



Beyond the local-newcomer divide: Village attachment in the era of mobilities



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ABSTRACT

Villages are often perceived as close-knit societies to which residents feel strongly attached. In the era of mobilities, rural residents have more opportunities to choose their own degree and form of village attachment. This challenges the distinction between locals and newcomers, which is frequently made, where the latter are considered to have only weak village attachment compared to the former. To assess contemporary types of village attachment, we employed a latent class analysis using survey data on 7684 residents of small villages and outlying areas in the Netherlands. Based on their degrees of social, functional, cultural and environmental attachment we categorised rural residents into seven groups according to their type of village attachment: traditionally attached, socially attached, rural idyll seekers, rest seekers, slightly attached, footloose and reluctantly attached. The results demonstrate meaningful variation in people-place relationships in Dutch villages. Moreover, they underscore that simple distinctions such as that between locals and newcomers do not suffice to describe this variation.

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1. Introduction

'Peet has never left his village. He lived in the closed circuits of family, relations, friends and neighbours. On some mornings he would leave a bunch of carrots on the doorstep of someone he liked, or a cauliflower, or a few leeks'. Thus, Geert Mak (2001) begins his popular novel on post-war sociocultural change in the Dutch village of Jorwerd, illustrating a degree of village attachment that is hard to imagine today. Although in some media and policy discourse the idea that rural areas have remained traditional and static persists (Woods, 2011), increased mobility and technology has enabled attachments beyond one's own living environment. In the words of Halfacree, this 'is concerned with forging identity and lifestyle through multiple places that does not depend on the core sedentary assumption of a single, settled home place' (2012, p. 214). The geographical scope of many people's lives, and especially those living in the countryside, has been greatly extended over the past decades. This increased outward orientation can be interpreted as a sign that the type of village attachment described in Mak's novel is waning.

However, even in the era of mobilities, village attachment remains significant in the lives of most rural residents (Milbourne and Kitchen, 2014). Through increased levels of daily, residential and digital mobility, contemporary rural residents are able to develop more diverse forms of attachment to their village. Rural residents differ on how they would like to interact with the village and its surroundings. This diversity in people-place relationships can partly be explained by differences in access to mobility: mobile people are likely to develop different types of attachment and may perceive places as meaningful for other reasons than less mobile residents (Gustafson, 2013; Bell and Osti 2010). Mobility does not necessarily weaken people-place relationships but may provide rural residents with opportunities to become attached to their villages in myriad ways and degrees.

When discussing different types of rural residents, one frequently made distinction is that between autochthonous villagers and newcomers. Born and bred locals are assumed to be less mobile and more strongly attached to their village compared to newcomers who are more outwardly oriented (Relph, 1976; Hay, 1998). In some cases, this has led to cultural tensions and conflict between the two segments of a village population, as both are believed to have different values and desires regarding their living environment (Cloke et al., 1997; Smith and Krannich, 2000). However, with migration to the rural being a familiar phenomenon

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since the 1970s, newcomers have become a highly diverse category. While a share of them migrated to a village to enhance their quality of life (Benson and O'Reilly, 2009; van Dam et al., 2002), other new residents migrated for affordable housing or due to family relationships (Stockdale, 2015; Bijker et al., 2012). And whereas some are primarily interested in peace and quiet, others are among the most active residents in the village (Gustafson, 2009). In addition, among village-born residents – a minority in most present-day Dutch villages (Vermeij, 2015) – there is also considerable variation in people-place relationships. While some struggle to maintain threatened village facilities, others gladly embrace the individual freedom resulting from less social control, or disappointedly turn their back on the village they no longer feel part of.

