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Relational Values, Place Attachment and Ecological Loss of Elderly People in Zurich

GEO 511 Master's Thesis

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ABSTRACT

The relationship between humans and nature is constantly evolving. As a result of increasing prosperity, the value of nature has changed for many people. Whereas it used to have mainly instrumental values, such as providing food and clean water, other values are becoming increasingly significant as prosperity increases. These include not only intrinsic values but also relational values. The present study examines precisely these relational values in the city of Zurich, which are specific to older people. These relational values are related to the concepts of ecological loss and place attachment and are analysed retrospectively over the different life phases of the elderly. The data corpus consists of thirteen interviews with participants who have lived in Zurich for at least fifteen years and are over 70 years old. This study applies an interplay of deductive and inductive interview strategies and is based on the qualitative research approach of problem-centred-interviews. The analysis shows that a dichotomy characterises the relationship between older people in Zurich and nature. One side is based on what nature offers to humans. Here, eudaemonic values are in the foreground. Nature is particularly important to the participants because it has a great influence on the quality of life, especially through its contribution to the well-being of the participants. Other values that characterise this side of the dichotomy emerge through the experienced ecological loss. Participants have been found to form place attachments prior to ecological loss. On the other side of the dichotomy, the participants' regrets about the damage humans have done to nature, a sense of personal responsibility, and wishes for nature are found. Furthermore, ecological loss and place attachment bring out values that the participants have regarding nature. According to the interviews, the importance of nature either remains constant or increases over different phases of life, but it never declines in importance. Additionally, the participants consistently linked nature with positive attributes. This thesis also demonstrates that one's upbringing can have an impact on the relationship with nature but that this influence does not need to be limited to what is learned from one's family. Throughout life, nature plays a variety of roles, but it is particularly valued for its ability to serve as a mediator in friendships and relationships.

ACKNOWLEDGEMENTS

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ABBREVIATIONS

abb	Abbreviation
NK	Natural Killer
PCI	Problem-centred-interview

1 INTRODUCTION

1.1 RELEVANCE

Relational values give a new approach for the valuation of nature and the environment. They help in the planning of nature conservation projects or the general planning of the city of Zurich. The elderly, who have frequently spent a very large part of their lives in this place, often have a different take on nature which is not always considered in such decisions. No research has been done that applies the concept of relational values to the elderly population. This thesis will therefore be the first that looks at the key relational values of elderly people living in Zurich.

Looking at the relational values of the elderly can highlight central issues regarding the health or well-being of the elderly in connection to nature. The health of elderly people has been the subject of many studies (e.g., Turner & Ship, 2007; de Groot et al., 1988). Other studies with elderly people usually include their economic or social circumstances (for example, Rissanen & Ylinen (2014), who looked at elderly poverty). On the other hand, studies on relational values often focus on specific groups like farmers or decision-makers (e.g. Chapman et al., 2019; Chan et al., 2018). Studying well-being in connection to elderly people is of importance, as Yuan and Wu (2021) showed. They found a significant correlation between place attachment and well-being in addition to a positive correlation between outdoor leisure and place attachment. They argue that environmental stressors can have a negative influence on the well-being of elderly people.

Predictions show that the part of the population that is aged 70 or older will increase (Fuster, 2017). As this age group grows, so should the interest in their valuation of nature as nature plays an important role in the lives of the elderly.

1.2 RESEARCH OBJECTIVE AND RESEARCH QUESTIONS

As described above, the relationship with nature influences the quality of life of the elderly. Relational values, place attachment, and ecological loss play a significant role in this relationship. The aim of this thesis is to find the relational values of elderly people living in the city of Zurich concerning nature, landscape, and the environment. This includes identifying the key values that are particularly important for this age group. In addition to these key values, the principle of ecological loss, which is very closely linked to relational

values, will also be addressed. Furthermore, this thesis focuses on how the relationship of elderly people to nature changes over different phases in their lives and how the positive and negative changes in their environment change their relationship to nature as well as how they influence their well-being. Since elderly people have often lived in one place for a longer period, they might have formed an attachment to a specific place. This place attachment is another important concept that will be addressed in the thesis, as changes to that place could lead to ecological loss. The thesis follows three main research questions:

1. What are the key relational values of elderly people living in Zürich with regard to nature, landscapes, and the environment?

2. Have the elderly people in the study experienced ecological loss? If so, what kinds and how does this loss connect to their key relational values?

3. How does the relationship with nature (including place attachment) change over different phases of life?

1.3 STRUCTURE OF THE THESIS

This thesis is divided into seven chapters. The first chapter presents the relevance of the research, the research objective and questions, and the structure of the thesis. The second and third chapters build the theoretical basis for the thesis, with chapter 2 describing the theoretical background of relational values, ecological loss and place attachments and chapter 3 describing the current state of the art covering nature's influence on well-being, the psychological effect of loss and loneliness in old age and the specific characteristics of place attachment and nature-human relationship of the elderly. Chapter 4 discusses the methodologies used throughout the qualitative research process. This chapter describes the data acquisition, the data analysis, the study area, and in a final section, emphasizes positionality and ethical considerations. In chapter 5, the results of the study are presented. In chapter 6, the presented results are analysed and discussed, connecting the theoretical basis from chapters 2 and 3 to the results in chapter 5. Chapter 7 concludes the thesis by summarizing the major findings and focusing on the study's limits and strengths. In this chapter, the research questions are revisited and answered as far as possible.

2   THEORETICAL BACKGROUND

2.1   THE DEVELOPMENT OF THE HUMAN-NATURE RELATIONSHIP

Humans have always relied heavily on nature. However, the industrialisation and technological revolution brought a change in people's relationship with nature (Bourdeau, 2004). Over time, the dependency on nature grew more and more distant from many people's everyday lives. For example, in Switzerland, as in much of Europe, the self-sufficiency rate sunk tremendously as well as the number of people who are farmers. In Switzerland, for example, well into the 19th century, around 80% of the population were farmers, and the self-sufficiency rate reached nearly 100% (Rachoud-Schneider et al., 2007), while less than 2% of people living in Switzerland are farmers in 2020 with a self-sufficiency rate of 58% in 2018 (Schultz, 2020, Agrarbericht 2020). Another factor that shows how the relationship of humans and nature changed is the land-use change. Much land around Zurich that had once agricultural or no use is now an urban area, where nature is marginalized (Wehrli-Schinder & Widmer Pham, 2019).

During the second half of the 20th century, widespread deterioration of nature began (although the roots of the deterioration in western societies began much earlier (Mason, 2004)). At the end of this time, a wish to keep nature clean was growing, and modern ideas of protecting nature started to arise (Basiago, 1996). This wish for a clean and healthy nature is closely connected to the fact that despite the more direct reasons for the importance of nature (providing food and fresh water), nature is also a key component to a good quality of life (Pascual et al., 2017). Taking another look at the land-use change in Switzerland, the forest area has grown steadily since 1989, according to the Swiss federal statistical office. This growth has different reasons, with one of them being the change in the relationship people have with nature and the appreciation that has grown towards it.

Nowadays, there are several reasons why people are fighting to protect nature. Motives behind the protection of nature vary, however. The different motives often stem from the value a person sees in nature. There are different concepts of giving nature a specific value or quantifying its worth. In most decision-making processes, the importance of conserving nature is explained either by nature's instrumental values (for human's sake) or by intrinsic values (for nature's sake) or sometimes a combination of both. However, the literature

suggests that there is a third value type that must be considered which is not found in either of the two: relational values (Chan et al., 2016).

2.2 RELATIONAL VALUES

Relational values are preferences, principles, and virtues that a person has regarding their relationship with nature (Chan et al., 2016). Relational values cannot be described as things but rather as a derivative of relationships. When looking at nature through the lens of relational values, conservation can be motivated without putting a monetary value on nature (Chan et al., 2016).

Providing scientific proof of the importance of policies protecting nature and biodiversity is a fundamental part when it comes to planning conservation programs (Neuteleers, 2020). When nature is only quantified by instrumental or intrinsic values, an important part of nature is not in these quantifications. In the case that there is a need for such a quantification (for example, resettlement compensations), the value of the land must be quantified with regards to invisible losses, which can only be described in relational values (Witter & Satterfield, 2014). Such invisible losses include, for example, identity loss, loss of knowledge that is transmitted when using resources of that land or loss of status and reciprocity inferred in the transfer of resources (Turner et al., 2008, Witter & Satterfield, 2014).

Additionally, instrumental values can too easily be an excuse for commercial interest of market-centric systems. In these scenarios, nature is commodified, which often goes hand in hand with a privatization of rights (Gómez-Baggethun & Ruiz-Pérez, 2011). Harvey (2004) even goes as far as labelling the commodification of nature as a strategy of "accumulation by dispossession". In order to critique and eventually stop this accumulation by dispossession, nature must be valued not just through instrumental or intrinsic ways but through the lens of relational values.

Deplazes-Zemp & Chapman (2020) describe indirect relational values as part of an interpretation of the concept of relational values. They propose that relational valuation has both intrinsic and instrumental features. If relational values are assigned, items are valued because their link to humans adds to the well-being component of human flourishing. Simultaneously, assigning relational value entails real regard for the appreciated item. While

this regard is the intrinsic aspect of relational valuing, the aforementioned component that adds to human flourishing is the instrumental aspect. Additionally, Deplazes-Zemp and Chapman (2020) offer the concepts of mediating and indirect relational environmental values, which are ascribed to relationships involving both humans and environmental objects.

2.3   ECOLOGICAL LOSS

Just as relational values cannot be measured through intrinsic or instrumental values, ecological loss is not accounted for in these two categories either. Ecological loss occurs when the landscape around a person changes over time in a negative way. This includes the disappearance of certain animals or plants but also the conversion of larger areas (for example, a meadow that changes into a residential area) (Riechers et al., 2019). A recent study by Cunsolo and Ellis (2018) suggests that people suffer intense feelings of grief from ecological losses of valued species, ecosystems, and landscapes. This mental health response is what they call "ecological grief". It is therefore important to understand the symptoms and consequences that ecological loss can produce when we want to understand motivations and values that are connected to nature and nature conservation (Riechers et al., 2019)

2.3.1   Solastalgia

Solastalgia is a concept proposed by Albrecht et al. (2007) that was designed to provide additional context and clarity for environmental distress. In contrast to nostalgia, which is the melancholy that people can feel when they are away from a beloved home, solastalgia is the discomfort caused by environmental change that affects people while they are still physically linked to their home environment. Albrecht et al. (2007) argue that individuals exposed to environmental change suffer negative consequences that are amplified by a feeling of helplessness or a lack of control over the changing environment.

2.4   PLACE ATTACHMENT

Ecological loss can be preceded by place attachment. Place attachment is formed over time, sometimes even over the span of several human lifetimes (Li & Chan, 2018). The importance of time when looking at ecological loss can be seen in the example of Drenthen (2009). In his article, he explains the difficulties that occurred when the Dutch government decided to use ecological restorations of river systems as a way to mitigate rising sea levels. This ecological

restoration is a step towards nature conservation as it forms the landscape back into what it was before humans used it for agriculture. However, the local population tried to stop this endeavour, as they have formed a strong place attachment to the agricultural landscape. This place attachment has grown over several generations. The ancestors of some people who are living there started to cultivate the land. The people cultivating the land now feel connected to their ancestors. This connection to their ancestors provides an important part of their identity. For these people, the change of landscape feels like a loss of their roots and has a deep impact on their identity.

What is made clear by this example is that nature and landscapes can have strong influences on people's well-being. This includes the physical, mental and spiritual health of a person (Russel et al., 2013). Place attachments that are formed over a long period of time cannot be easily pushed aside as they are deeply woven into the identities of people. This regard towards nature cannot be identified through intrinsic or instrumental values but is just as important - if not more important - to the local population and should therefore have a place in any decision concerning nature.

Since place attachment is formed over a long period of time, elderly people might be the ones that have the most experience of place attachment and the ecological loss that comes with certain changes. As they have experienced a lot, they can give insight into how changes (positive or negative ones) influence a person and their well-being. Considering the fact that the population is getting older and that there'll be much more elderly people in the future (Rogerson, 1996), it is important for decision-makers to know the relational values that are most important to them and how these values are connected to their well-being.

Looking at place attachment in more detail, it has much in common with relational values. Place attachment is often formed (but not exclusively formed) through the relationships with people one associates with a place (Hidalgo & Hernández, 2001). Place attachment, as well as relational values, give nature importance and value that is not present in intrinsic or instrumental values of nature.

3 State of the Art

3.1 The Influence of Nature on the Well-Being

Human health and well-being may be seen as the highest service provided by an ecosystem (Sandifer, Sutton-Grier & Ward, 2015). For medical professionals and the general public, health is frequently defined as the absence of disease. The World Health Organization (WHO, 1946), on the other hand, describes health considerably more comprehensively as a condition of physical, mental, and social well-being, rather than only the absence of sickness or infirmity.

Studies such as done by Díaz et al. (2006) show that biodiversity has an effect on the qualities of ecosystems and, therefore, on the benefits individuals derive from such. Whilst it is broadly known that the diversity of life on earth is significantly impacted by human-induced environmental changes (Baillie et al., 2004) the opposite is not as commonly known, though it is just as true (path 2/3 in figure 1). Through the ecosystem services, biodiversity has a distinct influence on well-being (see figure 1).
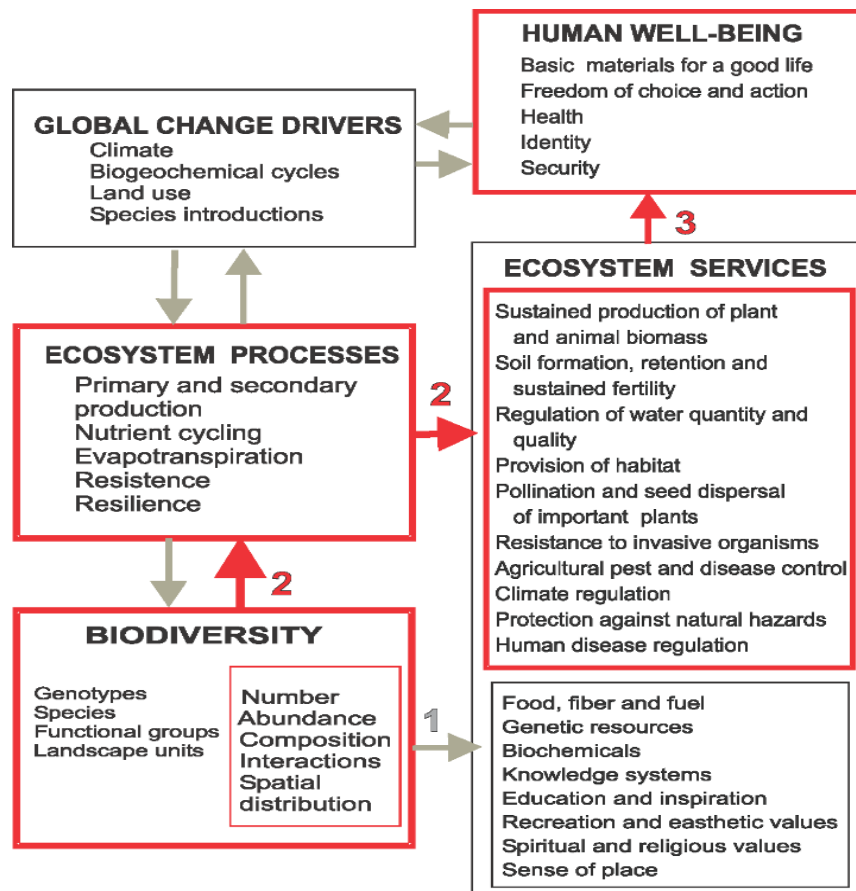
Figure 1: Biodiversity is both a response variable affected by global change drivers and a factor that affects human well-being (Diaz et al., 2006)

This figure demonstrates that nature has a direct influence on human well-being by generating food, fibre, potable water, shelter, and medicines (Millennium Ecosystem Assessment 2005). But there are also factors that might not seem as obvious as the aforementioned. Pritchard et al. (2019) found that individuals who are more connected to nature also have better self-reported well-being. This self-reported improved well-being for individuals who are more connected to nature is, on the one hand, hedonic well-being but, on the other, also eudaemonic well-being, in particular higher levels of self-reported personal growth.

Examples of such a positive effect on well-being were shown by Saroglou, Buxant & Tilquin (2008), who showed that seeing a video about nature increased levels of positive emotions such as delight and amazement. Ryan et al. (2010) demonstrated that immersion in virtual or real nature increased vitality. Furthermore, Weinstein, Przybylski, & Ryan (2009) discovered that exposure to nature-themed slides or plant-filled laboratories showed increased support for intrinsic goals. And Mayer et al. (2009) argue that exposure to a nature preserve increases positive affect.

While there are many more studies that show the positive effect nature has on well-being (Keyes, 2005; Nisbet, Zelenski & Murphy, 2011; Wilson, 1984), not many of them focus on elderly people and how the well-being is influenced through relational values.

3.1.1 The Effects of Forests and the Colour Green

Forests provide immense potential for improving human mental and physical health in a variety of ways: they aid in stress reduction and recovery from attentional exhaustion, and they typically increase psychological and physical rehabilitation (Karjalainen, Sarjala & Raitio, 2010). The research on nature's restorative impacts has been dominated by two theories: one emphasizing stress reduction (Roger, 1983) and the other highlighting the recovery of the capacity to focus (Kaplan & Kaplan, 1989). Forests may aid in the prevention of illnesses caused by psychological processes such as stress, as well as the treatment of disorders such as burn-out and depression (Karjalainen, Sarjala & Raitio, 2010).

Certain studies even describe how visits to the forest strengthen the immune system while also increasing humans' natural killer cell (NK) activity (Li et al., 2008). The rise persisted for up to 30 days. Because NK cells have the ability to destroy tumour cells via the release of anticancer proteins, forest visits may act as a preventative measure against cancer

production and growth (Li et al., 2008). Additionally, as compared to city visits, forest journeys dramatically lower salivary cortisol (stress hormone) concentrations (Park et al., 2007).

Similarly, there are positive effects associated with seeing the colour green. People seem to have an inbuilt affinity for nature and living systems, as Wilson (2017) explains in his biophilia theory. Simple kinds of exposure to nature, such as gazing through windows, have been shown to have a number of therapeutic benefits, including better recovery after surgery (Roger, 1984), increased perceptions of wellbeing (Kaplan, 2001), and increased mood positivity (Van den Berg et al., 2003). The combination of exercise and exposure to nature has sparked interest since it demonstrated physical and psychological health advantages in addition to those typically associated with exercise alone (Akers et al., 2012). In their research, Akers et al. (2012) showed that seeing the colour green lead to lower total mood disturbance and ratings of perceived exertion.

3.1.2 Emotions in Nature

Emotions have an influence on a person's well-being (Fredrickson & Joiner, 2002). And while a balance between positive and negative emotions contribute to a sound judgment of life satisfaction (Diener & Larsen, 1993), positive emotions influence the health and well-being in favourable ways both in the moment and in the future of an individual (Fredrickson & Joiner, 2002). The broaden-and-build theory of Fredrickson (1998) suggests that negative emotions narrow people's thought of action repertoire, which is compared to the fight or flight sensation, while positive emotions broaden people's thought of action repertoire. This broadening leads people to be more encouraged to discover novel lines of thinking and acting.

Positive emotions not only improve attention and cognition they also enable flexible and creative thinking, making it easier to cope with stress and adversity (Aspinwall, 1998). Positive emotions can lead to greater well-being through several different factors (Stein et al., 1997). One thing that can lead a person to feel more positive emotions (or significantly fewer negative emotions) is nature (McMahan & Estes, 2015). Even short contacts with nature are associated with greater emotional well-being (Mayer et al., 2009). As such, nature has the ability to inspire joy and excitement, as well as contentment and affiliation (Richardson et al., 2016).

Emotions such as anger, fear or hate, on the other hand, can have negative consequences, even causing chronic pain, anxiety, depression, and other lasting emotional disturbances (Wiech & Tracey, 2009). Anger or fear leads to a rise in proteins called proinflammatory cytokines (which in turn can lead to atherosclerosis and cancer) as well as greater cortisol levels (Moons, Eisenberger & Shelley, 2010). As being in nature not only leads to an increase in positive emotions but also a decrease in negative emotions (Mayer et al., 2009), this influence of nature on emotions and its health benefits should not be overlooked.

3.2 THE PSYCHOLOGICAL EFFECT OF LOSS AND LONELINESS IN OLD AGE

The life of the elderly is often marked by losses (Åberg et al., 2005), whether it be the loss of role (Chambre, 1984) or memory loss (Boyle et al., 2018). Losses can lead to depressive symptoms, as Pai & Carr (2010) have shown. They looked at late-life spousal loss and argued that those people who experienced loss in the form of late-life spousal loss show significantly more depressive symptoms compared to those who are still married.

As Siegel & Kuykendall (1990) show in their study on psychological distress caused by loss among the elderly, the symptoms of loss should not be underestimated as they can lead to severe reductions in mental and physical health. However, Siegel & Kuykendall (1990) also show that there are mediating factors that can lessen the effect of loss. They showed how churches and temples or spouses can act as such mediating factors. Their study showed that in men, but not necessarily in women, loss was associated with a higher level of depressive symptomatology. Both the involvement of a spouse and involvement in a church or temple reduced the effect of loss on depression in men.

