The Influence of Length of Residence on the Reasons for Place Attachment to the Neighbourhood

Jessy Snip (S2782278)

University of Groningen

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Correspondence regarding this master thesis can be addressed to Jessy Snip, J.Snip.3@student.rug.nl.

Abstract

A large scale survey was held in two newly built neighbourhoods in the Netherlands. People were asked about their most important reasons for living in their neighbourhood. The reasons were divided into social and physical reasons for place attachment. A binary logistic regression was used to predict the possibilities of mentioning a social or physical reason, based on the years of residence. No support was found for the suspected increase of social reasons and the suspected decrease of physical reasons. When people were asked to look back at the reasons for moving to the neighbourhood, social reasons and physical reasons were both mentioned significantly less often than when they were asked about the current reasons for place attachment. This could indicate that there is a difference between the functions of social and physical aspects in place attachment, but that this effect was not visible in the current study and time frame.

Key words: Place Attachment, Social, Physical

The Influence of Length of Residence on the Defining Factors of Place Attachment to the Neighbourhood

1. Introduction

Take a moment to ask yourself, why did you want to live in the place that you are living right now? What attracted you to this place? Now think again, why do you want to stay in this place? What keeps you from moving away? Chances are that the most important reasons for you to live where you do, have not remained the same in the course of your residence. The bond that people feel to a place is called place attachment and the factors that influence place attachment can be related to the place, the person and the process of place attachment. The factors of a place that can influence the place attachment can be divided in social and physical factors (Scannell & Gifford, 2010). Physical factors can for example be the shopping centre or a nice park nearby; a social factor can be your nice neighbours. One of the most important predictors of the strength of place attachment to the living environment is the residence length, this is a personal aspect of place attachment. The longer people have been in a certain place, the stronger their attachment to this place will be, generally (Kasarda & Janowitz, 1974). The increase in place attachment to the neighbourhood over time is the strongest in the first four years of residence (Lalli, 1992; Hernandez, Hidalgo, Salazar-Laplace and Hess, 2007). Factors that influence the development of the attachment to a place are called process factors. The connection between the three aspects of place attachment has often been lacking in previous research. The aspects related to the person, the place or the process of place attachment, are often researched separately. In previous research, the personal aspect has often been the main focus, which caused the place and process aspects of place attachment to be ignored and understudied (Lewicka, 2011a). In this research, a personal aspect of place attachment, the length of the residence, will be connected to the physical and social aspects of place. By analysing whether the social or physical aspects are more or less important for people's place attachment at certain times in the course of the residence, insights will hopefully be gained about the process of becoming attached to a place. The focus of the current research is on the attachment to the neighbourhood and therefore the research question is: does the length of the residence influence the reasons for place attachment to the neighbourhood? This idea is based on an untested suggestion made by Beckley (2003), in which she proposed that physical factors

cause people to be attracted to a certain place, but the social factors cause people to stay in that place. The information gained in this research can be useful in the design and promotion of new neighbourhoods, as it can give us a better idea of the importance of different neighbourhood aspects at certain times in the development of place attachment. It is desirable for the residents of a neighbourhood to have a strong place attachment, as a strong place attachment is related to higher overall life satisfaction (Lewicka, 2011a). Therefore, the expansion of knowledge about place attachment is a valuable goal to have.

2. Literature Review

2.1 Place Attachment

People's mobility has grown very rapidly in the past decades. People are traveling for work or for fun and are more inclined to move in search of better life opportunities. This mobility causes places that are distant from each other in physical form to be more connected socially, which contributes to the globalization (Gustafson, 2014). These developments could cause people to be less attached to places. However, this is not the case. People continue to have strong bonds with numerous places (Lewicka, 2011a). These emotional bonds people can have with places, called place attachment, can affect people's emotional wellbeing, which becomes clear when people are forced to move to a different location (Kleit & Manzo, 2006). Place attachment can also be defined as the desire to stay in a place (Hay, 1998). The attachment to a place does not only occur in the case of residential places. Place attachment can be in regard to every meaningful location and can range from residential areas, working areas, vacation homes and more (Lewicka, 2011a). Attachment to a place can be at different scales, ranging from homes and neighbourhoods to cities and countries. The development of place attachment is a psychological process that is mainly influenced by the time that is spent in the place and is positively influenced by connections that are made with the other people in that place (Kasarda & Janowitz, 1974). Since these first, and still most influential predictors of place attachment have been discovered, a wide range of other predictors of place attachment, like age, social status, home ownership, community size and architectural and natural aspects of the place have also been shown to influence place attachment (Lewicka, 2011a).

Having a strong attachment to a place can have numerous consequences. A strong place attachment is usually considered as a positive thing. People with a strong place attachment are more satisfied with their life overall, have a stronger connection to the neighbourhood, have stronger social bonds, have more trust in people and seem to be less egocentric (Lewicka, 2011b). However, these findings all resulted from correlational research and place attachment can therefore not be said to have a positive influence on people (Lewcika, 2011a). However, the connections between place attachment and positive psychological aspects seem to be an indicator that feeling attached to a place is a positive feeling. This does not mean that a strong place attachment cannot have negative influences on people's lives. People are, for example, less inclined to move when they have a strong attachment to a place, which can cause them to miss out on certain life opportunities (Fried, 2000).

A lot of research has gone into the variety of factors that influence the development of place attachment. In their tripartite model, Scannell and Gifford (2010) analysed these factors and defined three aspects of place attachment: the person, the place and the process. The person is the actor that develops the place attachment. The person influences this process in two ways: through their individual experiences, realizations and milestones, or through the cultural group that the person is a part of. These different aspects cause place attachments at a group level, for example, the attachment of a people to their country, or on a personal level, for example, the attachment of a person to their birthplace. The psychological process of place attachment exists of the mechanisms through which place attachment develops. The attachment to a place is influenced by the way people interact with places and how the place makes them feel. The three psychological mechanism that influence place attachment are emotional affects, cognitive processes and behaviour. The emotional affect of a place can be defined as the feelings that the place brings up. One can, for example, feel like they belong in a certain place, or certain places can cause feelings of pride and happiness. Feelings of homesickness and longing to a place can be caused by (forced) relocation. The cognitive elements of place attachment consist of knowledge, memories, meanings and beliefs that cause people to assign importance to certain places. The behaviour of people in a place is also important for people's attachment to it. When important life events take place at certain locations, people can see this place as an important part of their life and their self. This makes it possible for people to be strongly connected

to a place and sometimes make it part of their identity. Finally, the place itself is also an important aspect in the development of place attachment. The aspects of a place that influence place attachment can be divided into social and physical aspects. The social and physical factors of place are important factors in this research and will be explained more extensively.

