Abstract
This article aims to deepen understanding of the informal social relationships of the oldest old by applying qualitative methods. It considers ideas of the fourth age, socioemotional selectivity theory, and gerotranscendence theory from the viewpoint of Finnish community-dwelling nonagenarians. Qualitative life-story interviews were analyzed using qualitative content analysis. Nonagenarians described the significance of social relationships but also social restrictions and loneliness. In addition, the interviewees described the company and help their social relationships provided, and the pleasant and unpleasant emotions they experienced in their existing and past relationships. Our findings indicate that social relationships can contribute to the ability of nonagenarians to live a good life in old age, and that nonagenarians’ successful aging is not necessarily related to voluntary disengagement from social relationships, as suggested by some theories. Rather, our findings indicate a pursuit of engagement with other people to be important for the good aging of the oldest old.

Keywords: the oldest old, nonagenarian, community-dwelling, social relationships, qualitative research.
Introduction
Despite the fact that the populations of Finland and most developed countries are aging rapidly (Eurostat 2018; National Institute of Health and Welfare 2018), our knowledge about the social relationships of the oldest old is limited. There is strong evidence that social relationships are important for older individuals’ health and well-being (Berg-Warman & Brodsky 2006; Borgloh & Westerheide 2012; Yang & Stark 2010), yet our understanding of the social relationships of the oldest old from their own viewpoint is almost nonexistent. Consequently, our existing knowledge about social relationships in very old age is strongly based on quantitative research.

Previous studies have shown, for instance, that social engagement remains an important determinant of physical health in old age (Cherry et al. 2011); that social relationships can have a protective effect against mortality (Giles et al. 2005); and that social relationships are associated with cognitive performance (Gow et al. 2013), life satisfaction (Berg et al. 2006; Okabayashia & Hougham 2014), attachment to life (Jopp et al. 2008), and self-perceptions of disability (Kelley-Moore et al. 2006). Furthermore, social relationships have been found to be one of the most important aspects for the well-being and successful aging of the oldest old (Nosraty et al. 2012, 2015; von Faber et al. 2001). Numerous quantitative studies have shown that social relationships play an essential role in the lives of older and the oldest old people.

The qualitative approach is also needed to reveal new aspects of the factors perceived to be important for the well-being of older people. This is essential in order to promote the health and well-being of the older population, as quantitative measures are not always able to capture the essence of the studied subject, as the study by von Faber et al. (2001) demonstrates. They studied successful aging using both quantitative and qualitative methods, and found a considerable difference in their findings: the quantitative findings showed a very low proportion of successfully aged people, whereas the proportion of those perceiving themselves as successfully aged in the qualitative findings was significantly higher. Interestingly, when the older people were able to offer their own perceptions of successful aging, it turned out that it was not a matter of objectively measured physical functions but of successful adaptation to physical limitations. Thus, when the opportunity was given to older
people to give their own views on the matter in their own words, a whole new perspective to the studied subject was found, one that could not have been detected using only quantitative methods. Similarly, as with the case of von Faber et al. (2001), the quantitative studies mentioned above emphasizing the advantages of an active social life cannot say much about the personal meanings that older people give to social relationships.

The primary focus of this study is on acquiring information about the informal social relationships of community-dwelling nonagenarians, also referred to as the “oldest old.” The secondary aim is to consider some well-known ideas about the quality of life in old age – namely, the fourth age, socioemotional selectivity theory (SST), and gerotranscendence theory (GT) – from the viewpoint of these nonagenarians. This will be done by using life-story interview data, which are analyzed using qualitative content analysis. This study provides diverse information about the social relationships of the oldest old, including knowledge about the perceived limitations for – and the significance of – social relationships in the lives of the oldest old, and the valued aspects of social relationships in very old age. Thus, this study provides new knowledge about the social world of the oldest old, which is needed to promote their health and well-being.

Theoretical Background

The theoretical background of this study arises from the conception of affiliation, as outlined by the philosopher Nussbaum (2011: 34, 39–40). Nussbaum considers affiliation to be one of the most important human capabilities. Firstly, affiliation entails “being able to live with and toward others, to recognize and show concern for other human beings, to engage in various forms of social interaction, and to be able to imagine the situation of another” (Nussbaum 2011: 34). Therefore, community-dwelling nonagenarians should indeed be able to feel like members of a community, living “with and toward” others. Secondly, affiliation is about “having the social bases of self-respect and non-humiliation and being able to be treated as a dignified being whose worth is equal to that of others” (Nussbaum 2011: 34). This second precondition of affiliation presupposes that community-dwelling nonagenarians should not be in a disadvantageous position compared to others due to their advanced age and limited capabilities.
However, due to the various functional, social, and psychological challenges that very old individuals experience – such as reduced physical health and the loss of well-liked activities and family and friends (Jopp et al. 2016) – their social relationships, which are important for Nussbaum’s (2011: 34) first precondition of affiliation, tend to decrease. Therefore, it is important to study qualitatively the nature of the social networks of people aged 90+ who are still living in well-established homes. In addition, reaching very old age may result in different forms of social and cultural stigma (Gilleard & Higgs 2010; Nussbaum & Levmore 2017), hampering nonagenarians’ chances for Nussbaum’s (2011: 34) second precondition – namely, to be treated as dignified beings whose worth is equal to that of others. In the next section, we will enter into these sociocultural challenges.

**The Fourth Age and Successful Aging**

Now that people are living longer, our perceptions of old age have become more multidisciplinary and diverse. Furthermore, it can be argued that old age cannot be studied without considering the life experiences and social context of individuals’ lives. The fact that people are living longer has also resulted in the division of old age into ever smaller and more distinguishable life stages (Degnen 2007; Heikkinen 2004).