Similarities can be found in the effect of loneliness in old age. Most individuals anticipate a drop in the size of their social network (Lang, Staudinger, & Carstensen, 1998; Lee & Markides, 1990), the quantity of their social connections (Okun & Keith, 1998), and the number of people who provide comfort and support (Wagner, Schütze, & Lang, 1996). Circumstances that further favour social isolation and loneliness among the elderly include limitations in mobility, losing partners and pears through death, and or the loss of social roles (Pinquart & Sorensen, 2001).

As Cacioppo et al. (2002) describe, loneliness can have severe influences on a person's health and well-being. Such deleterious effects include but are not limited to cardiovascular

activation, cortisol levels, and sleep dysfunction. Berkman & Syme (1979) found that socially isolated adults have a higher rate of mortality over the subsequent nine years after the start of their isolation, even when self-reported physical health, socioeconomic status, smoking, alcohol consumption, obesity, race, life satisfaction, physical activity, and use of preventive health services are taken into account. Due to the challenges of the ageing process, around 15%–19% of adults aged 65 years and older are diagnosed with depressive symptoms (Cahoon, 2012). Furthermore, suicide rates for older adults are estimated to be two to three times higher than for other age groups (Han, Li & Chang, 2021).

3.3 PLACE ATTACHMENT OF THE ELDERLY

There is compelling evidence that ageing results in a greater sense of place attachment to one's social and physical surroundings (Buffel et al., 2014). This emotional connection to a neighbourhood - or place attachment - is produced by interactions between the person and their surroundings, and it contributes significantly to the individual's emotional identity (Stedman, 2003).

For older people, the significance of a place is magnified by a number of factors: First, the long period of time spent in the same place, which results in accumulative memories of said place (Phillipson, 2007). Second, place attachment helps the elderly to preserve their sense of identity and or independence (Rowles, 1983; Rubinstein & Parmelee, 1992).
Third, following retirement, elderly people tend to spend more time at home or in the surrounding neighbourhood, as their patterns of spatial use change (Peace et al., 2007), and fourth, the greater dependency upon neighbourhood relationships, as a consequence of decreasing physical health (Krause, 2003).

Han, Li & Chang (2021) revealed that place attachment of older adults had a significant influence on the well-being. They looked at place attachment, social capital, and social cohesion, out of which place attachment contributed the most to the participants' well-being. They also found that individuals with strong place attachment had the biggest improvement in their well-being when there was dense vegetation in nearby greenways.

Long-term emotional attachment to the surrounding environment has also been found to promote happiness in the older population (Taylor, 2001). Given the higher depression rates among elderly people (see chapter 3.2), it is thus desirable to use all factors that counteract

this as much as possible. In the case of place attachment, this does not mean simply leaving places as they are but understanding how place attachment develops and what characteristics are particularly important to the older population.

3.3.1   The Feeling of Home

Feeling at home or a general feeling of home is often connected to place attachment (Wanka, 2018). Hidalgo & Hernandez (2001) even consider the question of "Do you feel at home here?" a measurement to find spatial identification among participants. A person who is really "at home" in their neighbourhood and makes great use of it will also be more inclined to keep a positive self-identity as they age, even if their spatial agency declines (Wanka, 2018).

As Marcheschi et al. (2015) show, the feeling of home can be of even more importance when it comes to people who experience mental illnesses. Because the home provides a sense of stability and closeness, it frequently serves as an extension of a person's self-image and identity, increasing the opportunity to experience feelings of belonging and attachment (Cristoforetti, Gennai, & Rodeschini, 2011). For this reason, providing a homelike setting for people who have a mental illness such as depression or are struggling with experienced loss is crucial for the development of the individual well-being (Borg et al., 2005). Because of the close link between feeling home and place attachment (Wanka, 2018), it is essential to understand the feeling of home for the concept of place attachment.

3.4   IMPACTS ON HUMAN'S RELATIONSHIP WITH NATURE

Figuring out what shapes one's relationship with nature is a very broad and difficult question. In this chapter, the literature on three different influences on one's relationship with nature is examined. First, how education plays a role in shaping one's relationship with nature (upbringing); second, how experiences can change the relationship with nature (experience and attitudes); and third, what influence regret has on the relationship (regrets). This is not meant to be a complete list of things that influence the interplay of humans with nature, but rather an insight into three impacts that are relevant to this thesis.

3.4.1   Upbringing

As with much in life, the upbringing has a significant influence on the relationship with nature (Hosaka, Sugimoto & Numata, 2017). In their research, they showed that exposure to nature during the childhood influences the relationship towards nature for life. People who

had many experiences in nature are more willing to coexist with biodiversity in cities. Especially first-hand experiences of nature such as fishing, hunting, insect catching, plant collecting, hiking, or camping can strongly shape the attitude towards nature (Soga et al., 2016). But exposure to nature through a medium such as TV, books, and websites can influence one's environmental preferences, competencies, and concerns as well (Bixler & Floyd, 1997).

Bixler, Floyd & Hammitt (2002) argue that students in middle and high school who played in natural or wild settings had a more favourable attitude toward natural environments, outdoor recreation activities, and other outdoor activities. This is evident when it comes to the willingness for nature conservation. Children who frequently spend time and play in nature are more likely to want to conserve nature, including the protection of wild or dangerous animals (Zhang, Goodale & Chen, 2014). As Nabhan & St. Antoine (1993) put it, interaction with nature as a child substantially stimulates an appreciation for life or living systems.

3.4.2   Experiences and Attitudes

Experiences in and about nature can either directly or indirectly shape one's relationship with nature. A Swedish study performed by Eriksson, Sandström & Ericsson (2015), for instance, found that while more than three-quarters of the Swedish people expressed a liking for bears and wolves, their approval for conservation efforts dwindled as people's contacts with these species increased. These contacts changed the citizens' attitudes towards bears and wolves over time.

Attitudes are mental constructs composed of cognitive and affective elements that influence how we evaluate attitude objects (Heberlein, 2012). Eventually, repeated interaction with an object establishes a baseline attitude that serves as a guide for future interactions with the same or a similar object. Hence, attitudes act as a mental shortcut for humans when evaluating an object. Through this, the cost of decision-making is reduced while possibly also affecting the person's behaviour (Olson and Zanna 1993). Such attitude patterns are usually formed during the childhood and then reinforced over the course of life as a result of confirmation bias (Eagly & Chaiken 1993; McFarlane & Boxall 2003; Heberlein & Ericsson 2005), resulting in stable mental structures that dictate the formation of our identity, world view, and actions (Olson and Zanna 1993).

As Eriksson, Sandström & Ericsson (2015) suggest, attitudes of individuals towards nature can change. The more profound an event is in nature, the more it changes the relationship with nature (Olson and Zanna 1993). Although attitudes are often very persistent, experiences in nature can alter these mental structures regarding nature. When people do not have strongly held attitudes towards nature, their attitudes are easier changed, as the cost of this change is not too high. The lower the cost of a change in attitude is, the more likely it is that the benefits of attitude transformation outweigh the cost (Ajzen, 1989).

3.4.3   Regrets

Regrets can be considered a special form of experience (King & Hicks, 2007). Although regrets regarding the relationship with or the treatment of nature are not included in the top five regrets when dying (Ware, 2012), regrets can have a significant influence on a person's decision-making process, which can also include the treatment of nature (Pethtel, 2012). Most often, regrets consist of things people did not do as opposed to what they did (Gilovich et al., 2003). Regrets provoke a range of strong negative emotions, including feeling sorry, upset, or angry (Gilovich, Medvec & Kahneman, 1998). Regrets tend to be stronger among the elderly, as opportunities to overcome the decisions that cause regret decline with age (Wrosch & Heckhausen, 2002).

4 METHODOLOGY

The current study is based on social science and employs a qualitative research methodology. In social science, qualitative research is frequently used and widely accepted (Flick, Kardorff & Steinke, 2010). Whereas research is based on measurements and quantification, qualitative research's epistemological principle is to understand (Helfferich, 2011). Qualitative research necessitates describing events and experiences from the viewpoints of the parties involved to present a unique inside-out perspective (Flick, Kardorff & Steinke, 2010).

The goal of this study is to reveal individual viewpoints on hazards and to comprehend the social reality of the local people. A qualitative research technique may, therefore, completely meet this goal. Furthermore, this research's ontological perspective is based on the assumption that reality is socially constructed (Berger & Luckmann, 1966). This research focuses on people's subjective perceptions, perspectives, and actions. Accordingly, primarily interpretative-understanding procedures are used to generate new information (Reuber & Gebhardt, 2013).

This study applies an interplay of deductive and inductive interview strategies and is based on the qualitative research approach of problem-centred-interviews (PCI) (Witzel, 1982). As a sampling strategy, the convenience sampling strategy was used. The data analysis followed the thematic qualitative content analysis after Kuckartz (2018). During the entire process of the acquisition and analysis of the data, the researcher's positionality must be considered as well as the influence the COVID-19 pandemic had on the process. This reflection can be found at the end of this chapter.

4.1 DATA ACQUISITION

To collect the data, thirteen interviews were conducted. The choice of interview partners is discussed in the next chapter, 4.2. All interviews were conducted in person and lasted between 25 and 90 minutes, with an average of 50 minutes. The language used in the interviews was Swiss-German, with the exception of two interviews that were conducted in regular German. To ensure that the participants felt the most comfortable, the interviewer, who is a native speaker in both Swiss German and regular German, adapted their chosen language.

Guest et al. (2006) state that the amount of data collected through interviews drastically declines after twelve interviews. They suggest that by conducting twelve interviews, 80 % of the data is gathered. Therefore, thirteen interviews were conducted in case one interview could not be used or if one of the interviews encountered any other difficulties. The location of the interview was chosen by the participant in order to ensure that they would feel most comfortable. Due to the COVID-19 pandemic, there were participants that could not choose their preferred location as they did not want to endanger a sick partner (see also chapter 4.7). Except for one interview, all the others were conducted with a single participant. In one interview, the participant invited a friend to the interview in order to increase his or her comfort level. However, in many interviews, additional individuals listened to the questions and replies and occasionally recommended possible responses.

The preparation for the interviews consisted of an in-depth analysis of scientific literature as well as two pilot interviews. The participants in the pilot interviews were not required to meet the requisitions of the study participants.

4.1.1   The interviews

The goal of the interviews was to understand the participants' relationship with nature, how it changed over the course of their lives and what relational values are key in their relationship. Furthermore, the interviews captured their experience with ecological loss, place attachment and how this connects to the relational values. Using the problem-centred-interview after Witzel (1982) proved to be the ideal method for the interviews, as it focuses on the participant's individual subjective perceptions. Through the responses of the participants, the PCI approach challenges the interviewer's assumptions and results in a more complete comprehension of the presumed phenomena. A centrepiece of this approach is object-orientation. Object orientation promotes openness and flexibility regarding the observed objects. According to Witzel (2000), it, therefore, enables the interaction between narrative segments and a directed dialogue. According to Mattissek, Pfaffenbach & Reuber (2013), this form of interview is often used in the context of human geography research, as it is particularly suitable for questions about descriptions and opinions.

This PCI approach is located in the category of guided interviews (Flick, Kardorff & Steinke, 2010). Mattissek, Pfaffenbach & Reuber (2013) suggest that the PCI should be used in

conjunction with a semi-structured guideline. This enables the interviewer to be flexible and respond appropriately to the participant's responses and ideas. The semi-guided interviewing approach provided the basis to change, reflect on, and enhance the interviews while conducting them.

4.1.2 Interview Guideline

The interviews were conducted with an interview guideline. This interview guideline was prepared in a way to give the interviewer as much steadiness as needed but still providing the ability to freely adjust the interview along the way. This is the beauty of qualitative research. Whereas in quantitative research, the researcher and participant are bound to the exact procedures, qualitative research allows room for adapting to the participant's answers (Helfferich, 2011).

It is critical, particularly for the identification of individual perspectives, to allow respondents sufficient opportunity to unfold their perceptions. Thus, among other things, openness must be considered while designing the interview guideline. The interview guideline is a critical component of the fieldwork preparation process and should not be overlooked. Witzel & Reiter (2012) describe the interview guideline of problem-centred interviews as a tool for "securing both the problem centring of the interview and the comparability of the individual interviews" (Witzel & Reiter, 2012). It aids in the organization of the researcher's interests and background knowledge and acts as a memory aid throughout the interview. The guideline should therefore give the interview a structure and a frame so that the interviewer can follow an interesting line of thoughts outside the guideline but then come back to it to keep a common thread.

4.2 SAMPLING

Kruse (2014) describes how the sample group influences the validity of the research significantly. He suggests thus that the sample group should be made with deliberate intent. The objective is to pick examples that include sufficient material to address the research question. The sample group must meet predefined criteria yet be as heterogeneous as possible within these criteria (Patton, 1990). As Helfferich (2011) describes, the sample group should be as small as possible but with as much heterogeneity as possible. In the presented study, the sampling group had to fulfil the following prerequisites:

- Aged 70 or older

- Living in the city of Zurich (Kreis 1-12, without agglomeration)

- Having lived in Zurich for at least fifteen years

- Be fluent in either German or English

Within this scope, however, the sample should be as diverse (in this case: gender, education and city district) as feasible in order to increase the sample's credibility. The eclectic sample was chosen to expand perspectives but not to reinforce preconceptions (Kruse, 2014).

Multiple individuals aided in the recruiting process. Most notably, one participant recruited five more participants. Since he knew many people who fulfilled the criteria, he was able to look for a heterogenous mix within his connections. Other people helping in the process were staff of retirement homes and other acquaintances who had grandparents in Zurich.

It should be acknowledged that, despite efforts to keep bias to a minimum, bias could occur in a variety of situations. One of the main difficulties during the recruiting process was that elderly people were very afraid of phone scams. This fear of being scammed leads many elderly people to not pick up the phone if they do not know the number that is calling. The senior residences' employees assisted in finding participants and provided their telephone numbers, but they did not have the capacity to arrange personal introductions. Therefore, only a handful of potential participants answered the phone when an unknown number called them. Only when the staff was able to specifically schedule a time in which the participants knew they were being contacted they would pick up the phone.

It was far more effective if a personal acquaintance contacted a possible participant and asked if they could speak with me directly to discuss the study and schedule an interview. However, this meant that around half of the participants were acquaintances of friends or colleagues, which potentially introduced a certain bias.

The following table 1 gives an overview of the conducted interviews:

Table 1: Overview of the interviews. In interview 2, there are two participants.

Interview number	Gender	Age	How long have they lived in ZH / How long in the home they live in now
Interview 1	Female	86	86/10
Interview 2	Female	A: 83 B: 78	A: 70/45 B:42/42
Interview 3	Male	86	45/30
Interview 4	Male	90	70/45

Interview 5	Male	84	55/1
Interview 6	Female	84	56/2
Interview 7	Female	76	42/3
Interview 8	Female	78	45/3
Interview 9	Male	73	60/3
Interview 10	Female	79	32/2
Interview 11	Male	80	60/1
Interview 12	Female	77	48/1
Interview 13	Male	80	80/15

4.3 DATA ANALYSIS

4.3.1 Transcription

The conducted interviews were recorded and transcribed. As a transcription software, MAXQDA was used. This transcription of the recorded interviews is the basis for the analysis. It is important to note that transcribing is always a selective process since it is difficult to capture all the material included in primary data from the actual discussion or secondary data contained in the recordings (Kowal & O'Connell, 2004). This reduction in data happens in two steps. First, there is a reduction from the actual conversation to the recording. In this step, none of the visual or non-linguistic ways of communicating are recorded. In a second step, when the recording is transformed into a written format, nuances such as accentuation are lost. Therefore, a transcription cannot be seen as a perfect copy of the actual conversation that was held (Kowal & O'Connell, 2004).

Certain nuances like clearing the throat are not included unless it was used to give the answers more emphasis or convey any meaning. As the interviews were held very openly, the conversation sometimes drifted into subjects that did not contribute to the study. These stories were not transcribed. The transcriptions were not executed by an exterior provider.

The interviews were conducted in Swiss German were translated into standard German. This translation was not always possible, as there are certain words that exist in Swiss German but not in high German. In those cases, the Swiss word was used in quotation marks. The structure of the sentence often had to be altered in order to make a grammatically correct sentence in standard German. This restructuring of the sentence did not influence the meaning.

4.3.2 Qualitative Content Analysis

The objective of qualitative content analysis is to simplify the data. This method provides the foundation for a particular research-driven viewpoint, either theoretical or empirical, that identifies the features of interest. The transcripts were coded into 67 categories. The categorization of relevant characteristics may occur either before (deductive) or during (inductive) the data analysis process, resulting in a system of categories and subcategories. A-priori category building, often known as deductive category construction, is a theoretical technique. Categories are defined based on prior information, theoretical direction, the interview protocol itself, or the research question. This procedure is done independently of empirical data. Alternatively, inductive category creation is an empirical technique in which categories are constructed entirely from empirical data. Although the two techniques are diametrically opposed, they may be used interchangeably (Kuckartz, 2018).

When data is coded and therefore simplified, a certain amount of information is lost or filtered. This is, in part, the purpose of the process. However, it may be an unintended result of a rigid and exclusively deductively created system of categories (Kuckartz, 2018). If categories are constructed only deductively, unanticipated issues mentioned during interviews will slip through the system of previously established categories, despite their significance to the research's objective (Kuckartz, 2018). For this study, a mix of deductively and inductively developed categories was found to be beneficial and was employed in the manner described in Kuckartz' thematic qualitative content analysis.

The 67 codes used in the analysis of the interview were grouped in the following nine categories:

- Human Behaviour
- Characteristics of Nature
- Values and Morals
- Disruptive Factors
- Emotions
- Advantages of Nature
- The Future of Nature
- Specific Incidents
- Other

4.4 STUDY AREA

The study area of this thesis is the city of Zurich. Only elderly people who lived in one of the twelve subdivisions were allowed to participate. The agglomeration of Zurich did not count (see figure 2, the subdivisions of Zurich).
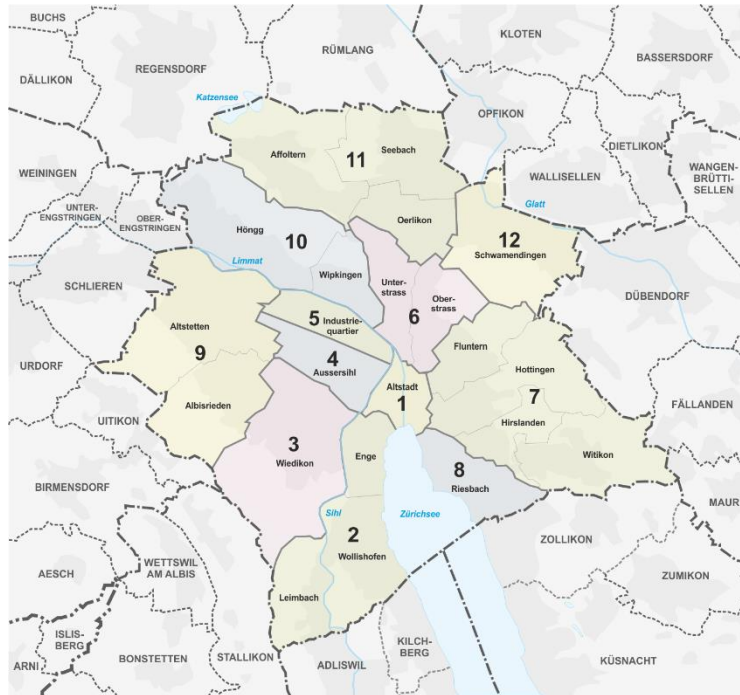
Figure 2: The city of Zurich with its subdivisions (Source: Tschubby, 2014)

Around 23% of the area in Zurich are green spaces and 25% is forest. As shown in figure 3, the area of green spaces declined around 20% between 1940 and 2016, while the forest area is constant at 25%. The decline in green spaces stems mainly from the population growth in Zurich (Stadt Zürich, 2021). The reason for the consistency in the forest area is the very strict law concerning forests in Switzerland. The law states that the forest area is forbidden to shrink (BAFU, 2021).

Bodennutzung in der Stadt Zürich
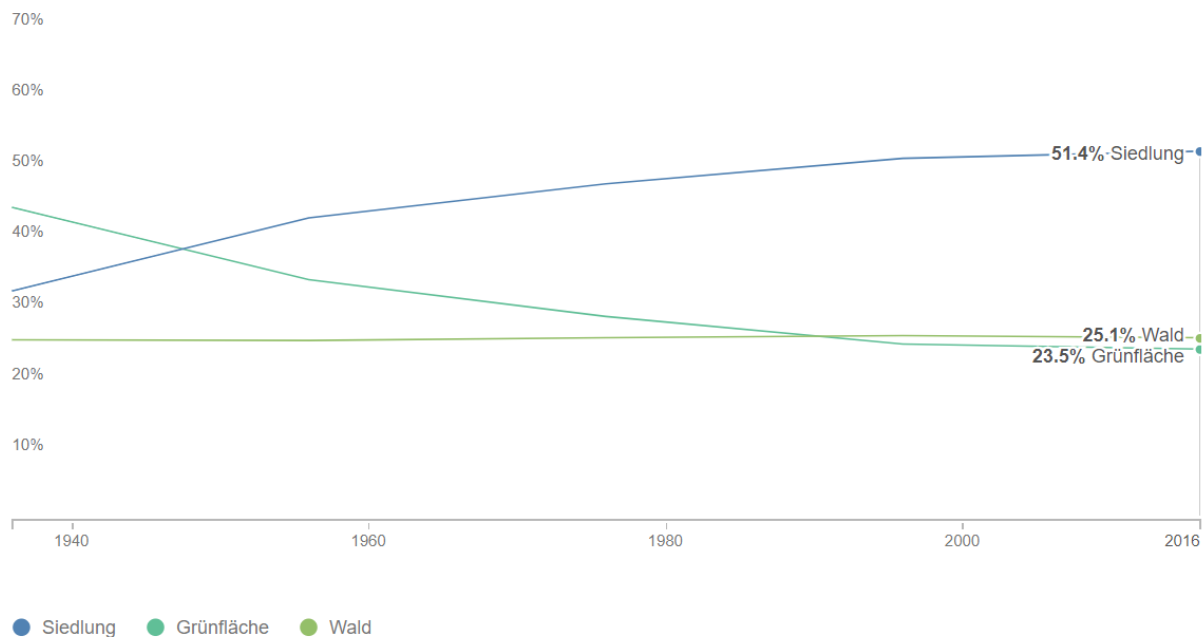
Figure 3: Residential area, green spaces and forest in the city of Zurich (Source: Stadt Zürich, 2018)

4.5   POSITIONALITY

According to Waitt (2010), it is important to reflect on the researcher's positionality. By reflecting on it, awareness of how the researcher relates to the research object is created. In order to create the greatest possible transparency in the research process, I present my own positionality in this chapter.