2.2 Social and Physical Factors of Place

The aspects of a place that cause people to feel attached to it, can be different for every person or place. It is however possible to categorize the aspects into physical and social aspects. Social aspects being, for example, the connection to the neighbours, a feeling of rootedness or symbolic meanings that are attached to a place. Physical aspects can, for example, consist of natural aspects or possibilities for recreation (Lewicka, 2011a). Although social aspects seem to have a bigger influence on place attachment than physical aspects, social and physical aspects both influence place attachment (Hidalgo and Hernandez, 2001). The role of both physical and social aspects on place attachment was confirmed in a study by Eisenhauer, Krannich and Blahma (2000), in which people in a rural community in southern Utah were asked what made certain places special to them. Their answers were equally divided between social and ecological (physical characteristics) reasons. Social factors mainly involved friends and family that lived in the neighbourhood. Physical characteristics consisted of environmental features and characteristics of the place. The influence of social and physical factors on place attachment can also depend on what type of relationship a person has with the place. Stedman (2006) found a difference in reasons for place attachment between year-round home owners, seasonal/weekend users and infrequent visitors in the North Central Region of Wisconsin. Community ties and social networks being the most important reason of attachment for home owners, where activities and environmental qualities were the most important reasons for the other two groups.

The relationship of both physical and social aspects with place attachment can be multidirectional. People with stronger social relations in a place, have a stronger attachment to this place (Scopelliti & Tiberio, 2010). However, a positive attachment to a place could also lead to the willingness to create social bonds in this place (Lewicka, 2011a). This is similar for physical aspects of a place. Physical aspects can be the cause of an attachment to a place, but a stronger place attachment also causes a more positive view on the physical aspects of the place (Félonneau, 2004).

The distinction of factors of place in social and physical factors has often been criticized. The reason for this being that it is sometimes hard to separate social and physical factors. According to some researchers, physical factors only have meaning through social construction, which makes it impossible to separate them (Burley, 2007). A church can, for example, be a very important building for people and could therefore be regarded as a physical influence on place attachment. But what actually influenced the attachment are the socially constructed meanings of this building. Physical aspects might also facilitate social contact, through which they influence place attachment indirectly (Sugihara & Evans, 2000). In this case, you can think of a playing ground in the middle of a neighbourhood that facilitates contact between the children and between the parents of the children. This playing ground is a physical aspect of the neighbourhood, but its effects on the social contacts in the neighbourhood and subsequently on place attachment are mainly social. However, the majority of researchers are convinced that social and physical aspects are worth distinguishing (Lewicka, 2011a). The distinction can especially be useful because the social and physical aspects of a place might play different roles in place attachment processes. Beckley (2003) suggested that the physical factors might act as a pulling force, that would attract people to a certain place (magnets). While the social factors would play an important role in preventing people from moving to another place (anchors). Following this assumption, it is possible that there is a connection between the importance of social and physical factors and the length of residence.

2.3 Length of Residence

Along with community ties, the length of residence is found to be the best predictor of place attachment (Kasarda & Janowitz, 1974). There is a positive relation between the length of residence and the attachment to the place. This relation should be handled carefully. If place attachment would be regarded as an equivalent to residence length, tourists, newcomers and people in new neighbourhoods would not be able to experience place attachment Some researchers have used the relation between length of residence and place attachment this way and argued that newcomers were not able to have a strong attachment to a place, as they were not part of the creation of the values of the place, they do not share the same values as the original community and the low amount of contact would make it impossible for them to feel attached to a place (Porteous, 1976). Although the length of

residence is a strong predictor of place attachment, it cannot be said that temporary visitors and newcomers cannot experience place attachment. Numerous studies have shown that newcomers and tourists are capable of experiencing place attachment (Lewicka, 2011). The most amount of growth in place attachment even takes place in the first few years of residence (Lalli, 1992; Hernandez et al., 2007).

That newcomers and tourists can experience place attachment does not have to mean that this attachment is based on the same type of aspects as for people that have lived in the place for a longer amount of time. As mentioned before, Stedman connected different groups of residents to different factors of place attachment and found a difference in the valuation of physical and social aspects of these groups. Beckley (2003) also related the social and physical aspects of place to length of residence, by suggesting that physical factors are important to attract new people and social factors are important for people to stay in a place. This suggests that there might be a connection between the length of the residence and the importance of social and physical aspects of a place. This change would most likely take place in the first few years of residence. Therefore, it might be good to look at new neighbourhoods in the context of the development in place attachment, as this proposes the opportunity to look at these first few years of place attachment, specifically.

2.4 The New Neighbourhood

As mentioned, attachment to places can take place at different scales. Attachment to the neighbourhood is less strong compared to scales like the home and the city (Lewicka, 2011a). This is probably caused by the fact that cities and homes are more distinctive and cause people to have stronger associations. The stronger associations make it easier for people to feel attached (Tuan, 1975). The neighbourhood usually does not have clear and absolute borders and can consist of multiple smaller units of importance (Kusenbach, 2008). Agreements of what areas are and are not part of the neighbourhood can differ between different people, between different functions and can sometimes be different from the administrative borders (Galster, 2001). This might, however, be different for new neighbourhoods, because the border between the older part of the city or town and the new houses is likely to be clearer. The neighbourhood is the most popular scale to measure place attachment on. This

is mainly caused by the popularity of community studies and the similar features of communities and neighbourhoods (Lewicka, 2011a).

What distinguishes new neighbourhoods from other neighbourhoods is that there is not yet a settled community or a set of values that newcomers have to fit in, or adjust to. This causes new neighbourhoods to be a good context to research the development of attachment to a place from the onset of the creation of the place. Researching the place attachment in a new neighbourhood would hopefully show how the importance of physical and social aspects of the place, change in the course of the residence. Collecting data in a new neighbourhood also results in the biggest chance of finding a large number of new residents in the same neighbourhood. As the most amount of strengthening of place attachment happens in the first few years of residence, it can be expected that most of the changes in the reasons for place attachment also take place during this period. It is expected that the social reasons for place attachment will become more important over time, and the physical factors will become less important over time. This results in the following hypotheses:

Hypothesis 1: The probability of people mentioning physical reasons for living in their residential area will decrease over time of residence.