This paper considers whether a traditional local versus newcomer divide still suffices to capture the diversity of contemporary people-place relationships in villages. While diversity in these relationships is widely recognised (cf. Cloke et al., 1997; Marsden et al., 1993; Woods, 2011; Ruiz and Domon, 2012; Smith, 2007), an empirically supported typology of present-day rural residents based on how they are attached to their village is currently lacking. This study aims to fill this gap by proposing a typology of village attachment based on various dimensions of place attachment. To do so, we pose two questions: What types of village attachment can be distinguished in the rural areas of the present-day Netherlands? And which sociodemographic variables coincide with what type of village attachment?

Before addressing these questions, we will discuss the relationship between mobility and place attachment. This will be followed by an explanation of how present-day rural residents may be attached to their villages according to various dimensions of place. The method is further explained in the subsequent method-section, followed by the results and the discussion.

2. Theory

2.1. Mobile residents, mobile attachment

Mobility in the rural is not a new phenomenon (Goodwin-Hawkins, 2015); however, its ubiquitous nature has changed the social, economic and cultural structures of many present-day villages. One way in which mobility has increased is in the daily transport opportunities of residents. Most rural inhabitants have access to one or multiple cars (Noack, 2011; Steenbekkers and Vermeij, 2013), and their use of transport has increased steadily over recent decades (van Wee et al., 2006). It has now reached an average of over 1 h travel time and 35 km daily (Steenbekkers and Vermeij, 2013). Changes in residential mobility have also had an impact. The extended scale of daily mobility has resulted in more opportunities to combine life in the village with social and professional networks at other locations (Smith, 2007; Boyle and Halfacree, 1998). In recent decades, physical and residential movement has been complemented by digital mobility (Salemink et al., 2016). Although some rural areas still have to cope with slow online connectivity, digital activities are having an increasing impact on the lives of rural residents (Steenbekkers et al., 2006).

These various types of mobility have created an increasingly mobile lifestyle (Urry, 2007; Sheller and Urry, 2006; Larsen et al., 2006). Accordingly, mobility has become the locus of processes of identity formation (Easthope, 2009; Cresswell, 2011), social inclusion (Oliva, 2010) and sense of place (Barcus and Brunn, 2010). This raises questions concerning how contemporary rural residents are attached to their residential environment (cf. Bauman, 2000; Castells, 1996). Previous research has found that mobile people become 'liberated from place' (Lewicka, 2005, p. 383), meaning that mobile residents become less dependent on their local

environment. The traditional close-knit village community, with deeply rooted village bonds, has become a community with limited commitment to the local (Hunter and Suttles, 1972; Groot, 1989; Vermeij, 2015). However, it has also been suggested that although the overall intensity of the attachment to a village has diminished over the years, a 're-discovery of place' may be occurring (Lewicka, 2005, p. 382). Thus, mobility does not prevent residents from developing a meaningful relationship with their place of residence (Antonsich, 2010; Milbourne and Kitchen, 2014), and may even encourage them to do so (Ralph and Staeheli, 2011).

Mobility and place attachment are often treated as two extremes on one continuum (Gustafson, 2013). Most studies have found that the length of residence correlates positively with place attachment (cf. Brehm et al., 2006; Kasarda and Janowitz, 1974). However, this depends on the specific dimension of place attachment. There is some empirical evidence to suggest that social attachment is significantly correlated to length of residence, while attachment to the natural environment is not (Scannell and Gifford, 2010). Gustafson (2009) also demonstrated that people who recently moved to the countryside can have strong social bonds with fellow residents. He gives the example of Swedish business travellers who, despite their cosmopolitan lifestyle, actively participate in village life and feel strongly attached to the social qualities of the village. Therefore, mobility should not be automatically associated with low levels of place attachment and vice versa. In fact, through the use of the technology, the tendency to work or pursue leisure activities at a distance from the birth region is gaining popularity and leading people to develop emotional bonds with various places at the same time (Barcus and Brunn, 2010).