There are a few things that influenced my positionality during the work on this thesis. For one thing, my education at the department of geography at UZH has given me much information about nature connected subjects. I was furthermore able to go on many different field trips that enabled me to see many different aspects of nature. However, my educational background is not the only thing that strongly shaped my relationship with nature. I was always taught to be in awe of nature's beauty and to see its value. Therefore, I greatly appreciate nature. This might lead to a lack of understanding for people who do not respect nature in any way, as well as a bias in the questions asked and answers that were selected to be represented in the thesis. I did, however, try to minimize this bias by randomly choosing participants and explicitly stating in my invitation letter that a special relationship with nature is not at all a requirement, as I would like to hear as many opinions as possible.

It must also be acknowledged that the variables such as age, gender, education, and other social surroundings influence my positionality. Caring so much for nature usually requires a person to have a rather privileged life, where worries about food, shelter, or other basic needs are non-existent.

Another issue that was considered beforehand was the researcher's independence, as I was not linked with any organizations and did not conduct the research in the government's interests. As a result, I was able to portray a neutral stance toward various interest groups. Despite all attempts, my perspective cannot be considered unbiased since it is constantly impacted by my cultural norms, experiences, and personal interests.

4.6 ETHICAL CONSIDERATION

To prevent harmful consequences for the study participants, ethical issues are critical while conducting qualitative interviews. Individual participants' own narratives and opinions are the focus of the current study. Several standards of ethics must be obeyed in addition to a reflection on the researcher's positionality and behaviour. To prevent harming the participants, the researcher must be mindful of the sensitive nature of the issues being discussed. The participants should not be embarrassed or provoked by the questions. Because the relationship with nature is such a personal issue, it's best not to pass judgment on the participants' perceptions or compare them to other participants' perceptions or opinions.

Furthermore, the participants' anonymity and the privacy of the acquired data must be guaranteed. Because the information did not have to be traced back to a specific person, all interviews were anonymized. First, the respondents were informed that their answers would be anonymized, and then their permission to record the interviews was requested.

One of the most critical factors to examine is the concept of informed consent. Participants should be informed in advance of the type of study in which they consent to engage so that they may determine for themselves whether their involvement will have adverse effects on them. Thus, when reaching out to people, the research's purpose was made clear to the degree that it did not influence the future interview but also assured that no critical information was concealed. Finally, participants' contributions to the study should be recognized by ensuring that they get access to the study's results at the end of this thesis. As

a result, towards the conclusion of the interview, I inquired about the participants' interest in the results and allowed room for further comments or questions concerning the research.

Before requesting permission to record the interview, I mentioned to the participants that I could not guarantee that others who are familiar with them would be able to identify them. This is due to the nature of certain questions. For instance, in the first question, participants discuss their favourite location in Zurich. Someone who is aware of the participant's contribution to my study and knows the participant's favourite location may be able to make conclusions on the participant's identity. No participant expressed concern since they did not perceive their relationship with nature to be particularly sensitive. They were promised, however, that they might omit any question they did not like to answer to prevent causing harm.

4.7 COVID-19

During the time the interviews were conducted, the COVID-19 pandemic was still dominating the public life of the Swiss population. The pandemic made finding participants for the study harder, as SARS-CoV-2 is especially dangerous to the elderly. The government advised the elderly to stay at home as much as possible and to limit their contact with other people to a minimum. This advice from the government could affect the sampling, as the people who were afraid to meet with someone outside of their circle of acquaintances did not participate. However, the situation was not as grave as a few months prior to the study, as several vaccination were approved by Swissmedic and available to all the elderly people who wanted to get vaccinated by the time the interviews were conducted.

5 RESULTS

In this chapter, all relevant results from the analysis of the interviews are presented. The results are structured into three sections. The first two sections discuss the relationship between humans and nature, focussing on a dichotomy that was found in the results. Both sections describe one side of this dichotomy. The third section focuses on further aspects that are important to the research objective but do not fit in the dichotomy of the human-nature relationship.

5.1 DEFINING NATURE

Before the results are presented, it is important to define the nature the participants engage with. When speaking of nature, the participants included their gardens, the meadows and forests in and around Zurich and all the small features such as plants, trees or animals that can be found in the city. This entails the bigger aspects but also a single lilac bush. In some interviews, the participants also talked about nature in other places such as the mountains, the nature they experienced during their vacations, or the nature surrounding their former homes.

5.2 THE EUDAEMONIC RELATIONSHIP WITH NATURE

The relationship between the participants and nature was defined by a dichotomy. On one side, the relationship consists of how nature influences the participants, and on the other side, it consists of how the participants influence nature. The figure below gives an overview of the aspects that belong in this dichotomous relationship. In this chapter, the arrow that goes from nature to human is discussed (figure 4, left), while chapter 5.3 discusses the arrow that goes from human to nature (figure 4, right).

Nature   **Human**

- Well-being
- Changes in behaviour
- Beauty of nature
- Fears regarding nature
- Ecological loss: What was taken away from participants
- Place attachment: The characteristics that support place attachment
- Inter-generational timelines

- Attitudes toward nature
- Responsibility
- Regrets
- Ecological loss: What did the participants not prevent
- Place attachment: How do the participants identify with the place
- Wishes

Human   **Nature**

Figure 4: The dichotomy of the human nature relationship

5.2.1   Well-being

In chapter 3, the significant influence of nature on humans has been discussed. This chapter describes the results found regarding the influence of nature on the well-being of the elderly. The participants have described the ways in which nature improves their well-being, out of which the most common and salient findings are presented here.

In eleven out of thirteen interviews, it was mentioned how much nature influences the well-being of the participants. Terms that came up frequently were calmness, peace, or contentment. For certain participants, nature is the only thing that brings peace and calmness back into their lives and at the same time recharges their inner batteries:

«Die Natur beruhigt. Und du holst einfach Energie, habe ich das Gefühl. Wenn ich eben am Uetliberg gewesen bin, und um mich herum das Grüne und die Ruhe sogar, das ist viel mehr Energie, das ist wie eine Batterie, die auflädt. […] Du könntest […] nicht mehr runterfahren [ohne die Natur], es ist einfach, die Ruhe hast du nicht mehr. Das Beispiel New York, von der Wohnung siehst du nur Betonwände und dann kannst du dich gar nicht beruhigen, du bist immer auf einem hohen [Stress-] Level.»

EN: *«Nature calms. And I feel like you just get energy. If I was at Uetliberg and around me everything is green and peaceful, that's much more energy, that's like a battery that recharges. […] You couldn't calm down anymore [without nature], it's just, you don't have peace anymore. The example of New York, in front of the apartment you only see concrete walls and then you can't calm down, you're always on a high [stress] level.» (Interview 9)*

This coming to rest is also evidenced by the fact that many participants find it easier to sort out thoughts and separate the important from the unimportant when they are in nature. One participant noticed during the time of her divorce that nature took on a particularly

important significance. During this very emotional and turbulent time, the forest offered her stability and a foothold:

«Ich hatte auch Krisen, wo der Wald noch wichtiger geworden ist, weil ich eine schlechte Stimmung hatte durch Trennung oder so und bin dann aber wie aufgeräumter wieder zurückgekommen. Eindeutig ist das so bei mir gewesen.»

EN: *«I also had crises, where the forest became even more important, because I had a bad mood due to a breakup or something and then I came back more like tidy/clean. Definitely that is how it has been with me.»* (Interview 12)

This peace and the support that nature gives the participants is something unique for many. Among other things, this comes from the fact that nature is there for everyone, regardless of external factors such as financial or social status. One participant mentioned that she could only unwind in nature. And yet another tells of how nature sometimes takes away his anger when he gets upset about something. Thus, people come back from their time in nature calmer and with clearer thoughts and appreciate nature for these qualities, among others.

Other participants also spoke of nature taking away their problems. For certain participants, it means they can go for a walk in the forest with friends and talk about their problems and then leave those problems in the forest:

«Wir diskutieren vielfach im Wald, […] und dann sagen wir, so der Wald hat uns jetzt die Probleme abgenommen. Jetzt haben wir wieder eine Woche Zeit und dann haben wir neue Probleme, dann gehen wieder in Wald, diskutieren wir wieder und der Wald nimmt uns wieder die Probleme. Das ist so ein Kreislauf, es ist ganz interessant.»

EN: *«We often have discussions in the forest [...] and then we say, so the forest has now taken the problems from us. Now we have another week and then we have new problems, then we go back to the forest, we have another discussion and the forest takes away our problems again. It's a cycle, it's quite interesting.»* (Interview 13)

Additionally, it means that when they are in nature, they gain a different perspective and realize that their problems are not as big as they seemed to them in the city. For example, one participant talks about how everything in his garden grows regardless of the things that trouble him and how gardening gives him a different perspective:

«Den Bohnen ist es egal, ob eine Pandemie ist.»

EN*: «The beans don't care if there is a pandemic.»* (Interview 13).

Nature's ability to cause a change of mind is also evident in Interview five. The participant describes it the following:

«Wenn du in der Natur bist, dann stimmt einfach alles und du bist glücklich. Es gibt es schon auch in anderen Situationen, aber nie so stimmig.»

EN: *«When you are in nature, everything is just right, and you are happy. There are other situations like that, but never so harmonious.» (Interview 5)*

For him, it is especially noticeable how simply everything is right and fits in nature. It is not just one part that is beautiful or makes him happy. It is nature as a whole that makes it so special and cannot be found anywhere else. In nature, very different emotions come to the surface. Many of them influence a person's well-being directly or indirectly. For example, some participants mentioned that they feel gratitude towards their life when they are in nature.

Another point discussed frequently is doing exercise in nature. While there are many senior-oriented activities available in Zurich, many people prefer however to get their exercise in natural settings such as parks, forests, and gardens. This shows that despite the great number of possible activities created for the elderly, nature still remains of great importance regarding leisure activities and fitness.

In combination with exercise, regularity comes into play. Many participants mentioned how important it is to have regularity in their life, and they feel more comfortable in set structures. Since nature is always accessible to them (which has also proven to be especially true during COVID-19), it creates a regularity for seniors that has almost no exceptions. The seniors can choose for themselves if they want to take a walk every day, every week, or every month. It became quickly apparent during the interviews that eight of thirteen participants spend time in nature on a regular basis and integrate it into their weekly routines. This shows that not only mental well-being can be improved in nature, but also physical well-being. Fresh air, exercise and more pleasant temperatures make the time spent in nature a beneficial time for the elderly.

The lives of people who find themselves in their later years are often marked by loss. Many lose the opportunity to do things they have always enjoyed. For example, some talked about not being able to travel as much as they used to because of physical limitations or being too afraid. Nature provides an important counterbalance to the ever-present loss. As nicely summarized in an interview, a beautiful forest or a particularly beautiful place in nature can replace a vacation in the sense that participants no longer feel the need for vacations when they can be in nature.

«Man braucht gar nicht in die Ferien zu gehen, wenn du so einen schönen Wald in der Nähe hast. Und es gibt nichts Schöneres als das. Du hast die frische Luft und den Wald so in der Nähe.»

EN: *«You don't even need to go on vacation when you have such a beautiful forest nearby. And there is nothing more beautiful than that. You have the fresh air and the forest so close by.» (Interview 5)*

A specific loss associated with the lives of the elderly is that more and more people around them are passing away. The participants deal with this very differently. While for some, this is a completely natural process that you do not have to be afraid of, others are afraid not only of death but also of the time when they will be alone. It is at this point that the significance of nature comes to the fore once more. As mentioned in an interview, they feel a certain peace in nature in which the fear of being alone recedes, knowing that nature is something that will remain no matter how many people pass away around them. Moreover, this peace helps to have a time out from the fear of dying, as these thoughts are not so frequent in nature. It was frequently mentioned in the interviews how beautiful it is to know that nature is always there for you. No matter what is happening in a person's life, nature does not change its attitude towards the person.

Other participants also feel that nature gives them strength. This strength is needed by many to cope with the difficult things that they face in their lives. Also, one participant elaborated that they feel that nature has healing properties. Whether and how this power is felt by the participants depends on their attitude. It goes from "nature refreshes" to profound positive changes in a person's well-being. These profound changes have similarities to the afore-mentioned example, where the forest takes up the problems of the participant. Further, it can help the participants find a new way to look at their problem (like the beans and the pandemic), or even give the participants a feeling of freedom as compared to being in a coffin as the participant from interview nine mentioned (see quote below).

However, there is also a flip side. If nature is in poor condition, destroyed, or seems broken, it can negatively affect a person's well-being (this is further discussed in section 5.3). In seven interviews, participants specifically talked about how they get angry when they see trash lying around in nature. The absence of nature in day-to-day life also shows clear consequences. For example, one participant describes the following:

«Nein es würde mir viel fehlen, es ist einfach wie eine Blockade, ich weiss nicht, wenn du kein Grün mehr siehst, das ist wie ein Gefängnis oder wie ein Sarg. Das würde einen zur

Verzweiflung bringen und Beruhigung ginge nicht. Du könntest dich nicht mehr runterfahren, es ist einfach, die Ruhe hast du nicht mehr.»

EN*: «No, I would miss a lot, it's just like a blockade, I don't know, when you don't see green anymore, it's like a prison or a coffin. It would make you desperate and you couldn't calm down. You couldn't calm down anymore, it's simply that you don't have peace anymore.»* (Interview 9)

Others can relate and say they would despair without nature because it is such an essential part of their lives. Although, upon further questioning, it is not always possible to explain exactly why nature is so important. Nevertheless, participants do agree that it is extremely important. When asked whether something could replace nature, no participant was able to give an answer other than it cannot be replaced by anything.

5.2.2 The Beauty of Nature

A unique feature of nature is its beauty. Many people choose a certain route or place to stay because it is particularly beautiful. Over time, experiences and habits are accumulated in the area, but it is clear from the interviews that the participants' favourite place is almost always chosen because it is beautiful. Beauty can come from various things. For some participants, it is a unique place where the arrangement of trees and water bodies are just right, while others find beauty in what is familiar. When the participants talk about what is important to them in nature, they sometimes cannot grasp it directly. However, by asking and analysing, it becomes clear that the predominant motive is beauty.

This can also be directly linked to ecological loss. Although there are millions of trees, each tree is unique and of special beauty to many participants. They are aware that if this tree is cut down, it can never be restored, and its beauty is thus lost forever. As one participant mentioned, this is a very strong contrast to many other developments in our world, where everything can be reproduced and manufactured by the thousands. More details on ecological loss can be found in chapter 5.2.5.

One participant described nature as a carrier of culture and history. When asked about her favourite place in Zurich, she quickly answered that it was the Lindenhof. The reason why she considers this one of her favourite places is because it combines nature and culture. The Lindenhof has been a famous place in Zurich for a long time, even if it is not a beautiful, old building. She felt that should the Lindenhof be replaced by a building, a part of Zurich's history and culture would vanish.

5.2.3 Comparisons

This association of nature and culture is one of many comparisons that were presented during the interviews. Participants were asked to draw some comparisons between their relationship with nature and other situations in life. Whether it was about the feelings they had in nature or how nature affected their well-being, a lot of interesting comparisons were made. These comparisons can help to better understand the relationship between the elderly and nature. The answers varied heavily. While for some people, it was easy to find many different comparisons, others struggled more with that question and were not able to make any.

In the end, their answers either compared nature to something very positive in their life, or they stated that nature could not be compared to anything as it is so unique. This pattern of nature only being associated with positive things is one that was found throughout most interviews. It shows not only the importance of nature for the participants but also that, when asked like this, the participants only look for positive comparisons.

Some of the most interesting comparisons of the participants were: One person said being in nature is like listening to music (interview one). It is important to understand that this person played the violin for almost all her life until she was not able to anymore due to her age. Music always played a big role in her life, as this was the one thing she and her family bonded over the most. Now that she cannot play the violin anymore due to her age, she finds herself enjoying nature nearly as much as music. Nature also took up part of the role that music held in her life, as she now likes to take walks with her children and their partners and bonds through nature with them instead of music. Even though nature is not the same as music for this participant, it replaces some of the things she appreciated about music.

Furthermore, the comparison of being in nature and having a good discussion was emphasized several times. The participants mentioned how talking to other people helps them to sort out their priorities, get a clearer view of things and just gives them an overall feeling of belonging. Although nature does not talk back the way another person does, some participants noticed how nature can do all those things as well. In Interview thirteen, the participant says that the impressions he gets from nature are the answer:

«Aber wenn man so diskutieren kann zusammen, dann ist das schon befreiend und ist ein zufriedenes Gefühl, wenn man sieht, dass man Gleichgesinnte hat, wenn man sieht, dass man nicht so allein in der Welt dasteht, dann hilft das schon auch. Der Wald redet nicht und wenn

man mit Freunden ist, die geben Antwort und beim Wald ist einfach die Natur, der Eindruck ist die Antwort.»

EN: *«But when you can discuss things together like that, it's liberating and a satisfied feeling, when you see that you have like-minded people, when you see that you're not so alone in the world, then that also helps. The forest doesn't talk, and when you're with friends, they answer, and with the forest it's just the nature, the impression is the answer.» (Interview 13)*

Lastly, there were many comparisons like reading, spending time alone, reflecting, or batteries being recharged. All those things can be associated with a calm environment and are usually done by oneself. In chapter 5.2.1 it is already explained how many participants credit nature to calm them down in their hectic city lives. These comparisons confirm this as well.

5.2.4 Fear of Losing Access to Nature

One of the biggest fears participants feel is that they will lose access to nature. How accessible nature is, depends on many factors. Mainly relevant are the distance and steepness of the path leading into nature.

Many of the participants had to give up their cars in recent years because it was too dangerous for them and others to continue driving. This means a huge restriction in mobility. Thus, it became even more important for them that nature was accessible on foot. For the participants to be able to enjoy nature to the fullest, they should have spontaneous access. There should be no need to plan in advance how and when to go for a simple walk in the forest. Spontaneity is highly valued, as described here in interview four:

«Ich hatte da vor zwei drei Jahren überlegt, den Garten könnte ich auch langsam aufgeben und […] da habe ich gedacht, das kann ich nicht, ich muss gehen können. Und das Schöne ist natürlich hier, es ist so nah, ich kann natürlich ganz spontan sein. Innerhalb von fünf Minuten irgendetwas liegen zu lassen und zu sagen, so jetzt kann ich gehen.»

EN*: «Two or three years ago, I thought about giving up the garden and [...] I thought, I can't do that, I have to be able to leave. And the nice thing is here, of course, it's so close, I can be spontaneous. Within five minutes, I can leave something and say, now I can go.» (Interview 4)*

What also becomes apparent is the big question of whether one should give up one's own garden. Many of the participants have or had a garden either right outside the front door or an allotment garden. They have spent almost their whole lives with a garden and felt a great loss when they had to give it up. Those who still have the garden want to keep it as long as

they can. This is another reason why it is particularly important that nature is close by since it replaces, to a certain extent, the own garden that the participants appreciated.

Many participants were also concerned that they might not be able to walk long distances or may even be in a wheelchair. The participants, therefore, wish that there are certain walks that are wheelchair accessible and still have beautiful trees or flowers along the way. In interview number two, the participant describes how her physical condition has worsened to the point where she is unable to walk the path she used to because the hill has become too steep for her.

Another fear that most of the participants have is the thought of the city getting bigger and bigger. By growing so much, they fear that the city will replace the nature around Zurich. The participant in interview three is especially wary of how the city will evolve:

«Mit dem Zubetonieren, das ist natürlich schon eine schlimme Sache. Und ich habe im Internet […] eine Prognose gesehen, dass Zürich bis Olten alles zusammengehängt ist.»
EN*: «Covering everything with concrete, that's a terrible thing. And I saw a forecast on the internet [...] that Zurich to Olten is all connected.» (Interview 3)*

There are also some concerns about the expansion of 5G or drugs being used in the area they are living in. However, these did not seem to be as big of a concern as the vanishing of species and forest areas. The biggest fear the participants have regarding the immediate nature is that they will not be able to access it in the future. Losing access was sometimes reflected in the fear that nature (most prominently the forest area) would be replaced by even more buildings.