A well-acknowledged division is the one between the third and the fourth age (Laslett 1989). The distinction between and the definitions of the third and fourth age are not straightforward. Based on one definition, the fourth age can begin at very different ages, ranging from 60 to 90 years (Baltes & Smith 2003), which would make our interviewees (aged 90+) fourth agers. The third age is often referred to as the good news of old age, whereas fourth age is the bad news. Hence, the third age refers to the ability of older people to be effective and productive members of society, while the fourth age refers to a high prevalence of dysfunction, a reduced potential to recover functionality, and to loss of identity, autonomy and a sense of control which are threatening the features of the human mind and the chance to live and die with dignity (Baltes & Smith 2003). However, the shift from the third to the fourth age is not necessarily tied to the chronological age or life stage of the person; it can be a state of “unbecoming” (Higgs & Gilleard 2014) characterized by a lack of agency. A person becomes a subject of the fourth age when
Nonagenarians' perceptions of social relationships

others determine him or her to be no longer able to manage everyday life (Gilleard & Higgs 2010). This study will provide new knowledge on whether people aged 90+ who still live in their well-established homes closer match the definition of third or fourth agers.

Considering the issues raised above, one could ask whether successful aging is at all possible for the oldest old who are often classified as fourth agers. What is considered successful aging depends on the definition used. Successful aging has been approached from three different perspectives: biomedical theories, psychological approaches, and lay views (Bowling & Dieppe 2005). Therefore, one could emphasize successful aging as the absence of disease and disability (Rowe & Kahn 1997); as consisting of life satisfaction, social participation, and functioning (e.g. Carstensen et al. 1999; Freund & Baltes 1998); or as consisting of manifold lay definitions that are only partly captured by theoretical models (Bowling & Dieppe 2005).

The concept of successful aging is problematic, and it has been criticized for creating unrealistic expectations. It implies that older people must stay active and be productive members of society, and that one can choose to age successfully (Dillaway & Byrnes 2009). Furthermore, the shortcomings of the theoretical conceptualizations of successful aging are related to their very limited opportunities to represent a wide range of older people's experiences of aging, rather than only a select group (Bowling & Dieppe 2005; Dillaway & Byrnes 2009). Thus, Dillaway and Byrnes (2009) argue that the definitions of successful aging provided by older people themselves can be more appropriate than external definitions. In addition, as Bowling and Dieppe (2005) argue, lay views are important for testing the validity of existing models and measures.

Indeed, studies conducted among the oldest old people suggest that the viewpoint of successful aging being merely the absence of disease and disability is problematic, as it would exclude most older people (e.g. Nosraty et al. 2012; von Faber et al. 2001). Although differing results can be found (Cherry et al. 2013), many studies instead point to the importance of social relationships in the successful aging of the oldest old people, even when studying older people's own perceptions (Jopp et al. 2008; Nosraty et al. 2012, 2015; von Faber et al. 2001).

The meaning of social relationships for successful aging has been theorized by SST and GT. SST suggests that as people get older, they become more present-oriented instead of future-oriented, focusing on
experiences occurring in the moment. Therefore, they are likely to pursue goals related to emotional meaning and emotional satisfaction. This would also lead to the preference for familiar social partners in order to ensure the predictability and positivity of emotions and the emotional quality of social interaction. SST argues that reduced social contact in old age is not due to age-related losses or emotional withdrawal from social life but due to older people themselves being active agents, constructing their social worlds to match their social goals (Carstensen et al. 1999).

GT, on the other hand, suggests that the very process of living into old age is characterized by a general potential toward gerotranscendence, which means that as people age, they encounter changes in the way they perceive themselves, others, and the world. As a natural consequence, the social relationships of older people change from wider and more superficial to narrower and more profound (Tornstam 2011). However, there is a troubling inconsistency between these approaches and previous studies emphasizing the importance of social relationships in old age.

In this study, we aim to shed light on the social relationships of community-dwelling nonagenarians while bearing in mind Nussbaum’s (2011: 34) view of affiliation in addition to the theory of the fourth age, SST, and GT (Carstensen et al. 1999; Tornstam 2011). We aim to determine whether our informants achieve affiliation as Nussbaum (2011) defines it, and whether SST and GT still hold up for nonagenarians. In addition, we aim to clarify whether cultural definitions of the third and fourth ages match the reality of our informants, and whether our informants can be seen as successful agers.

Data and Methods
The data used in this study originate from the Vitality 90+ study carried out in the city of Tampere in southern Finland. It is a multidisciplinary study focusing on longevity and the oldest old. This study utilizes life-story interview data from 2012. Every fifth community-dwelling woman and man living in Tampere (born between the years 1921 and 1922, thus aged 90–91 at the time) was sent a request to participate in the interview. The request was sent to 99 women and 41 men, of whom 25 and 20, respectively, gave a positive answer. The response rate was 25% for women and 48% for men. The collection of the data was approved by the ethics committee of the local hospital district.
Along with the interview request, a short questionnaire was sent to the participants asking about marital status, living arrangements, need for help, and self-rated health. Information about the participants’ characteristics can be found in Table 1. As can be seen, the majority of the participants were widowed, lived alone, had no need for help, and rated their health as average.

