and the harbour are seen as having potential to create new employment and services in tourism that could benefit the whole community. People are concerned about the future of the village if no action is taken to improve these issues. The two examples show that place attachment goes beyond personal interests. People feel connected to the community and that leads to a feeling of responsibility for the well-being of the community.

The above topics all proof that economic issues influence both place attachment and resilience. In the case of Drummore and Wanlockhead the economic context focuses on the availability of services, employment opportunities and development possibilities. An interesting issue of place attachment that is revealed here is that the people/place relation involves more than the individual level, as respondents stated important community issues on their mental maps. This is in line with the statement of Lewicka (2005) that place attachment benefits both the individual and the wider community.

4.3.3 Physical component results

Because the SAC questionnaire does not explicitly measure environmental resilience as an entity, it is impossible to analyse the direct relationship between place attachment and resilience from the quantitative data. Only one question from the questionnaire was linked directly to physical place aspects. On the SAC question ‘how much do you use green spaces and appreciate the natural environment?’ both villages received an average score of 7.3 from the interviewees. No remarkable differences between long-term residents and newcomers were observed. Both communities are situated in a unique natural environment, which is highly appreciated by the residents. This corresponds with the findings of Brehm et al. (2004) who suggest that this shared interest in the natural environment can serve as a common ground for community projects.

Both villages however appreciate different environmental aspects. In Wanlockhead the focus is on the nature, it’s geographic location and the historical buildings. In Drummore people focus besides the nature on the current community buildings such as the harbour and the gateway garden. Figures 4.13 and 4.14 shows how environmental resilience is linked to place attachment codes in both communities.

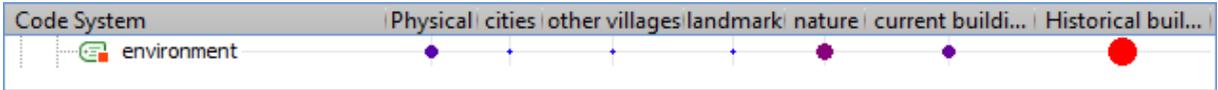


Figure 4.13 Environmental resilience in relation to physical place attachment codes in Wanlockhead

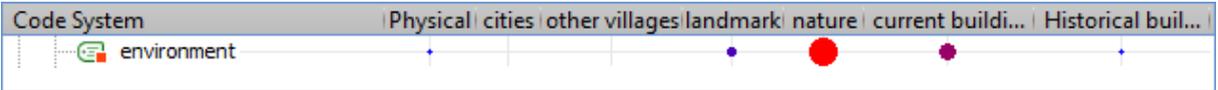


Figure 4.14 environmental resilience in relation to physical place attachment codes in Drummore

All newcomers from Wanlockhead mentioned the house and the natural environment as being the main reason for moving to this village. In Drummore 3 of the 5 newcomers came to the area because of the environmental aspect, but for all of the availability of services was the main reason for choosing Drummore specifically.



The geographical components of the Wanlockhead area are appealing for several reasons: close to the border with England, close to the cities of Glasgow and Edinburgh and in a natural rich environment. The respondents from Wanlockhead are proud to live in the highest village of Scotland. Newcomers did not choose specifically for Wanlockhead at first, but fell in love with the unique houses and scenic views. The following quotes give an impression of what brought these people to this village:

[Pointing at his mental map] Down there is the reason why we came: the Mennock Pass. It's a brilliant road all the way to Sanquar. We were in the Mennock and it reminded us of home. This is the sort of surrounding where we used to live. It reminded us of the place we know. We also lived in a flat place of Scotland but we didn't like that. We saw this and thought: this is for us! We've been here three years now and my wife hasn't started packing boxes yet. Normally she tends to pack her bags after 3 years, so that really says something.

(Respondent W3, male, age 65 - <70, newcomer)

We bought the house here with the intention to retire here some day. We used to come for weekends and holidays. We told our neighbour we would maybe want to come here sooner. Because every time after the weekend we were more and more reluctant to the idea of having to go back to Manchester. Every time that we were here for the weekend we just didn't want to go back.

(Respondent W6, female, age 65 -<70, newcomer)

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The above quotes show how the people sort of 'fell in love' with the landscape of Wanlockhead and felt a strong connection to the location. These results correspond with the idea of Cutter et al. (2008) who state that having a connection to the land is an important factor for place attachment. In the case of W3 this connection originates from its familiarity, a reminder of home. Figure 4.7 shows that his resilience is also mostly based on the environmental aspects of Wanlockhead. For respondent W6, the landscape is an escape from the hectic city towards a more peaceful environment. This again shows a similar result as Brehm et al. (2004) who stress the importance of the natural environment in attracting in-migrants to the area.

None of the newcomers in Wanlockhead or Drummore were specifically looking for a house in this village, but saw the entirety of Dumfries & Galloway as a potential new home. In the case of Wanlockhead the village is based strategically between the two largest cities of Scotland. This has positive results on inhabitants, as they are able to commute to work or visit family easily. In the case of Drummore however, its geographical location causes more negative than positive implementations. Drummore is far more remote and offers problems for inhabitants. Respondent D5 will even move houses in a couple of years to live closer to his family. Moving out of Drummore is for him personally a hectic and negative change, which decreases his level of resiliency. Respondent D5 has lived his whole life in Drummore is very much aware of the natural surroundings. He feels a strong connection to his farmland and the surrounding area:



How much do I appreciate the natural environment, you ask? I work in it! I use the green spaces all the time. It's where I grew up. I had a choice; I could have gone somewhere else. Which I did, I studied. Could have gone somewhere else, but agriculture is in my blood. During college I was distracted by the guy outside cutting the grass, which was far more interesting.

(Respondent D5, male, age 55 -<60, long-term)

D5 mostly feels connected to the land through ancestral ties. These ancestral ties provided the respondent with a large amount of place knowledge and a certain sense of responsibility for the place. The interviewee is actively involved in many local organisations and is often referred to when people have questions regarding the past of the area. Chapter 4.4.2 provides another quote on this rootedness. However, as mentioned before in the section on physical components, respondent D5 will move out of Drummore:

I'm at a stage now where I want to move back from some things. But I can't seem to get off some things, like my position as chairman of the South Rins Community Development Trust. I want to move back because in a couple of years I will move to Stranraer with my wife when we retire, because she's closer to family and our boys then. She requested this. I'll miss it here but I will do it for her.

(Respondent D5, male, age 55 -<60, long-term)

Because his personal situation is about to change, this respondent is less willing to be so involved in community life. When this respondent leaves the community, a lot of local knowledge will disappear with him. This can have large impact on the community resilience of Drummore.

External threat

Respondent D9 is one of the only few local fishermen in Drummore, whose sense of place is also strongly depending on environmental issues. When discussing the environmental aspects of Drummore and the surrounding waters he becomes passionate and states:

The harbour is an absolute nightmare. We've discussed it a lot. I'm already trying to improve things around here for almost 10 years, but it's only getting worse and worse. Now the government even wants to put up a wind farm around Luce Bay. That would be a disaster for my business.

(Respondent D9, male, age 55 -<60, newcomer)

This respondent gained a lot of knowledge about the local environment due to his strong connection to natural environment. The respondent uses this knowledge in local fishermen organisations and tries to help with the improvement of the harbour. His passion for the wellbeing of the natural environment provides the respondent with a lot of potential resilience for the community. As can be seen in figure 4.8 his resilience is mostly based on economic aspects. It is likely that the absence of a useable harbour and the possible new wind farm will drastically decrease his individual resilience level. The respondent clearly stated that finding a job in fishery was the only



reason for coming to Drummore. The respondent is not strongly attached to the village and would possibly leave the village when he cannot longer work as a fisherman in Drummore.

The disappearance of fishermen from Drummore will also have influence of the level of community economic resilience, as other tourism-related services like the Bed & Breakfast also base their existence on the fishery by housing fisher-tourists. However, because most of the respondents focus strongly on the social place aspects, the researchers surprisingly did not hear many participants about the possible threat of a wind farm in Luce Bay. This may be explained by the theory of Stedman (2002) who states that people will only fight for that aspect which they most appreciate. Drummore respondents are more concerned with the availability of services than the natural environment.

Wanlockhead respondents also did not mention significant environmental threats. Their only concern is the quality of the 'Southern Upland Way', an important walking route that passes through the village, which brings in many tourists. Environmental organisations are in charge of its maintenance but several respondents blame these organisations for neglecting the route. Respondents would be very upset if the walking route disappears, because villagers are regular users of the paths.

The above quotes show that the natural environment mainly offers personal place connection and personal well-being, whereas it only has few implications for community well-being. However, this shared appreciation for the natural environment can benefit community well-being indirectly through its potential as common ground.

4.3.4 Personal component results

The personal components of place attachment show clear connections with the individual resilience aspects as researched by the SAC questionnaire. In both villages it shows that those strongly focusing on personal aspects of place attachment also have a higher level of individual resilience. For Wanlockhead these numbers are 6.6 against 6.2, indicating only a small difference. In Drummore these numbers are larger, those with mainly personal attachment rate 7.6 against those who don't with a score of 6.6. These numbers on individual resilience do not have any relation with the level of community resilience.

Availability of services

The availability of services, as mentioned in the economic components section, also has implications for the personal component of resilience. Especially the access to medical care is seen as an important item. Both respondent W6 and D6 are very content with their life in the villages at this time. However, they are not sure if they are still able to live here when they need more medical care in the future. When asking about the doctor's surgery that's drawn on their maps, the respondents reply:

I am happy with my live here now. But when you get older here and as I live by myself, it might be hard. I might move to a place where there are more services.

(Respondent W6, female, age 65 -<70, newcomer)



Yes, that's important to me. Unfortunately I still need a lot of medication. The fact that it's there is amazing. It's not too far to walk even if you're not feeling well. I'd be pretty upset if they would decide to combine us with Sandhead, the next village. I choose for Drummore because the doctor's surgery is so good here.

(Respondent D6, female, age 60 -<65, newcomer)

These respondents are aware of their age and what implications this might have for the future. Dependency on health services is likely to change their resilience level. These examples prove that resilience is dynamic as mentioned by Hegney et al. (2007).

Personal well-being

Respondent W7 and W9 provide two other examples of drastic changes in the personal situation, which influences both their personal wellbeing and their contribution in the community life:

See, I'm divorced. My ex-wife and kids live in the city. This has changed my life completely. I still have my life here which I enjoy, but I also want to spend time with them every now and then. That's another reason why I'm not so involved. I don't have the time.

(Respondent W7, male, age 45-<50, long-term)

I used to be involved in everything, now I'm involved in nothing. [...] Up to 15 years ago I used to work a lot more, but I overworked myself. That's also the time I split up with Ann. So I don't want to get too involved in things in the village anymore because I don't want this to happen again.