5.2.5 Ecological Loss

When participants talked about things they missed or where they felt losses, the examples brought forward often occurred during childhood or in their later years, not in the middle. It must be mentioned here that the biggest loss mentioned by almost all participants is happening due to the constant building and enlarging of Zurich. Not only have large parts of nature been lost (ecological loss), but the familiar cityscapes, the houses that the participants knew and liked, have been demolished and replaced by new ones (further losses).

There was a wide variation in the extent to which participants responded to losses they experienced regarding nature and the environment. For some, recalling an instance of a

change that was significant enough to stick in their memory proved difficult. For others, it was soon almost impossible to talk about anything other than the many negative changes that had occurred in the environment.

Ecological loss can cause a lot of stress for some people. For example, many still remember losses in their childhood, although one might think that this could have been forgotten long ago. When asked if something important was taken from them in nature, one participant recounts the following:

«Ein Baum, den ich sehr liebte, wo wir immer drunter sassen und spielten. Ich weiss nicht mehr, war es ein Kirschbaum? Und das hat mich sehr verletzt, aber das ist nichts, ja.»

EN*: «A tree that I loved very much, where we used to sit and play under it. I don't remember, was it a cherry tree? And that hurt me very much, but that's nothing, yes.» (Interview 10)*

She herself says at the end that it was nothing, but still: it hurt her very much so deeply that she can still remember it almost 70 years later.

Although the participants' answers often had different foci, one trend can be identified across the interviews. Namely, the various losses caused by "concreting" (DE: "Betonisierung" was the term used most frequently by the participants). The extent to which the cityscape of Zurich has changed can be seen in figures 5 and 6. Many of the participants complained about either specific houses or meadows being replaced by new buildings. For others, it was more the general tendency that less green space and more buildings were being created in Zurich.

But there are also smaller things through which the participants experienced ecological loss. For example, one person in interview two describes how the small islands between the streets in Zurich used to be planted with flowers and are now simply paved over:

«Ja und früher hat es einen Haufen Inseln gehabt in der Stadt. Eben zum Beispiel ein Rondell und nachher ist innendrin das ganze Rondelle bepflanzt gewesen. Ich kannte sogar den Gärtner. Einen von den Gärtnern. Ein Stadtgärtner. Der ist voll beschäftigt gewesen. Heutzutage brauchen sie gar keinen mehr, denn es ist alles geteert. Jede Insel, statt dass es etwas angepflanzt wäre, oder wenigstens eine Wiese hätte, ist heute nur noch Stein. Besetzstein oder ich weiss auch nicht was. Nicht mehr von Dings und dafür eine riesige Autolawine. Dass man nicht durchkann.»

EN*: «Yes, and in the past, there were a lot of islands in the city. There was a roundabout, for example, and later the whole roundabout was planted inside. I even knew the gardener. One of the gardeners. A city gardener. He was very busy. They don't need one nowadays because it's all tarred. Every island, instead of being planted with something, or at least having a*

meadow, is now just stone. Occupation stone or I don't know what. No more of that and instead a huge avalanche of cars. That you can't get through.» (Interview 2)

Figure 5: View from Zurich Waid 1890 (Source: Stadt Zürich, 2018)

Figure 6: View from Zurich Waid 2020 (Source: zuerich.com, 2020)

Another cause for many participants to experience ecological loss was the vanishing of singing birds. When the participants were younger, they used to hear a lot of birds, but as Zurich grew, the singing birds started to vanish.

«Früher als ich hier hingezogen bin, hat man die Vögel noch pfeifen gehört. Und morgens, wenn ich aufgewacht bin, das war meistens so um 5 Uhr oder halb 7. Zwischen 5 und halb 7 um 5 haben sie ungefähr angefangen zu pfeifen und dann ist man wach geworden, weil man ein schönes Pfeifkonzert gehabt hat. Das ist vorbei und nicht nur weil ich schlechter höre, sondern einfach, weil die Grünfläche fehlt.»

EN*: «When I first moved here, you could still hear the birds whistling. And when I woke up in the morning, it was usually around 5 a. m. or 6:30 a. m. Between 5 a. m. and 6:30 a. m. at 5 a. m., they started whistling, and then you woke up because you had a nice whistling concert. That's gone and not just because my hearing got worse, but just because the green space is missing.» (Interview 2)*

Other participants also talked about hearing the singing birds less often. The participant from interview four was able to say for how many years the singing birds were gone and when they started coming back.

«Was ich jetzt einfach beobachte […], als wir am Anfang hier gewesen sind, haben wir viel mehr Singvögel gesehen und gehört. Auch Amseln zum Beispiel. Bis etwa vor 15 Jahren hatten wir sehr viele Amseln und ich habe das immer sehr genossen, speziell so am Abend

haben plötzlich die Amseln im Frühling wieder angefangen zu singen auch da in den Bäumen. Und das ist eine Zeit lang, ja ich würde sagen so zwischen fünf und zehn Jahren haben wir eine Zeit lang fast keine Amseln mehr gehört. Jetzt kommt es langsam wieder, aber ich bedauere das sehr stark, dass die Vogelarten so zurück gegangen sind. Und man sieht auch nicht mehr so viele Singvögel. Früher hat man viele Spatzen und Meisen und Buchfinken gesehen. Was man natürlich hat sind Krähen und Elstern, die die anderen vertreiben oder.»

EN*: «What I simply observe now [...], when we were here at the beginning, we saw and heard many more singing birds. Also, blackbirds, for example. Until about 15 years ago we had a lot of blackbirds, and I always enjoyed that very much, especially in the evening the blackbirds suddenly started singing again in the trees in spring. And for a while, I would say between five and ten years, we almost didn't hear any blackbirds anymore. Now it's slowly coming back, but I very much regret that the bird species have declined so much. And you don't see so many singing birds anymore either. You used to see a lot of sparrows and titmice and chaffinches. What you have, of course, are crows and magpies, which drive the others away.»* (Interview 4)

As the person from interview four further describes, it is not only the loss of species that concerns people but also worries about the future. Questions like "what will happen if more and more animal species become extinct" are on the minds of the participants. This is also associated with a certain fear of an unknown future in which nature is increasingly damaged. This fear stems from the ever-increasing building area in Zurich. Here are some examples of how the participants feel:

«Ja die vielen Bauten. Hier die Strasse, alles, immer noch mehr, noch mehr, noch mehr. Ich meine einfach früher hatte man noch mehr Bäume und Wiesen. Jeder Fleck wird ja mittlerweile ausgebaut. Es ist schade.»

EN*: «Yes, the many buildings. Here the road, everything, always more, more, more. I mean, in the past there were more trees and meadows. Every spot is being filled now. It's a pity.»* (Interview 8)

«Wenn sie immer wieder neu bauen und die guten abreissen, das ist das Gemeine. […] Die anderen lassen sie stehen, die die abgerissen werden sollten. Bei den Wäldern auch. Da hat es auch immer etwas, was sie wegnehmen, was sie nicht sollten. Immer für die Häuser, dass man gar nichts mehr sieht, gar keine Bäume mehr hat.»

EN*: «If they keep building new ones and tearing down the good ones, that's the mean thing. [...] They leave the others standing, the ones that should be torn down. The same goes for the forests. There's always something they take away that they shouldn't. Always for the houses, so that you don't see anything anymore, you don't have any trees anymore.»* (Interview 7)

«Dass es nicht mehr so schön ist wie früher. Der Gestank der Autos. Eben in der Stadt selbst hat man nicht so viel Natur, da muss man gleich aufs Land raus. […] Den Albis. Das vermisse ich jetzt noch am meisten. Da hinten verbauen sie ja auch alles, da sieht man die Berge gar nicht mehr. Ja es könnte schon wie früher bleiben, wo man mehr Platz hatte.»

EN*: «That it's not as beautiful as it used to be. The smell of the cars. In the city itself, you don't have so much nature, you have to go straight out into the countryside. [...] The Albis.*

That's what I miss the most now. They're building up everything back there, so you can't see the mountains anymore. Yes, it could stay like it used to be, where you had more space.» (Interview 7)

For one participant, the loss comes from the expropriation of the property and thus the loss of the garden. In interview eleven, the participant explains that he once lived in a house in Zurich that had a beautiful garden. He and his family enjoyed this garden, and they enjoyed watching the birds and discovering flowers. When the "Westtangente" was built in Zurich, a large part of his property was expropriated so that the road could be built. Not only did they miss their garden, but they now had one of the busiest roads right in front of their door.

However, ecological loss does not only have to be caused by humans. Many also mention the damage caused by the storm in the summer of 2021 or the Lothar storm in 1999. The destruction of forests is of particular concern to the people interviewed. Behind this is the knowledge that houses and cars can be replaced quickly, while trees that have grown over decades can never be replaced (see also chapter 5.2.2).

5.2.6 How Place Attachment is Influenced

Ecological loss, as discussed in the previous chapter, is closely connected to place attachment. Place attachment can build the identity but can also cause a lot of stress when the attached place changes. This chapter discusses whether and how the participants feel place attachment; place attachment to Zurich, but also place attachment in relation to specific places in nature. Across the interviews, it emerged that place attachment occurs when participants feel at home in Zurich or in a specific place.

What triggers a sense of home? In interview thirteen, it is explained by feeling cared for:

«Man fühlt sich aufgehoben. Man hat Schulen, man hat ein Spital, man hat Verkehrsmittel. Einfach man ist irgendwie nicht verlassen. Wenn sie irgendwo auf dem Land draussen sind, dann müssen sie in die nächste Stadt zum Doktor oder wenn sie einkaufen wollen, dann fahren sie mit dem Auto auch irgendwo ins nächste Einkaufszentrum. Ich kann zu Fuss einkaufen, meine Kinder konnten zu Fuss in die Schule, ich konnte zu Fuss arbeiten gehen sogar und das ist ein Vorteil. Man hat einfach alles komplett. Es gibt auch Nachteile, aber wenn sie nach Vorteilen fragen, dann ist man gerade in Zürich aufgehoben. Also in meinem Alter redet man auch über Beerdigungskosten und das bekommst du alles von der Stadt. Also einen Sarg bekommst du, ein Auto, einen Organist bekommst du und das wird in der Stadt alles offeriert. Klar zahle ich Steuern, aber ich zahle auf dem Land auch Steuern und dann muss ich vielleicht noch zahlen, dass das Grab ausgehoben wird und die Stadt bietet einfach Sachen, die ich schätze.»

EN: *«You feel you are in good hands. You have schools, you have a hospital, you have transportation. You are somehow not abandoned. If they are out in the countryside somewhere, they have to go to the doctor in the next town, or if they want to go shopping, they drive to the next shopping centre somewhere. I can go shopping by foot, my children could go to school by foot, I could even go to work by foot and that's an advantage. You just have everything complete. There are also disadvantages, but if you're asking for advantages, then Zurich is the place to be. So, at my age they also talk about funeral costs and you get all that from the city. So, you get a coffin, a car, an organist and all that is offered in the city. Of course, I pay taxes, but I also pay taxes in the countryside and then I might have to pay for the grave to be dug and the city just offers things that I appreciate.»* (Interview 13)

This "having everything close by" is also mentioned in other interviews and often extended to the forest. For many participants, having nature close to home is an essential part of place attachment, and they especially appreciate the forest, as they like to take a walk in the forest.

Another frequently mentioned factor that influences place attachment is relationships. If the participants have already raised their children in Zurich, they often feel an even deeper attachment to the city because so many of their memories with their children are tied to places in Zurich. But it is not only the children who influence the sense of place. Other relationships also strengthen feelings of home. As mentioned in interview nine, for example, clubs or associations also play an important role. The affiliation to the club shapes the sense of place for some people just as much as children do for others. Memories of special experiences and people are also important for the sense of place. When asked how this attachment is expressed, the participant in interview six gave the following answer:

«Ja schon schöne Erlebnisse eigentlich. Ich bin nicht jemand der sich an einen Haufen negative Sachen erinnert. Das sind einfach Erlebnisse, die man gehabt hat, aber wir […] sind in Afrika mehrmals auf Safari gewesen oder was wir auch gesehen haben […], das darf man ja gar nicht mehr sagen, das geht alles kaputt, die schönen Korallen und das Zeug, das geht ja alles kaputt dort. Und das haben wir alles noch erlebt in voller Pracht.»

EN: *«Well, it's nice experiences actually. I am not someone who remembers a lot of negative things. These are simply experiences that one has had, but we [...] have been on safari in Africa several times or what we have also seen [...], you can't even say that anymore, everything is destroyed, the beautiful corals and that stuff, everything is destroyed there. And we still experienced all that in all its glory.»* (Interview 6)

Here it was now no longer about Zurich, but about places all over the world to which one feels connected. This example shows that particularly impressive experiences make the participant feel connected to a place. However, this quote also shows many aspects of

ecological loss and how they feel guilt regarding these places being destroyed. This guilt is looked at in more detail in chapter 5.3.3.

5.2.7 Nature Changes Human Behaviour for the Better

When individuals form place attachments, their behaviour in that place or regarding that place can differ. Just as place attachment can cause a change in the behaviour, being in nature can itself also cause a change in the behaviour. This characteristic of nature was evident in most interviews. The behavioural change was always described as positive. In interview nine, the participant describes that people are simply more open in nature. It is easier for him to meet new people or to start a conversation with a stranger. Since loneliness is a major concern in old age, openness to fellow human beings is an important trait for many.

This openness is further reinforced by the fact that people feel they belong in nature. This contrasts with city life, where they must be very careful about where they go and that they do not run into anyone. In nature, not only do you feel connected to nature, but you also feel connected to the other people in nature.

All participants mentioned how nature's tranquillity affects them in a positive way. The tranquillity that nature radiates causes people to meet each other differently, as described above. In particular areas with activities, water bodies or barbecue areas were named to have such a positive effect.

In many interviews, participants mentioned how nature changes people's behaviour in the short term ("you are more open in nature"). However, many also mentioned characteristics of nature that change behaviour and personal attitudes for the better in the long term. Thus, many compare the stay in nature with a battery that is charged and can then perform again for a few days. Others talk about the forest taking away their problems. They can leave their worries in the forest and no longer have to carry them about with them and be dragged down, allowing them to return with more patience for others or the ability to act more calmly.

5.2.8 From Grandparents to Grandchildren

This chapter focuses on the influence that nature has on the relationships from grandparents to children and grandchildren. Several interviews revealed that nature is often particularly appreciated because it is good for their children or grandchildren. For example, one

interviewee mentions how much someone appreciates his allotment garden because he could plant something there with his children, and they could then watch it grow over the next few months. Another participant tells of once catching a new-born bird in his hand:

«Einmal bin ich dort gewesen, als sie zum Nest rausgeflogen sind und ein Junger ist mir in die Hand geflogen, weil ich gerade dort gestanden bin und er nirgends absitzen konnte. So eine kleine Blaumeise ist das gewesen. So herzig. Das sind so schöne Momente, die man in der Natur erleben kann.»

EN: *«Once I was there when they flew out to the nest and a young one flew into my hand because I was standing there and it had nowhere to sit. It was such a little blue tit. So cute. These are such beautiful moments that you can experience in nature.»* (Interview 11)

The experience itself was very special for him, but he was even more excited to be able to share it with his children as they were with him at that time. It was a great joy for him that his children could watch the birds in the nest and learn something about nature.

However, it is not only observing what the children and grandchildren have done in nature or sharing experiences in nature that makes the participants particularly appreciate nature. Participants often associate special places in nature with activities they have done with their children or grandchildren. For example, a simple meadow that was flooded by the fire department in winter allowed children to ice-skate on it. Even if this meadow is no longer flooded, it still fills the participant describing this story with gratitude that their children were able to experience this.

5.3   HUMAN'S INFLUENCE ON NATURE

While the participants view the influence of nature always in a positive light, the influence of humans on nature leaves room for much more discussion. There was some controversy in the answers of the participants when it came to the question of what we as humans should or should not do. An attitude that could be identified is that the participants clearly separate nature and human-made. Often even a human vs nature attitude could be detected. In this mindset, humans are as harmful to nature as cancer is to humans. There is a desire that nature should simply be left alone so that it can then return to its original form is expressed by eleven of thirteen participants. This thinking assumes that nature is more beautiful, better, and healthier without human influence.

In contrast, when asked what they wish for the future of nature, eleven out of thirteen participants mentioned that they want people to look after nature. Maintaining and caring

for nature both put human action in the foreground. This attitude that the residents of Zurich need to care for nature was also evident when the participants were asked about their duties in nature.

This shows that the participants have very conflicting views. For example, the participants often see people as the enemy of nature, but at the same time, they are bothered if someone does not take good care of the garden. Order is a very important aspect of life for most of them, which also refers to nature. In many interviews, the participants were annoyed that certain meadows or green spaces are not gardened and maintained but are simply left to themselves, but in other questions, they emphasised that humans do nothing but destroy nature and that nature would be better off if humans left it alone.

5.3.1 Responsibilities of the Individual

A view held by all participants is that all citizens have a responsibility. How far this personal responsibility goes depends on the person interviewed. For some, it is simply not to throw their waste into nature but to dispose of it properly. Others believed that human responsibility extended so far that in nearly every aspect of life, one should consider how one may care for nature or minimize the damage one creates, for instance, nutrition, clothing choices and water usage. Another very important basic attitude found in all interviews is that the current condition of nature is bad. Many mourn the nature from their youth when there were many more forests and meadows in the immediate area. Others, on the other hand, are of the opinion that the destruction of nature began before they were born, concluding that the pre-industrial nature was the best. The participants agreed that the current situation needs to change, and it is the responsibility of humanity to mend nature. This is evident in the following quote:

Interviewer: «Wenn Sie jetzt dran denken, dass es […] grüner wird oder dass man sich bemüht, mehr Bäume zu pflanzen, was löst das in Ihnen aus? »

Participant: «Dass es ein kleiner Beitrag ist, doch dass da doch etwas stattfindet, wo man weiss, das ist unsere Natur, wir sind ein Stück genauso von der Natur und man kann jetzt natürlich nicht zaubern und von heute bis morgen so machen, wie es ursprünglich vielleicht mal in den 50ern war. Dafür hat es auch viel zu viele Leute, also die ganze Überbevölkerung weltweit.»

EN*: Interviewer: «When you think that it is becoming greener or that efforts are being made to plant more trees, what does that evoke in you? »*

Participant: «That it's a small contribution, but that something is taking place where you know that this is our nature, we are a piece of nature and of course you can't magically come up with something to make it like it was originally in the 50s. There are far too many people for that, the whole overpopulation worldwide.» (Interview 12)

Further, it is clear to many that we are now at a crossroads. Participants told how life became more convenient for them since the Second World War. But now, this development has slowed down, and we as humans must decide which future we want to walk into. Here again, personal responsibility comes to the surface, which is so important for the participants.

When the topic of renaturation was raised, it was clear to all that renaturation is a good idea. This reflects the attitude "make nature the way it was before". What is meant by "before" depends on the participant. Most associated it with when they were young. However, this is not the only insight that can be gained from the participants' answers to the question of renaturation. Most of the participants see an interesting behaviour of mankind in dealing with, for instance, rivers. Interview thirteen states:

«Und das ist vielleicht auch auf der Erde, es gibt immer so Wellen. Einmal begradigt man es, dann renaturiert man es wieder und dann tut man's in Boden rein und dann holt man es wieder hoch. Es ist einfach so ein Wechsel, das ist noch interessant.»

EN: «And maybe that's also the case on earth, there are always waves like that. Once you straighten it, then you renaturalise it again, and then you put it in the ground, and then you bring it up again. It's just such a change, it's interesting.» (Interview 13)

Not only in interview thirteen but also in many others, the participants observe that people undo what they used to think was sensible, either because they have learned something new or because the attitude of humanity has changed. In connection with this, many also mentioned how their own life will end one day or that the decisions made today can be undone tomorrow.

5.3.2 Regrets

The regrets show more clearly than many other things how older people think about nature and their lives in relation to it. Broadly speaking, the participants' regrets can be divided into personal regrets and general regrets as a society. People often have the greatest personal regrets towards other people. However, it should not be neglected how these regrets also have a reference to places in certain cases. For example, losing a garden (see chapter 5.3.3) or a specific bench.

It is also evident that many participants are bothered by the fact that they did not intervene when something important was taken from their natural environment. For example, one participant describes how his land was largely expropriated in order to build a road. This road quickly became a big thorn in his side, as it is one of the main roads that bring cars into the city. So not only was his garden stolen, but it also supported the traffic policy, which he judged to be very bad.

But there are also regrets that the participants had as part of society. For example, many mentioned that they feel responsible as part of society for the fact that so much has been destroyed in nature. While the participants mentioned how they did encounter almost no major problems as a society until now, what they appreciate greatly, many of the participants still feel regrets when they see how nature is and has been treated.

"Après nous le déluge" This is how the participant describes the situation in interview five. Immediately afterwards, he adds "I am so sorry for what happened". This regret can be seen in many interviews. Many regret not having done something earlier as a society so that nature would not be destroyed and therefore welcome the fact that young people now want to take on more responsibility.

5.3.3   Ecological Loss and Guilt
Often, regrets regarding nature can be connected to situations where people experience ecological loss. This chapter focuses on the experiences of ecological loss of the participants where they felt like it was their influence or partially their influence that caused the loss.

Most examples of ecological loss occurring during the interviews were not connected to a feeling of guilt. On the contrary, the participants usually felt like they had no choice in the processes shaping nature. However, there are certain examples where the participants feel that their inactivity was partially responsible for the experienced loss. As described in chapter 5.3.2, some participants feel like they failed to preserve nature for the younger generations.