The interviews were conducted by three researchers who were experts in the field of aging studies and two medical students trained to conduct interviews. The participants were interviewed in their homes. The shortest interview took 34 min and the longest 3 h and 20 min. There were nine interviews which took less than an hour, 24 interviews that took 1-2 h, ten interviews which took over 2 h, and two interviews lasting over 3 h. All 45 interviews were tape-recorded and transcribed into 1073 text pages. The interviewers had also documented short details of the interview situation and their personal observations about the

| Table 1. Characteristics of participants in the interviews (n = 45) |
|---------------------------------------------------------------|
| Number of participants | Men (n) | Women (n) | Total (n) |
|------------------------|---------|-----------|-----------|
| **Marital status**     | 20      | 25        | 45        |
| Married                | 9       | 3         | 12        |
| Widowed                | 11      | 17        | 28        |
| Unmarried              | 1       | 4         | 5         |
| **Living arrangements**|         |           |           |
| Alone                  | 11      | 23        | 34        |
| With spouse            | 9       | 2         | 11        |
| **Need for help**      |         |           |           |
| None                   | 12      | 12        | 24        |
| Sometimes              | 6       | 8         | 14        |
| Daily                  | 3       | 4         | 7         |
| **Health**             |         |           |           |
| Good/fairly good       | 8       | 6         | 14        |
| Average                | 12      | 16        | 28        |
| Poor                   | 1       | 2         | 3         |
interviewees, which helped the authors to delve deeply into the interview material, despite not having conducted the interviews themselves.

The same interview framework was used in all of the interviews; the participants were first asked to tell their life story from childhood to the present day. If necessary, additional questions were asked about school and studies, working life, marriage and children, wartime, and the death of loved ones. After that, questions about various topics, such as health, hobbies, everyday life, social relationships, a good old age, and longevity were asked.

The data were analyzed using the inductive approach of qualitative content analysis (Elo & Kyngäs 2008). Qualitative content analysis can be defined as a “research method for the subjective interpretation of the content of text data through the systematic classification process of coding and identifying themes or patterns” (Hsieh & Shannon 2005: 1278). This method of analysis was chosen because it allowed us to concentrate on a special viewpoint in the vast amount of text data, and thus it allowed a detailed identification of descriptions related to social relationships.

As the authors were not familiar with the interviews beforehand, the first phase of the analysis included a thorough familiarization with the data, ensuring an understanding of the data as a whole. In the next phase, by looking for descriptions of informal social relationships, the transcribed interviews were coded and short notes about the codes written. After that, the coded sections were read multiple times in order to recognize differences and similarities between the codes. In that way, an understanding of different descriptions of social relationships was created. Based on the observations made in this phase, codes identified as similar were grouped and preliminary categories were thus created. By observing the content of the preliminary categories created, similar categories were combined to create subcategories. Then, subcategories were observed in a similar way and combined in order to create general categories and, finally, the main categories.

The coding and the grouping of the codes into preliminary categories and the combining of the preliminary categories into subcategories were done by the first author. After that, the second author examined the codes in each category and presented his own observations. Together, the categories were revised and the generic categories and main categories formulated. The grouping of the categories is presented in Table 2. In the next section, these categories are presented and their content described.
Table 2. Categories created in the analysis process

| The main category | General-level descriptions | Particular-level descriptions |
|-------------------|----------------------------|-----------------------------|
| **Generic category** |                            |                             |
| The significance of social relationships | The nature of social relationships |
| **Sub-category** | Restrictions and loneliness | Appreciation of social relationships | Company | Help | Emotional activity |
| Death of friends and relatives | Being social | Visits | Receiving help | Feelings of joy |
| Poor health | Having people around | Neighbors | Helping others | Unpleasant feelings |
| Busy lives of relatives | Having family and friends | Telephone | Independence | Impact of childhood family |
| Relatives living far away | Harmony of social relationships | Association activities | | |
Results

Based on the analysis, community-dwelling nonagenarians talked about their social relationships on both the general and particular level. The general level consisted of articulations about the significance of relationships and associated ideas of social restriction and loneliness. On the particular level, the participants described the nature of their existing social relations. We identified these levels as “the significance of social relationships” and “the nature of social relationships.” The findings are illustrated below by extracts from the interview data. The extracts were translated from Finnish into English by the authors. The names of people and places appearing in the extracts are pseudonyms, and the letter R in front of a quotation refers to the researcher.

The Significance of Social Relationships

People reaching very old age are likely to encounter changes in their social surroundings. The participants talked about factors in their life that limited their opportunities to gain, maintain, and enjoy social relationships. Poor eyesight, deteriorating functional abilities, and increasing health problems resulted in fewer trips outside the home. The ever poorer condition of friends of the same age was mentioned as a social restriction as well. Anna explains how poor hearing became a reason for her to avoid conversations:

Anna: This hearing of mine harms me so much, because I can’t hear. A lady was talking to me in an Ostrobothnian dialect, it’s strange to me, and I couldn’t hear. Sometimes I can’t understand a word and it’s so awkward. I can’t take part in conversations... I can’t hear questions, I can’t hear answers, only when they burst out laughing. And I don’t get to be part of it. (Female, living alone)

Anna felt awkward in social situations due to her impaired hearing. The phrase “I don’t get to be part of it” reveals that she feels like an outsider. She feels worse off compared to others, which may have negative effects on her affiliation. In addition, one’s own age as such was experienced as an obstacle to social relationships. Maria noted that in old age one cannot find a new partner.
R: How has life been on your own?
Maria: It’s been okay. I’ve thought many times, that it would be nice to have a gentleman friend, but when you’re old you can’t find one anymore.
R: Why not?
Maria: No, who would take a 90-year-old? I’m in good shape though, I could manage just fine. But still. (Female, living alone)

Maria suspects that no one would take a 90-year-old lady friend. She believes that nonagenarians lose desirability in the eyes of others. Bearing in mind Nussbaum’s (2011) definition of affiliation, Maria’s dignity and equal worth to others seem threatened.

When relatives and friends lived far away, communication was naturally restricted. Moving to another area, away from old friends and acquaintances, had also caused feelings of loneliness in one participant. Some also felt that relatives did not have time to visit them because they are busy with work and hobbies.