Hypothesis 2: The probability of people mentioning social reasons for living in their residential area will increase over time of residence.

3. Method

3.1 Study context

The hypotheses are tested, using quantitative research. A large scale survey, measuring the reasons people have to live in their neighbourhood, will be conducted in two new neighbourhoods. The choice for this approach was made, because the data will not be used to look at individual reasons but for a trend that would apply to most people. Although a quantitative approach is used, the questions about the place attachment factors will be very open. This way the respondents are not steered in a certain direction or restrained in their answers. Using this open questioning, it is possible that certain reasons for place attachment will not be mentioned, because they are not thought of immediately by the respondents. These ‘forgotten’ aspects might be important for place attachment, without people being aware of this. However, the reasons for place attachment that are given will be

representative of what people experience as the most important reasons for place attachment and will therefore be most valuable in practice.

The neighbourhoods in which the questionnaires are distributed are ‘Meerstad’ in Groningen and ‘de Oostergast’ in Zuidhorn, both in the northern part of the Netherlands. These neighbourhoods are chosen because they are both new construction projects that have started a few years ago and are still in progress. The first residents moved to ‘Meerstad’ in 2010. In 2018, Meerstad counted 818 residents, 350 sold houses and 150 sold building slots. At the moment, houses are being build and the plan is to build facilities when these are needed (Meerstad, 2018). The construction of ‘de Oostergast’ started in 2007. Between 2007 and 2010, around 140 houses were built. In 2017, the second building phase started, which is planned to continue until 2020. Around 150 new houses will be built during this period (deoostergast, 2019). The marketing strategy of both of the neighbourhoods focuses mainly on the physical aspects of the neighbourhood. For ‘Meerstad’, this is mainly the physical appearance and the amount of greenery in the neighbourhood. A lot of attention is given to the lake that is in the middle of the neighbourhood, the amount of space in the neighbourhood and the peaceful atmosphere of the neighbourhood (Meerstad, 2018). In the marketing of ‘de Oostergast’, the location of the neighbourhood and its proximity to the city of Groningen is the main focus. The peacefulness, greenery and amount of space are also prominent in the marketing of ‘de Oostergast’ (deoostergast, 2019). These marketing strategies are in line with the suggestion by Beckley (2003), that physical aspects are most important in attracting people to a new place.

The collected data of the two neighbourhoods will be combined into one data set. This will be done to make the data more generalizable. The current study is not a case study on either of the neighbourhood, but an effort to create a more general conclusion. Combining the data of two different neighbourhoods, prevents the possible conclusion to be only applicable to one specific new neighbourhood. The building of the neighbourhoods started in approximately the same period and new houses (and residents) are still added to the neighbourhoods. This will prevent a large discrepancy between the average residence length of the two neighbourhoods. The physical aspects of both neighbourhoods seem to be somewhat different, which will probably cause a wider range of reasons for place attachment than would have come up if only one neighbourhood was studied.

3.2 Procedure

Residents of 'Meerstad' and 'de Oostergast' received a questionnaire and an information letter in their mail. The envelopes were mostly distributed door-to-door skipping every other house. In some streets, the envelopes were given to every house in order to distribute every questionnaire. The residents were asked to fill in the questionnaire. This could be done online via a link in the information letter, or respondents could fill in the questionnaire they received on paper. This questionnaire would be retrieved a week and a half later by the researcher. The information letter informed the respondents about the goal, anonymity and voluntary nature of the research.

3.3 Measures

The question that was used to measure the attachment to the neighbourhood was: *'What are, at this moment, the most important reasons for you to live in Meerstad/de Oostergast?'*. This question was open-ended and the respondents could name as much reasons as they wanted. The reasons that were given by the respondents could be categorized in 27 categories that can be found in the first column of table 3. These categories were made into dummy variables that determined whether a respondent had mentioned the specific reason or not. Every reason that was named by the participants was included in a category. Some reasons could be assigned to multiple categories. When this was the case, the reason was put into both of the categories. An example of this would be a respondent mentioning using the lake to take out their boat. This reason would be put in the categories of 'nature, greenery and water' and 'possibilities for hobbies'. The categories of reasons were then divided into social and physical reasons. Some categories were applicable to both categories, for example, the reason 'child friendliness of the neighbourhood' could either apply to the facilities for a child to play around (physical), as well as the presence of other children in the neighbourhood (social). When a reason suited the social as well as the physical label, it was put in both categories. Some reasons did not fit the physical or the social label and were labelled as the remaining reasons. The division of the reasons into the categories can be found in the first column of table 3. The reasons in the remaining category seem to have the common trait of not being specifically bounded to the neighbourhood itself.

Dummy variables were also created, based on whether a participant had mentioned at least one of the reasons in the social, physical or remaining group of reasons. The probability of someone

mentioning a certain type of reason over time of residence was measured using a binary logistic regression analysis. The choice for this statistic method was made in order to keep the independent variable, the length of residence, a continuous variable. The use of the binary approach for the reasons was needed in order to prevent the double assignment of reasons to influence the data. Using the specific number of reasons in each group of reasons would have given a distorted image of the data. The length of residence was measured by asking the participants the question: *'Since when have you been living in Meerstad/de Oostergast?*' the answers were manually transformed into the amount of years, as some respondents answered with a moving date and others with the amount of years of residence.

The respondents were also asked to think back at the initial reasons they had to move to their neighbourhood with the question: *'Can you remember what the most important reasons were for you to live in Meerstad/de Oostergast, when you just moved here? What were those reasons?'* The answers that were given to this question were processed in the same way as the current reasons for living in the neighbourhoods. The answers that were given to this question fitted in the same categorization of reason, with the addition of the categories: 'being a pioneer' and 'the situation of the housing market', which were both put in the remaining group of reasons. The answers to this question will be compared the answers to the question about the current reasons for residence, using the McNemar-test. The McNemar-test can be used to test the consistency of responses on two nominal items within the same respondent. A significant p-value indicates a significant difference between the two responses.