(Respondent W9, male, age 50-<55, long-term)

Whereas the above respondents perceived negative changes in their well-being, others experience improvement during the recent years because of the 'peace & quiet' of this rural lifestyle. Respondent W2 explains the benefits of peaceful community life:

When we came here, we wanted a quieter life. We live high up, no floods, so it's safe. The south of England is very competitive and a hard life, we wanted to get out of that. We are now only an hour away from two amazing cities. We wanted peace and quiet, put the clock back. And still have a community, like we know from our time when growing up. We don't have many modern facilities here, but we're also not looking for it. We don't want to live next to a supermarket. We also really enjoy the natural environment, that's probably the main reason we live here. It's so peaceful and quiet.

(Respondent W2, male, age 65-<70, newcomer)

Similar to respondent W2, the example mentioned in section 4.3.2 about the rural being beneficial to the mind, these respondents gained personal well-being by a change in their lifestyle. Both respondents have lived and worked in cities, realising that they did not enjoy that lifestyle. Moving to Wanlockhead is for them beneficial as they now enjoy a slower pace of life, have contact with neighbours enjoying the outdoors. This personal well-being and feeling comfortable living in this village was for them a reason to become active in community life and bring in ideas at community



council meetings. These, and other respondents, state that living in other places has been beneficial as they are now able to identify important community aspects and have ideas about improvement. This awareness increases both the personal resilience as well as that it increases community attachment. It does not directly influence community resilience, as the respondents come for the peace & quiet and are not looking for over-involvement in activities or committees.

The topics discussed above all influence personal resilience. The factors that influence resilience at the personal level are personal health, dependency on services and the distances to services or relatives. The topics mentioned above and in the interviews correspond with the intrapersonal resilience factors that are mentioned by Hegney et al. (2007). These findings are consistent with those of Gwimbi (2009) who wrote that for a community to be resilient, its members must have the capacity to bounce back. Community resilience building should not underestimate the importance of individual resilience. As stated in the theoretical framework, community resilience is often focusing merely on the economic, physical and cultural capitals in a village (Heijmans et al., 2007) but neglecting the individual component. Some of these intrapersonal resilience factors are however impossible to plan or adapt to, as health problems are unforeseen.

4.4 The role of the past in resilience building

Next to the above-mentioned indicators of place-based resilience, this section will explore one component more detailed. Both place attachment and resilience literature give attention to the role of the past. Both theories have showed varying negative and positive results in previous research about the connection between place history and resilience. The section below discusses both the negative and positive implementations with regards to history with the place. The concept of rootedness is analysed with regards to resilience. Furthermore, the difference between old and new residents and their role in resilience building will be discussed.

The results of the SAC questionnaire show different results for the two villages. In Wanlockhead, newcomers (those who have no lifetime history with the place) show a higher level of overall resilience than the permanent residents who have lived (nearly) all their life in Wanlockhead. Newcomers rate an average of 6.2 whereas the long-term residents only score 5.1. Newcomers are also more resilient on the social individual level compared to long-term residents. Newcomers score 8.3 against only 6.1 of the long-term residents. Respondents of Drummorie do not show differences in their level of place attachment. Both old and new residents rate their overall resilience level at 6.4. The causes of these large differences in resilience levels will be explained below.

4.4.1 Rootedness

The figures below show the division between subjects that were important in the past (history related subjects) and subjects that currently play a role in the daily life of the respondents. Figure 4.15 and 4.16 show the relation between past/present issues and resilience. When comparing the villages it becomes clear that respondents from Wanlockhead refer more to the past than their counterparts in Drummorie. In Wanlockhead the focus of history related issues is on both the social and the environmental aspects of resilience. In Drummorie however, only social related issues are discussed.



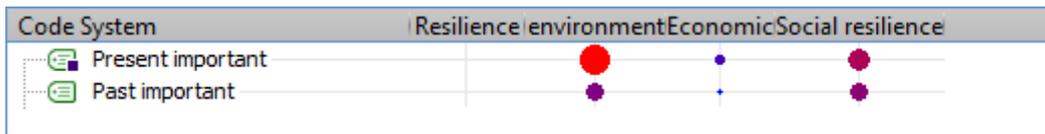


Figure 4.15 Past and present importance in relation to resilience - Wanlockhead

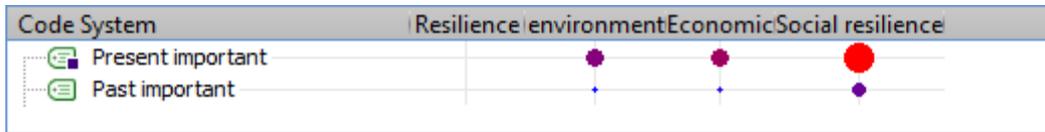


Figure 4.16 - Past and present importance in relation to resilience - Drummore

Figure 4.17 and 4.18 below show the balance between the amount of historical issues and current issues that are discussed during the in-depth interviews. For each respondent, the large dots show where the emphasis of their place attachment is based.



Figure 4.17 - Division past / present Wanlockhead participants

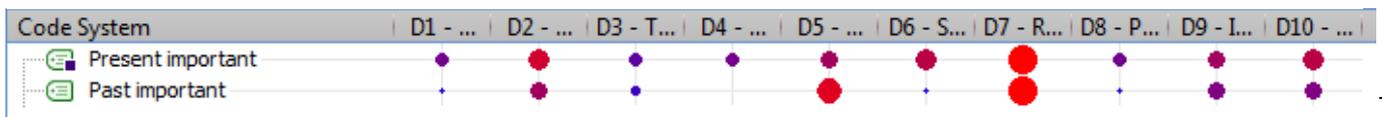


Figure 4.18 - Division past / present Drummore participants

The code 'history' is mentioned often in relation to social resilience in Wanlockhead. This code relates to memories, stories, place history and the like. History plays a large role in this community and is related to several resilience components. The issues that were mentioned in Wanlockhead with regards to historic importance are mainly based on storytelling, pride, past jobs, historic or removed buildings, items that have changed over time. The focus however is mostly on historic buildings that are currently still there and help to tell the story of the past.

The above figure 4.17 show that in the case of Wanlockhead only the long-term residents W7 and W9 strongly emphasise on history related issues. These are mostly childhood memories, places where they used to live and houses or places that have changed through time. The third respondent who can be referred to as a long-term resident, W4, however, does discuss items related to the past but she is also very much aware of current issues. Therefore her results are more balanced.

Figure 4.18 also shows that newcomers mention historical items. These items are mostly related to the mining history, as many houses and the museum remind people about this on a daily basis. In section 4.3.2 regarding the physical place aspects this pride towards the place history was already shortly mentioned. In the mental maps and interviews, both long-term and new residents state to be fascinated by or interested in the place history. The quotes below touch upon several historic items and how these are important for the villagers:

But the main important side is the Symington Steam Engine Site next to it, where the first steam engine was created. That's a very important site which is not known at all. Nothing is done about it at the moment. The only reason I know is because of one of my neighbours. He was born here and knows more about this place than anybody else here. He told me about that site.

(Respondent W2, male, age 65-<70, newcomer)

There is another little building about there somewhere which is the one on this picture [showing an old house in a history book]. That's what we used to call here a killing house. [...] I know that doesn't sound very nice but it's a piece of physical history in terms of buildings. I know this because of my knowledge of buildings and I read about this in someone's written memories of this village.

(Respondent W3, male, age 65-<70, newcomer)

The Library is the most important building in the village. Because it's been here for 250 years, not in that building, but the library has. But the library is significant because it was the men that started it. They started it for themselves and its very much part of the village life. They build it; they worked hard and paid for it by themselves.

(Respondent W4, female, age 45-<50, long-term)

The above quotes show that the history of Wanlockhead is very much alive among the inhabitants, both long-term and newcomers. Many inhabitants are able to tell detailed stories about the past. Long-term residents have gained knowledge about the past through family history, other have learned it because they worked as a tour guide in the museum. The museum helps in spreading this story, but also word of mouth is still used.

The place history goes further than only the mining museum, as the first two quotes about the Symington Steam Engine and the 'killing house', discuss places that are not visible to the eye of the researcher. Only storytelling (or dairies in the case of the killing house) keeps these places alive. This storytelling helps people to become aware of the place history and enhances the inhabitants to take care of the build environment. The SAC questionnaire revealed that people take good care of their houses and find it important that the museum remains. Respondent W5 even mentions during the in-depth interview that he finds it important for the community that the village becomes better exploited, as mentioned in section 4.3.2. This corresponds with the results of Schein (2009) who states that storytelling helps to create a sense of belonging and a feeling of responsibility for environment. Moreover, the notion of Lewicka (2005) regarding the benefits of having interest in the roots is true. Those participants who showed great interest in their roots and interest in place history also showed a stronger place attachment on the issues of environment and social aspects. In turn this contributes to community resilience, as they said to undertake more action in maintaining and taking care of the natural and build environment.

The fact that also newcomers show such an extensive interest in the place history is against the idea of Mallki (1992) that only those who have roots in the place show interest in the place history and feel a sense of belonging. From this example it seems that having 'roots' in a place is not a condition for being resilient.

In Drummole the historic issues emphasise on different place aspects. Only the Old Kirk is mentioned as being a historically important place. Several people have ancestors buried there. On top of that,



the church still has a very active community, which means that the church is also important in the present. Other history related subjects are all concerning the recent past. When talking about the past, most respondents refer to services that have disappeared, buildings that now have a different function and activities in which they took part but that have now disappeared. Issues regarding the past are mostly discussed in a depressed tone. People regret that these services have left the area. The disappearance of services leads to more dependency on other villages and an unwanted change in the lifestyle of the respondents. Respondent D9 is affected by resent closure of the garage.

Even the petrol is not in Drummore any longer. Somebody would have to go up to Stranraer to get petrol. So that's another service disappeared from Drummore. I used to use the garage a lot. (Respondent D9, male, age 55-<60, newcomer)

In some cases, places of the past are positively mentioned in relation to social resilience. Respondent D3 for example owns many of his current social contact to his job. His job had a very social function, which is still important for him today.

This section shows that the past indirectly influences resilience both positively and negatively. All three aspects of resilience are influenced by historic issues, from which the social aspect is mentioned most frequently. Place attachment gained through an interest in roots or sense of belonging influences individual and community resilience.

4.4.2 The role of the past in community participation

Besides rootedness, chapter 2 also distinguished a relationship between resilience and community participation. Schwarz et al. (2011) emphasises the importance of grass root leadership and community participation as an important characteristic of resilience. Norris et al. (2008) adds that community leaders are usually those with a high level of place attachment. This section explores whether the factors of place attachment that can play a role in participation and leadership among the inhabitants of these two villages.