Helena: But that’s how it is, my relatives, they have so many of their own activities... They don’t have time, these youngsters. I understand that they have their own hurries. (Female, living alone)

Helena felt that “these youngsters” had no time for her anymore, indicating she felt like an outsider in relation to her family. However, Helena, like many other interviewees, considered her relatives’ busy lives natural, and expressed this in an understanding tone.

When interviewing 90-year-old people, death was a common theme. The interviewees talked about the deaths of several friends and relatives. Sometimes they had outlived all their friends. Amanda was asked whether she had any close friends.

Amanda: Not anymore. I’ve had a huge circle of friends, since I’ve had so many hobbies and been involved in everything. But everybody dies. When I look at those pictures... I counted the other day, when I was there tidying up and looking at those pictures. That one is dead, that one is dead. Everybody is dead, but the only one alive was me. Then I had those bosom friends, there might
be 6–7 of them even. We always visited one another, drank coffee and so on, but all of them are already dead. There’s none of them left. (Female, living alone)

Amanda shed light on an interesting angle of social relationships in very old age. Due to living to a very old age, she had lost her primary social circle to death, which is a distinctive phenomenon for this age group. The death of loved ones was also related to loneliness. For example, the death of a spouse meant that one no longer had anyone to talk to at home.

R: What is most unfortunate in this old age?
Erik: It would be nice to sometimes talk in here, sometimes when you wake up. When you’re not completely conscious, you can almost feel that your wife is lying next to you. That you ought to talk, but then you realize that you’re all alone here. Indeed, there’s no one else here. (Male, living alone)

Erik pictured loneliness that seemed almost existential, yet the death of loved ones was not always experienced necessarily as a purely bad thing, but rather as a natural situation. Then again, losing loved ones could result in the loss of interest in social life altogether. This would not, however, mean that one could not be content with life and all the other things that make life good in the moment.

Amanda: When all your friends and all loved ones are gone, you don’t even have much interest in those things, or in life outside. I can be happy, when I have a good house and I feel good. (Female, living alone)

As the excerpt above shows, being alone was not necessarily experienced as a bad thing as such, and it was not synonymous with being lonely. The ability to control being alone, by going where one wants or by calling someone, was a reason why some participants mentioned that although they were alone, they did not feel lonely.

Elsa: I have gotten to know people in this building, but this is the kind of place where you don’t really have any collective events. I don’t know, we are all just in our own boxes here.
Nonagenarians’ perceptions of social relationships

R: Do you feel lonely then?
Elsa: No, I have never really felt like that. If I do, then I grab my phone and call my friend or my sister. (Female, living alone in an assisted living residence)

Indeed, as Elsa puts it, it was not being alone but loneliness that was considered unfortunate. Sometimes loneliness entirely preoccupied a person, as Emil explains:

Emil: I must say that although I still have much left in me, this loneliness, it imprisons you in a certain way. And when it imprisons you, it cuts down your way of thinking in some way very powerfully. It doesn’t mean that one wouldn’t understand, but the flight of thoughts… You can’t get that kind of inspiration. (Male, living alone)

For Emil, loneliness seemed to be an overwhelming experience of emptiness that made him feel excluded, even imprisoned. Loneliness not only isolated him from other people but also from his own “flight of thoughts.”

All these restrictions on social relationships and feelings of loneliness made social relations valuable to the participants. In particular, the importance of children, grandchildren, and the spouse was highlighted, as were social relationships in general. In addition, being social – talking to other people, being surrounded by people, and getting along with others – was highly appreciated. Mikael was asked what would make old age good:

Mikael: I can’t think of anything else than having loved ones. To have someone who takes care of you or is interested in you. But they are quite rare in this busy crowd. (Male, living alone in an assisted living residence)

Mikael aptly sums up the significance of social relationships to our interviewees; in very old age, you need people to take care of you and take an interest in you. As we have seen, the absence of these other people may even result in existential loneliness and feelings of imprisonment.
Nature of Social Relationships

Despite all the restrictions regarding social relationships described above, the participants enjoyed the various kinds of relationships with their children and grandchildren, other relatives, friends, and neighbors. Based on the analysis, we arrived at three categories, which we named “company,” “help,” and “emotional activity.” The content of these categories is outlined below.

Company

In the interviews, it was common that children and grandchildren visited the nonagenarians’ homes; it was rarely the other way around. Meeting other relatives or friends was not very common, and again, it was more common that the other person would be the person doing the visiting. Nevertheless, some also described going outside to meet friends or occasionally going out to eat with children and grandchildren.

Neighbors seemed to be an important social contact for community-dwelling nonagenarians, as the participants described meeting and spending time with them. Neighbors were met and chatted to in the garden of the housing cooperative, and they could also be company for activities, such as taking walks, drinking coffee, or playing cards. Neighbors were a good source of company, because they were close by and usually present, as Eeva explains:

Eeva:  If you want to be alone, you can be alone. But when you go out there, you are always surrounded by friends. (Female, living alone in an assisted living residence)

The telephone was important for the maintenance of social relationships, as friends and relatives were often reached specifically by phone. The telephone was a means to bring friends and relatives living further away closer. Calling was a way of maintaining the relationship when it otherwise would be too hard or even impossible, as Hilda describes:

Hilda:  I have a friendship of 80 years with this friend of mine, but she lives in a different city. We have been friends since we were 10 years old – and we still are. She has lost quite a lot of her memory, but I call her quite often. That’s a long friendship. (Female, living alone)
Nonagenarians’ perceptions of social relationships

Taking part in association activities, such as veteran associations and spiritual clubs, was described as a way to meet people and make friends. Some described having made lifelong friendships in association activities earlier in their lives, but taking part in associations was also a way to meet new people and enjoy interesting events, such as presentations and trips. Sometimes associations could even act as a social safety net. Liisa gave an apt example when she was asked what kind of features belong to a good old age.