4. Results

4.1 Respondents

Data was gathered in two new neighbourhoods: 'Meerstad' in Groningen and 'de Oostergast' in Zuidhorn. 250 residents of the neighbourhood 'Meerstad' in Groningen and 247 residents of the neighbourhood 'de Oostergast' in Zuidhorn were invited to participate in the research. 58 (23%) of the invited residents of 'Meerstad' completed the questionnaire. 78 (32%) of the invited residents of 'de Oostergast' completed the questionnaire. The data of both neighbourhoods was combined. This was possible because the percentages of people giving social, physical and other reasons in both neighbourhoods was similar (Table 1). Combining the data of both neighbourhoods led to a sample

group of 136 residents of new neighbourhoods. The sample consists of men 58 (43%), women 76 (56%) and two people that preferred not to indicate a gender. The mean age of the respondents is 42 and they were living in their neighbourhood for 4.5 year on average (Table 2) The distribution of the years of residence can be found in figure 1. The mean score on the satisfaction with the neighbourhood on a scale of 1 to 10 was 8.3 (Table 2).

Table 1

Percentages of people mentioning at least one physical, social or other reason for both neighbourhoods

	Meerstad	de Oostergast
Physical reasons	*98.3%*	*96.2%*
Social reasons	*59.3%*	*65.4%*
Other Reasons	*28.8%*	*33.3%*

Table 2

Descriptive statistics of the sample groups

	M	*Minimum*	*Maximum*	*SD*
Age	*42.4*	*24*	*77*	*12.7*
Years of Residence	*4.5*	*.02*	*11*	*3.5*
Satisfaction with the Neighbourhood (scale of 1 to 10)	*8.3*	*5*	*10*	*1.0*

N=136

Figure 1: Distribution of the years of residence of the respondents in their neighbourhoods.

4.2 Correlations

Correlations between the variables can be found in table 4. There are no significant correlations between 'years of residence' and mentioning at least one physical, social or remaining reason. Significant correlations that are interesting to note are the positive weak correlation between mentioning a social reason and gender (*Pearson correlation* = .19). Women are mention significantly more social reasons than men. And the negative moderate correlation between age and mentioning a

social reason (*Pearson correlation* = -.26). The older a person is, the less likely they are to give social reason for place attachment (Table 4). Further exploration of the correlations will not be done, as correlations are not found to be very useful with binary variables. The correlation table (Table 4) can however be used as a quick overview of the variables and the directions in which they are related.

Table 3

Frequencies and percentages of the respondents that have given certain current reasons for place attachment (first columns), certain original reasons for moving to the neighbourhood (second columns) and the significance of the change between them.

Category	*n*	*Percentage*	*n*	*Percentage*	*Sig.*
Physical	***133***	***97.1%***	***108***	***78.8%***	***.00***
The geographical location	*50*	*36.5%*	*43*	*31.4%*	*.25*
The amount of space in the neighbourhood	*49*	*35.8%*	*38*	*27.7%*	*.05*
(Characteristics of) the house	*44*	*32.1%*	*38*	*27.7%*	*.38*
Facilities	*37*	*24.7%*	*18*	*13.1%*	*.00*
Child friendliness	*34*	*24.8%*	*18*	*13.1%*	*.00*
Nature, greenery and water	*32*	*23.4%*	*29*	*21.2%*	*.66*
Peacefulness	*32*	*23.4%*	*19*	*13.9%*	*.00*
Accessibility	*26*	*19.0%*	*19*	*13.9%*	*.17*
New construction	*21*	*15.3%*	*23*	*16.8%*	*.81*
Schools and day-cares	*19*	*13.9%*	*7*	*5.1%*	*.00*
Aesthetics of the neighbourhood/house	*16*	*11.7%*	*5*	*3.6%*	*.01*
Garden	*10*	*7.3%*	*14*	*10.2%*	*.42*
Sustainability	*10*	*7.3%*	*9*	*6.6%*	*1.00*
The view/openness	*9*	*6.6%*	*6*	*4.4%*	*.37*
(The feeling of) a village	*7*	*5.1%*	*9*	*6.6%*	*.73*
Possibilities for hobbies and recreation	*6*	*4.4%*	*3*	*2.2%*	*.45*
Work	*6*	*4.4%*	*9*	*6.6%*	*.51*
Safety	*4*	*2.9%*	*4*	*2.9%*	*1.00*
Available building lots	*3*	*2.2%*	*10*	*7.3%*	*.06*
Traffic-calmed	*3*	*2.2%*	*2*	*1.5%*	*1.00*
Parking space	*2*	*1.5%*	*1*	*1.5%*	*1.00*
Social	***86***	***62.8%***	***41***	***29.9%***	***.00***
Child friendliness	*34*	*24.8%*	*18*	*13.1%*	*.00*
Peacefulness	*32*	*23.4%*	*19*	*13.9%*	*.00*
(Characteristics of) the neighbours	*22*	*16.1%*	*9*	*6.6%*	*.00*
Schools and day-cares	*19*	*13.9%*	*7*	*5.1%*	*.00*
A good feeling or atmosphere	*17*	*12.4%*	*12*	*8.8%*	*.27*
(The feeling of) a village	*7*	*5.1%*	*9*	*6.6%*	*.73*
Family(-history) and friends	*6*	*4.4%*	*6*	*4.4%*	*1.00*
Safety	*4*	*2.9%*	*4*	*2.9%*	*1.00*
Remaining	***43***	***31.4%***	***65***	***47.4%***	***.00***
Finances	*18*	*13.1%*	*39*	*28.5%*	*.00*
A good feeling or atmosphere	*17*	*12.4%*	*12*	*8.8%*	*.27*
Work	*6*	*4.4%*	*9*	*6.6%*	*.51*

The satisfaction of wishes	*5*	*3.6%*	*7*	*5.1%*	.75
Resistance to future life developments	*3*	*2.2%*	*5*	*3.6%*	.69
Situation of the housing market	*0*	*0.0%*	*7*	*5.1%*	-
Being a pioneer	*0*	*0.0%*	*1*	*0.7%*	-