One such example of ecological loss was the construction of the Westtangente. On the one hand, the participant describes how his garden was taken away by the city, but on the other hand, he also talks about how he should not have allowed this to happen because he knew

how short-sided the project was and how his family and their neighbours suffered from this construction.

«Ich habe jetzt eben gerade letztens gesehen, das neue Projekt, das man machen will, die Untertunnelung von der ganzen Westtangente und dann denke ich "Gopfridstutz" wieso hat man das nicht früher gemacht. Jetzt muss man wieder so viel Geld in die Hand nehmen, um das Ganze zu renaturisieren. Die Leute können dort leben und wieder mal über die Strasse laufen und müssen keine Unterführung suchen. Das was man früher hatte, das war schon viel Wert und das stört mich am meisten, dass man da so kurzfristig gehandelt hat.»

EN: *«Just the other day I saw the new project that they want to do, the tunnelling of the whole Westtangente, and then I think "Gopfridstutz" why didn't they do that earlier. Now they have to spend so much money again to renaturalise the whole thing. People can live there and walk across the street again and don't have to look for a subway. What we had before was already worth a lot, and that's what bothers me the most, that they acted so short sided.»* (Interview 11)

One story of a participant shows how people want to care for nature or mourn nature. That people can develop a special connection to nature that goes beyond intrinsic and instrumental values is now widely known. The following quote reflects the relationships that can emerge:

«Ich meine, ich weiss nicht was du noch gesehen hast, wie der Wald hier oben aussieht, wie das alles kaputt ging nach dem Sturm, oder in Seebach, wir waren letztens noch in Seebach da hat mir jemand gesagt, […] der Weg ist immer noch nicht begehbar, dort liegen noch grosse Bäume im Weg. Das braucht eben grosses Material zum Abtransportieren. Und auch im Friedhof selber. Uralte grosse Bäume sind weg, sind umgefallen und das ist lustig, da hat es zwei Bäume, da habe ich jetzt schon ein Paar mal gesehen als ich gegangen bin, da gibt es immer jemand, der so ein Friedhofskerzchen drauf stellt.»

EN*: « I mean, I don't know what else you've seen, what the forest looks like up here, how everything was destroyed after the storm, or in Seebach, we were in Seebach the other day, someone told me [...] the path is still not passable, there are still large trees in the way. That requires a lot of material to remove them. And also in the graveyard itself. Old, big trees are gone, have fallen down, and it's funny, there are two trees, I've seen a couple of times now when I was walking, there's always someone who puts a little graveyard candle on it.»* (Interview 6)

The storm referred to here was the Zurich Storm Night on 13 July 2021, which many have compared in intensity to the Lothar storm. This storm caused great damage in Zurich (see figure 7).

Figure 7: Storm Night in Zurich 13. Juli 2021 (Source: Tages Anzeiger, 2021)

Interestingly, among all the trees that had been unrooted, there was one specific tree in the cemetery that was very old and had fallen due to the storm. Some person lit a candle at the site of the fallen tree, as is done at the graves of deceased persons. What relationship this person has to the tree is unclear, and whether it is just one person or several. What is clear, however, is that this person(s) felt great grief, and the death of the tree was so relevant to them that they kept lighting a candle, as they do at people's graves. This story shows how people interact with ecological loss and how the relationship between humans and nature is not one-sided but goes in both directions.

5.3.4 Participants' Influence on Place Attachment

When the participants were asked whether they felt connected to Zurich, they often said yes because they would miss certain things if these did not exist anymore. Similarly, when asked about ecological loss, many participants talked about aspects of nature that have always been there until suddenly they were not. There is a strong interplay that can be observed between place attachment and ecological loss. In interview two, the participant talks about how it was better before:

«[Bei] der Werdinsel dort haben sie jetzt auch einen Haufen neue Einstiege gemacht bei der Limmat, dass es wirklich nur ein Vergnügungspark ist. Auch nicht mehr viel von der Natur. Ein

Haufen Schilder das soll man nicht, grillen ist verboten, Abfall mitnehmen, nur noch Schilderwald. [...] Ja es ist einfach früher anders gewesen.»

EN: «[At] the Werdinsel, they've made a bunch of new entrances by the Limmat, so it's really just an amusement park. There's not much nature left either. A bunch of signs that you shouldn't, barbecues are forbidden, take litter with you, just a forest of signs. [...] Yes, it was simply different in the past.» (Interview 2)

Because the participant appreciated the way the bank of the Limmat was before, she does not appreciate the changes that have been made.

There are other examples of the close connection between place attachment and ecological loss. A participant explained that if you feel connected to a place, chances are higher that you would do something about the things that are displeasing. And when the possibility to change (or sometimes preserve) parts of the environment the participant feels connected to is denied, changes can lead to ecological loss. This was evident from the way the participants talked about the events of the storm during the summer, where they wished they could have saved some trees from destruction.

Going back to the quote from interview two, where the participant talks about the gardeners she used to know, we can see how place attachment plays an important role here. The participant describes in the story that she used to know some gardeners, which she liked very much and which belonged to the place for her. She explained how by knowing the gardeners, she received a feeling of belonging. Now that she does not know the gardeners anymore or there are no gardeners anymore, respectively, she lost some feeling of belonging. This shows how the relationships the participants build are an important influence on the place attachment.

5.3.5 Wishes Regarding the Future of Nature

When given the opportunity to voice their wishes and hopes for the future of nature, many participants did not state anything complicated but rather simple things. They want more green spaces in the city in any way possible. They do not want the forest area to be reduced and just generally wish for a better handling of nature.

The focus of those wishes usually is on human-nature interaction. Everyone should take up some responsibility and treat nature with respect. Not leaving behind one's trash and keeping the front yard clean are some of the most frequently mentioned wishes. There is the

phrase used by many participants "de Natur eifach Sorg hebe" which roughly translates to "simply take care of nature". This includes all the things that we as humans should be and do regarding nature.

When it came to wishes, some participants did not voice them explicitly since they felt like there was no use to it.

«Aber ich glaube gar nicht dran, denn in meinem Alter kenne ich den Menschen, weil jeder denkt, der andere machts dann schon. Und wenn man sieht, wie heute generell so anders gedacht wird und gehandelt wird, als es bei unserer Zeit war. […] Aber dass dann so fortschreitend mit der Natur alles kaputt gemacht wird, das Meer, die Wälder und alles und dass man praktisch fast keine Chancen mehr hat, weil niemand mehr bereit ist, also es gibt schon Leute, einzelne die bereit sind und sagen ich würde schon das und das machen. Aber wenn die Situation kommt, dann schaut jeder für sich, da ist der Mensch so.»

EN*: «But I don't believe in it at all, because at my age I know people, because everyone thinks the other person will do it. And when you see how today people generally think and act differently than they did in our time. [...] But that everything is progressively being destroyed in nature, the sea, the forests, and everything, and that there are practically no more chances, because no one is willing, well there are people who are willing and say I would do this and that. But when the situation comes, everyone looks out for themselves, and people are like that.» (Interview 5)*

However, many participants did not lose hope. When asked what advice they would give to the younger generations when it comes to nature, they often answered like this:

«Ah das wissen Sie doch. Das Wissen nutzen und immer wieder dafür demonstrieren. Also ich finde das gut, dass die Jungen jetzt so Demonstrationen machen und sich wirklich so für die Natur einsetzen. Also dass das ein grosses Thema ist. Und auch dass die Politiker darauf aufmerksam gemacht werden. Allerdings passiert immer noch viel zu wenig, viel zu langsam.»

EN*: «Ah, you know that. Use the knowledge and demonstrate for it again and again. I think it's good that the young people are now making such demonstrations and really standing up for nature. That this is a big issue. And also that politicians are being made aware of it. However, far too little is still happening, far too slowly.» (Interview 6)*

In the end, all participants simply wished for a better future for the nature in and around Zurich, not just because they want to have beautiful nature close by but also because they had deep emotions for nature itself.

5.4 FURTHER CONSIDERATIONS

Not all results could be fitted into the bidirectional relationship between humans and nature. Much information from the interviews is neglected in this thesis, as the results only contain what is relevant to answer the research question. However, there are three

important findings that are relevant to this study, which are described in the following chapters.

5.4.1 Looking at the Language: "They"

Although this is not unique to my research, I would like to briefly address the ominous "They", which was part of all interviews:

«Und ein Vorteil, den es gibt, in Schwammendingen gibt es [das] auch wie beim Irchel, dort machen sie richtig Grünfläche. Sie haben es gemerkt, dass die Menschen das wollen und machen wieder richtig Grünfläche. Das ist ja [oberhalb] der Autobahn oben durch machen sie eine richtige Grünfläche, einen Park machen sie dort und dort haben sie vermutlich gemerkt, dass die Menschheit doch etwas Grünes will und das ist jetzt positiv.» (Interview 9)

EN*: « And one advantage that there is, in Schwammendingen there is [that] also like at Irchel, there they make a properly green space. They've noticed that people want that and they're making proper green spaces again. That's [above] the highway they're making a real green space, they're making a park there and there they've probably noticed that mankind does want something green and that's positive.» (Interview 9)*

One can see very well that it is assumed that there is someone who has all the decision-making power. In this case, one could argue that it simply means the city government of Zurich, but in the same interview, the "they" is used again, where it cannot mean the city government because it rather means the state government. Sometimes the "they" even goes so far as to suggest that human behaviour can be so strongly influenced by "them" that it would be possible for all people to have the same opinion if only "they" would act correctly.

This notion or unconscious assumption of a power that has so much to say distorts the picture of reality in certain ways. Often, the things that participants are bothered about have not been determined by a single entity but a complicated construct of politicians, interest groups and the population itself. For example, it cannot simply be decided that Zurich will have half as much traffic, which was often requested by the participants as something that "they" should do.

5.4.2 The Importance of the Upbringing

This chapter emphasizes the fact that the relationship towards nature is heavily influenced by the upbringing of a person. When asked about their relationship with nature, nearly all the participants explained their relationship by telling what their parents taught them. It does not mean that what the parents' thought was always viewed as a right, but the

participants acknowledged that the influence of the parents is what formed their relationship with nature the most (at least at the beginning of their lives).

If parents have taught their children to treat nature carefully and to appreciate it, then this remains in a person's life. Thus, those who have learned such behaviour from their parents talk in a positive way about their parents' influence in relation to nature. For those who did not learn much from their parents about the careful treatment of nature, a little disappointment or a slight reproach tends to come through. The question that arises is where or how did they learn to care for nature? The interviews do not suggest much, but one participant talked about how he educated himself on all kinds of topics, including nature-related topics. He said this knowledge provided a basis to appreciate nature in a way he did not learn from his parents.

It was observed that the participants often learned from their parents that nature is the basis for their daily food. The beauty of nature and its value outside of the food provider was often not acknowledged. But that did not stop the participants from changing their attitude towards nature. The fact that they can just go to the supermarket and buy food without worrying about whether they will have enough to eat next month enabled many participants to appreciate nature differently.

A child first adopts its parents' attitudes and later that of other people. Many therefore describe how their relationship with nature was influenced by their parents:

«Ich bin so gross geworden. […] also das hat man mir gar nicht gesagt, das hat man mir vorgelebt. Wow ist das schön, das ist jetzt gut, das sind feine Äpfel und so. Also er [der Vater] war sehr jemand, sehr wertschätzend, was die Natur angeht und das übernimmt ein Kind natürlich.»

EN*: «I grew up like this. [...] I wasn't told that, I was taught that. Wow, this is beautiful, this is good, these are fine apples and so on. So he [the father] was really someone, very appreciative of nature and a child naturally adopts that.» (Interview 12)*

However, the relationship with nature is also dependent on many other factors. Especially relationships with children or spouses can have a great influence. When the participants think of situations in which they particularly appreciated nature, these are often situations in which the children or grandchildren enjoyed nature or were able to learn something exciting in nature (see also chapter 5.2.8). But friendships also shape the relationship with nature. For example, one participant describes that he goes for a walk in the forest with a friend

every week, and they talk about their problems there. This creates a relationship with nature that has very special characteristics. As the friendship evolves, so does the importance of nature.

5.4.3   The importance of Nature Never Decreases

Whether or not the relationship towards nature changes over a person's lifespan is dependent on that person's experience, character, and surroundings. In general, most of the participants said that their relationship with nature has not changed specifically or that nature has become more important to them over the years, but never less important.

As already described in previous chapters, the lives of the elderly are changing gradually but noticeably. Close people pass away, and many recreational activities are not manageable anymore. For reasons like these, nature takes on a different significance. As some participants describe, nature is the only thing they are sure will stay. This changes the relationship with nature, and participants learn to appreciate nature again in a different way.

One participant describes how the relationship with nature has changed as follows:

«Ich denke die hat sich, wenn ich jetzt heute sagen müsste, die hat sich noch vertieft. Früher hat man es zur Kenntnis genommen, also als Kind und als Jugendlicher nimmt man das nicht so wahr, man nimmt es zur Kenntnis, aber heute schaut man das Zeug so vom Alter an, man hat andere Ansichten, früher hat man das einfach zu Kenntnis genommen. Es ist noch schön da in dieser Natur und wie die Bäume eine andere Farbe bekommen und wie man einen Haufen fischen konnte, und Zeug und Sachen und es war noch lustig zum Schauen und ja heute schätzt man das anders, es ist einfach eine andere Art, wie man schaut. Es ist auf jeden Fall eine Erfahrungszeit, die man gemacht hat, ja. Es ist ein wenig intensiver.»

EN*: «I think it [the relationship with nature] has deepened even more if I had to say that today. In the past, you took note of it, so as a child and as a young person you don't notice it like that, you take note of it, but today you look at stuff like that from your age, you have different views, in the past, you just took note of it. It's still beautiful there in that nature and how the trees get a different colour and how you could fish a bunch, and stuff and things and it was still fun to look at and yeah today you appreciate it differently, it's just a different way of looking. It's definitely an experiential time that you've had, yeah. It's a bit more intense. (Interview 13) »*

How the relationship to nature changes is also explained in the answers to the question "What are some things that you particularly appreciate about nature?"

«Dass ich, wenn ich durch die Gegenden laufe, wo die Natur noch natürlich ist, dann kann ich mich hinsetzten oder hinstehen und staunen. Oder etwas beobachten, irgendwie ein Vogel oder ein Schmetterling, das hat man früher zur Kenntnis genommen und ist weitergelaufen und heute ist das ja, wenn man ein Reh im Wald sieht, da steht man doch still und schaut,

das ist so selten. Und früher wollte man feuern und grillieren und Schnitzeljagd machen. Und heute sind es einfach andere Werte, also früher sind es auch wichtige Werte gewesen in der Jugend natürlich, aber wenn du mal so lange auf der Welt bist, ja man verändert sich ja auch.»

EN*: « That when I walk through areas where nature is still natural, I can sit down or stand up and be amazed. Or observe something, somehow a bird or a butterfly, in the past you took note of it and kept walking, and today it's like when you see a deer in the forest, you stand still and look, it's so rare. And in the past, you wanted to make a fire and have a barbecue and go on a scavenger hunt. And today, there are simply other values, so in the past, they were also important values in youth, of course, but when you've been in the world for so long, yes, you also change.» (Interview 13)*

These interview excerpts illustrate how the relationship with nature has strengthened, or as the participant described it, it has become more intense. He could not describe what caused the change. It was more like a gradual change as he got older and calmer. This quote shows that there are many different aspects of nature that can be appreciated and that they do not have to stay the same.

Another participant described the change in his relationship towards nature from childhood to where it is now:

«Deshalb haben wir zu der Natur an sich eigentlich keine starke Beziehung gehabt. […] Ich habe halt nie die Vögel so beobachtet. Es ist auch eine Sache der Erziehung. Wie ich gesagt habe, bin ich immer mehr auf die Gebäude gestanden und auf Geschichte. Die Geschichte was da alles verbunden ist mit dem Gebäude und das ist das was mich dann sehr, sehr stark bewegt und weniger die Vögel und diese Sachen. Da hat jeder das seine. Wenn das nicht geschult wird oder zum Teil eben erzogen wird, dann geht das an einem vorbei.»

EN*: «That's why we didn't really have a strong relationship with nature. [...] I just never watched the birds like that. It's also a matter of upbringing. As I said, I've always been more into buildings and history. The history of everything that is connected with the building and that is what moves me very, very strongly and not so much the birds and these things. Everyone has their own thing. If that is not trained or partly educated, then it passes you by.» (Interview 5)*

Later in the interview, the same person who did not have a strong relationship with nature as a child describes how important nature has become to him in the meantime. When asked: "What would you miss most if you could no longer go out into nature?"

«Mir würde einfach das Wichtigste fehlen. Nebst dem Essen und meiner Frau würde mir natürlich schon am meisten das fehlen. Weil das brauche ich heute.»

EN*: «I would simply miss the most important things. Besides food and my wife, that's what I'd miss most of all, of course. Because that's what I need today.» (Interview 5)*

This change from "no strong relationship" to "the most important thing next to food and wife" illustrates how the relationship can change and the influence of the parents is there but does not have to stay there.

Interestingly, there was no reverse example where a participant was taught by their parents that nature is very important and they must take care of it, and over the course of their life, the relationship towards nature evolved into indifference. This is not to say that this does not exist anywhere, but within the thirteen interviews, such a tendency was not visible). This is further elaborated in the next section.

5.4.4   COVID-19

It is important to acknowledge the influence the pandemic had on people's relationship with nature. As many people stayed at home due to the restrictions and did not go back to the office for quite a while, nature took up a different role for many.

It is, however, interesting to notice that for most of the participants of the study, the relationship with nature did not change. One reason is that they are not working anymore and therefore did not suddenly have much more time at home. When asked whether their relationship towards nature changed during the pandemic, many said something along these lines:

«Nein ich bin nach wie vor begeistert.»
EN*: «No, I am still enthusiastic» (Interview 6)*

It was nonetheless noticed that something was different when they went on their stroll: They noticed that there were much more people, especially during the lockdown in spring 2020. This newly found appreciation that many people found during the pandemic was viewed with mixed reactions. Some disliked the crowded feelings they had, whilst others were happy that more people were able to enjoy the beauty of nature in their day to day lives.

In interview thirteen, the participant talked about how the beans do not care whether there is a pandemic. He argues that while humans are often concerned with all kinds of problems, nature is not. This is a feeling that many participants had regarding nature. They argued that their relationship with nature did not change due to COVID-19 since nature did not change. None of the participants mentioned that nature had helped them cope with the specific

stress of the pandemic. They did, however, talk about how nature helped them to cope with other stressful situations.

6 DISCUSSION

6.1 THE DICHOTOMY OF HUMAN-NATURE RELATIONSHIP

This discussion follows the dichotomy of the human-nature relationship similar to the structure of the results. The discussion first follows the arrow on the left side in figure 8 and afterwards the arrow on the right.
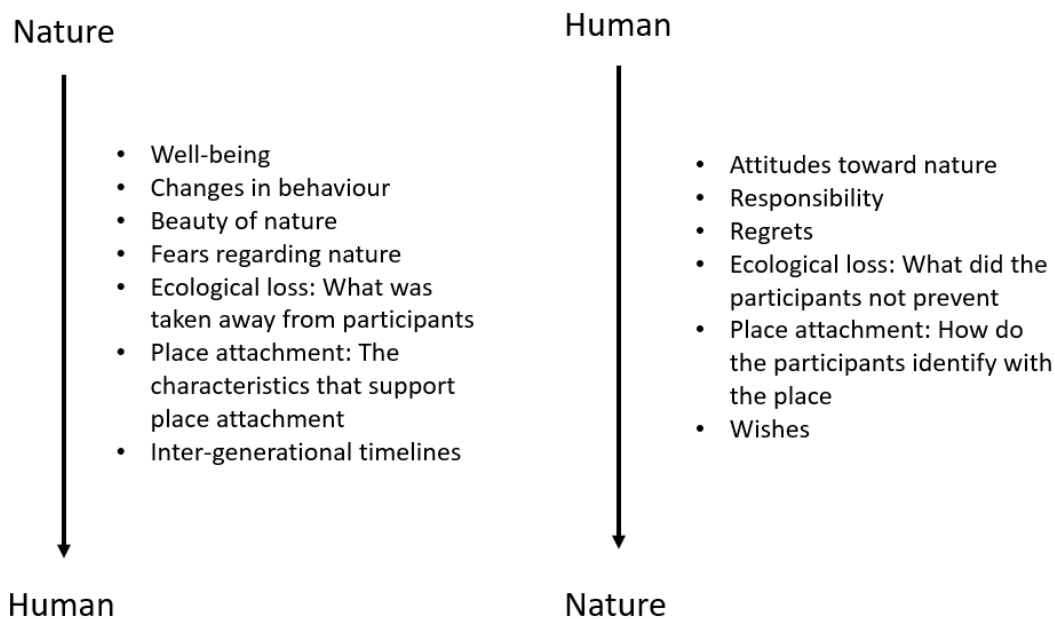
Nature   Human

- Well-being
- Changes in behaviour
- Beauty of nature
- Fears regarding nature
- Ecological loss: What was taken away from participants
- Place attachment: The characteristics that support place attachment
- Inter-generational timelines

- Attitudes toward nature
- Responsibility
- Regrets
- Ecological loss: What did the participants not prevent
- Place attachment: How do the participants identify with the place
- Wishes

Human   Nature

Figure 8: Revisiting figure 4: The dichotomy of the human-nature relationship

6.1.1 Well-being

Through the interviews, it became apparent that one of the most important factors shaping the relationship with nature is the influence of nature on well-being. The different points mentioned by the participants can be confirmed, extended, or explained by the literature.