Liisa: One has to have friends. Or some kind of a safety net, like that of my sister’s mission circle… Good friends are left behind when you leave a place. Then you have to learn all that again and make friends. My sister’s friends have now become my friends, so I’m sort of an associate member in their mission circle. (Female, living alone)

As the previous excerpt demonstrates, being part of an association provides one with company, which also offers security. In addition, all kinds of company may have positive effects on nonagenarians’ affiliation.

Help

Giving and receiving help was a frequent theme in the interviews. Help seemed to play an important role in nonagenarians’ lives, as help given in everyday chores by relatives, neighbors, and friends was a common theme raised by the interviewees.

Relatives, usually children and grandchildren, helped nonagenarians with all kinds of everyday chores, such as cooking, cleaning, shopping, and paying invoices. Some also mentioned that their children and grandchildren helped them with everything that they needed. Besides describing getting concrete help, nonagenarians also noted that children and grandchildren took care of them, for example, by calling or visiting often just to make sure everything was all right. Friends also helped them in everyday life by taking them shopping, for example. Neighbors mostly helped with outdoor chores such as plowing the snow in winter and tidying up the garden, but some also said that their neighbors took care of them more comprehensively, as Erik relates:
Erik: I haven’t had any worries about those outdoor chores. And with all those other things as well, like I said, that neighbor of mine really gets it done. And helps me with everything I need. I’ve never had a situation where I would have been left helpless, thinking on my own, “what am I going to do?” (Male, living alone)

The nonagenarians were not only receivers of help, they also helped others. Amanda describes helping others as an important value in her life:

Amanda: To me, the most important thing in this life has been adjusting to everything and helping in general. I’ve always been like that, I want to help those worse off. (Female, living alone)

Few of the nonagenarians described helping the children from whom they themselves received a lot of help. Rather, they mentioned helping other elderly people who were in poorer state of health than they themselves were. Helping was also related to the experience of being needed, and it boosted the nonagenarians’ self-esteem, as Ida explains:

Ida: Think about it, even at this age I’m able to do something. It’s darned good for my self-esteem that I’m necessary to someone. And I can still do things, I’m not totally empty-headed. (Female, living alone)

Some interviewees were – or had been at some point – a carer for their spouse. They often stated that taking care of a spouse at home was natural. Being able to take care of the spouse at home – thus avoiding transfer to a nursing home – sometimes seemed to be a matter of principle. Taking care of a sick spouse at home was not necessarily easy, but it could be even more important than one’s own well-being.

Alma: Many people say that I should put him [sick husband] in some institution. But the way I see it, I won’t put him out, for this is our shared home. I couldn’t tolerate it if he would end up in some place. I don’t bother about myself so much. For sure, it would be much easier for me, because this is not an easy life for me. It’s been easier sometimes, but I will bear it as long as I bear this life. (Female, living with a spouse)
The three previous excerpts are important regarding Nussbaum’s (2011) affiliation, encompassing “being able to recognize and show concern for other human beings.” As Ida puts it, being necessary to someone boosted the nonagenarians’ self-esteem.

Being able to make one’s own decisions and rule one’s own life was described as an important way to stay independent and not be patronized. On the other hand, a few nonagenarians also mentioned how the lack of social relationships forced them to be independent. Therefore, independence was not always a choice.

Emma: I’ve known how to ask and demand all kinds of care for myself so that I would be able to manage on my own, because I don’t have a single relative in this city. And all my acquaintances, my age group, are already gone or in the same condition as I am, so there’s not much help. (Female, living alone)

Although the ethos of managing on one’s own is strong in older generations (Jolanki 2009; Pirhonen et al. 2016), nonagenarians highly appreciated help received from other people. Emma’s account of her situation reveals that her independence was reluctant. Thus, for some independence is a choice, whereas for others it is a necessity, a forced independence.

Emotional activity

The participants described how their social relationships brought joy and enrichment to their lives.

Leo: Well, certainly our retirement has been enriched by our grandchildren; we have 11 of them. And there was some care when our daughters quite readily brought them to us to be looked after. But somehow, it was a richness... When my grandson was little, he once said to me, “Grandpa, now I am leaving, you must feel so bored as you’ll have nothing to do.” Yes, that was about right. (Male, living with a spouse)

Nevertheless, unfortunate issues related to social relationships were also described. The illness and death of a child and the disappointment caused
by one's own child were among the issues causing grief. In addition, a few nonagenarians felt sad that their relatives did not really remember or keep in contact with them, feeling that no one really cared about them anymore. Other peoples’ wrongdoings were also described by some, for example, experiences of injustice and mistreatment in childhood.

Erik: And well, then began that gloomy time. My father was a very quarrelsome man. Practically never did I hear a friendly word coming out of his mouth, he was always so bossy... That idea grew in my mind, when I always heard my father, he was the one who put it in there. When they [mother and father] were fighting, I could clearly hear those words: “You are crazy.” And at school age I started to wonder if I really am crazy. Is there something wrong with me when they always say that again and again? (male, living alone)

However, some nonagenarians also described their family’s positive impact on their lives. Some described having learned or “inherited” their parents’ sportiness or healthy lifestyle. For example, some described how their parents’ abstinence from alcohol resulted in them being teetotalers their whole life too. Memories of happy childhoods and loving parents still made participants feel happy in very old age. A couple of nonagenarians also raised the importance of their grandmothers in their lives because of what they taught them about religiosity and attitudes toward death. Social relationships, both past and present, seemed to work as a kind of emotional depository one could access spiritually when physical activity was restricted.