Table 4

Correlations between variables

	(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*	*(8)*	*(9)*	*(10)*	*(11)*	*(12)*
(1) Physical reasons												
(2) Social reasons	*.22***											
(3) Other reasons	*.02*	*.13*										
(4) Years of residence	*-.05*	*-.11*	*-.12*									
(5) Satisfaction with neighbourhood *(scale of 1 to 10)*	*.18**	*.11*	*-.08*	*-.07*								
(6) Satisfaction with neighbours *(1=Positive;2= negative; 3=neutral)*	*-.21**	*-.16*	*.06*	*.18**	*-.30***							
(7) Considering to move *(scale of 1 to 5)*	*.18**	*.18**	*-.04*	*-.26***	*.47***	*-.32***						
(8) Neighbourhood *(1=de Oostergast; 2= Meerstad)*	*.06*	*-.06*	*-.05*	*-.37***	*.13*	*.25***	*.32***					
(9) Gender *(1=Male;2=Female)*	*-.04*	*.19**	*.01*	*-.12*	*.02*	*-.12*	*-.08*	*.07*				
(10) Education level	*.42***	*.13*	*.11*	*-.21**	*.24***	*-.12*	*.13*	*.14*	*.04*			
(11) Satisfaction with financial situation	*.08*	*.09*	*.26***	*.84*	*.06*	*.12*	*.15*	*.09*	*.05*	*.19**		
(12) Age	*-.16*	*-.26***	*-.02*	*.34***	*-.05*	*.25***	*-.12*	*-.31***	*-.28***	*-.37***	*.04*	

N=136, **p<.05, **p<.01*.

4.3 Hypotheses testing

A visual representation of the percentages of residents mentioning at least one physical, social or other reason, divided over the years of residence, can be found in figure 2.

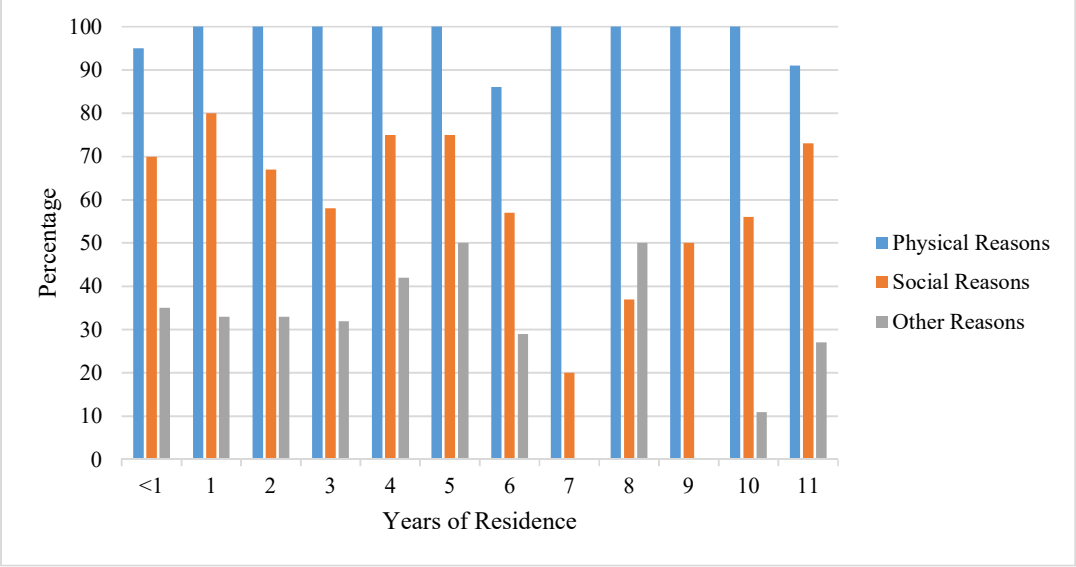

Figure 2: percentage of people mentioning at least one physical, social or other reason, divided by years of residence.

Using binary logistic regressions, with 'years of residence' as the independent variable and 'mentioning at least one physical reason for place attachment' as the dependent variable, the analysis did not show a significant influence of the years of residence on the probability of people giving physical reasons for living in their neighbourhood, see table 5. Based on this information, *Hypothesis 1*: 'The probability of people mentioning physical reasons for living in their residential area, will decrease over time of residence.' can be rejected for the timeframe of less than a year to eleven years. The same analysis was done with 'mentioning at least one social reason for place attachment' as the dependent variable. This analysis did not show a significant influence of years of residence on the probabilities of mentioning a social reason for place attachment, see table 6. Based on this information, *Hypothesis 2*: 'The probability of people mentioning social reasons for living in their residential area, will increase over time of residence.' can be rejected for the timeframe of less than a year to eleven years. The binary logistic regression with 'years of residence' as the independent

variable was also measured with the remaining reasons as the outcome variable, no significant effects were found either, see table 7.

Table 5

Results of the binary logistic regression with years of residence as the independent variable and mentioning at least one physical reason as the dependent variable.

	β	*SE*	*Exp.(B)*	*Sig.*
Constant	*4.26*	*1.07*	*70.51*	*.00*
Years of Residence	*-.09*	*.16*	*.91*	*.56*

Chi square= .34, p= .56 N=136

Table 6

Results of the binary logistic regression with years of residence as the independent variable and mentioning at least one social reason as the dependent variable.

	β	*SE*	*Exp.(B)*	*Sig.*
Constant	*.89*	*.30*	*2.43*	*.00*
Years of Residence	*-.07*	*.05*	*.93*	*.16*

Chi square=1.94, p=.16 N=136

Table 7

Results of the binary logistic regression with years of residence as the independent variable and mentioning at least one the remaining reason as the dependent variable.

	β	*SE*	*Exp.(B)*	*Sig.*
Constant	*-.49*	*.30*	*.61*	*.10*
Years of Residence	*-.07*	*.06*	*.93*	*.20*

Chi square=1.66, p=.20 N=136

These binary logistic regressions have also been done using the data from only ‘Meerstad’ or only ‘de Oostergast’. This division did not lead to a notable change in the significance of the effect of years of residence, see tables 8 and 9. The analysis of the effects of years of residence on the probability of mentioning a physical reason in ‘Meerstad’ could not be executed, as there was only one respondent in ‘Meerstad’ that did not mention at least one physical reason. Using only the data from ‘Meerstad’ a negative relation is found between the years of residence and the probability of mentioning a social reason, which would mean that the probability of mentioning a social reason

would decrease over the course of the residence. This is probably due to the significant positive correlation (*Pearson correlation* = .38; $p<.01$) between the years of residence and age of the resident.

Table 8

Results of the binary logistic regression with years of residence as the independent variable and mentioning at least one physical, social or remaining reason as the dependent variable, only including residents of 'de Oostergast'.