Appendix 4 shows an overview of the participants and how active they are in official committees. Taking part in official committees is seen by several scholars (e.g. Lewicka, 2005) as an indicator of personal resilience, as committees also invest and create activities for the benefit of the village. The overview in appendix 4 shows that in Wanlockhead only 4 from the 11 respondents are active in a committee, of which only one long-term participant. In Drummore half of the participants are active, of which 3 are long-term residents.

The long-term residents from Wanlockhead gave legit personal reasons for not joining committees. All of them try in their own way to add to the community, even though none of them is hundred per cent positive about the community. Especially respondent W7 and W9 have strong opinions, which they express during the SAC questionnaire:



The museum has been there for a long time. [...] That was my first job. So the museum has been of importance for me in that sense. [...] But I don't go there myself nowadays. It's an important landmark for the community and brings visitors into the village. People who've visited the museum seem to fall in love with the village. Then they move here. I don't have a connection with the new people. They either stick together or they don't integrate at all. There are certain strong 'klieks'/ groups in the village, I don't like that. I became reserved with people more now.

(Respondent W7, male, age 45-<50, long-term)

I've realised, living here all my life, that people come here because they love the village. And the first thing they want to do is change it. I don't like these internal politics. It bothers me, so I try not to get involved just for my own sake. It's not good for my health you see.

(Respondent W9, male, age 50-<55, long-term)

55

These original inhabitants see how the village has changed over time. Up to 15 years ago everybody knew each other and had close contact with everybody. Now more people move in and live here only a couple of years before they move somewhere else. The long-term residents blame these people for not integrating and not participating in community life. This lack of social contacts has influenced the local residents, as they are now more reluctant to getting enhanced in new contacts. This reaction corresponds with the findings of Norris et al. (2008) who state that place attachment can impair resilience in some circumstances, because the place attachment is so damaged that it affects the well-being of individuals drastically and they find it hard to overcome this disruption.

Both respondents handle these disruptions to place attachment in different ways. Respondent W9 stays out of any sort of formal contact. This is also displayed in his drawing (see appendix 5), as hardly any of the items that he drew represented places of present importance. The respondent keeps things to himself and stays within these memories.

Respondent W7 however is more aware of these changes and still sees opportunities for change and improvement in the village. In section 4.3.2 he explains that he does try to join community activities and express his opinion about village improvements. When asking him about why his still choose to live here even though his job meant he would travel to London half of the year he replies:

I was born here and had a great childhood in this village. The village hasn't done no problems to me. It's my childhood memories really. I just had such a great time and this is where my home is and always will be.

(Respondent W7, male, age 45-<50, long-term)

This respondent is aware of his rich past in this village and still wants to fight for its maintenance. Figure 4.7 also shows that his resilience is mostly based on social aspects. The respondent claims that because he's always out of the village and has seen the world, he can help the village to become better. Because of his knowledge, he can add information that others who stayed all their life within the village are not capable of knowing. These two respondents illustrate



the point made by Lewicka (2005) that higher educated people are more active, because of their way of life. However, this scholar also claims that higher educated people do not stay in villages, which respondent W7 obviously did. When asking how long he lived here, respondent W7 says “*all my life*” even though he lived in Germany and England several years for his work. The respondent feels deeply rooted to this place and therefore came back here. The ‘traditional’ view towards place attachment as mentioned by Mallki (1992) therefore sometimes can still be applied in modern situations.

Building on the idea that rooted people have a stronger sense of place, there should be a distinguishable difference identifiable in community participation between of long-term and new residents. In the mind of Mallki (1992) only those people who are rooted in a place or spend most of their life there (Brown et al., 2003) have a strong place attachment and are therefore more active in the community. The respondents of Wanlockhead however show an alternative outcome. Newcomers are more active in community activities, as can be seen in appendix 4. The outcomes from previous section on rootedness also show that newcomers in Wanlockhead are more resilient than long-term residents.

In Drummore the ideas of these scholars do apply, as it’s mostly the long-term residents who are active in community committees. When asking about how involved they are (and have been), the respondents speak freely:

I use the past and history of the village in several committees. A lot of the people that move in here don't know anything about the history of the place. Our family has lived here over 300 years so my family has a lot of knowledge on what went on in this area. [...] I am the chairman of SRCDT; they won't let me give up my position because I am the one with the most local knowledge here. Some people maybe don't like me, but I can relate to a lot of people. I tend to be the person where people come to, for help. Because newcomers don't know everybody here so they don't know where to start if they need something.

(Respondent D5, male, age 55-<60, long-term)

I am involved in just about everything that happens here. We know almost everybody. But it has changed a lot. We used to know everybody in every house. Now we don't know people the living in the council housing. [...] But personal life is good, its home, we've grown up here. I enjoy it here. We had a navy life for a long time and never really had a home there, so this has always been our home and it still is.

(Respondent D7, female, age 65-<70, long-term)*

**during their position at the navy they have always kept close contact with home, stating that this has always been home.*

Both respondents use their knowledge of the place history in the many community committees in which they take place. The researchers of this project realised during the fieldwork that both respondent D5 and D7 are revered to as natural community leaders, due to their extensive place knowledge and involvement throughout the years. Both respondents are happy to assist new residents and try to activate community members to become active in the village life. These examples show indeed that grass root leadership helps to create community participation among



residents, as mentioned earlier by Schwarz et al. (2011). Furthermore, both residents experience a high quality of life and a strong place attachment, which are viewed by Norris et al. (2008) as characteristics of community leaders.

Whereas Drummore possesses some clear community leaders who are deeply rooted in the place, this grass root leadership is hard to find in Wanlockhead. In the current community council there isn't a long-term resident who has extensive place knowledge. None of the respondents could point out a strong natural leader. The long-term respondents do not respect the current committee boards, as they all mentioned to have problems with the internal politics taking place within the community. The long-term residents view the socio-demographic changes negatively, because newcomers have different ideas about the future of the village. The long-term residents do not respect the current board, as they think it disrespects the social history of the community. Newcomers are not aware of the place history in terms of community life. The focus of the village history is strongly on the mining community, not realising that there are still inheritors of this mining culture currently present in the village. Community participation and local leadership are important factors that can facilitate resilience building (Schwarz et al., 2011). The lack of strong grass-root leadership and community participation can be seen as one of the reasons why the community of Wanlockhead is less resilient than the community of Drummore.

4.4.3 Autonomous or residential village and its influence on resilience

The above quotes and results provide an extensive overview of which community aspects people find important. In many ways, these results show clear links with the theory of Thissen & Fortuijn (1998) about autonomous villages and residential villages.

From the analysis, Wanlockhead can be categorised as a residential village. For most of the residents the residential function plays a central role in their place attachment: the distance to economic centres, the residential quality, the nature and the peace and quiet. Personal resilience is strong and place attachment is mostly based on the personal and physical aspects of place. People take efforts to maintain and sustain the natural environment. The village hardly provides any services, but people are not complaining about this and do not find services very important.

Respondents W2 and W11 already provided examples of this 'residential village' mind-set, being people who wanted to escape the hectic city and go back to a village community lifestyle, where people are no strangers from one another. However, not all newcomers take part in the community, as they have their interest and activities outside of the village.

Especially newcomers live up to this idea of the residential village and create friendships with alike-minded people. The presence of the heritage group in the village is an example of a group of friends who have found a joint interest that creates new ideas and activities for the community. Thissen & Fortuijn (1998) refers to this as 'local consciousness', which is seen as something which people use to define a new society that is unique from elsewhere. The Wanlockhead heritage group is an excellent example of showing pride for the village and being aware of the community in which they live. Drummore also has its own 'natural heritage club' in which old and new residents share their knowledge on wildlife and nature. Brown et al. (2003) mention such history projects as examples that create social integration and community strengthening.

These newcomers have pride for their village in a different respect than the original inhabitants. Long-time residents don't always appreciate the newcomers' lifestyle, because it is different from the original community life. Respondent W7 states:



This place has become a Dormitory Village. People eat and sleep here but everything else they do outside of the village.

(Respondent W7, male, age 55-<60, long-term)

This statement directly suggests what Thissen & Fortuijn (1998) call a residential village. Long-term residents blame newcomers for not participating in community life. In Wanlockhead there seems to be a clash between the long-term and new residents, in which each community group appreciates the village for different reasons. The long-term residents appreciate the village in its autonomous state, whereas the newcomers see the village as a place of residency. Respondents mentioned that a growing number of in-migrants have moved into Wanlockhead the past 10 years, whereas the number of long-term residents is declining. One can say that this village is in a state of transition from an autonomous village to a residential village. It is possible that in a decade none of the 'rooted' villagers lives in Wanlockhead anymore if this trend continues. When this will happen, the village of Wanlockhead will become a residential village and the clash of cultures might fade out.

Drummore is a very different village, and can be seen as an autonomous village in a reduced form. Drummore residents are proud of its independence and self-regulation; residents don't have connections with other villages or cities in the area. The village is more remote and has more inhabitants who have lived all their life in Drummore. Another characteristic of autonomous villages is the dependency on services and job opportunities, which are a necessity to maintain the self-regulative identity. All respondents strongly refer to the availability of services in the place attachment and resilience interviews.

Thissen & Fortuijn (1998) among other scholars refer to autonomous villages as being the more resilient one. This is because resilience asks for grass root leadership and self-regulation. Autonomous villages are in this sense better organised and prepared. However, a long-term resident of Drummore stated that this strong place identity could lead to problems:

The community stays in the past. People who have lived here all their lives tend to stay where they are, they don't travel. And on the other hand, you've got the incomers who take the community for granted; they are not looking for development. They have this idyllic rural image in mind but they don't help to improve things here.

(Respondent D2, male, age 55-<60, long-term)

This strong individual identity of Drummore therefore can also have negative implementations on the quality of life in the village. Whereas Thissen & Fortuijn (1998) states that autonomous villages are good in self-regulation, the inhabitants have the knowledge and experience about how to deal with disruptions. People have not travelled elsewhere and therefore live in a protective environment without being exposed to other disruptions that teach people how to become self-aware and take action. The participants D5 and D7 are seen as community leaders and are an exception to this rule as they are very active for the wellbeing of the community. Both respondents have however travelled elsewhere and returned deliberately to Drummore.

Resilience in Drummore is focused strongly on the maintenance of existing services. In order to maintain these services, people have to keep using them. However, newcomers who have a slightly similar mind-set as those living in Wanlockhead are not interested in these services in the



same way as an autonomous village subscribes. Newcomers are less influenced by disappearing services, as their residential function is undamaged.

In short, because Drummore is a light version of an autonomous version, resilience will be influenced by the disappearance of services and other economic aspects. Wanlockhead on the other hand will experience loss of resilience when the environmental aspects of place are disrupted.

4.5 Conclusions on individual resilience

This extensive chapter provides proof that place attachment influences resilience in many ways. Figure 4.19 below shows a short overview of the place attachment codes and how these are linked to the four dimensions of individual resilience. Which implications place attachment has on community resilience will be further discussed in the next chapter.