Discussion

Community-dwelling nonagenarians talked about social life on both the general and the particular level. On the general level, nonagenarians talked about the significance of social relationships. This was not only related to the great appreciation of social relationships in the first place but also to the social restrictions and loneliness the nonagenarians encountered in their lives. We found that the interviewees’ deteriorating health, advanced age, distance from friends and relatives, limited
opportunities to see loved ones due to time pressures, and the death of friends and relatives were experienced as restrictions to social relationships. Due to these restrictions, some nonagenarians also felt lonely. However, the restrictions and loss of social life were also experienced as natural phenomena in old age, and being alone and being lonely were not synonymous. For example, if one could control being alone by popping out or calling someone, it prevented one from being lonely, even while being mainly alone.

On the particular level, nonagenarians described the nature of their existing social relationships with their children, grandchildren, other relatives, friends, and neighbors. Social relationships were described as a source of company, as having them meant having someone who visits, someone to spend time with, and someone to talk to on the telephone. In addition, taking part in association activities was described as a way to meet friends, and even as a social safety net. Nonagenarians also described receiving help from their relatives, neighbors, and friends with all kinds of everyday chores. However, being able to help others was important to nonagenarians as well, and they mostly helped other older persons or acted as carers to their spouses. Despite receiving help from others, nonagenarians also wanted to be independent. However, independence was a choice for some; for others, it was a necessity due to a lack of social relations. Thus, while some struggle with not being dependent on loved ones despite their very old age, others struggle with the necessity of being independent because of their very old age, as they have no other choice. The latter we call “forced independence.”

Considering the features of the social lives of the nonagenarians, certain special characteristics can be found based on our results. One distinctive feature of the social life of the oldest old seems to be what we call “place-bound sociality.” By this, we mean that the social life of the oldest old seems to be bound to the place of their residence. As the nonagenarians described, they were usually visited by others; they tended not to go on visits themselves. In addition, neighbors – that is, those who lived near them – were described as an important source of company and help. The telephone was an important means of communication and brought friends and family living further away closer to the nonagenarians. Therefore, it seems that the place of residence plays a particularly important part in the social life of the oldest old people.
An interesting feature in the descriptions of the nonagenarians was the significance not only of their existing social relationships but also of the social relationships in their past. Both existing and past relationships were a source of pleasant and unpleasant feelings. The participants explained that their way of life, life choices, and attitude toward life had been influenced by the social relationships of their past, reaching as far back as their childhood. Furthermore, the nonagenarians noted that happy memories of past relationships made them feel happy in the present. This would suggest that a life-course perspective (Dannefer & Settersten 2010) – that is, taking into account the whole life experiences of an individual – should be adopted when attempting to understand the lives of the oldest old. Our participants used memories of other people during their life course as an emotional depository they could access to avoid feelings of loneliness.

Based on their age and life stage, the nonagenarians in this study can be said to be living the fourth age. However, the idea of the fourth age as a phase of frailty and dependency (Baltes & Smith 2003) or complete lack of agency (Higgs & Gilleard 2014) is not supported by the findings of our study. Although the social life of nonagenarians was limited by a variety of factors and they were in need of help to some extent, they also described having and enjoying various social relationships. As Tanner (2016) suggests, the fourth age should be seen not only through the various limitations encountered in very old age but also through the opportunities the oldest old people still have. As was found by Lloyd et al. (2014) and Tanner (2016), the meaning and support social relationships bring to life may enable the oldest old to live meaningfully and maintain their identity, dignity, and autonomy in the fourth age.

Therefore, despite the limitations the nonagenarians in this study experienced, it seems their meaningful social relationships have contributed to their ability to continue living a good life even in very old age, and they thus do not meet the criteria for being fourth agers. In accordance with the findings of Pirhonen et al. (2016), this study indicates that the socially determined category of the fourth age does not apply to the level of individual experience. We argue that belonging to the fourth age cannot be determined by considering solely the individual’s characteristics, the characteristics of the individual’s social surroundings must be considered as well. Indeed, these social surroundings can enable a good life despite the challenges encountered in very old age.
Our findings indicate that social relationships play an important role in the lives of the oldest old people and that social relationships are important and valued by them. In particular, family – one’s own children and grandchildren – played an important part in the nonagenarians’ lives. According to SST (Carstensen et al. 1999), by emphasizing close and satisfactory relationships, our interviewees had successfully adapted their social worlds to match their social goals. Therefore, they could be considered successfully aged. It is noteworthy, however, that there is no indication in the findings of this study about the willingness of the oldest old people to disengage from their social relationships, although both SST (Carstensen et al. 1999) and GT (Tornstam 2011) suggest it to be important for older people. Indeed, although in some studies, some of the oldest old people have emphasized solitariness over social relationships (Cherry et al. 2013; Ness et al. 2014), our interviewees found being alone undesirable, and their valuation of peace and the absence of negative emotions was reflected in their desire for a certain kind of social relationships, not in the desire to live a solitary life.

Furthermore, we found that the experienced limitations in social relationships and the narrowing down of the social network did not occur due to the active or voluntary efforts of our interviewees themselves, but rather due to circumstances they could not influence themselves. Thus, the oldest old were not able to choose to reduce their social relationships; this reduction instead happened due to factors beyond their control. Consequently, voluntary and active disengagement from social relationships as a means of pursuing successful aging was not relevant to them at all.