Physical Reasons	*β*	*SE*	*Exp.(B)*	*Sig.*
Constant	*5.25*	*2.09*	*191.15*	*.01*
Years of Residence	*-.23*	*.23*	*.79*	*.32*
Chi square=1.23, p=.27 N=77				
Social Reasons				
Constant	*1.10*	*.45*	*3.01*	*.01*
Years of Residence	*-.07*	*.06*	*.92*	*.24*
Chi square=1.42 , p=.23 N=77				
Remaining Reasons				
Constant	*-.12*	*.41*	*.88*	*.76*
Years of Residence	*-.10*	*.06*	*.90*	*.11*
Chi square=2.63 p=.10, N=77				

Table 9

Results of the binary logistic regression with years of residence as the independent variable and mentioning at least one physical, social or remaining reason as the dependent variable, only including residents of 'Meerstad'.

Social Reasons	*β*	*SE*	*Exp.(B)*	*Sig.*
Constant	*1.05*	*0.49*	*2.85*	*.03*
Years of Residence	*-.20*	*.13*	*.82*	*.11*
Chi square=2.59, p=.11 N=59				
Remaining Reasons				
Constant	*-.78*	*.50*	*.46*	*.12*
Years of Residence	*-.06*	*.14*	*.94*	*.66*
Chi square=.19, p=.66 N=59				

The binary logistic regressions have also been tested for two subgroups, divided on whether the respondent has lived in the neighbourhood for a year or more or less than a year. In the group of residents that has lived in the neighbourhood for less than a year, there was only one person that did not mention a physical reason. Therefore, the binary logistic regression with the physical reason as the dependent variable, could not be computed for this group. The division on the basis of residence time did not cause changes in the significance of the effects of years of residence on mentioning certain reasons (Table 10, Table 11).

Table 10

Results of the binary logistic analysis with years of residence as the independent variable and mentioning at least one social or other reason as the dependent variables, including only the residents that have lived in the neighbourhood for less than a year.

Social reasons	*β*	*SE*	*Exp.(B)*	*Sig.*
Constant	*-.37*	*.98*	*.69*	*.71*
Years of Residence	*2.21*	*1.62*	*9.09*	*.17*
Chi square=1.98, p=.16 N=20				
Other reasons				
Constant	*-2.14*	*1.33*	*.12*	*.11*
Years of Residence	*2.43*	*1.85*	*11.34*	*.19*
Chi square=2.08, p=.19 N=20				

Table 11

Results of the binary logistic analysis with years of residence as the independent variable and mentioning at least one physical, social or other reason as the dependent variables, including only the residents that have lived in the neighbourhood for a year or more.

Physical reasons	*β*	*SE*	*Exp.(B)*	*Sig.*
Constant	*6.19*	*2.23*	*486.03*	*.01*
Years of Residence	*-.31*	*.25*	*.73*	*.21*
Chi square=.1.97, p=.16 N=116				
Social reasons				
Constant	*.91*	*.37*	*2.48*	*.01*
Years of Residence	*-.07*	*.06*	*.93*	*.20*
Chi square=.1.66, p=.20 N=116				
Other reasons				
Constant	*-.42*	*.37*	*.66*	*.25*
Years of Residence	*-.08*	*.06*	*.92*	*.20*
Chi square=.1.70, p=.19 N=116				

When the group of respondents is separated on the variable of having at least one child that lives at home, the time of residence does significantly influence the probability of mentioning a social reason for the people without children living at home (Table 12). In the group of people that does have children that live at home, this effect is not significant (Table 12). However, the mean age of the group without children living at home is a lot higher (M=50, SD= 17.4) than the mean age of the respondents with children living at home (M=39, SD=7.0). There is also a moderate difference in the percentage of female respondents in the group with children living at home (62%) and the group without children living at home (43%).

Table 12

Results of the binary logistic regression with years of residence as the independent variable and mentioning at least one social reason as the dependent variable, only including the respondents without children living at home.

Without children living at home	*β*	*SE*	*Exp.(B)*	*Sig.*
Constant	*1.10*	*.52*	*3.02*	*.03*
Years of Residence	*-.28*	*.11*	*.75*	*.01*
Chi square=8.50, p=.00 N=44				
With children living at home				
Constant	*.83*	*.39*	*2.29*	*.03*
Years of Residence	*.00*	*.07*	*1.00*	*.95*
Chi square=.00, p=.95 N=90				

When the variables: 'age', 'gender' and 'children living at home' were added to the binary logistic regression, the overall model predicting the probability of mentioning a social reason based on the years of residence was significant. The individual variables did not show significant effects, see table 13. The significance of the model is probably due to the combined effects of gender and having children living at home.

Table 13

Results of the binary logistic regression with years of residence, age, gender and children living at home as the independent variables and mentioning at least one social reasons as the dependent variable.

	β	*SE*	*Exp.(B)*	*Sig.*
Constant	*.74*	*.88*	*2.10*	*.40*
Years of Residence	*-.08*	*.06*	*.93*	*.22*
Age	*-.01*	*.02*	*.98*	*.39*
Being Female	*.69*	*.39*	*2.00*	*.08*
Children Living at Home	*.36*	*.20*	*1.44*	*.07*

Chi square=14.24, p=.01 N=136

These results led to the idea that social reasons regarding children might be influenced differently by the years of residence than other social reasons. Therefore, a binary logistic regression was done in which reasons regarding 'child friendliness' and 'schools and day-cares' were not included as mentioning a social reason. Removing the child-related reasons, led to an effect of years of residence on mentioning as social reasons that was almost significant, see table 14. This could mean that the probability of mentioning social reasons that are not child related are influenced more strongly by the time of residence than social reasons that are related to children.

Table 14

Results of the binary logistic regression with years of residence as the independent variable and mentioning at least one social reason that is not child-related as the dependent variable.

	β	*SE*	*Exp.(B)*	*Sig.*
Constant	*.34*	*.28*	*1.40*	*.23*
Years of Residence	*-.09*	*.05*	*.91*	*.07*

Chi square=3.39, p=.06 N=136

Binary logistic regressions, with years of residence as the independent variable, have also been done for the most popular (Table 3) individual reasons. The outcomes of these analysis can be found

in table 15. The neighbourhood has been added as a control variable in this analysis. The reason for this being that the mean years of residence are not the same for both neighbourhoods (Meerstad: *M*=3.05, *SD*=2.20; de Oostergast: *M*=5.59, *SD*=3.90) and unlike the categorized reasons, the popularities of the individual reasons are not equally distributed over the two different neighbourhoods. A difference in popularity of a certain reason in a neighbourhood would therefore look like an effect of the years of residence. The years of residence did not have a significant effect on the individual reasons that were measured.