In general, those who are socially attached to place are also social more resilient. Those who focus strongly on personal components of place attachment are personally more resilient. Both villages have a strong focus on the social aspects of place attachment and social resilience. Social contact reaches further than having local contacts but also results in local activities, supporting each other and a sense of community.

Respondents from Wanlockhead have a strong focus on the personal and environmental aspects of place, as residential function is for them the most important. The results from Drummore are strongly focused on the local services. These services provide the inhabitants with resilience on both the economic and social level, as the services function as the main social meeting point in the village. In both communities the natural environment is highly appreciated by all community members. Physical place aspects can serve as a common ground for community bonding.

The four components of individual resilience (social, economic, physical and personal) are all influenced by or do in turn influence place attachment. Social and personal aspects receive most attention in both the place attachment and resilience. The level of individual resilience does not inherently influence the level of community resilience.

Having a past with a place or being rooted in a place does not automatically create higher individual resilience. In the case of Wanlockhead, resilience is higher for newcomers. Rooted people are more likely to stay attached to the past, without being able to adjust and adapt to possible disruptions. However, the results also showed several long-term residents that are very passionate about their village and use their place knowledge for community benefits. Newcomers create place attachment though pride for the unique place history of their villages.



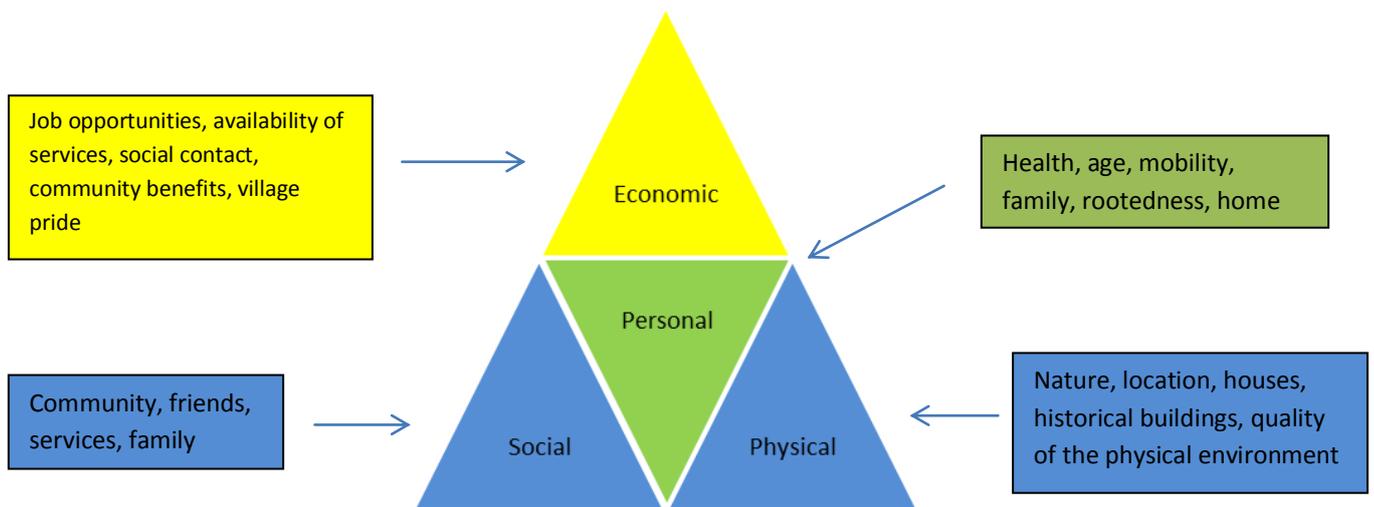


Figure 4.19 Place attachment items linked to individual resilience

These results prove that both place attachment and resilience are based on the willingness to invest. With investing in a location, having interest in the roots and readiness to integrate in the village, people invest in a place; which creates place attachment. Place attachment consequently has positive implementations for individual resilience because this is often seen as the primary reason for making investments in a community. Compensation and multidimensionality play a key role throughout these results, as many components have wider implementations than their own. The results show that respondents each have specific place attachment, which makes people resilient on different aspects. Compensation is the reason why people can still perceive a high quality of life even when they are not resilient in all facets of the concept.



5. Results - Implications for community resilience

The previous chapter explored the relationship between place attachment and individual resilience. The results from the four dimensions from the place-based resilience model as shown in figure 4.19 showed a direct positive relationship between place attachment and individual resilience. However, unlike place theory suggests, length of residence is not an important factor.

This chapter builds further on the results from chapter 4 by discussing the different implementations on community resilience. Theory suggest that place attachment can enhance resilience building because the emotional bond with a place is often the underlying reason for community action and sustainable behaviour (Brown et al., 2003; Lewicka, 2005). However, the relationship between place attachment and community resilience is complex with various interfering factors. Figure 5.1 below portrays a graphic overview of these different implications. This chapter starts by discussing two important implications of place attachment (section 5.1). Both types of place attachment will be linked to community resilience in section 5.2 and 5.3.

5.1 The implications of place attachment for community resilience

Both theory (Devine-Wright & Howes, 2010; Davenport & Anderson, 2005) as well as the results of this research show that place attachment can have two forms: positive and negative place attachment. These two forms are constructed in relation to resilience. Resilience is about “the ability to absorb change and disturbance” (Holling, 1973) and the ability “to bounce back” (Hegney et al., 2007). Linking resilience to place suggests on the one hand that a place should retain its essential structures but on the other hand should also adapt to new situations. Therefore positive place attachment for me stands for the ability to absorb change and to adapt to disturbance. Positive place attachment, henceforth called ‘adaptive’ place attachment, has positive results on resilience. ‘Adaptive’ place attachment results in sense of community, can serve as inspiration and motivation to invest in community and place aspects, and can create a sense of responsibility for the area. This in turn will lead to community resilience.

The second implementation of place attachment is a negative one, meaning that it is not able to absorb change and disturbance. This implementation is hereafter called ‘preservative’ place attachment. ‘Preservative’ place attachment results in protective behaviour to the current place attachments and a fear of loss or change of the existing place aspects. This type of place attachment is not adaptive to changes and not open for new insights. This consequently results in a lack of individual resilience and community resilience.

5.2 Adaptive place attachment

Adaptive place attachment is positively connected to individual resilience. Especially newcomers show a high level of individual social and economic resilience. These individuals do not have a deeply rooted place attachment and thus are not dependent on economic or social aspects of the village. It



is likely that these people will leave the area when their place attachments are disrupted. The place attachment of newcomers is often based on the availability of services in the area and the 'peace & quiet' of the natural environment. When these place dimensions are disturbed, there are not many factors that will bind these people to the village. Due to their lack of 'rootedness', new place attachments in a different setting are easily made. Newcomers are attached to the idea of the 'rural idyll', not specifically to Wanlockhead or Drummole. Their place attachment is mostly based on individual attachments in the first place. After becoming at ease in the place in question, social relations follow from these positive place relations. When these positive place relations are disturbed though, the respondents will most likely also invest less in their social relations.

However, when local place attachment is not being disrupted, newcomers can still become highly attached to their new residency. Newcomers are more aware of their environment since they choose voluntarily to live there. Mobility and in-migration therefore has positive implications for both individual and community resilience, as travelling elsewhere provides new insights applicable in a new community. For the potentially short time-period that people live within a community, they can add positively to place attachment by sharing their knowledge. Therefore, length of residency is not a condition for community resilience.

5.3 Preservative place attachment

The impact of place history receives much attention in literature concerning place attachment, whereas the resilience literature neglects this issue. When connection both concepts, the past plays an important role and should therefore not be underestimated by resilience scholars.

Long-term residents on the other hand often have a very strong place attachment based on rootedness, family, place dependency and a strong sense of belonging. However, these are not always the people who are individually resilient. People with a deeply rooted place attachment risk a lack of personal development, which provides people with the life lessons on how to deal with disruptions.

On the other hand, the results in section 4.4.2 also showed that long term residents use their extensive place knowledge and place history to keep community councils and committees running. These rooted people can be seen as community leaders and therefore full-fill a role in creating community resilience. However, resilience based on a strong history could lead to restrictive behaviour and defensive towards new insights. Rooted people can develop a very protective place attachment attitude by which they want to protect the village against possible changes and development.



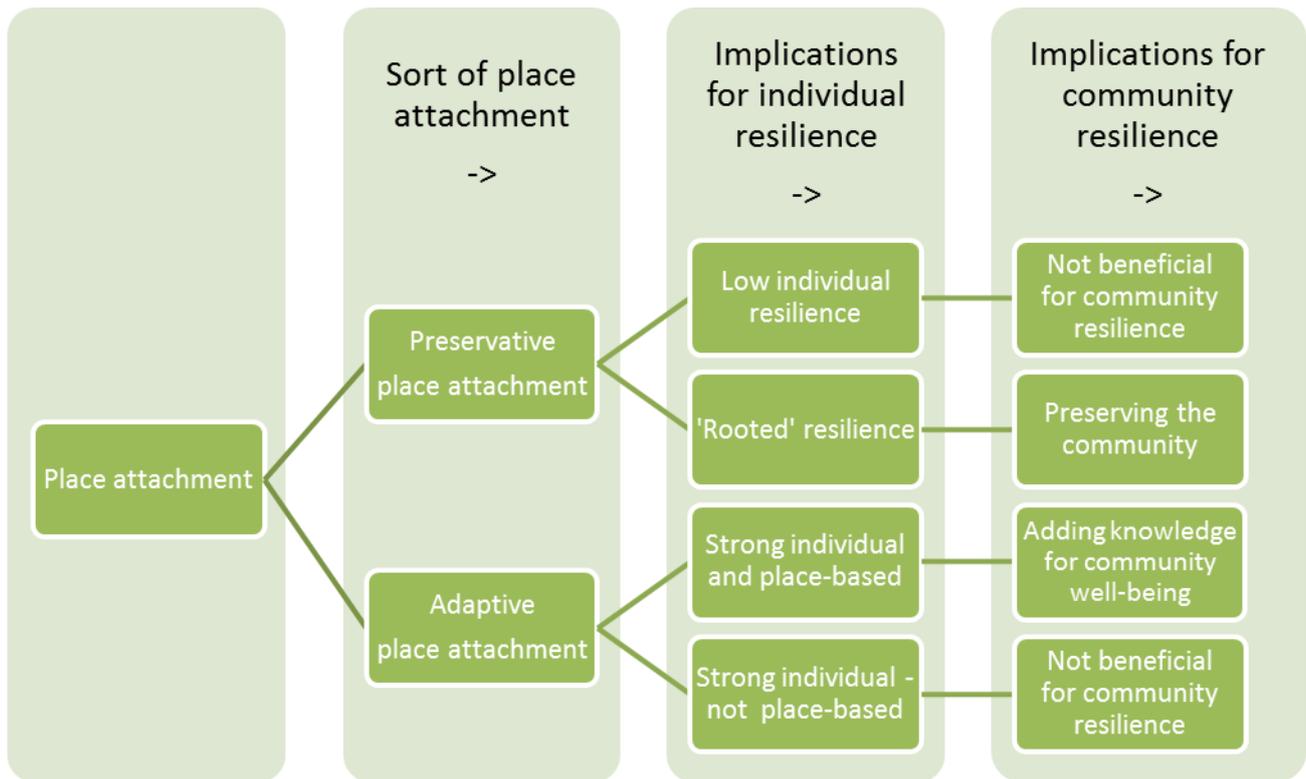


Figure 5.1 Place attachment implications for community resilience

In short, the above figure shows that both preservative place attachment and adaptive place attachment can be beneficial for community resilience. Both newcomers and long-term residents can show a strong place attachment, which eventually can be beneficial for the community. On the other hand, both community groups can also display negative behaviour towards community resilience. It becomes clear from this data is that place attachment has both individual and community implications. Strong individual resilience is not necessary a positive addition to community resilience. Also, rootedness is not related to resilience, despite the strong link between place attachment and rootedness. Rootedness is therefore not the connecting factor between place attachment and resiliency.