That new rural residents can develop strong attachments to their living environment is partly due to people making more informed decisions to reside in places that are congruent with their life stories. Savage et al (2005, p. 29). argued that places have become 'sites to perform identities' and are selected to 'tell stories that indicate how their arrival and subsequent settlement is appropriate to their sense of themselves'. Accordingly, rural residents are able to choose how they want to be attached to their residential area on the basis of their preferred lifestyle. However, not all residents have equal opportunities to live a mobile life, with some rural residents remaining immobile (Franquesa, 2011; Hannam et al., 2006; Hedberg and do Carmo, 2012). While mobility has become a precondition for societal and economic inclusion (Oliva, 2010; Spinney et al., 2009), not having access to either a car or an appropriate online connection could lead to marginalisation. In particular, older rural residents and those living in remote rural areas are least mobile as a result of circumstances rather than choice. Therefore, it is important to bear in mind that place attachment and mobility 'mean different things, to different people in different situations' (Gustafson, 2001, p. 681).

2.2. Dimensions of place attachment

In the present study, we aim to establish a typology of rural residents according to what their village means to them in terms of their sense of attachment. As a starting point for this typology, we use dimensions of place attachment, within which such village attachment may evolve. Gustafson (2006, p. 19) defined place attachment as 'bonds between people and place based on affection (emotion, feeling), cognition (thought, knowledge, belief) and practice (action, behavior)'. We are interested in the relationship between rural residents and how they are attached to various aspects of place, rather than the manifestations of place attachment. We therefore focus on the aspects of the village that may matter to residents, assuming that attachment to those aspects can have

affectionate, cognitive as well as practical forms.

While place attachment researchers have proposed a number of different dimensions of attachment, a distinction between the social and the physical dimension of place attachment is most commonly used (Hidalgo and Hernández, 2001). In the words of Lewicka:

Some people feel attached to a place because of the close ties they have in their neighborhood, generational rootedness, or strong religious symbolism of the place, that is, because of social factors; others may feel attached to the physical assets of places, such as beautiful nature, possibility of recreation and rest, or physically stimulating environment (2011b, p. 213).

For the present purpose of capturing contemporary patterns of place attachment, we argue that this dichotomy is too limited.

Firstly, we propose that the social dimension of place attachment consists of three subdimensions: the number of local social contacts, social orientation and socio-cultural attachment. While local social contacts refers to the number of relationships a resident has within the village, social orientation can be understood as the relative importance of these local relationships in a resident's social network. The two may often coincide but do not necessarily do so: very mobile and socially active residents may have many local contacts as well as a large social network outside the village. Inversely, less mobile and more isolated villagers may depend on just a few local contacts. Gustafson (2006) and Gallent (2014) showed that active involvement in social networks within the village does not necessarily conflict with an outward social orientation. However, in some cases, a strong outward orientation indicates limited possibilities to become active in a village's communal life (Nichols et al., 2012).

The final subdimension of social place attachment refers to socio-cultural bonding, which may be manifest in active engagement in local traditions, festivities and customs. Cultural practices can elicit feelings of 'being at home' and a sense of community (Antonsich, 2010). Moreover, local socio-cultural symbols and memories play a role in processes of identity-building and can demarcate socio-cultural boundaries between, as well as within, village communities (Tonts and Atherley, 2010; Smith and Phillips, 2001). Cultural attachment is strongly related to residential history (Raymond et al., 2010; Hay, 1998) and in-migration and globalisation are often considered to be threats to cultural forms of place attachment (Milbourne and Kitchen, 2014; Driessen, 2005). However, others have argued that globalisation has led to a renewed interest in small-scale life and local cultural practices and products, also among counter-urban movers in search of the rural idyll (Bell, 2006).