Table 15

Results of the binary logistic regressions with years of residence and the neighbourhood as the independent variables and the most popular individual reasons as the dependent variable.

Geographical Location	*β*	*SE*	*Exp.(B)*	*Sig.*
Constant	*-.21*	*.32*	*.81*	*.51*
Years of Residence	*-.15*	*.06*	*.95*	*.40*
Neighbourhood	*-.21*	*38*	*.81*	*.58*
Chi square=1.52, p=.47 N=136				
Space in the Neighbourhood				
Constant	*-.03*	*.32*	*.97*	*.92*
Years of Residence	*-.01*	*.06*	*.99*	*.83*
Neighbourhood	*-.95*	*.40*	*.39*	*.02*
Chi square=7.22, p=.03 N=136				
Characteristics of the House				
Constant	*-.61*	*.33*	*.54*	*.06*
Years of Residence	*-.03*	*.06*	*.97*	*.53*
Neighbourhood	*.07*	*.40*	*1.08*	*.85*
Chi square=.39, p=.82 N=136				

Facilities	*β*	*SE*	*Exp.(B)*	*Sig.*
Constant	*-2.84*	*.62*	*.06*	*.00*
Years of Residence	*-.02*	*.06*	*.98*	*.69*
Neighbourhood	*2.73*	*.65*	*15.39*	*.00*
Chi square=29.42, p=.00 N=136				
Child-friendliness				
Constant	*-.66*	*.34*	*.52*	*.05*
Years of Residence	*-.04*	*.06*	*.96*	*.48*
Neighbourhood	*-.43*	*.42*	*.95*	*.31*
Chi square=2.33, p=.31 N=136				
Nature, Greenery and Water				
Constant	*.06*	*.39*	*1.06*	*.88*
Years of Residence	*-.02*	*.09*	*.98*	*.84*
Neighbourhood	*-3.16*	*.68*	*.04*	*.00*
Chi square=42.15, p=.00 N=136				
Peacefulness				
Constant	*-.65*	*.35*	*.52*	*.06*
Years of Residence	*-.02*	*.07*	*.98*	*.72*
Neighbourhood	*-.82*	*.44*	*.44*	*.06*
Chi square=4.70, p=.09 N=136				
Characteristics of the Neighbours				
Constant	*-1.49*	*.40*	*.22*	*.00*
Years of Residence	*.01*	*.07*	*1.01*	*.85*
Neighbourhood	*-.37*	*.51*	*.69*	*.46*
Chi square=.56, p=.75 N=136				

Schools and Day-cares	*β*	*SE*	*Exp.(B)*	*Sig.*
Constant	*-3.28*	*.75*	*.04*	*.00*
Years of Residence	*-.02*	*.07*	*.98*	*.79*
Neighbourhood	*2.12*	*.79*	*8.30*	*.01*
Chi square=11.07 p< .00, N=136				
Good Feeling or Atmosphere				
Constant	*-1.87*	*.46*	*.15*	*.00*
Years of Residence	*.01*	*.08*	*1.01*	*.88*
Neighbourhood	*-.22*	*.56*	*.80*	*.70*
Chi square=.15 p=.93, N=136				

4.4 comparing current and first reasons

The differences in mentioning physical, social and remaining reasons for currently living in the neighbourhood and the self-reported reasons for originally moving to the neighbourhood have been measured, using the McNemar-test. The percentage of people mentioning a physical reason for moving to the neighbourhood is significantly lower than the percentage of people mentioning a physical reason for currently living in the neighbourhood (Table 3). The percentage of people mentioning a social reason for moving to the neighbourhood is also significantly lower than the percentage of people mentioning a social reason for currently living in the neighbourhood (Table 3). The percentage of people mentioning a remaining reason for moving to the neighbourhood is significantly higher than the percentage of people mentioning a remaining reason for currently living in the neighbourhood (Table 3). These results seem to be in favour of *Hypothesis 2*: 'The probability of people mentioning social reasons for living in their residential area, will increase over time of residence.', but not of *Hypothesis 1*: 'The probability of people mentioning physical reasons for living in their residential area, will decrease over time of residence.'

Discussion

5.1 Interpretation of the results

In this study, the factors that influence place attachment are compared over the years of residence. It was expected that the longer people lived in their neighbourhood, the more likely they would be to mention social factors of place attachment. This would cause them to focus less on the physical aspects of the neighbourhood, so the mentioning of physical factors would decline in the course of the residence. The data of this research does not support these expectations, as there was no evidence found to confirm the effects of the residence time on mentioning social or physical reasons. This was neither the case when the data was divided into the two neighbourhoods or when the relatively new (less than a year) residents were separated from the older residents. However, when people were asked to look back at the reasons why they moved to their neighbourhood, social reasons were mentioned significantly less than when they were asked about the current reasons for living in their neighbourhood. When people were asked to think of their original reasons for moving to the neighbourhood, they also mentioned less physical reasons than when they were asked about their current reasons. However, this difference was less prominent than for the social factors. This could indicate that the differentiation between social and physical aspects of a place, made by Beckley (2003), in which she suggested that physical factors are more important for attracting people to a place and social factors are more important for keeping people in a place, is true. It is possible that the importance of social reasons is something that increases during the residence, but this increase might be quicker than could be measured in the current study. It is, for example, possible that this importance of social reasons grows only over the first year of residence. There were not enough of these short-term respondents to measure this suggestion properly. When the data was divided on the basis of years of residence, the effects of years of residence on the probability of mentioning a social reason was more significant for the group that has lived in the neighbourhood for less than a year than for the group that has lived in the neighbourhood for a year or more. This could indicate that the effects of residence time on mentioning social reasons are most prominent in the very beginning of the residence.

Based on this research, it can also not be excluded that social aspects of place attachment do not become more valuable over time. For example, residents that have lived in the neighbourhood for different amounts of years both mention a social and a physical reason. However, the social reason of

place attachment might be the most important reason for the one person, while the physical reason is more important for the other. This way, it is possible that social reasons do become more important over time, while they are not mentioned more often. Due to the design of the current study, this distinction could not be made.