Indeed, based on these findings, we argue that it is not necessarily the voluntary disengagement that is significant for the successful aging or good old age of the nonagenarians, but rather the pursuit of engagement despite the many kinds of limitations encountered in very old age. Thus, in accordance with the findings of von Faber et al. (2001), a different perspective was found by giving the oldest old opportunities to offer their own views on what is important for their good aging. Our findings indicate that being able to maintain meaningful social relationships in very old age seems to be something that could enable successful aging for the nonagenarians. Conversely, disengaging from and not having social relationships could lead to undesirable feelings of loneliness.
Nussbaum’s (2011) bipartite definition of affiliation, together with our findings, add to our knowledge of how to improve the life satisfaction of the oldest old people. The ability of community-dwelling nonagenarians to live with and toward others was found to be problematic. Deteriorating functional abilities and the loss of friends and relatives caused loneliness – in other words, loneliness arose from restricted opportunities to live with and toward others. Therefore, these people would benefit from services that make it easy for them to go out on the one hand, and services that make socializing possible in their own home on the other hand. Both social and technological innovations are needed. For example, well-organized volunteer work and transport services could bring nonagenarians together, while different kinds of telepresence technologies to provide company are already being developed for older people (Frennert et al. 2013; Mitzner et al. 2014). In addition, in line with Nussbaum’s (2011) definition, showing concern for other human beings was also highlighted, as our interviewees’ self-esteem was partly based on helping others even in very old age. Thus, there is a need for social innovations that would provide nonagenarians with a sense of reciprocity.

The latter part of Nussbaum’s (2011: 24) definition – being able to be treated as a dignified being whose worth is equal to that of others – was also found to be problematic for community-dwelling nonagenarians. In many cases, nonagenarians stated that their children did not have time for them, although they said so in an understanding tone. Some also felt that their relatives had forgotten about them. One interviewee, Maria, suspected that nobody would want her as a lady friend anymore because of her age, which is perfectly in line with the previous theories of the fourth age as a life stage that is socially defined (Gilleard & Higgs 2010; Higgs & Gilleard 2014). Therefore, nonagenarians’ generational equality could be strengthened by affecting public representations of old age and the oldest old people. Nussbaum’s (2011) bipartite definition of affiliation reminds us that older people need both concrete social relationships and societal and cultural respect. Qualitative studies highlighting the individuality

---

1 Being able to live with and toward others, showing concern for other human beings, and being able to be treated as a dignified being whose worth is equal to that of others.
and diversity of nonagenarians would help to break stereotypes and make them visible and accepted as the people they are.

Conclusions
By conducting a qualitative study using extensive life-story interviews, we were able to take into account the in-depth and varied descriptions provided by nonagenarians with different backgrounds and life situations. Thus, we were able to consider multiple perspectives in this study, which led to the recognition of different aspects of social life in very old age. We argue that in order to better understand very old age in its complexity, various – and also divergent – perspectives need to be acknowledged. This can best be accomplished by qualitative studies, which allow the oldest old to reveal their perceptions in their own words. Consequently, more studies using a qualitative approach are needed to capture the multiple aspects of social life in the oldest old people.

Acknowledgements
We wish to thank the older people taking part in the interviews in 2012 and all the researchers conducting the Vitality 90+ research. We also wish to thank the Tampere University for providing the facilities to conduct this research. We are grateful to the Björkqvist Fund and the Päivikki and Sakari Sohlberg Foundation for making the research financially possible.

Corresponding Author
Katarina Tuominen, Faculty of Social Sciences, Tampere University, P.O. Box 100 FI-33014 Tampere University, Finland. Email: katarina.tuominen@tuni.fi.

References
Baltes, P. B. & Smith, J. (2003). New frontiers in the future of aging: From successful aging of the young old to the dilemmas of the fourth age. Gerontology 49(2): 123–135.
Berg, A. I., Hassing, L. B., McLearn, G. E. & Johansson, B. (2006). What matters for life satisfaction in the oldest-old? *Aging & Mental Health* 10(3): 257–264.

Berg-Warman, A. & Brodsky, J. (2006). The supportive community: A new concept for enhancing the quality of life of elderly living in the community. *Journal of Aging & Social Policy* 18(2): 69–83.

Borgloh, S. & Westerheide, P. (2012). The impact of mutual support based housing projects on the costs of care. *Housing Studies* 27(5): 620–642.

Bowling, A. & Dieppe, P. (2005). What is successful ageing and who should define it? *British Medical Journal* 331(7531): 1548–1551.

Carstensen, L. L., Isaacowitz, D. M. & Charles, S. T. (1999). Taking time seriously: A theory of socioemotional selectivity. *American Psychologist* 54(3): 165–181.

Cherry, K. E., Marks, L. D., Benedetto, T., Sullivan, M. C. & Barker, A (2013). Perceptions of longevity and successful aging in very old adults. *Journal of Religion, Spirituality & Aging* 25(4): 288–310.

Cherry, K. E., Walker, E. J., Brown, J. S., Volaufova, J., LaMotte, L. R., Welsh, D. A., Su, L. J., Jazwinski, M., Ellis, R., Wood, R. H. & Frisard, M. I. (2011). Social engagement and health in younger, older and oldest-old adults in the Louisiana Healthy Aging Study. *Journal of Applied Gerontology* 32(1): 51–75.

Dannefer, D. & Settersten, R. A. (2010). The study of the life course: Implications for social gerontology. In D. Dannefer & C. Phillipson (eds.), *The SAGE Handbook of Social Gerontology* (pp. 3–19). London: SAGE Publications Ltd.

Degnen, C. (2007). Minding the gap: The construction of old age and oldness amongst peers. *Journal of Aging Studies* 21(1): 69–80.

Dillaway, H. E. & Byrnes, M. (2009). Reconsidering successful ageing: A call for renewed and expanded academic critique and conceptualizations. *Journal of Applied Gerontology* 28(6): 702–722.

Elo, S. & Kyngäs, H. (2008). The qualitative content analysis process. *Journal of Advanced Nursing* 62(1): 107–115.