One of the most often mentioned appreciated aspects of nature was the forest. This might be because the forest combines nearly all the things that influence well-being in a positive way. Karjalainen, Sarjala & Raitio (2010) argue that forest visits improve not only physical health but also mental health. Most participants take walks in the forest and explain that the exercise is good for them. Regarding mental health, there was much more mentioned than just exercise. One participant talked about how the forest takes up his problems. There are different underlying explanations for this observation that were brought forward in the interviews: For some participants, the forest presents a frame for good conversations. Through these conversations, problems may become clearer. For other participants taking a walk in nature or specifically, the forest helps to have clearer thoughts and therefore sort

out problems. Although the literature is clear on the fact that nature reduces stress, there are not many explanations of what it is precisely that nature does to reduce stress.

One of the processes behind the beneficial characteristics of the forest is shown by Kaplan (2001), who found that seeing the colour green increases a person's well-being. In all interviews, seeing green spaces and forests was mentioned as something very important to the participants. One participant even went as far as to compare being in the city with being in a coffin when there are no green spaces. This was also described by Wilson (2017), who argued that people seem to have an inbuilt affinity for nature and the colour green. When being in nature and seeing green spaces, this inbuilt affinity can be one of the reasons why nature reduces stress and leads to higher self-reported well-being (Pritchard et al., 2019).

However, for the participants, it does not matter what the exact processes are that improve their well-being. Most appreciate the combination of all the positive things that is only found in nature: Fresh air, exercise, peace and quiet, the colour green and much more. When taking into account that forest visits have the ability to reduce or prevent cancer production (Li et al., 2008), the forest has become particularly important to senior citizens, as cancer is more prevalent in that age group.

Another factor contributing to stress reduction is the regularity that nature can give. In the interviews, the participants talked about how they incorporate regular walks in the forest into their daily or weekly routines. As the forest is always available, the participants are able to integrate the forest as a set routine to give their life structure while at the same time allowing them to be as flexible as they wish. This unique combination of flexibility and structure is very important to the participants and might be a further reason why the forest reduces stress.

Reducing stress or reducing the chances of tumour production are focusing on reducing something negative. The participants, on the other hand, usually focused on enhancing something positive when they talked about the beneficial aspects of nature. As one participant stated, being in nature is like recharging one's batteries. Getting energy from nature was also observed in some ways by Ryan et al. (2010). They reported increased vitality of participants who were exposed to either virtual or real nature, while Weinstein, Przybylski, & Ryan (2009) found that exposure to nature-themed slides or a plant-filled laboratory boosted support for intrinsic objectives.

This may also explain why, according to one participant, nature might serve as a substitute for a holiday. Vacations, for the most part, exist to replenish depleted energy tanks and provide a respite from the stresses of daily life. As argued above, nature can do exactly that. Regarding the aspect of having a time out from the daily struggles, the participants' answers were clear on how nature can do that as well. In chapter 5.2.1 it is shown how nature helps to gain a different perspective of life, for instance, by contemplating the growth of plants

A very interesting feature of nature is how it can play many different roles in the life of the elderly. It can adapt the role that is most important for the person at that moment. When the participants were asked to draw comparisons between nature and other aspects of life, many mentioned that nature can be a counterpart of some sort. Even though they note that nature does not respond like a friend, there are some interviews that suggest that nature can take the role of a friend. This role of a friend can be seen when participants compare nature to a good conversation with friends or when it helps them to sort out their priorities and gives the participants a feeling of belonging. This role is especially important when we look at the usual development of the number of friends the elderly have. In most cases, the participants talked about how some or even many of their friends passed away. Having a friend in nature means having a friend that will not pass away. This gives the participants stability.

The literature is clear on what effects emotions can have. When looking at what the participants say about their feelings in nature, this becomes another important aspect of the influence of nature on well-being. The participants talk about how their negative emotions recede and that they feel gratitude, peacefulness, and other positive emotions in nature. Thus, nature is helping on both sides: Taking away negative emotions and providing the participants with positive emotions.

6.1.2 Ecological Loss and Place Attachment

This specific characteristic of nature that it does not pass away like other friends might is important for understanding ecological loss of the elderly. As described by Chambre (1984), the elderly already have to adapt to many losses. The participants often regarded nature as a constant in their life. When the nature they engage with then changes, intense feelings of grief can occur, as was shown in the study of Cunsolo & Ellis (2018).

This grief was apparent in the example in chapter 5.3.3, where a person mourned the trees that fell due to the storm. The participant mentioned that she saw a graveyard candle for a fallen tree several times, which shows that this candle was not simply a joke, as it was replaced and relit. From the way the participant talked about this incident, it becomes apparent that she appreciated the gesture. There was slight amusement in her speech because the trees were mourned in a similar way a person is mourned, but not because she thought it strange, rather because it proved how important a tree can be for certain people.

This was not the only example where the language showed something interesting about ecological loss. In chapter 5.2.5, a participant talks about her experience with ecological loss as a child (again, the object talked about was a tree) but immediately adds "but that's nothing" at the end. A reason for this relativising could come from an underlying view, that nature is there to be used and not mourned (learning this view as a child was described by some participants), or it could come from a lack of understanding how important relational values can be when it comes to ecological loss.

Witter & Satterfield (2014) described how only relational values can account for invisible losses. However, the value people give knowingly to nature often comes from instrumental or intrinsic valuation. And although the examples of invisible losses were different in Witter & Satterfield's (2014) research, this invisibility of value might just be the reason why the participant felt like her loss cannot be regarded as a real loss. In chapter 6.2, the valuation of nature by the participants is looked at in more detail. Just as Siegel & Kuykendall (1990) argue that spouses or memberships in churches/temples can mediate the negative effect of loss, the results of this thesis show that nature can be such a mediating factor as well.

Another important aspect of ecological loss is the concept of solastalgia proposed by Albrecht et al. (2007). Solastalgia could be seen throughout the interviews, especially when people talked about their favourite places in nature. Many participants watched their home environment change into what it is today, causing them discomfort. This discomfort can be seen when some participants talked about how they miss the birds, even though there are still birds but not the birds they used to see and hear.

One reason why the participants experience solastalgia could come from their formed place attachment. Many participants have lived in Zurich for many decades and have formed strong place attachments to specific places. If they see their beloved places change, this can

lead to solastalgia and other aspects of ecological loss. In this case, place attachment precedes solastalgia.

The paper of Drenthen (2009) could support the idea that place attachment precedes ecological loss. He describes how the people who were about to lose their home environment fought against the changes. In his example of place attachment, there are a few important similarities to the answers of the participants. Place attachment is formed through many different factors, but one of the most important aspects are relationships in that specific place. As described in 5.2.8, "From Grandparents to Grandchildren," the participant formed a place attachment to that specific place because he shared this space with his children and grandchildren.

This example can also show something else: Place attachment can be formed inter-generationally. The participant also explained that his grandchildren have a special bond to that place because they know of the special bond their grandfather has to that place. Just like the people in Drenthen's (2009) paper argued that they have a special relationship with the land as their ancestors were already farmers in that specific land. This is also supported by Li & Chan (2018), who argue that place attachment is formed over time, sometimes even over the span of several human lifetimes.

Another aspect that is both found in Drenthen (2009) and the participants' responses is the growing place attachment over time. This means that the longer a person forms an attachment to a place, the harder it is to detach themselves from it. About half of the participants had to move in the last years as they moved into elderly homes (see table 1). As they have formed strong place attachments, moving is much harder for them than it might be for younger people. The strong place attachment to their previous home environment can be seen by the fact that many people still go to their old home environment regularly for a walk.

If place attachment gets stronger the longer a person lives in that place, elderly people will have stronger place attachments on average. At the beginning of chapter 5.2.5, it was mentioned that the examples of experienced ecological loss occurred either in the participants' childhood or when they were old. Considering that place attachment often precedes ecological loss and that elderly people have stronger place attachments, it makes sense that a lot of their experienced ecological loss is in the later years.

Another interesting aspect that supports this is that all participants mentioned the "Betonisierung" (EN: "concreting") as an experienced ecological loss. However, looking at figures 5 and 6 it becomes clear that Zurich had always changed even before the participants were born. But for many, this change only became a problem when they got older.

The thesis can be put forward here that too much else happens between childhood and the senior years that a person's focus is not on the changes of the outside world, but on personal changes. Children, in particular, take up much of their parents' attention that nature and its changes fly somewhat under the radar for many people. In the years when the career is coming to an end, and the children are independent, a little more space comes back into the lives of the participants, and the changes become more noticeable again. One could conclude that at some point, that nature and the environment become a kind of substitute for children and work.

Up until now, this discussion of ecological loss and place attachment focused on the left column of figure 8, the nature → human relationship. But ecological loss and place attachment also have aspects that go in the opposite direction. One example which shows this nicely was in chapter 5.3.2, when a participant talked about regrets. He says he is "so sorry for what happened". The question that comes up is who he is apologizing to and for what exactly. Maybe he feels the need to apologize to the youth due to the current climate movement (see also chapter 7.1.2). In this example, we see that the participant regrets not having given nature a high enough value to protect it.

6.2   VALUATION OF NATURE

Going back to the participants' quote where she talked about a beloved tree from her childhood that was cut down, adding "but that's noting", it shows that on the one hand, relational values are important as they compensate invisible losses, but it also shows that the participants do actually give value to nature in the form of relational value without being specifically aware of it. This chapter focuses on how the participants give value to nature and what those values are.

One of the most obvious ways people ascribe value to nature is through beauty. There are different reasons why the participants find nature beautiful. One of the most prevalent reasons is the uniqueness of nature. Nature cannot be replaced as opposed to many other

things in life. In interview thirteen, the participant describes nature as the opposite of the consumer-driven society. Many goods are reproduced in large quantities, and the participant from interview thirteen values nature because it is unique. Even though there are hundreds of trees, each tree is unique and cannot be replaced, which also explains (to a certain extent) the mourning of a tree (see chapter 5.3.3). As opposed to instrumental values, the value that comes from beauty cannot be replaced, which is a very important aspect of relational values.

Beauty also influences the relationship the respondents have with nature. Many of them choose certain routes or paths because they find it particularly beautiful to go there. Because beauty influences the places people visit and like the most, beauty might also influence place attachment or to which places people form attachments.

And while beauty influences place attachments, relationships with other people can form place attachments as well. One participant describes what makes him feel connected to a place, which is feeling cared for. He argues that this feeling does not only come from having everything nearby but also from the people he knows. Most participants did not associate specific places with a person when asked. They did, however, describe how different relationships make them feel a sense of place. Therefore, people value certain places because of the relationships they have. An example of this comes from interview thirteen, where the participant describes how he takes a walk through the forest with his friend and during these walks, the forest takes away their problems. In this case, the forest is a mediating relational value for their friendship.

Another mediating relational value is seen in chapter 5.2.7. Here one participant describes how in nature, he feels connected to other people. Nature is the basis for this mediating value, which he appreciates greatly. Other values that the participants give to nature include nature carrying culture, carrying memories or nature as something shared with other people. Sharing nature with other people might be through experiences, as with the new-born birds, or through lessons taught by a parent about respecting nature.

Nature can take different roles, for instance, being a friend or replacing a vacation, but there are more roles that nature took for the participants. When we look at how well-being is influenced by nature, we can find two more roles that nature plays. One is the role that would best be described as a comforter: In chapter 5.2.1, the participant talks about how nature became more important during the time of her divorce. Nature helped her improve

her mood and sort out her thoughts. Another role that nature played for a participant could be called a therapist. This participant described how being in nature helps him deal with his problems or even takes them away. From the conversations about COVID-19 during the interviews, it can be concluded that nature can (at least partially) take the role of children or work. These roles of nature in the participants life are another value that nature holds for the participants.

Many participants found it difficult to pinpoint exactly what makes nature so important for them. Often, they pointed out that they have learned this from their parents, but there were also a few who said their parents did not teach them anything about appreciating nature. Learning about other aspects than just instrumental ones might therefore come from simply realizing how much nature does for their well-being. As the influence of nature on well-being grew when the participants grew older, they might have learned this later in life, just like the participant from interview five described in chapter 5.4.2.

6.3 CONTRADICTIONS

All these reasons that were given by the participants why nature has great value to them are very important to understand their relationship with nature. However, the contradictions in their responses can also highlight some aspects of their relationship. Therefore, this chapter focuses on the most prominent contradictions and then also looks at the limits of this thesis.

In chapter 6.1.2, the "concreting" was covered that causes a lot of distress among the participants. They talked about feeling sad, angry, or worried when they saw how the forest had to give way to new buildings. As we have seen before, the forest is the most prevalent aspect of nature the participants talked about and is very highly valued. It would therefore make sense that it causes a lot of ecological loss when new buildings are replacing forest areas. However, when we look at figure 9, we see that the forest area has not declined in the last years.

The forest area in Zurich has been very constant at 25.1%. The question arises, why do so many participants feel like the forest is being destroyed in order to build new houses or other buildings? It might be because of their solastalgia, as the environment is changing, but maybe just not in the way that they have in mind. Or it could also be because the older properties often have just one house with a garden that might have a tree, and the new

buildings that replace these houses are often apartment buildings that use nearly the entire space of that property for the house. However, these are just speculations, and in order to get behind this, another interview with the participants would be necessary.
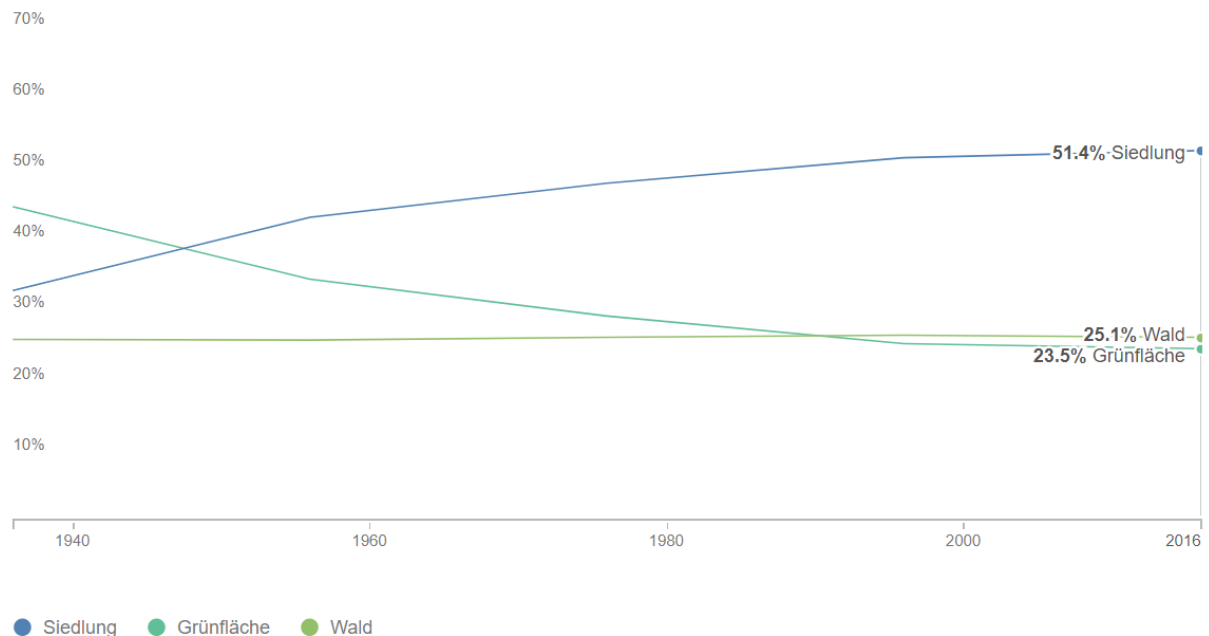
Bodennutzung in der Stadt Zürich

Figure 9: Revisiting figure 3: Residential area, green spaces and forest in the city of Zurich (Source: Stadt Zürich, 2018)

Another contradiction that was found in many interviews is that the participants only talked in positive ways when they were asked about their relationship with nature. In many cases, the participant regarded nature as nearly perfect, like in the quote from chapter 5.2.1 *«When you are in nature, everything is just right, and you are happy. There are other situations like that, but never so harmonious.»* Yet when they were telling stories or not concentrating on why they like nature, we see that there are things that actually do bother the participants. A good example of this is when a participant talks about the birds that are not there anymore, but then he says, *«What you have, of course, are crows and magpies, which drive the others away.»*

This contrast between what they think of nature as a whole and what they think in specific cases can be seen from interview eight. The participant talks about how we should simply leave nature to do its thing, but then she expresses dislike about the gardens that are not tidy. In those gardens, nature is left alone, but since it is a garden, the participant feels that it must be kept properly.

When asking the participants to make comparisons between nature and other things, the comparisons were always very positive, even though many talked about the storm that occurred during the summer. But even when they talked about the storm, they did not associate any negative things with nature. This shows that there is a certain romanticised way of thinking about nature or a glorifying of nature in their answers.

Contrary to this, one participant 5.4.3 uses the phrase *«where nature is still natural.»* The question of what natural means arises. From the examples he gives, one could argue that he means being not touched by humans or places where there are fewer people (for example, in the mountains). This idea of nature that is still natural also came up in other interviews. It seems like some participants feel like the nature in and around Zurich is not natural, yet it did not become clear what nature they consider natural.

7   CONCLUSION

The aim of the present study was to elaborate on the relationship between elderly people living in Zurich and nature. As the demographic group of senior citizens will increase and the city is constantly changing, it is important to understand what the elderly appreciate about nature in and around Zurich and in what ways they ascribe value to nature. For this study, three research questions were defined:

1. What are key relational values of elderly people living in Zürich with regard to nature, landscapes, and the environment?
2. Have the elderly people in the study experienced ecological loss? If so, what kinds and how does this loss connect to their key relational values?
3. How does the relationship with nature (including place attachment) change over different phases of life?

The key relational values of elderly people living in Zurich varied among the interviews. Nevertheless, there were some aspects of the relationship with nature that shaped all the participant's relationships. One of those aspects is the influence nature has on the well-being of a person. Overall, the participants talked about physical well-being through nature (due to, for example, exercise and the fresh air) and, more prominently, the mental well-being or health through various characteristics of nature.

The influence on the well-being of the participants is partially due to the different roles nature can take. The interviews showed that nature can act as a friend that does not pass away as other friends might, it can take the role of a comforter during tumultuous and tiring life phases, it can act as a therapist and help to sort out problems, or it can replace a vacation. Further, it can take the role of children or work.

Sharing experiences with family and friends through nature is also a key relational value of the elderly regarding nature. Many participants mentioned how nature can be a mediator of relationships. A garden shared with children or grandchildren can be the reason why they meet, or a weekly walk through the forest be the reason for a friendship.

Regarding ecological loss, there was particularly concerns about the increased densely built-up area ("concreting") and the constant change in their home environment. This causes solastalgia and intense feelings of grief. As solastalgia comes from the changes in the home

environment, it might occur more often in the city, since cities usually change faster than the countryside. The ecological losses that stay in the mind of the participants often happen during their childhood or in their later years of life but not in between.

Even though ecological loss causes distress and grief, participants feel like they should not have these emotions. This can come from a lack of understanding of the relational values nature holds, especially regarding invisible loss. For many participants, ecological loss did not just mean losing that specific place in nature, it also meant losing something that influenced a close relationship. An example of this would be a garden, which has always been a place where the whole family met, and the participant taught his children and grandchildren different things about nature. When the garden was taken away from him, so was the connection to his children and grandchildren this garden held.

The relationship with nature can but does not have to change over different phases of life. For those participants that felt like their relationship always stayed the same, nature was a very important part of their life, and they had a great appreciation for nature ever since they were a child. There was no participant who found that the relationship towards nature declined over time.

For most participants, nature came to hold an ever more important place in their lives. As the participants grew older, their social network grew smaller, as well as their possibilities of leisure activities. Therefore, nature took the place of relationships and hobbies throughout the years. Nature also became more important for many, as it is always there, no matter what happens around them and in other relationships.

Place attachment usually gets stronger over time and often precedes ecological loss. The formed place attachment can therefore cause great emotional distress when participants must move. Moving at old age is not uncommon, as many need to leave their homes to move to a retirement community or home. Participants often hold on to the place attachments they formed before they had to move by visiting those places and taking walks in the area (often the forest) where they used to live.

Concluding, nature is important to the elderly people living in Zurich for various reasons, most prominently due to the eudemonic relationship, where nature improves the well-being of the participants. However, their well-being can also be negatively affected by nature

when the nature they are attached to is being changed or destroyed, which causes stress and grief. Preventing the distress caused by ecological loss is therefore relevant for the well-being.

7.1 Limitations

Helfferich (2011) talks about the impossibility of objectivity, which must be accepted and subsequently reflected upon from that subjective viewpoint. The research process underlies the ontological belief that reality is socially constructed and that the epistemological position is a subjective one. As Hussy et al. (2010) describe, complete independence of the data from the researcher is seen as hardly feasible and not necessarily desirable. Thus, there was no claim of complete objectivity in the analysis of the data. Rather, the focused was laid on maximizing the transparency and comprehensibility of the data collection and analysis. This chapter will therefore reflect the methodology applied in this study, followed by a reflection of the positionality.