It is also possible that the hypotheses of this study are not true for the chosen research neighbourhoods, but they might be for other kinds of neighbourhoods. New construction neighbourhoods might not have a strong social network like other neighbourhoods. New neighbourhoods, like the two that are used for this study, are still undergoing changes. Therefore, the social relationships might not be gaining importance for people yet, as people notice that the neighbourhood is still changing and a continuous flow of new people is coming in. On the other hand, the excitement of a new project and the often similar characteristics of the people moving into a new neighbourhood can also increase the feelings of being a community. Either way, it is good to keep in mind that the development of social reasons for place attachment might be different in new construction neighbourhoods than in other neighbourhoods.

The results of the current study indicate that social reasons for place attachment that are related to children are less influenced by time of residence than other social reasons, as the influence of years of residence on the probability of mentioning a social reason became almost significant when child-related reasons were excluded. However, factors like the presence of children living at home, age and years of residence might all be connected to each other, so the effects of the individual variables are still unclear.

Almost all of the respondents named at least one physical reason for their place attachment. Based on the data, it can be concluded that physical aspects remain important in the first years of the residence, keeping in mind that the time of residence of the respondents in this study ranged from 2 weeks to 11 years. Because the data was gathered in a new neighbourhood, it cannot be said whether the mentioning of physical reasons will decline after this period. It is possible that physical reasons for place attachment are less prominent in other types of neighbourhoods. The marketing for neighbourhoods in this research is mainly focused on the physical aspects. The location of ‘de Oostergast’ and the physical appearance of ‘Meerstad’ seem to be their strongest attributes. People in

neighbourhoods that do not have such a distinctive physical characteristics, might have less physical reasons for place attachment.

Although there were some reasons mentioned that were neither physical nor social, and there were some reasons that could be defined as social, as well as physical, the distinction between social and physical factors of place attachment by Scannell and Gifford (2010) seems to be valuable and practical. No other way of structuring of the factors for place attachment would have felt suitable for the given answers.

5.2 Strengths and weaknesses

The questioning about the important aspects of place attachment was completely open. This was a strength, as well as a weakness, in this research. It was a strength, as the respondents were in no way guided in their answering. It was also not possible that important factors were overlooked upon, because of this. On the other hand, there might be factors that do not come to mind as easily as others. It is even possible that physical factors come to mind more easily than social factors. It can also be that physical factors are mentioned more, as they are more distinctive of the neighbourhood than social reasons. Factors that are used to promote the neighbourhood might come to mind easily and might therefore be named more often than other factors. This does not mean that other factors do not play a role. The data might therefore be more of a representation of what people experience as the important reasons for their place attachment, rather than the actual reasons of place attachment. At this point, it is not possible to know whether there is a discrepancy between the experienced reasons for place attachment and the actual reasons for place attachment. However, when this data is used to create guidelines for promoting new neighbourhoods, it might be more valuable to know what people experience are the reasons for attachment to a place, as these are the factors that they will probably be more focused on. It might also be difficult for people to distinguish the reasons for their place attachment at the moment and the reasons that they had to move to the neighbourhood, especially for relatively new residents. People might not be aware that the things that attracted them to the neighbourhood might not be the same things that are causing them not to leave.

As mentioned, the current data does not give a lot of information about the importance of the reasons. The question was to name the most important reasons, so it can be said that the reasons that

are mentioned are all important. But, there is no ranking or valuation of the reasons that are mentioned. Therefore, it is possible that social reasons are not mentioned more often over time of residence, but they do become more important over time. Asking the respondents to rank the reasons that they mentioned or to indicate the importance of the reasons on a scale, would have solved this problem.

Choosing to look into the influence of residence time in a new neighbourhood caused the distribution of the residence time to be as wanted, but it might also cause the residence time to not be the only factor of influence. A new neighbourhood is a highly flexible area that changes a lot. This causes that the changes in possible reasons for place attachment can also be influenced by the changes of the neighbourhood, rather than the increase of residence time. The neighbourhood being very open and spacious in the beginning of the residence can, for example, be a physical factor, but over the course of the residence, this spaciousness might change and therefore become less of a reason for place attachment. In that case, the reason for place attachment looks like it is influenced by the residence time, when this change is actually caused by the changing environments of the new neighbourhood.

5.3 Implications for future research

It would be valuable to replicate the current research, with the addition of a scale to measure the importance of the given reasons for place attachment, as this could give a more closing answer to the question whether different types of factors become more or less important over residence time. It would also be recommended to think about a way to give the respondents some guidance in indicating their reasons for place attachment, in order to prevent them from only naming the reasons that immediately come to mind or mentioning the initial reasons for moving to the neighbourhood, without questioning if these have changed. It is important that this guidance does not restrict them from giving certain answers or causes the respondents to answer socially desirable.

It might be interesting to do the same type of research in a neighbourhood that is not a new construction neighbourhood or a neighbourhood that is partly in development. The social relationships might be different and maybe more important in neighbourhoods where the network of relationships

has had a longer amount of time to develop. In older neighbourhoods, aspects like family history and traditions might also be more prominent, as these might take longer to develop. It might be the case that the physical aspects do get less important over time, but that it takes more than the first few years. Doing this research in an older neighbourhood would give more insight in the reasons for place attachment of people that have lived in a neighbourhood for a very long time. However, it might also make it more difficult to find a good distribution of new residents. Therefore, a larger group of respondents is probably needed if this research was to be replicated in an older neighbourhood.

It could also be the case that a change of importance of social reasons is something that occurs much earlier, maybe even from the first contact with the neighbours or the first visit to the house. Therefore, it would be interesting to follow people that are considering to buy a house and people who have just bought a house and measure what factors are important to them in their considerations. Taking the gender, age and parenthood into account would be recommended in all of these suggestions.

6. Conclusion

In a large scale survey among residents of new neighbourhoods, no support was found for an increase in mentioning social reasons or a decrease in mentioning physical reasons for place attachment over time of residence. However, when people were asked to look back at the reasons for why they originally moved to their neighbourhood, social reasons were mentioned less often. This supports the suggestion of Beckley (2003), that social and physical reasons do have different functions in developing place attachment. This data can be used as a reason to look further into this difference. There also seems to be some kind influence of gender and parenthood on the reasons for place attachment, that could be explored further. The usability of the distinction between social and physical factors of place in place attachment has been re-established in this research.

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