6. Conclusion

The results from the previous chapters reveal a complicated relationship between place attachment and resilience. This observation is by itself already interesting as such a proclamation has not been made before in the field of human geography and environmental psychology. This research has explored the relationship between place attachment and resilience on both the individual and the community level and has been analysed through four components of resilience: social, economic, physical and personal components. The following sections provide an overview of interpretations regarding individual resilience, the role of the past as well as community resilience, serving as the foundation for the conclusive answer on the research question of this paper.

6.1 place attachment versus individual resilience

The results from chapter 4 indicate that there is a direct connection between place attachment and individual resilience. This connection is a bilateral relation, as both place attachment can enlarge individual resilience, as well as that individual resilience can strengthen place attachment. The results showed that this bilateral relationship is strongest on the social and economic aspects of place. Those who are socially strongly attached to a place also measured a high level of social individual resilience.

For the components of economic resilience, the availability of services and village pride are the most important factors that strengthen both individual resilience as well as place attachment. Significant for rural areas is that local services also fulfil a social role as meeting place for inhabitants.

Physical place attachment and appreciation of the natural environment is strong amongst all respondents, which is contradicting to the traditional notion of 'rootedness'. The thought that those with a stronger 'connection to the land' (strong physical place attachment) would be more individual resilient does not apply. Both long-term and new residents appreciate the natural environment. In fact, newcomers in most cases specifically choose their residential place because of the beautiful environment. Appreciation of the natural environment enhances both individual resilience and place attachment.

The last individual resilience component consists of personal aspects. These aspects can have both positive and negative influences both place attachment as well as resilience. Unfortunately these individual aspects are complicated for resilience building processes and are in itself an indicator for resilience. Small rural communities can perceive great loss when, for example, a community leader resigns from his duties due to illness. Due to a large retired population in those communities, personal resilience levels are fragile.

In short, with the exception of physical resilience, the level of place attachment influences individual resilience on specific components. Stronger place attachment on one aspect does not automatically effectuate strong overall individual resilience.

6.2 The role of the past

The past plays an important role for both the individual as well as the community resilience. Whereas place attachment literature merely suggests a positive relation between length of residency and



community involvement, this research proves that the opposite is also true. In the case of Wanlockhead, the SAC questionnaire revealed that newcomers have a higher personal resilience level than long-term residents. The results from chapter 4 provide examples of long-term residents who are not actively involved in their community. This lack of involvement is in some cases caused by disagreement concerning the current situation in the village or recent changes in community structure. Long-term residents to have a strong place history and all experience a high quality of life, which are important indicators of place attachment. However, they are not resilient. People with a long history with a place are likely to show preservative behaviour towards the place. This preservative attitude is caused by a fear for place attachment disruptions. These residents perceive the village as an autonomous village, by which a loss of services is directly linked to a diminished quality of life. Their level of resilience depends on economic and social place aspects.

Newcomers on the other hand mostly view the village as a place of residency, by which only direct disruptions to the residential aspects have influence on the individual resilience level. In-migrants do not have a long history with their new residential place and are not 'rooted' in the village. For this community group, an interest in the roots can be beneficial for both place attachment and creating a sense of community. Especially in the case of Wanlockhead, people are proud of the village history and use this as a shared basis for community pride and a sense of responsibility for the community environment. Newcomers express their interest in roots by carrying out activities for community improvement. In this case, place attachment is adaptive and open for new initiatives.

6.3 Place attachment versus community resilience

65 The results from chapter 5 showed that there is no direct relationship between personal place attachment and community resilience. This is due to two interfering factors: the type of place attachment and the level of individual resilience. Figure 5.1 provides a good overview of this complex relation, and can be seen as the core figure of this thesis.

Both preservative place attachment and adaptive place attachment can indirectly be beneficial for community resilience. Moreover, both newcomers and long-term residents can have strong place attachment in turn leading to community resilience. On the other hand, both community groups can also display negative behaviour towards community resilience. Thus, the aspects of individual resilience influence the sort of place attachment and the connection to community resilience. Strong individual resilience is not necessary a positive addition to community resilience.

The previous deductions provide a solid foundation for answering the research question of this paper: *"What is the influence of place attachment on rural (community) resilience?"* The relationship between place attachment and resilience is complex and influenced by several aspects. First, place attachment is divisible in preservative place attachment and adaptive place attachment. The type of place attachment influences individual resilience. With regards to place attachment, resilience should be viewed from a four-dimensional perspective that acknowledges the importance of social, economic, physical and personal aspects.

There is a positive relationship between place attachment and individual resilience. This relationship is bilateral and present across all dimensions. When implementing these results on the community level however, there is no direct positive relation with strong individual resilience. I conclude that there is a negative relation between place attachment and community resilience.



7. Reflection and recommendations

This research has been the first to extensively explore the relationship between two complex concepts. Therefore this research can be seen as a first step in creating a place-based and inclusive resilience policy. This chapter provides a critical reflection on the methodology and results of the current paper. The lessons learned from this reflection can be used for future research about the relationship between place attachment and resilience.

7.1 Collaboration with Scottish Agricultural College

Besides the many advantages of collaborating with SAC, there are also negative implications. This collaboration was useful as it opened doors to community members of Wanlockhead and Drummole which are otherwise isolated research groups. Moreover, extensive research on community resilience on this scale is the first of its kind. SAC possesses far-reaching knowledge on the concept of resilience and is the top-institute with regards to information on rural Scotland. Their insights in resilience enabled me as a researcher to gain a comprehensive overview of the complicated concept of resilience.

The negative implementation of joint research with Scottish Agricultural College is that it restricted the researcher in the methodology and choice of respondents. During a limited time-schedule both the research for the SAC and the research for this thesis needed to be conducted. With SAC as our supervisor we felt the responsibility to deliver good and plenty of data. In some cases happened in the expense of data gathering for this thesis. Moreover, because people previously participated in the SAC questionnaire not everybody was willing to participate in another time consuming research. Consequently, this also leads to confusion on the account of the participants who did not see the purpose of the follow-up interviews. Participants sometimes felt that they were repeating themselves and felt difficulties in concentrating for a second time on these topics. During this second interview, respondents referred to previous conversations by statements such as “like I told you last time”. This complicates the data analysis, as the researcher has to refer to two conversations to gain the complete meaning of their statements. Future research should be even more aware of the possibility of information overload amongst the interviewees.

Collaboration with SAC also caused for restrictions in the applied methodology. The existing questionnaire was an inspiration for this research and only small adjustments could be made. During fieldwork we discovered that several questions did not provide the right type of answers or were not understood by the respondents. Respondents sometimes gave a number in reaction to questions that they did not understand, just for the sake of ticking a box. This leads to misinterpretation of the data and errors in the outcomes of resilience levels. Unfortunately we were unable to adapt the questionnaire, which left us with deficient data. Also, because we could not add a large amount of questions there are now some questions remained unanswered. These are questions with regards to the perception on possible disruptions.

The SAC questionnaire is based on self-assessment, which asks for careful psychological analysis. Personal mind-set and cultural implications play a large role in the provided answers. Some respondents are more self-critical than others. This sometimes leads to an ultimate score given by someone who is not formally active in the community, whereas a committee member is modest



about his own contributions and only marks himself a 6. This psychological interpretation should be taken into consideration when analysing resilience data.

Self-assessment has implications on several aspects. This research was carried out in May 2012 during two very sunny weeks with warm temperatures. Several respondents mentioned that the rain is experienced very negatively, influencing people's mind-set. Some respondents even mentioned these climate aspects in their first association. Interviewees repeatedly phrased things such as "especially during this time of the year" or "especially on days like this", which shows that the time of the year influences people's thoughts on their village. Community life is also depending on the time of year, as discussed in chapter 4.3.1, implicating that people's mind-set is influenced by the seasons. Results on resilience might be lower if this questionnaire was carried out during wintertime.

Moreover, the SAC questionnaire applied the model of Forgette & Boening (2009), which focuses on the social and economic aspects of resilience. My literature study revealed that environmental resilience could also be seen as a separate resilience aspect. For this research it was impossible to measure the impacts of environmental resilience, with regards to place attachment.

Besides the above-mentioned restrictions caused by SAC for his research, the concepts of place attachment and resilience both have restrictions with regards to measurement. This research used a qualitative approach to analyse place attachment. Research on place attachment often uses quantitative approaches, which do not reveal why places are important. The disadvantage of qualitative methods on the other hand, is that concrete and exact measurements are not possible. One cannot simply say which person has a stronger place attachment compared to others. The SAC questionnaire provides quantitative data on resilience, which makes it complicated for the researcher to compare this data with the results of the place attachment interviews. A quantitative research approach would have been useful in order to be able to reveal a direct link between strength of place attachment and strength of resilience.

7.2 Research method

A creative research method was used to start a discussion on important places. The mental maps served as a foundation and structure for the interview and were not intended to be integrated in the data analysis in the first place. However, the drawings revealed unexpected and interesting insights to very personal information. Both that what is drawn and that what is not drawn, is interesting for the analysis. Unfortunately, I as a researcher do not have experience with psychological empirical studies by which I can reveal the deeper meaning of the mental maps. Collaboration with psychology studies might be fruitful for future research on place attachment through mental maps. The method has proven to be a successful research method for discussing and expressing a personal relation with place. The drawings provided new insights, which had not shown up during the SAC questionnaire.