Eurostat. (2018). *Population Structure and Ageing*. Available on http://ec.europa.eu/eurostat/statistics-explained/index.php/Population_structure_and_ageing (Accessed: September 11, 2018)

von Faber, M. A., Bootsma-van der Wiel, A., van Exel, E., Gussekloo, J., Lagaay, A. M., van Dongen, E., Knook, D. L., van der Geest, S. &
Westendorp, R. G. J. (2001). Successful aging in the oldest old. Who can be characterized as successfully aged? *Archives of Internal Medicine* 161(22): 2694–2700.

Frennert, S. A., Forsberg, A. & Östlund, B. (2013). Elderly people’s perceptions of a telehealthcare system: Relative advantage, compatibility, complexity and observability. *Journal of Technology in Human Services* 31(3): 218–237.

Freund, A. M. & Baltes, P. B. (1998). Selection, optimization, and compensation as strategies of life management: Correlations with subjective indicators of successful aging. *Psychology and Aging* 13(4): 531–543.

Giles, L. C., Glonek, G. F. V., Luszcz, M. A. & Andrews, G. R. (2005). Effect of social networks on 10 year survival in very old Australians: The Australian longitudinal study of aging. *Journal of Epidemiology and Community Health* 59: 574–579.

Gilleard, C. & Higgs, P. (2010). Aging without agency: Theorizing the fourth age. *Aging & Mental Health* 14(2): 121–128.

Gow, A. J., Corley, J., Starr, J. M. & Deary, I. J. (2013). Which social network or support factors are associated with cognitive abilities in old age? *Gerontology* 59(5): 454–463.

Heikkinen, R. (2004). The experience of ageing and advanced old age: A ten-year follow-up. *Ageing and Society* 24(4): 567–582.

Higgs, P. & Gilleard, C. (2014). Frailty, abjection and the “othering” of the fourth age. *Health Sociology Review* 23(1): 10–19.

Hsieh, H. & Shannon, S. E. (2005). Three approaches to qualitative content analysis. *Qualitative Health Research* 15(9): 1277–1288. doi: 10.1177/1049732305276687.

Jolanki, O. (2009). *Fate of Choice*-Talking about Old Age and Health. Tampere: Tampere University Press.

Jopp, D. S., Boerner, K, Cimarolli, V., Hicks, S., Mirpuri, S., Paggi, M., Cavanagh, A. & Kennedy, E. (2016). Challenges experienced at age 100: Findings from the Fordham Centenarian Study. *Journal of Aging & Social Policy* 28(3): 187–207.

Jopp, D., Rott, C. & Oswald, F. (2008). Valuation of life in old and very old age: The role of sociodemographic, social and health resources for positive adaptation. *The Gerontologist* 48(5): 646–658.

Kelley-Moore, J., Schumacher, J. G., Kahana, E. & Kahana, B. (2006). When do older adults become “disabled”? Social and health antecedents of
perceived disability in a panel study of the oldest old. *Journal of Health and Social Behavior* 47(2): 126–141.

Laslett, P. (1989). *A Fresh Map of Life. The Emergence of the Third Age*. London: Weidenfeld and Nicolson.

Lloyd, L., Calnan, M., Cameron, A., Seymour, J. & Smiths, R. (2014). Identity in the fourth age: Perseverance, adaptation and maintaining dignity. *Ageing and Society* 34(1): 1–19.

Mitzner, T. L., Chen, T. L., Kemp, C. C. & Rogers, W. A. (2014). Identifying the potential for robotics to assist older adults in different living environments. *International Journal of Social Robotics* 6(2): 213–227.

National Institute of Health and Welfare. (2018). *Statistical Yearbook on Social Welfare and Health Care 2017*. Helsinki: Juvenes Print – Suomen Yliopistopaino Oy.

Ness, T. M., Hellzen, O. & Enmarker, I. (2014). “Embracing the present and fearing the future”: The meaning of being an oldest old woman in a rural area. *International Journal of Qualitative Studies on Health and Well-being* 9(1). Available on http://dx.doi.org.helios.uta.fi/10.3402/qhw.v9.25217 (Accessed February 2, 2018).

Nosraty, L., Jylhä, M., Raittila, T. & Lumme-Sandt, K. (2015). Perceptions by the oldest old of successful aging. *Journal of Aging Studies* 32: 50–58.

Nosraty, L., Sarkeala, T., Hervonen, A. & Jylhä, M. (2012). Is there successful aging for nonagenarians? The vitality 90+ study. *Journal of Aging Research* 2012: 1–9. doi: 10.1155/2012/868797

Nussbaum, M. C. (2011). *Creating Capabilities. The Human Development Approach*. Cambridge, MA: Harvard University Press.

Nussbaum, M. C. & Levmore, S. (2017). *Aging Thoughtfully. Conversations about Retirement. Romance, Wrinkles, & Regret*. New York: Oxford University Press.

Okabayashia, H. & Hougham, G. W. (2014). Gender differences of social interactions and their effects on subjective well-being among Japanese elders. *Aging and Mental Health* 18(1): 59–71.

Pirhonen, J., Ojala, H., Lumme-Sandt, K. & Pietilä, I. (2016). Old but not that old. Community-dwelling 90+ persons negotiating their autonomy. *Ageing and Society* 36(8): 1625–1644.

Rowe, J. W. & Kahn, R. L. (1997). Successful aging. *Gerontologist* 37(4): 433–440.
Nonagenarians’ perceptions of social relationships

Tanner, D. (2016). Sustaining the self in the “fourth age”: A case study. *Quality in Ageing and Older Adults* 17(3): 157–167.

Tornstam, L. (2011). Maturing into gerotranscendence. *The Journal of Transpersonal Psychology* 43(2): 166–180.

Yang, H.-Y. & Stark, S. L. (2010). The role of environmental features in social engagement among residents living in assisted living facilities. *Journal of Housing for the Elderly* 24: 28–43.