7.1.1 Methodology

There are several limitations but also some strengths of the applied method. As the sampling process was not randomized, the participants in the study might have a special interest in nature as they would not have participated otherwise. Even though appreciating or enjoying nature was not a prerequisite for the participants, all participants were very enthusiastic about nature. The ones that feel differently about nature might not have reacted to the invitation letters that were distributed to various organizations and retirement communities. Furthermore, when looking at the current public opinion towards nature, it is very clear that nature should be appreciated and respected. For this reason, participants might not have felt entirely free in answering the questions as they always had in mind what the "right" answer should sound like.

The sampling process turned out to be more difficult than expected. There are different reasons why this process was challenging, with the epidemic situation restricting contact possibilities above all. COVID-19 limited the selection of participants, as I conducted the interviews during a time when many elderly people tried to avoid any contact with strangers. Especially those who had an illness or other health issues did not participate in this study. Except for the person in interview three, all participants are able to be in nature on a regular basis. It would be interesting to see whether elderly people that are not able to

go into nature as often still appreciate nature for the same reasons as the participants of this study.

However, this was not the only issue. As elderly people are often more afraid of strangers on the phone than in person, finding participants heavily relied on a few contact persons that knew me and knew elderly people in Zurich. As soon as there was a mediator between the participant and me, chances were much higher that a person would participate. At the beginning of the sampling, the strategy was to contact the staff of retirement communities or other organizations for the elderly, so they could be the mediators. However, the staff was usually on a very strict work schedule, therefore, the research of this study had a low priority. A few participants were recruited by one single participant, who was able to give my contact to other people living with him in the retirement community. Thus, the sampling was less random than anticipated.

Regarding the results of the interviews, it must be noted that although the participants were above the age of 70 and living in Zurich, their answers and their feelings toward nature are not always unique to this age group or to Zurich. While there are certain issues that are very specifically regarding their age group (e.g. that many friends around them pass away and nature is a substitute), other issues might be true for all age groups (e.g. that being in green spaces reduces stress).

A smaller but still relevant issue during the interviews came from the participants' physical health. For some participants, talking for an hour was very tiring. Therefore, they wished to come to an end after somewhere between 45 and 60 minutes, as their concentration and ability to say precisely what they wanted declined, and they did not feel comfortable anymore.

A strength of the methodology was the interplay of inductive and deductive interview strategy, as it helped to uncover information that might otherwise not have been brought up. Many of the participants shared personal stories which did not follow the interview guideline but showed interesting aspects of their relationship with nature. By having this opportunity to follow stories that came up during the interview, the participants were able to share their thoughts and feeling regarding nature through all sorts of different stories.

7.1.2 Positionality

Looking at the subject of this study, the influence of the positionality is rather limited. Nonetheless, my positionality had an impact on both the data collecting and the data analysis. Through my studies at the department of geography, I have learned to appreciate and respect nature in more ways than I had before. As the interview strategy was a flexible one that allowed me to go into more detail on certain topics or answers, my attitude towards nature can influence the choice of which answers I discussed further with the participants. Focussing on the answers that show the importance and value of nature and neglecting the answers that could go in the opposite direction could be a consequence of my positionality.

There was a considerable age difference between the participants and me, which can bring about insecurities in the answers. Since the participants did experience much more in general, they can have different viewpoints. Due to the age difference, the participants might feel like I could not understand their point of view and were discouraged from voicing their opinions and thoughts.

This generational barrier was also evident in many interviews where the participants talked about the youth climate movement and automatically associated me with this movement since I was a young person inquiring about nature. Some voices in this youth climate movement express discontent towards the generations that came before them due to the deterioration of nature for which they blame those generations. For this reason, some participants felt like they needed to apologize to me or to justify their actions and decisions. During the introduction to the interview, I tried to counteract this potential bias by explaining that there is no right or wrong answer and that I did want to hear their thoughts and viewpoints.

Positionality issues regarding gender, education, heritage, or political orientation did not come up during the interviews.

7.2 OUTLOOK

After most interviews, the participants thanked me for listening to them. Some mentioned how they feel like nobody is listening to them and that their concerns are not taken seriously. So much is changing around them, which can be very stressful. On top of that, they know that younger people are very quick to dismiss their concerns and sufferings with the

fact that they are already old and therefore their opinion no longer counts, so to speak. Since the elderly make up a large part of the citizens of Zurich, it is important to include them in decision-making processes, which they currently feel left out of.

The study showed how important nature is for the elderly and how much stress ecological loss can cause. The city government should therefore try to keep nature as accessible to the elderly as possible. Places that are too crowded, like the lake, are often avoided by the elderly as they do not feel safe in these places. It is therefore important to give them a chance to enjoy nature in easily accessible places where they feel safe.

This thesis is not a complete work of the relational values, ecological loss or place attachment of the elderly rather, it is an overview. Future research could focus more on finding advice for the city government on how they can shape nature in and around Zurich in ways that the elderly appreciate. It would also be interesting to focus more on the timelines and generations that are connected to each other through nature and how the ancestors of a person influence the relationship with nature.

8 BIBLIOGRAPHY

Åberg, A. C., Sidenvall, B., Hepworth, M., O'Reilly, K., & Lithell, H. (2005). On loss of activity and independence, adaptation improves life satisfaction in old age–a qualitative study of patients' perceptions. *Quality of Life Research*, *14*(4), 1111–1125.

Agrarbericht 2020. (2020). https://www.agrarbericht.ch/de

Ajzen, I. (1989). Attitude structure and behavior. *Attitude Structure and Function*, *241*, 274.

Akers, A., Barton, J., Cossey, R., Gainsford, P., Griffin, M., & Micklewright, D. (2012). Visual Color Perception in Green Exercise: Positive Effects on Mood and Perceived Exertion. *Environmental Science & Technology*, *46*(16), 8661–8666. https://doi.org/10.1021/es301685g

Albrecht, G., Sartore, G.-M., Connor, L., Higginbotham, N., Freeman, S., Kelly, B., Stain, H., Tonna, A., & Pollard, G. (2007). Solastalgia: the distress caused by environmental change. *Australasian Psychiatry*, *15*(1), 95-S98.

Aspinwall, L. G. (1998). Rethinking the Role of Positive Affect in Self-Regulation. *Motivation and Emotion*, *22*(1), 1–32. https://doi.org/10.1023/A:1023080224401

Baillie, J., Hilton-Taylor, C., Stuart, S. N., & IUCN--The World Conservation Union. Species Survival Commission. (2004). *2004 IUCN red list of threatened species : a global species assessment*. IUCN--The World Conservation Union.

Basiago, A. D. (1996). The search for the sustainable city in 20th century urban planning. *Environmentalist*, *16*(2), 135–155.

Berger, P. L., & Luckmann, T. (1966). *The social construction of reality: A treatise in the sociology of knowledge*. Anchor.

Berkman, L. F., & Syme, S. L. (1979). Social networks, host resistance, and mortality: a nine-year follow-up study of Alameda County residents. *American Journal of Epidemiology*, *109*(2), 186–204.

Bixler, R. D., & Floyd, M. F. (1997). Nature is scary, disgusting, and uncomfortable. *Environment and Behavior*, *29*(4), 443–467.

Bixler, R. D., Floyd, M. F., & Hammitt, W. E. (2002). Environmental socialization: Quantitative tests of the childhood play hypothesis. *Environment and Behavior*, *34*(6), 795–818.

Borg, M., Sells, D., Topor, A., Mezzina, R., Marin, I., & Davidson, L. (2005). What makes a house a home: The role of material resources in recovery from severe mental illness. *American Journal of Psychiatric Rehabilitation*, *8*(3), 243–256.

Bourdeau, P. (2004). The man-nature relationship and environmental ethics. *Journal of Environmental Radioactivity*, *72*(1–2), 9–15. https://doi.org/10.1016/S0265-931X(03)00180-2

Boyle, P. A., Yu, L., Wilson, R. S., Leurgans, S. E., Schneider, J. A., & Bennett, D. A. (2018). Person-specific contribution of neuropathologies to cognitive loss in old age. *Annals of Neurology*, *83*(1), 74–83.

Buffel, T., De Donder, L., Phillipson, C., De Witte, N., Dury, S., & Verté, D. (2014). Place attachment among older adults living in four communities in Flanders, Belgium. *Housing Studies*, *29*(6), 800–822.

Bundesamt für Statistik, Wald. (n.d.). Retrieved March 11, 2021, from https://www.bfs.admin.ch/bfs/de/home/statistiken/raum-umwelt/bodennutzung-

bedeckung/bestockte-flaechen/waldflaeche.html

Cacioppo, J. T., Hawkley, L. C., Crawford, L. E., Ernst, J. M., Burleson, M. H., Kowalewski, R. B., Malarkey, W. B., Van Cauter, E., & Berntson, G. G. (2002). Loneliness and Health: Potential Mechanisms. *Psychosomatic Medicine*, *64*(3), 404–417. https://journals.lww.com/psychosomaticmedicine/Fulltext/2002/05000/Loneliness_and_Health__Potential_Mechanisms.5.aspx

Cahoon, C. G. (2012). Depression in older adults. *AJN The American Journal of Nursing*, *112*(11), 22–30.

Chambre, S. M. (1984). Is volunteering a substitute for role loss in old age? An empirical test of activity theory. *The Gerontologist*, *24*(3), 292–298.

Chan, K. M. A., Balvanera, P., Benessaiah, K., Chapman, M., Díaz, S., Gómez-Baggethun, E., Gould, R., Hannahs, N., Jax, K., & Klain, S. (2016). Why protect nature? Rethinking values and the environment. *Proceedings of the National Academy of Sciences*, *113*(6), 1462–1465.

Chan, K. M., Gould, R. K., & Pascual, U. (2018). Editorial overview: Relational values: what are they, and what's the fuss about? *Current Opinion in Environmental Sustainability*, *35*, 1–7. https://doi.org/10.1016/j.cosust.2018.11.003

Chapman, M., Satterfield, T., & Chan, K. M. A. (2019). When value conflicts are barriers: Can relational values help explain farmer participation in conservation incentive programs? *Land Use Policy*, *82*, 464–475. https://doi.org/10.1016/j.landusepol.2018.11.017

Cristoforetti, A., Gennai, F., & Rodeschini, G. (2011). Home sweet home: The emotional construction of places. *Journal of Aging Studies*, *25*(3), 225–232.

Cunsolo, A., & Ellis, N. R. (2018). Ecological grief as a mental health response to climate change-related loss. *Nature Climate Change*, *8*(4), 275–281. https://doi.org/10.1038/s41558-018-0092-2

de Groot, L. C., Hautvast, J. G. A. J., & van Staveren, W. A. (1992). Nutrition and health of elderly people in Europe: the EURONUT-SENECA Study. *Nutrition Reviews*, *50*(7), 185–194.

Deplazes-Zemp, A., & Chapman, M. (2020). The ABCs of Relational Values: Environmental Values That Include Aspects of Both Intrinsic and Instrumental Valuing. *Environmental Values*, 1–26. https://doi.org/10.3197/096327120x15973379803726

Díaz, S., Fargione, J., Chapin III, F. S., & Tilman, D. (2006). Biodiversity loss threatens human well-being. *PLoS Biology*, *4*(8), e277.

Diener, E., & Larsen, R. J. (1993). *The experience of emotional well-being,(Ed. IM Lewis, JM Haviland), Handbook of emotions*. New York: Guildford.

Drenthen, M. (2009). Ecological restoration and place attachment: Emplacing non-places? *Environmental Values*, *18*(3), 285–312. https://doi.org/10.3197/096327109X12474739376451

Eagly, A. H., & Chaiken, S. (1993). *The psychology of attitudes.* Harcourt brace Jovanovich college publishers.

Eriksson, M., Sandström, C., & Ericsson, G. (2015). Direct experience and attitude change towards bears and wolves. *Wildlife Biology*, *21*(3), 131–137.

Flick, U. (2000). *Triangulation in der qualitativen Forschung*. na.

Flick, U., von Kardorff, E., & Steinke, I. (2010). *Qualitative Forschung. Ein Handbuch.* (8. Auflage). Rowohlt Taschenbuch Verlag.

Fredrickson, B. L. (1998). What good are positive emotions? *Review of General Psychology*, *2*(3), 300–319.

Fredrickson, B. L., & Joiner, T. (2002). Positive emotions trigger upward spirals toward emotional well-being. *Psychological Science*, *13*(2), 172–175.

Fuster, V. (2017). Changing demographics: a new approach to global health care due to the aging population. In *Journal of the American College of Cardiology* (Vol. 69, Issue 24, pp. 3002–3005). American College of Cardiology Foundation Washington, DC.

Gilovich, T., Medvec, V. H., & Kahneman, D. (1998). Varieties of regret: A debate and partial resolution. *Psychological Review*, *105*(3), 602.

Gilovich, T., Wang, R. F., Regan, D., & Nishina, S. (2003). Regrets of action and inaction across cultures. *Journal of Cross-Cultural Psychology*, *34*(1), 61–71.

Gómez-Baggethun, E., & Ruiz-Pérez, M. (2011). Economic valuation and the commodification of ecosystem services. *Progress in Physical Geography: Earth and Environment*, *35*(5), 613–628. https://doi.org/10.1177/0309133311421708

Guest, G., Bunce, A., & Johnson, L. (2006). How many interviews are enough? An experiment with data saturation and variability. *Field Methods*, *18*(1), 59–82.

Han, B., Li, D., & Chang, P.-J. (2021). The effect of place attachment and greenway attributes on well-being among older adults in Taiwan. *Urban Forestry & Urban Greening*, *65*, 127306.

Harvey, D. (2004). The "New" Imperialism: Accumulation by Dispossession. *Socialist Register*, *40*, 63–87. https://socialistregister.com/index.php/srv/article/view/5811

Heberlein, T. A. (2012). Navigating environmental attitudes. In *Conservation Biology* (Vol. 26, Issue 4, pp. 583–585). Wiley Online Library.

Heberlein, T. A., & Ericsson, G. (2005). Ties to the countryside: accounting for urbanites attitudes toward hunting, wolves, and wildlife. *Human Dimensions of Wildlife*, *10*(3), 213–227.

Helfferich, C. (2011). *Die Qualität qualitativer Daten* (Vol. 4). Springer.

Hidalgo, M. C., & Hernández, B. (2001). Place Attachment: Conceptual and Empirical Questions. *Journal of Environmental Psychology*, *21*(3), 273–281. https://doi.org/10.1006/jevp.2001.0221

Hosaka, T., Sugimoto, K., & Numata, S. (2017). Childhood experience of nature influences the willingness to coexist with biodiversity in cities. *Palgrave Communications*, *3*(1), 1–8.

Hussy, W., Schreier, M. und Echterhoff, G. (2010) «Qualitative Erhebungsmethoden», in Forschungsmethoden in der Psychologie und Sozialwissenschaften. Berlin: Springer-Verlag, S. 213–234.

Kaplan, R. (2001). The nature of the view from home: Psychological benefits. *Environment and Behavior*, *33*(4), 507–542.

Kaplan, R., & Kaplan, S. (1989). *The experience of nature: A psychological perspective*. Cambridge university press.

Karjalainen, E., Sarjala, T., & Raitio, H. (2010). Promoting human health through forests: overview and major challenges. *Environmental Health and Preventive Medicine*, *15*(1), 1–8.

Keyes, C. L. M. (2005). Mental illness and/or mental health? Investigating axioms of the complete state model of health. *Journal of Consulting and Clinical Psychology*, *73*(3), 539.

King, L. A., & Hicks, J. A. (2007). Whatever happened to" What might have been"? Regrets, happiness,

and maturity. *American Psychologist*, *62*(7), 625.

Kowal, S., & O'connell, D. C. (2004). 5.9 the transcription of conversations. In *A Companion to Quealitative Research* (p. 248).

Krause, N. (2003). Neighborhoods, health, and well-being in late life. *Annual Review of Gerontology and Geriatrics*, *23*(1), 223–249.

Kruse, J. (2014). *Qualitative Interviewforschung. Ein integrativer Ansatz.* Weinheim.

Kuckartz, U. (2018). *Qualitative Inhaltsanalyse: Methoden, Praxis, Computerunterstützung, 4. Auflage. Grundlagentexte Methoden, Beltz Juventa*. Weinheim Basel.

Lang, F. R., Staudinger, U. M., & Carstensen, L. L. (1998). Perspectives on socioemotional selectivity in late life: How personality and social context do (and do not) make a difference. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, *53*(1), 21–30.

Lee, D. J., & Markides, K. S. (1990). Activity and mortality among aged persons over an eight-year period. *Journal of Gerontology*, *45*(1), 39–42.

Li, Q., Morimoto, K., Kobayashi, M., Inagaki, H., Katsumata, M., Hirata, Y., Hirata, K., Suzuki, H., Li, Y. J., & Wakayama, Y. (2008). Visiting a forest, but not a city, increases human natural killer activity and expression of anti-cancer proteins. *International Journal of Immunopathology and Pharmacology*, *21*(1), 117–127.

Li, T. E., & Chan, E. T. H. (2018). Connotations of ancestral home: An exploration of place attachment by multiple generations of Chinese diaspora. *Population, Space and Place*, *24*(8), e2147. https://doi.org/10.1002/psp.2147

Marcheschi, E., Laike, T., Brunt, D., Hansson, L., & Johansson, M. (2015). Quality of life and place attachment among people with severe mental illness. *Journal of Environmental Psychology*, *41*, 145–154.

Mason, J. (2004). *An unnatural order: The roots of our destruction of nature*. Lantern Books.

Mattissek, A., Pfaffenbach, C., & Reuber, P. (2013). *Methoden der empirischen Humangeographie*. Westermann.

Mayer, F. S., Frantz, C. M., Bruehlman-Senecal, E., & Dolliver, K. (2009). Why is nature beneficial? The role of connectedness to nature. *Environment and Behavior*, *41*(5), 607–643.

McFarlane, B. L., & Boxall, P. C. (2003). The role of social psychological and social structural variables in environmental activism: An example of the forest sector. *Journal of Environmental Psychology*, *23*(1), 79–87.

McMahan, E. A., & Estes, D. (2015). The effect of contact with natural environments on positive and negative affect: A meta-analysis. *The Journal of Positive Psychology*, *10*(6), 507–519. https://doi.org/10.1080/17439760.2014.994224

Millennium Ecosystem Assessment. (2005). *Ecosystems and human well-being* (Vol. 5). Island press United States of America.

Moons, W. G., Eisenberger, N. I., & Taylor, S. E. (2010). Anger and fear responses to stress have different biological profiles. *Brain, Behavior, and Immunity*, *24*(2), 215–219. https://doi.org/https://doi.org/10.1016/j.bbi.2009.08.009

Nabhan, G. P., & St Antoine, S. (1993). The loss of floral and faunal story: The extinction of experience. In *The biophilia hypothesis* (pp. 229–250). Island Press Washington, DC.

Neuteleers, S. (2020). A fresh look at 'relational' values in nature: Distinctions derived from the

debate on meaningfulness in life. *Environmental Values*, *29*(4), 461–479. https://doi.org/10.3197/096327119X15579936382699

Nisbet, E. K., Zelenski, J. M., & Murphy, S. A. (2011). Happiness is in our nature: Exploring nature relatedness as a contributor to subjective well-being. *Journal of Happiness Studies*, *12*(2), 303–322.

Okun, M. A., & Keith, V. M. (1998). Effects of positive and negative social exchanges with various sources on depressive symptoms in younger and older adults. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, *53*(1), 4–20.

Olson, J. M., & Zanna, M. P. (1993). Attitudes and attitude change. *Annual Review of Psychology*, *44*(1), 117–154.

Ong, A. D., Uchino, B. N., & Wethington, E. (2016). Loneliness and Health in Older Adults: A Mini-Review and Synthesis. *Gerontology*, *62*(4), 443–449. https://doi.org/10.1159/000441651

Organization, W. H. (1948). Preamble to the Constitution of the World Health Organization as adopted by the International Health Conference, New York, 19-22 June, 1946; signed on 22 July 1946 by the representatives of 61 States (Official Records of the World Health Organization, no. *Http://Www. Who. Int/Governance/Eb/Who_constitution_en. Pdf*.

Pai, M., & Carr, D. (2010). Do personality traits moderate the effect of late-life spousal loss on psychological distress? *Journal of Health and Social Behavior*, *51*(2), 183–199.

Park, B.-J., Tsunetsugu, Y., Kasetani, T., Hirano, H., Kagawa, T., Sato, M., & Miyazaki, Y. (2007). Physiological effects of shinrin-yoku (taking in the atmosphere of the forest)—using salivary cortisol and cerebral activity as indicators—. *Journal of Physiological Anthropology*, *26*(2), 123–128.

Pascual, U., Balvanera, P., Díaz, S., Pataki, G., Roth, E., Stenseke, M., Watson, R. T., Başak Dessane, E., Islar, M., Kelemen, E., Maris, V., Quaas, M., Subramanian, S. M., Wittmer, H., Adlan, A., Ahn, S. E., Al-Hafedh, Y. S., Amankwah, E., Asah, S. T., … Yagi, N. (2017). Valuing nature's contributions to people: the IPBES approach. *Current Opinion in Environmental Sustainability*, *26–27*, 7–16. https://doi.org/10.1016/j.cosust.2016.12.006

Patton, M. Q. (1990). *Qualitative evaluation and research methods*. SAGE Publications, inc.

Peace, S., Wahl, H. W., Mollenkopf, H., Oswald, F., Bond, J., Dittman-Kohli, F., & Westerhof, G. (2007). *Ageing in society: European perspectives on gerontology* (pp. 209–234). London: SAGE Publications.

Pethtel, O. L. (2012). *Decision-making competence, life regrets, and subjective well-being in mature adults*. Bowling Green State University.