However, in some cases the drawing was made almost directly after the SAC questionnaire. Despite the creative approach, which aimed to take people out of the resilience mind-set, some respondents were not able to see the mental map assignment separate from the resilience research. It is likely that respondents provided social-expected answers.

As aforementioned, both research methods were time-consuming. This can be seen as a reason why younger respondents did not participate in the follow-up interviews. This caused a lack of young respondents, leading to an incomplete population sample, which is not representative for all community groups. Researching younger participants, between the age of 18 and 35 would have



been very interesting, as several researchers state that younger people have different place attachments. Furthermore, this research was therefore unable to analyse the relationship between age and the level of resilience. Interviewing young adults is important for future research, as it could help in gaining more insight in their contributions to community resilience.

Furthermore, this research might have focused too much on personal issues, whereas the implications for the community are not fully explored. The resilience research method is based on self-assessment and place attachment in itself is a very personal concept, which could clarify a personal approach. The personal dimension is often dominated by social place aspects. Manzo & Perkins (2006) wrote, as discussed in chapter 2, that community planning consists of 4 capitals: physical, social, political and economic. The social and economic capitals, neglecting the political place aspects, dominate this research. Future research should keep this into account, as both internal and external political decisions may have large impact on the community.

Finally, it is necessary to reflect critically at the positionality of the researcher. Data analysis was time-consuming due to language and cultural barriers. This research is carried out in a region of Scotland where the researcher has never been before. The dialect, local culture and manners are not familiar for the researcher. Besides, English is not the first language of the researcher. This may have resulted in misinterpretation of statements and explanations getting lost in translation. The interviews are transcribed and analysed extensively on paper, whereas the spoken statements might have had different denotations. Not only language might have caused a barrier for the outcomes of this research. Also the large differences in age might have influenced the interpretation of the data. There is a large age gap between the researcher and the respondents. It is therefore harder for the researcher to understand what the respondent says and analyse this information correctly.

7.3 Implementations for managing resilience

This report again proves that the people/place relation influences both individuals and communities in complex ways. Several scholars in the field of place attachment already wrote years ago that the emotional bond between people and place should not be underestimated (Lewicka, 2011; Davenport & Anderson, 2005). Those same authors argue that researching the people/place relation is time consuming, but its results are beneficial for planners, managers and community leaders. This document argues that resilience is influenced by place attachment; therefore this concept should not be underestimated in researching resilience.

Many policy documents on preventing population decline are aimed at preserving the current residents. This research suggests that length of residency and rootedness is not necessarily beneficial for building resilience. When managing for resilience, preservation does not have priority.



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Appendices

This research contains a total of 5 appendices. These documents are provided in a separate folder. An overview of the document names and order can be found below. Full transcripts of the interviews and MAXQDA10 analysis are available by the researcher. For information please contact through saskiazwiers@gmail.com.

- ❖ Appendix 1 – Added questions to SAC questionnaire
- ❖ Appendix 2 – All place attachment segments – village overview
- ❖ Appendix 3 – Place attachment in relation to resilience – village overview
- ❖ Appendix 4 – Active community members– village overview
- ❖ Appendix 5.1 – Mental maps Wanlockhead respondents W1 to W11
- ❖ Appendix 5.2 – Mental maps Drummorie respondents D1 to D10



Appendix 3 - Resilience in relation to place attachment items

Figure 1: Wanlockhead

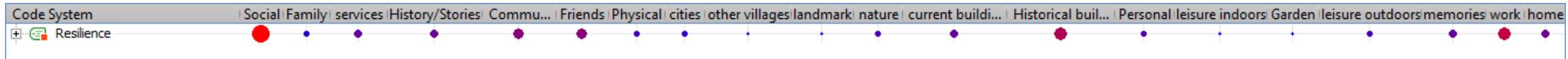


Figure 1 resilience in relation to place attachment items - Wanlockhead

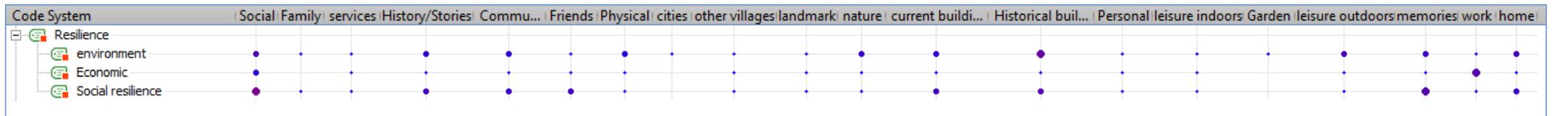


Figure 2 resilience overview per segment - Wanlockhead

Figure 2: Drummore

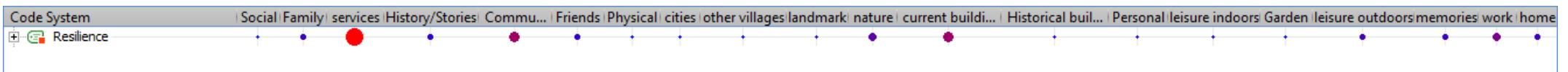


Figure 3 Resilience in relation to place attachment items - Drummore

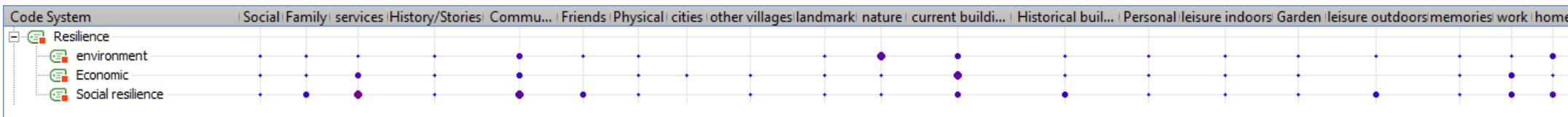


Figure 4 Resilience overview per segment - Drummore

Appendix 4 – overview of respondents and committee participation

Wanlockhead

No.	Category	Active in Committee	Comment
W1	newcomer	Yes	Several committees
W2	newcomer	Yes	Chairman friend of the museum
W3	newcomer	No	Used to be trustee in museum
W4	Long-term	Yes	Two committees but remains objective due to job in museum
W5	newcomer	No	But did friends of museum
W6	newcomer	Yes	Secretary Community Council
W7	Long-term	No	due to job
W8	newcomer	Yes	Several small committees
W9	Long-term	No	due to job and health
W10	newcomer	No	/
W11	newcomer	No	But did first responders

Drummore

No.	Category	Active in committee	Comment
D1	newcomer	No	Remaining objective due to job
D2	Long-term	Yes	several committees / coastguard
D3	newcomer	No	Does organise fishing event
D4	newcomer	No	/
D5	Long-term	Yes	Chairman Community Development Trust
D6	newcomer	No	Has been, now is still actively involved
D7	Long-term	Yes	Many committees and voluntary work
D8	Long-term	No	active in committee annual flower show
D9	newcomer	Yes	Harbour - / regional fishermen committee
D10	Long-term	No	Runs the local Facebook group

W2

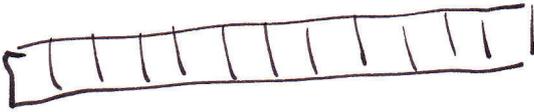
Box
Bowling Green

Box

< Symington
Steam Engine Site

Friend

Box
Friend



Friend

MY HOUSE

Community
Centre

MUSEUM

PUB

oldscour

Box
Mines Library

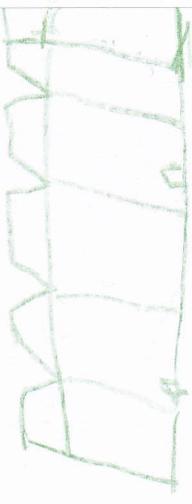
Box
MINE

W3

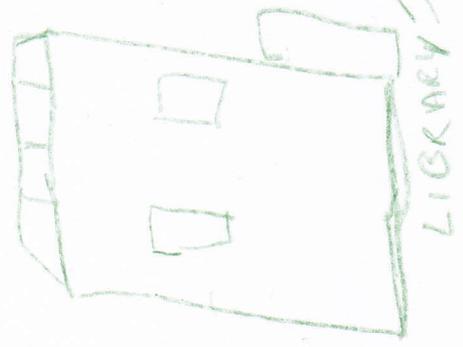


David Hutchinson
Imper Nem 3

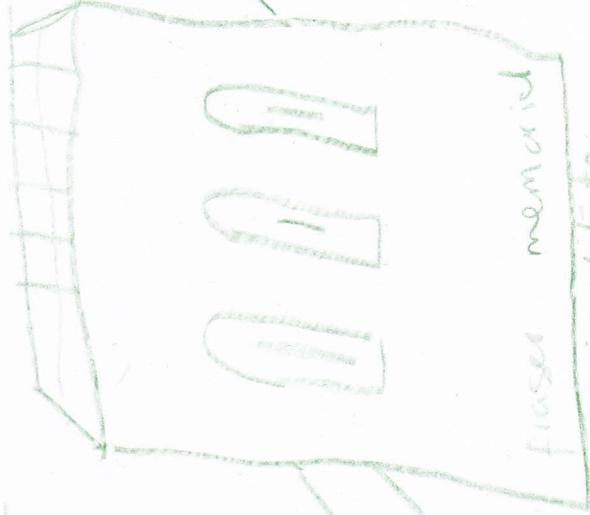
W4



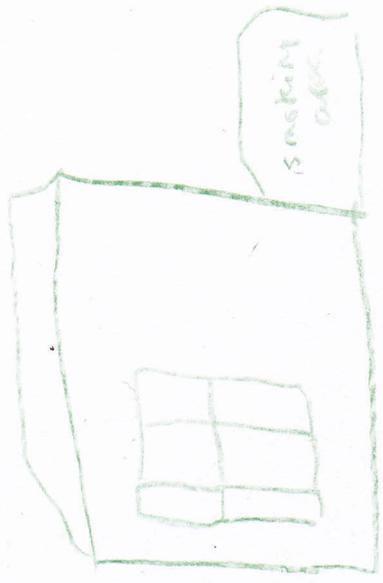
Goldscar
Row



LIBRARY



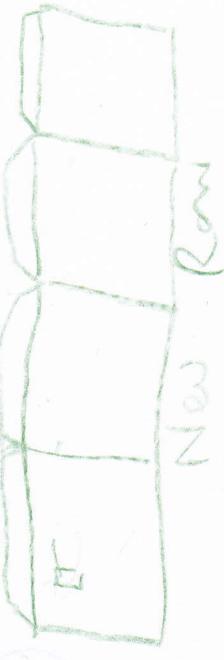
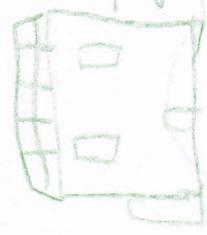
fraser
memorial
institute



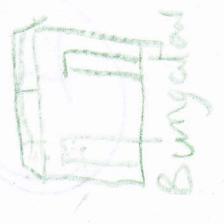
Smoking
club

Pub

Grasside



New Row



Bungayton

Bradbabald

Opposite street

fraser memorial institute

W6

Lily Bank

MAL'S HOUSE

John's House

LONG ROW

LOTUS LODGE

Geatsesmy Road

Community Centre

MUSEUM

ROBERTA ELLEN CHURCH ST

BURN-STREAM

Yardley Mill

M. Mackay



W7



[Large scribble]

W8

W8

AVON = CUSTOMERS
= DOG WALK



00

f Beam engine
MINES
↑

RADAR RIDE 2009

SUS09 NATS

OPENING TIMES 12/07

HQ/Registration 0530
Community Centre 0700
Hidden Treasures 0600



Anyone wearing an ID like this is part of the RADAR RIDE Team and is here to help.

WG

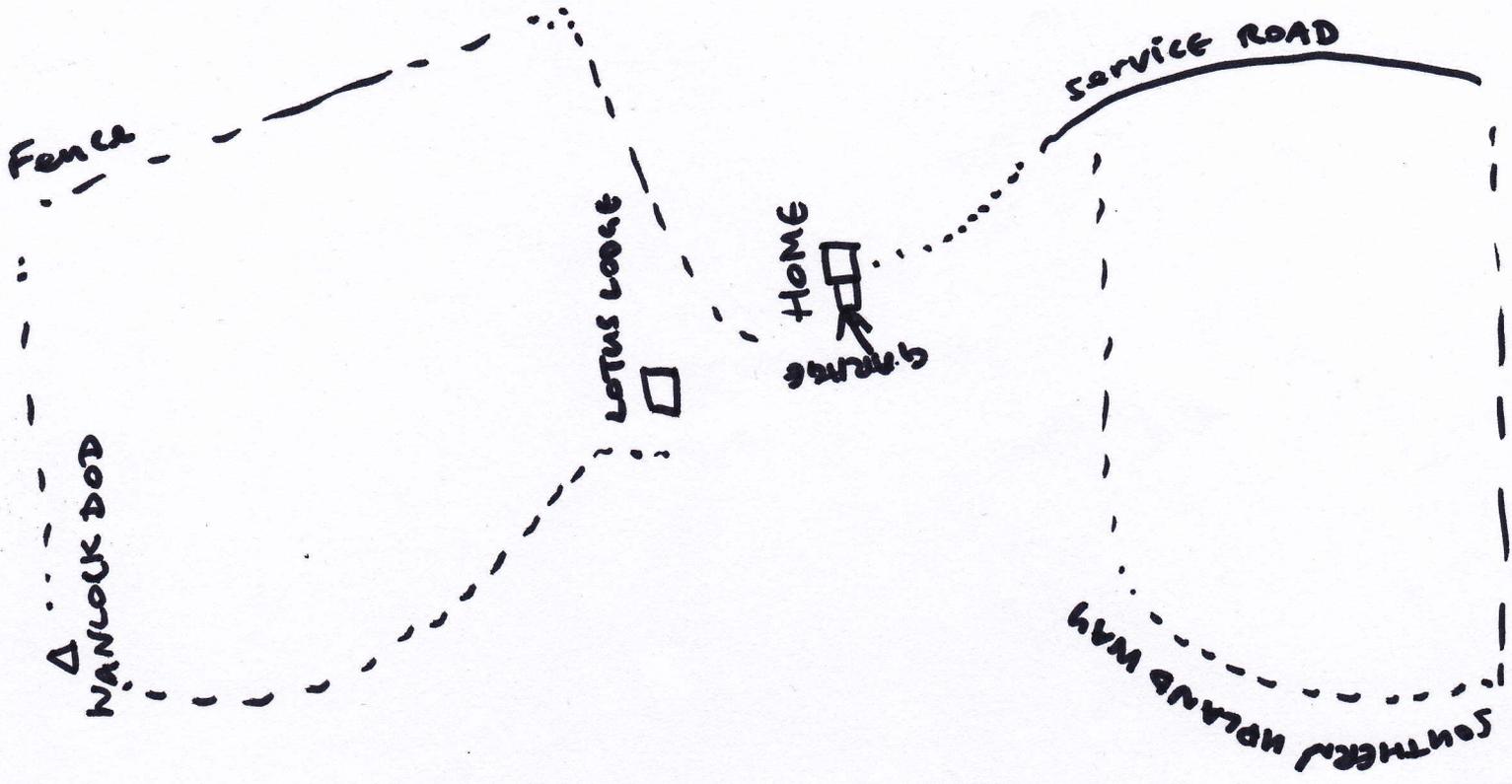
Jackie Vebidom
Information II



W10

Leadhills
□
village Hall

Handwritten notes:
part of (circle)
Cumbria Hall
of road
map of road
map of road
map of road