Phillipson, C. (2007). The 'elected' and the 'excluded': sociological perspectives on the experience of place and community in old age. *Ageing & Society*, *27*(3), 321–342.

Pinquart, M., & Sorensen, S. (2001). Influences on loneliness in older adults: A meta-analysis. *Basic and Applied Social Psychology*, *23*(4), 245–266.

Pritchard, A., Richardson, M., Sheffield, D., & McEwan, K. (2020). The relationship between nature connectedness and eudaimonic well-being: A meta-analysis. *Journal of Happiness Studies*, *21*(3), 1145–1167.

Rachoud-Schneider, A.-M., Leonhard, M., Schnyder, A., Baumann, W., & Moser, P. (2007). Landwirtschaft. In *Historisches Lexikon der Schweiz*.

Reuber, P., & Gebhardt, H. (2011). Wissenschaftliches Arbeiten in der Geographie. Einführende

Gedanken. *Geographie: Physische Geographie Und Humangeographie*, *2*, 89–101.

Richardson, M., McEwan, K., Maratos, F., & Sheffield, D. (2016). Joy and Calm: How an Evolutionary Functional Model of Affect Regulation Informs Positive Emotions in Nature. *Evolutionary Psychological Science*, *2*(4), 308–320. https://doi.org/10.1007/s40806-016-0065-5

Reuber, P., & Gebhardt, H. (2013). Wissenschaftliches Arbeiten in der Geographie. Einführende Gedanken. In: Gebhardt, H., Glaser, R., Radtke U., & Reuber, P. (2013):*Geographie: Physische Geographie Und Humangeographie*, 89–101. Heidelberg: Spektrum Akademischer Verlag.

Riechers, M., Henkel, W., Engbers, M., & Fischer, J. (2019). Stories of favourite places in public spaces: Emotional responses to landscape change. *Sustainability (Switzerland)*, *11*(14), 1–11. https://doi.org/10.3390/su11143851

Rissanen, S., & Ylinen, S. (2014). Elderly poverty: risks and experiences–a literature review. *Nordic Social Work Research*, *4*(2), 144–157.

Rogerson, P. A. (1996). Geographic Perspectives on Elderly Population Growth. *Growth and Change*, *27*(1), 75–95. https://doi.org/10.1111/j.1468-2257.1996.tb00897.x

Rowles, G. D. (1983). Place and personal identity in old age: Observations from Appalachia. *Journal of Environmental Psychology*, *3*(4), 299–313.

Rubinstein, R. I., & Parmelee, P. A. (1992). Attachment to place and the representation of the life course by the elderly. In *Place attachment* (pp. 139–163). Springer.

Russell, R., Guerry, A. D., Balvanera, P., Gould, R. K., Basurto, X., Chan, K. M. A., Klain, S., Levine, J., & Tam, J. (2013). Humans and Nature: How Knowing and Experiencing Nature Affect Well-Being. *Annual Review of Environment and Resources*, *38*(1), 473–502. https://doi.org/10.1146/annurev-environ-012312-110838

Ryan, R. M., Weinstein, N., Bernstein, J., Brown, K. W., Mistretta, L., & Gagne, M. (2010). Vitalizing effects of being outdoors and in nature. *Journal of Environmental Psychology*, *30*(2), 159–168.

Sandifer, P. A., Sutton-Grier, A. E., & Ward, B. P. (2015). Exploring connections among nature, biodiversity, ecosystem services, and human health and well-being: Opportunities to enhance health and biodiversity conservation. *Ecosystem Services*, *12*, 1–15.

Saroglou, V., Buxant, C., & Tilquin, J. (2008). Positive emotions as leading to religion and spirituality. *The Journal of Positive Psychology*, *3*(3), 165–173.

Schultz, E. (2020). *Statistiken zum Thema Landwirtschaft in der Schweiz | Statista*. https://de.statista.com/themen/2932/landwirtschaft-in-der-schweiz/

Schutz des Waldes. (n.d.). Retrieved December 21, 2021, from https://www.bafu.admin.ch/bafu/de/home/themen/wald/fachinformationen/strategien-und-massnahmen-des-bundes/schutz-des-waldes.html

Siegel, J. M., & Kuykendall, D. H. (1990). Loss, widowhood, and psychological distress among the elderly. *Journal of Consulting and Clinical Psychology*, *58*(5), 519.

Silverstein, M. (2004). *Annual Review of Gerontology and Geriatrics, Intergenerational Relations Across Time and Place*. *24*(1), 22–49.

Soga, M., Gaston, K. J., Yamaura, Y., Kurisu, K., & Hanaki, K. (2016). Both direct and vicarious experiences of nature affect children's willingness to conserve biodiversity. *International Journal of Environmental Research and Public Health*, *13*(6), 529.

Stedman, R. C. (2003). Is it really just a social construction?: The contribution of the physical

environment to sense of place. *Society &Natural Resources*, *16*(8), 671–685.

Stein, N., Folkman, S., Trabasso, T., & Richards, T. A. (1997). Appraisal and goal processes as predictors of psychological well-being in bereaved caregivers. *Journal of Personality and Social Psychology*, *72*(4), 872.

Taylor, S. A. P. (2001). Place identification and positive realities of aging. *Journal of Cross-Cultural Gerontology*, *16*(1), 5–20.

Turner, M. D., & Ship, J. A. (2007). Dry mouth and its effects on the oral health of elderly people. *The Journal of the American Dental Association*, *138*, 15–20.

Turner, N. J., Gregory, R., Brooks, C., Failing, L., & Satterfield, T. (2008). From invisibility to transparency: Identifying the implications. *Ecology and Society*, *13*(2). https://doi.org/10.5751/ES-02405-130207

Ulrich, R. (1983). Aesthetic and affective response to natural environment. In *Behavior and the natural environment* (pp. 85–125). Springer.

Ulrich, R. (1984). View through a window may influence recovery from surgery. *Science*, *224*(4647), 420–421.

Van den Berg, A. E., Koole, S. L., & van der Wulp, N. Y. (2003). Environmental preference and restoration:(How) are they related? *Journal of Environmental Psychology*, *23*(2), 135–146.

Wagner, M., Schütze, Y., & Lang, F. R. (1996). Soziale Beziehungen alter Menschen. In *Die berliner altersstudie* (pp. 301–319). Akademie-Verlag.

Waitt, G. (2010). *Doing Foucauldian discourse analysis-revealing social realities*. In Hay, I. (2010): Qualitative Research Methods in Human Geography. Third Edition. Victoria: Oxford University Press.

Wanka, A. (2018). Disengagement as Withdrawal From Public Space: Rethinking the Relation Between Place Attachment, Place Appropriation, and Identity-Building Among Older Adults. *The Gerontologist*, *58*(1), 130–139. https://doi.org/10.1093/geront/gnx081

Ware, B. (2012). *The top five regrets of the dying: A life transformed by the dearly departing*. Hay House, Inc.

Wehrli-Schindler, B., & Widmer Pham, A. (2019). *Megatrends und Raumentwicklung Schweiz*.

Weinstein, N., Przybylski, A. K., & Ryan, R. M. (2009). Can nature make us more caring? Effects of immersion in nature on intrinsic aspirations and generosity. *Personality and Social Psychology Bulletin*, *35*(10), 1315–1329.

Wiech, K., & Tracey, I. (2009). The influence of negative emotions on pain: Behavioral effects and neural mechanisms. *NeuroImage*, *47*(3), 987–994. https://doi.org/https://doi.org/10.1016/j.neuroimage.2009.05.059

Wilson, E. O. (1984). *Biophilia*. Harvard University Press.

Wilson, E. O. (2017). Biophilia and the conservation ethic. In *Evolutionary perspectives on environmental problems* (pp. 250–258). Routledge.

Witter, R., & Satterfield, T. (2014). Invisible losses and the logics of resettlement compensation. *Conservation Biology*, *28*(5), 1394–1402. https://doi.org/10.1111/cobi.12283

Witzel, A. (1982). *Verfahren der qualitativen Sozialforschung: Überblick und Alternativen*. Campus-Verlag.

Witzel, A. (2000). The problem-centered interview. FQS Forum: Qualitative Sozialforschung. *Forum: Qualitative Social Research [On-Line Journal]*, *1*(1), 22.

Witzel, A., & Reiter, H. (2012). *The Problem-Centred Interview: Principles and Practices*. London: Sage.

Wrosch, C., & Heckhausen, J. (2002). Peceived control of life regrets: Good for young and bad for old adults. *Psychology and Aging*, *17*(2), 340.

Yuan, K. S., & Wu, T. J. (2021). Environmental stressors and well-being on middle-aged and elderly people: the mediating role of outdoor leisure behaviour and place attachment. *Environmental Science and Pollution Research*, 1–10. https://doi.org/10.1007/s11356-021-13244-7

Zhang, W., Goodale, E., & Chen, J. (2014). How contact with nature affects children's biophilia, biophobia and conservation attitude in China. *Biological Conservation*, *177*, 109–116.

9 APPENDIX

9.1 INTERVIEWPROTOKOLL

1. Begrüssung

Vorstellen: Geographiestudentin, evtl. Hobbies und Interesse an Natur. Studium bis auf Masterarbeit abgeschlossen.

Masterarbeit erklären: Beziehung zwischen Mensch und Natur erforschen. Perspektive der älteren Menschen in Zürich. Interesse an Veränderungen über Zeit und Ortsverbundenheit. Relevant, weil es um Wohlbefinden der älteren Menschen geht.

Datenverarbeitung und -schutz erklären: Daten werden vertraulich behandelt. Nur von mir und meinen Betreungspersonen einsehbar. In Arbeit verwendete Interviewausschnitte werden anonymisiert und können nicht mit der Person in Verbindung gebracht werden. Jederzeit die Möglichkeit, eine Frage nicht zu beantworten. Es kann aber nicht ausgeschlossen werden, dass Menschen, die Sie kennen, Ihre anonymisierte Antwort zu Ihnen zuteilen kann. Einverständnis einholen zur Aufnahme.

Fragen, an welchen Daten sie Interesse haben: Ton-datei des Interviews, Interview Transkript, Zusammengefasste Auswertung der Daten, Gesamte Masterarbeit

Danken: Für die Teilnahme

Erinnern: Es gibt kein richtig oder falsch. Jede Antwort ist wertvoll.

Aufnahmegerät anstellen

2. Einstiegsfragen

➢ Als erstes würde ich mich freuen, wenn Sie mir von Ihrem Lieblingsort in Zürich erzählen könnten. (Wenn nicht ein Ort in der Natur gesagt wird, dann nochmals nachfragen, welcher der Lieblingsort in der Natur ist)

- o Wie häufig besuchen Sie ihn?
- o Was sind Eigenschaften, die Sie dahinziehen? (Beziehungen, innere Ruhe, Auftanken…)
- o Gehen Sie dorthin, wenn es Ihnen schlecht geht oder wenn es Ihnen gut geht? Oder beides?

o   Seit wann ist das Ihr Lieblingsort?

3. Beziehung zur Natur

Ich würde mit Ihnen nun gern etwas näher über Ihre Beziehung zur Natur sprechen.

➤ Beschreiben Sie die Gefühle, die Sie empfinden, wenn Sie in der Natur sind.

o   Wo haben Sie ähnliche Gefühle (Beisammensein der Familie, Lesen → versuchen, möglichst viele Vergleiche zu finden)

➤ Was würde Ihnen besonders fehlen, wenn Sie auf einmal nicht mehr in die Natur gehen könnten?

Nun möchte ich Ihnen eine etwas schwierigere Frage stellen. Es geht darum, welche Rolle Sie in der Natur einnehmen und welche Regeln oder Pflichten mit dieser Rolle kommen. (Solche Rollen sind Beschützer, Master, Manager, Partner, Teilnehmer, Besucher, Beobachter, Aussenstehender…)

➤ Wie sehen Sie Ihre Rolle in der Natur?

o   Welche Rechte und Pflichten kommen mit dieser Rolle? Wofür fühlen sie sich in dieser Rolle verantwortlich? Ev auch: Gibt es andere Situationen, in denen Sie eine andere Rolle in der Natur einnehmen? Weshalb….

➤ Wenn Sie ab morgen entscheiden könnten, was mit der Natur in und um Zürich geschieht (Bauzonen, Revitalisierungen, Aufforstung, Überbauungen), was würden Sie machen und wo würden Sie besonderen Fokus drauf legen?

4. Place Attachment & Veränderte Beziehung über Lebensphasen

➤ Sie haben bestimmt viele Veränderungen dieser Umgebung mitgemacht. Erzählen Sie von einer, die Ihnen in Erinnerung geblieben ist.

o   Wieso haben Sie dieses Beispiel gewählt? (Herausfinden, welche Faktoren wichtig sind, damit etwas in Erinnerung bleibt)

o   Was lösen diese Veränderungen in Ihnen aus?

- o Falls Beispiel negativ: Fragen, ob es auch etwas gibt, was sich ins Positive verändert hat
- o Falls Beispiel positiv: Fragen, ob es auch etwas gibt, was sich ins Negative verändert hat
  - ▪ Bespiele von Revitalisierungen ansprechen falls möglich und herausfinden, was sie von Revitalisierungsprojekten halten (Finden sie es gut, oder sind sie eher der Meinung, dass alles so bleiben sollte wie es ist? Zu viel Aufwand + Kosten? Oder ist es das wert?)

- ➢ Sie haben mir am Anfang von Ihrem Lieblingsort erzählt: Würden Sie sagen, Sie fühlen sich mit diesem Ort verbunden?
  - o Falls ja: Wie drückt sich diese Verbundenheit aus
  - o Falls nein: Können Sie sich vorstellen, eine Verbundenheit zu einem Ort zu haben? Was bräuchte es dafür?
  - o Gibt es andere Orte, zu denen Sie eine Verbundenheit fühlen?
    - ▪ Gibt es Orte, die, wenn sie sich verändern würden, etwas in Ihnen auslösen (innerhalb oder ausserhalb von Natur: vielleicht Elternhaus, Kinderspielwiese, der Bach im Chindsgi, ein Tobel, etc.) → Wieso?

- ➢ Gibt es etwas, dass Sie früher draussen gemacht haben, was Sie jetzt nicht mehr machen?
  - o Körperliche Beeinträchtigung
  - o Existiert nicht mehr
  - o Ausgestorben
  - o Überbaut

- ➢ Gibt es Orte, die Sie an eine andere Zeit erinnern? (Muss jetzt nicht zwingend in der Natur sein)
  - o Was für ein Gefühl gibt Ihnen das
  - o Mit welchen Personen verbinden Sie die Orte

- ➢ Verbinden Sie Orte mit anderen Personen?

- o Verstorbene Personen, Personen die weit weg sind, Partner/-innen…

- ➢ (Gibt es Orte in der Natur, die Ihrer Meinung nach schöner geworden sind?)
  - o Welche Veränderungen machen einen Ort schöner?
  - o Was braucht es, damit es zu einem Erholungsort für Sie wird?
- ➢ Gab es in Ihrer Beziehung zur Natur Änderungen im Verlauf Ihres Lebens
  - o Welche waren das?
  - o Was hat diese Veränderung ausgelöst?

5. Ecological Loss

- ➢ Gibt es Dinge, die Ihnen früher Freude bereitet haben, die es jetzt nicht mehr gibt? (Alternative Formulierung: Erinnern Sie sich an ein Erlebnis, wo Ihnen etwas wichtiges in der Natur genommen wurde?)
  - o Was macht das mit Ihnen, wenn Sie daran denken? (Emotionen: Wut, Trauer, Einsamkeit, Hilflosigkeit, Nostalgie?)
  - o Mit was könnte man die Gefühle vergleichen? Haben Sie diese Emotionen in anderen Lebenssituationen erlebt? (Verlust von einem Haustier, Verlassen der Heimat, Verlieren von einer befreundeten Person?)

- ➢ Am Anfang haben Sie von Ihrem Lieblingsort geredet. Was würde Ihnen am meisten fehlen, wenn es diesen Ort nicht mehr geben würde?
  - o Gibt es Orte, denen Sie noch heute etwas nachtrauern?
    - ▪ Falls ja: Was fehlt Ihnen besonders daran?

6. Abschluss

- ➢ Was wünschen Sie sich, wenn Sie an die Zukunft der Natur in Zürich denken?
- ➢ Haben Sie einen Tipp für die jüngeren Generationen, wie Sie mit der Natur umgehen sollten?
- ➢ Hat sich ihre Beziehung gegenüber der Natur durch Covid-19 verändert?
- ➢ Gibt es noch etwas, was Sie gerne sagen möchten?

Personalien

Wie alt sind Sie? _____

Wie lange leben Sie schon in Zürich? _____   Und wie lange an diesem Ort? _____

Haben Sie fragen an mich?

Herzlichen Dank für die Teilnahme!

Geschenk übergeben und evtl. Kontaktinformationen austauschen.

Nochmals nachfragen, ob sie die Resultate/Interviews möchten und in welcher Form

Kontaktdaten Falls erwünscht

Name:_____

Adresse:_____

PLZ/Ort:_____

Telefon:_____

E-Mail:_____

Einladung zur Teilnahme

Masterarbeit: Relational Values, Place Attachment and Ecological Loss of Elderly People in Zurich. (Relationale Werte, Ortsverbundenheit und ökologischer Verlust von älteren Menschen in Zürich)

Sehr geehrte Damen und Herren

Ich würde Sie gerne einladen, an der Forschung für meine Masterarbeit teilzunehmen. Ich möchte herausfinden, welche Werte ältere Menschen in der Stadt Zürich an der Natur besonders schätzen. Zusätzlich möchte ich verstehen, wie sich die Veränderung der Natur auf das Wohlbefinden auswirkt. Dafür würde ich gerne mit älteren Menschen sprechen, die in Zürich leben. Die Teilnehmer und Teilnehmerinnen sollten über 70 Jahre alt sein. Eine besondere Verbindung zur Natur ist keine Voraussetzung, da ich möglichst viele verschiedene Meinungen sammeln möchte.

Mein Interesse daran, die Beziehung von älteren Menschen zur Natur zu verstehen, kommt daher, dass ältere Personen schon viele verschiedene Lebensphasen durchgemacht haben. Dadurch haben sie eine Perspektive auf die Natur gewonnen, die den jüngeren Generationen fehlt. Genau diese Perspektiven und Weisheiten sind die Grundlage für meine Masterarbeit.

Ich bin Masterstudentin an der Universität Zürich im Bereich Geographie. Ich habe bereits meinen Bachelor in Geographie an der Universität Zürich absolviert und spezialisiere mich im Master auf den Bereich der Humangeographie. Besonderen Schwerpunkt lege ich dabei auf die Beziehung zwischen Mensch und Natur. Betreut wird meine Masterarbeit von Dr. Mollie Chapmann und Prof. Dr. Norman Backhaus.

Wenn Sie Interesse haben, würde ich gerne einen Termin mit Ihnen vereinbaren. Das Interview wird etwa eine Stunde dauern. Bei Fragen dürfen Sie sich gerne bei mir (Elena Robers) melden.

Freundliche Grüsse

Elena Robers

9.3 LETTER OF CONSENT

Informationen und Einverständniserklärung

Masterarbeit: Relational Values, Place Attachment and Ecological Loss of Elderly People in Zurich. (Relationale Werte, Ortsverbundenheit und ökologischer Verlust von älteren Menschen in Zürich)

Wer bin ich?

Ich bin Masterstudentin an der Universität Zürich im Bereich Geographie. Ich habe bereits meinen Bachelor in Geographie an der Universität Zürich absolviert und spezialisiere mich im Master auf den Bereich der Humangeographie. Besonderen Schwerpunkt lege ich dabei auf die Beziehung zwischen Mensch und Natur. Betreut wird meine Masterarbeit von Dr. Mollie Chapmann und Prof. Dr. Norman Backhaus.

Was bedeutet es für Sie, wenn Sie teilnehmen?

Ich werde einen Termin mit Ihnen vereinbaren, an dem wir ein Gespräch haben, das etwa eine Stunde dauern wird. Ich möchte mit Ihnen über Ihre Beziehung zur Natur und verschiedenen Orte in Zürich reden, die eine besondere Bedeutung für Sie haben. Ihre Teilnehme ist freiwillig und Sie können sich jederzeit dazu entscheiden, eine Frage nicht zu beantworten oder das Gespräch abzubrechen.

Wenn Sie zustimmen, würde ich das Interview gerne aufnehmen. Das hilft mir bei der Analyse, damit ich genau verstehen kann, was Sie gesagt haben. Nur ich und meine Betreuungspersonen können diese Aufnahmen anhören oder das (anonymisierte) Transkript lesen. Alle Ergebnisse werden so präsentiert, dass Ihre Identität vertraulich bleibt.

Was passiert mit den Ergebnissen?

Die Ergebnisse der Studie werden in meiner Masterarbeit zusammengetragen und ausgewertet, welche Anfang 2022 eingereicht wird. Wenn Sie Interesse daran haben, schicke ich Ihnen gerne eine Zusammenfassung der Ergebnisse (oder auch die gesamte Arbeit) per Mail oder Post zu. Ausserdem können Sie auch die Aufnahme des Interviews oder das Transkript davon erhalten. Wenn Sie Fragen haben können Sie mich gerne kontaktieren.

Freundliche Grüsse

Elena Robers

10 PERSONAL DECLARATION

I hereby declare that the submitted Thesis is the result of my own, independent work. All external sources are explicitly acknowledged in the Thesis.

Wolfhausen, 30. 01. 2022

Elena Robers