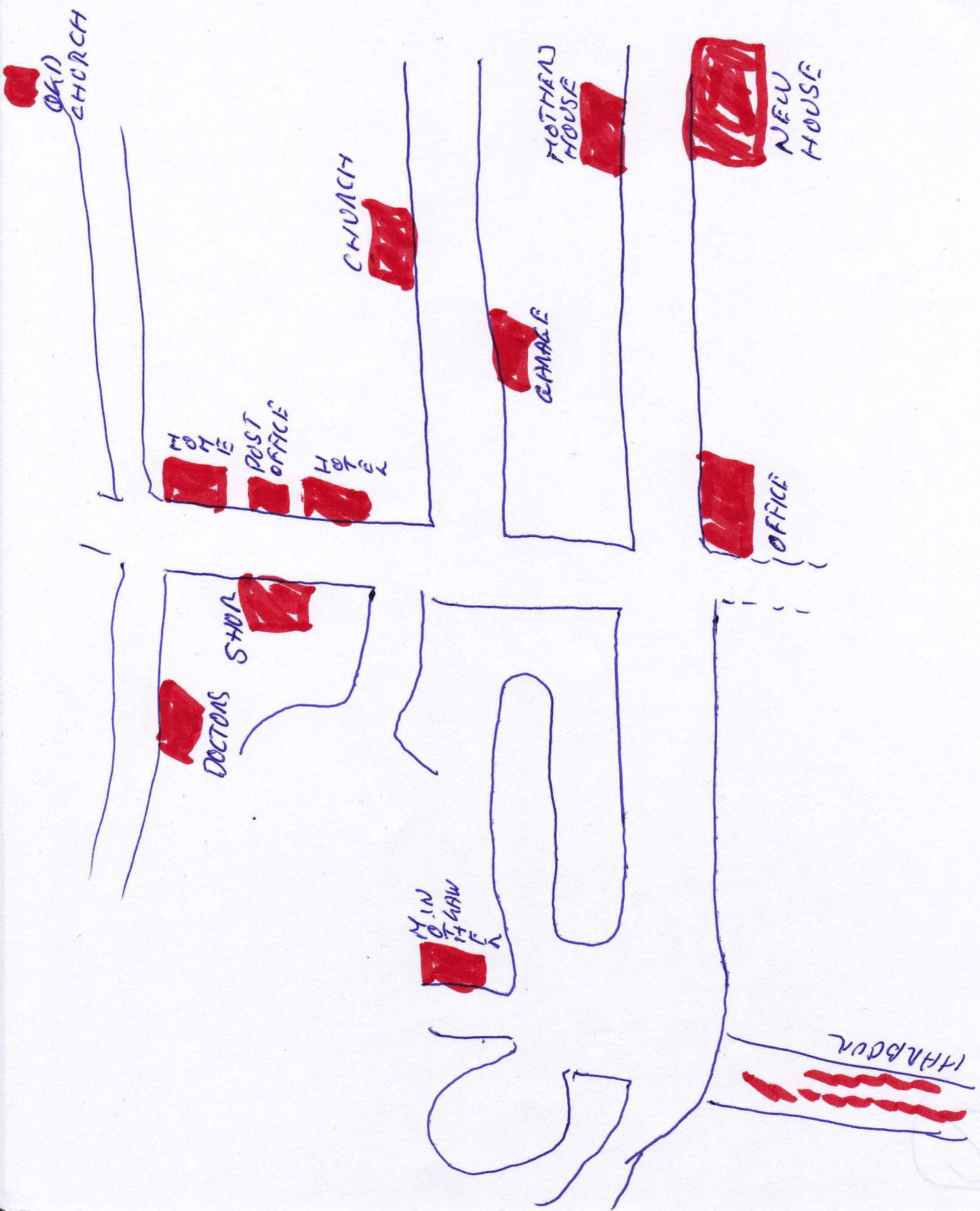
②

W11



D2

APR 2004
WPC NCM
D
D



D3



3

104

Don't forget
infestation
SBRM 150

cast W/ tower



infestation
cast W/ tower

Cement
Hall
House

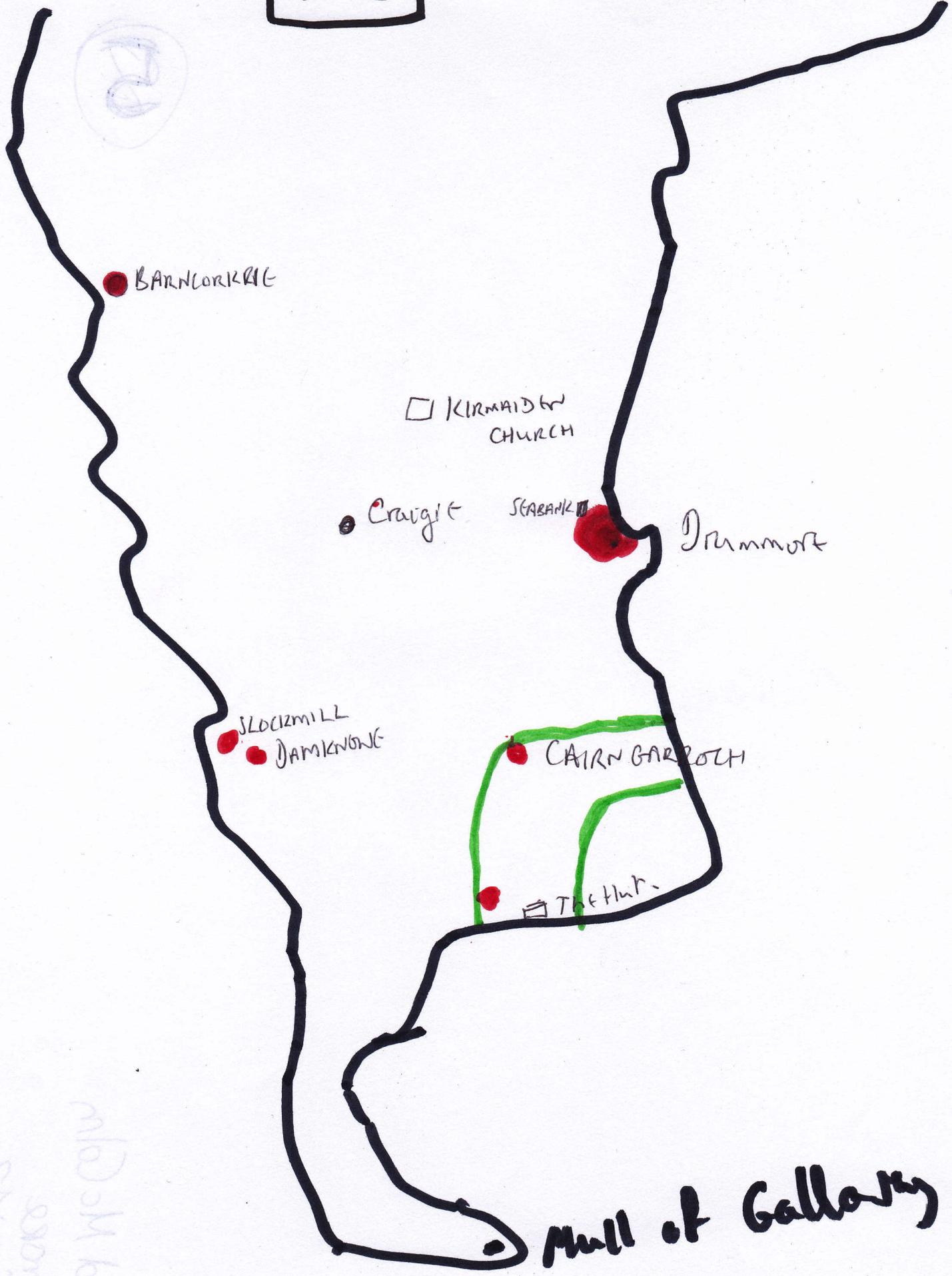
Quartz

HALL

HOUSE

Hall

D5



Mission St
St. Vincent
Damen
Damen
Damen

Mull of Gallary

[06]

STURE FOR WALKS

GATEWAY GARDEN

CHURCH HALL

SCHOOL - WHERE LOTS OF EVENTS HAPPEN

STAIR ST.

CHURCH

POST OFFICE

HALL (YOH)

INFO-CENTER

SHOP

MILL ST

[]

V. NICE! GARDEN!

SWEETERY

← PICK BERRIES!

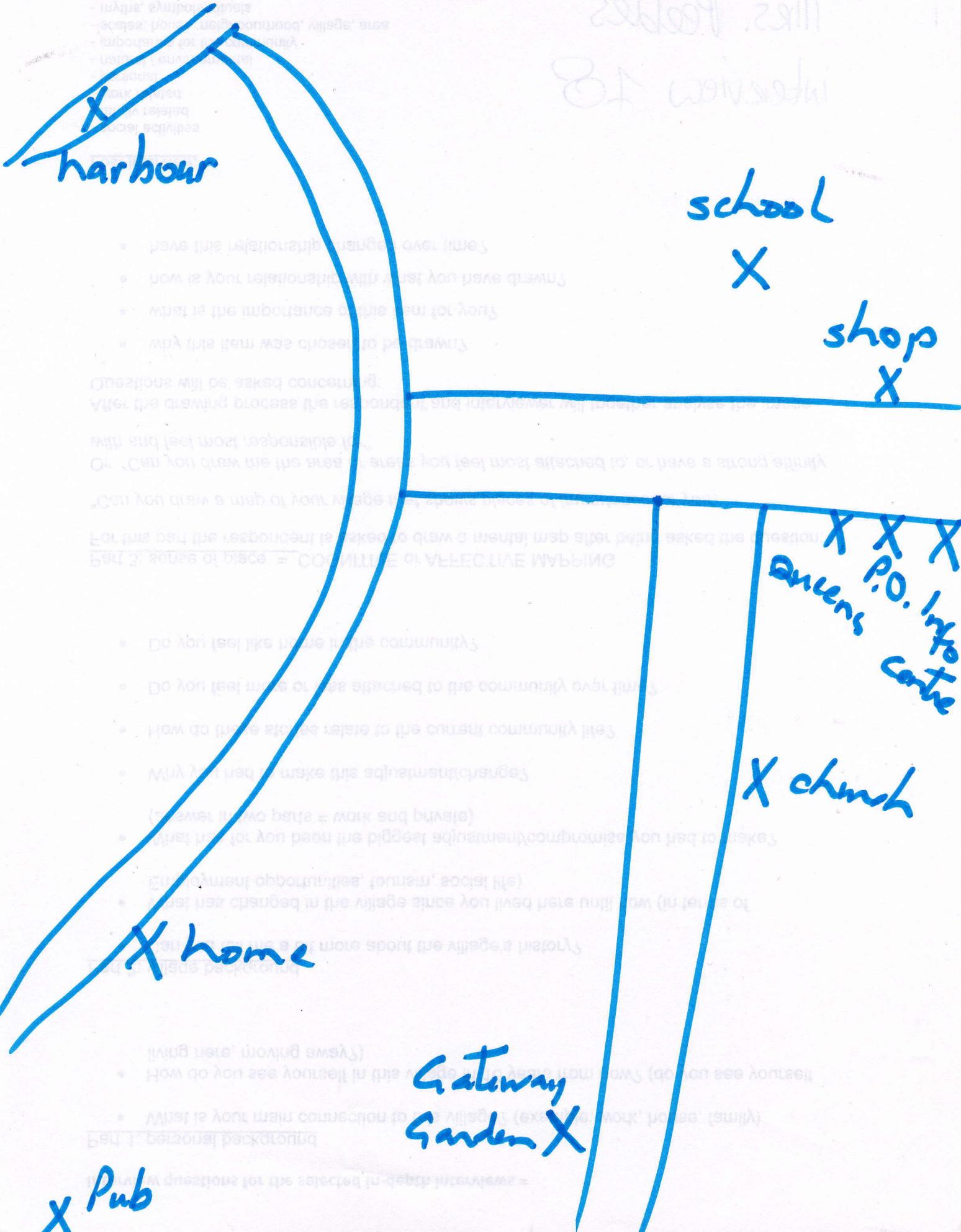
← WALK

2014 2015
MT MONITOR CENTER
DEVELOPER IMPROVEMENT

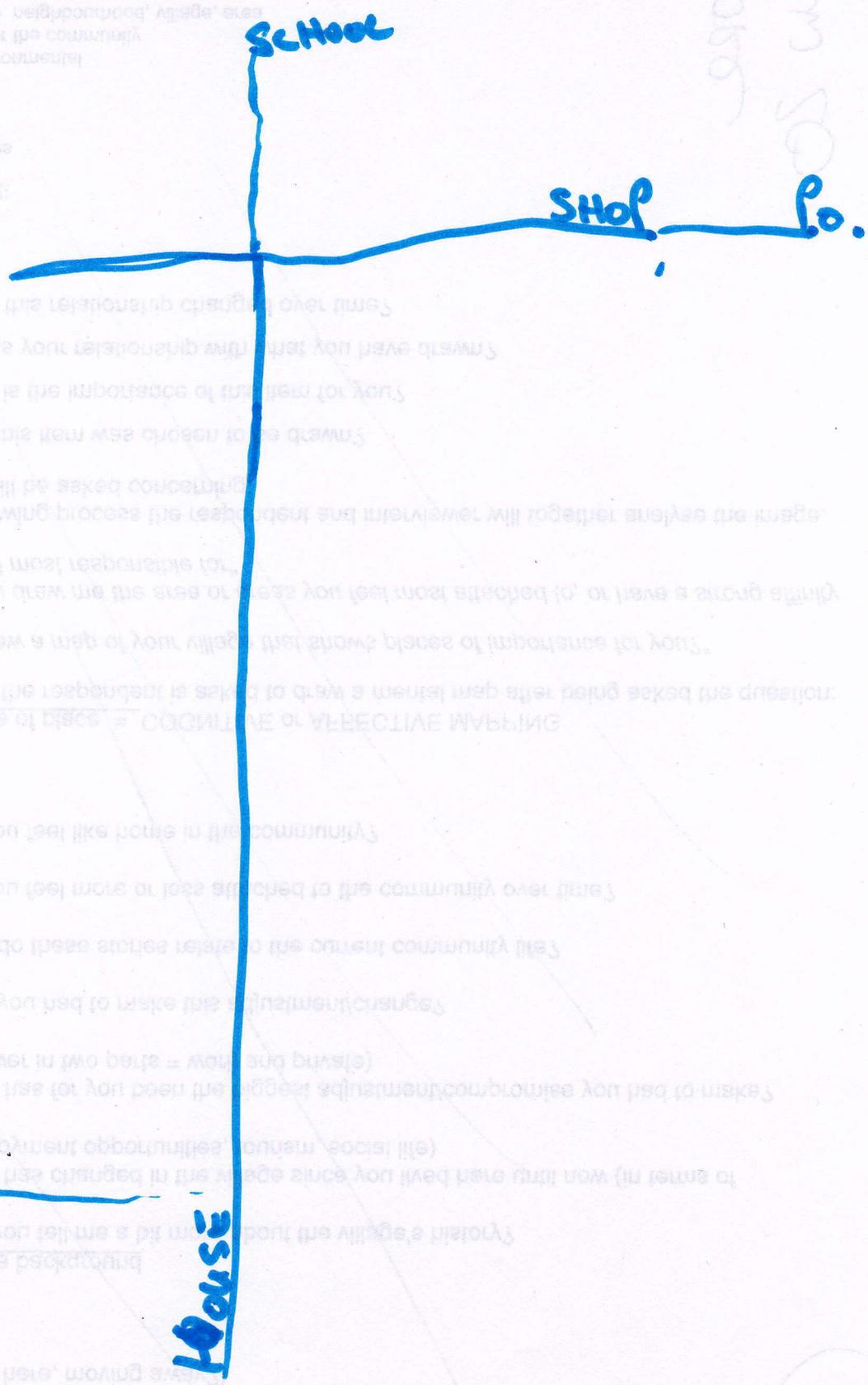
[D7]



Interview of Mrs. Roberts



Denmark
Welfare State
Ref. 10/2016



Garden

House



DGA



Dg^B

Harbour

School

Queens

Class house



D10

OLD KIRK

LOW DRUMMORE FARM

SURGEON
SHOP
SCHOOL

POST OFFICE
CRAIG MALLAN
CHURCH

PARLIMERS
WARDY GARAGE
CHURCH HALL
SHOP HOTEL
MRS SCOTT'S HOUSE
CAPTAIN DONNIE'S HOUSE

FIRE STATION

COASTGUARD STATION

SCOTT'S OFFICE