Secondly, we also divide the dimension of physical attachment into two subdimensions: functional attachment and environmental attachment. Following Williams and Vaske (2003, p. 831) we consider functional attachment to reflect 'the importance of a place in providing features and conditions that support specific goals or desired activities'. In other words, we consider a resident to have relatively strong functional attachment when they depend on the village for basic needs and daily activities. This is the case when a resident has few alternatives and, for example, rarely leaves the village or uses the internet. Due to an increase in mobility, functional attachment has, on average, decreased. However, this does not apply equally to all rural residents. The degree of functional attachment varies throughout the life course: residents with children and elderly residents are relatively dependent on their immediate surroundings (Burholt, 2012; Rubinstein and Parmelee, 1992). Furthermore, less affluent residents may face mobility

constraints and therefore be more dependent on the supporting functions of a village due to circumstances rather than choice.

Environmental attachment refers to the bonds that an individual has with the spacious and natural area that surrounds a village. This dimension of place attachment may become more important, as migration and second-home ownership in popular rural areas is predominantly fuelled by lifestyle motives (Benson and O'Reilly, 2009; Hjort and Malmberg, 2006). Living in close proximity to a beautiful natural environment is one important reason people move to the countryside and, in contrast to other dimensions of place attachment, environmental attachment operates relatively independently of length of residence. Rural in-migrants are therefore able to quickly develop a strong bond with the village's natural environment (Scannell and Gifford, 2010). In fact, in-migrants who are strongly motivated to move to the countryside based on environmental motives often have a conservative standpoint with respect to changes in the environment (Zwiers et al., 2016). However, this does not necessarily apply to all in-migrants. Moreover, people who were born in the village – in particular young adults – do not always report a positive connection to the quietness of the surroundings or the amount of green space that surrounds the village (Rye, 2006; Thissen et al., 2010).

Addressing our first research question, we propose that different segments of a village population take distinctive positions on these five dimensions of place attachment. Rather than a one-dimensional continuum, we expect different groups of residents to relate to their residential surroundings according to distinctive patterns of attachment, and that a typology can be discerned, demonstrating a variation in village attachment in the rural areas of present-day Netherlands.

3. Method

3.1. Data

To assess the types of village attachment of contemporary rural residents, we adopted a quantitative approach. The quantitative data we present in this paper were collected by means of a hard copy and online questionnaire as part of the Socially Vital Countryside Database 2014 Survey (SVP'14), carried out by the Netherlands Institute for Social Research (SCP). The survey was conducted among a random sample of the rural population of the Netherlands, defined as inhabitants of Dutch villages (<3000 inhabitants) and outlying areas with a minimum age of 15 years. For purposes beyond the scope of the present study, villagers of 75 years or older were overrepresented. The sample was randomly drawn by Statistics Netherlands from the Municipal Administration (GBA). The data were collected in autumn 2014.

In total, 7840 rural residents completed the survey, resulting in a response rate of 48 percent. A small number of questionnaires were incomplete, leaving 7684 respondents in the analysis. A weighting factor was developed to correct for selective representation on the basis of age, gender, ethnicity, household income, source of income, village size, proximity to the city and part of the country. In this way, inferences could be made concerning the more than two million rural Dutch inhabitants.

The survey addressed a range of topics with regard to the participation, self-reliance and quality of life of village residents, and consisted of 59 closed questions with statements concerning the respondents' engagement in village life, how they value various village facilities and associations and on their orientation outside the village. It also contained a few open questions where respondents could elaborate on current developments in the village.

3.2. Measures

To operationalise the five dimensions of place attachment (social contacts, social orientation, functional, socio-cultural and environmental), 16 closed items were used from the Socially Vital Countryside Database 2014 (Table 1). A confirmatory factor analysis of these items confirmed the existence of four of the five proposed dimensions of place attachment but combined the dimensions of social contacts and social orientation. However, based on the theoretical arguments outlined in Section 2.2, and the high Cronbach's alphas, we decided to include both dimensions separately in the LCA analysis. Details regarding the factor analysis and the corresponding factor loadings can be found in Appendix A. Each of the five dimensions of place attachment consist of several items with high factor loadings in conjunction with a Cronbach's alpha ranging from acceptable to high. For each variable, the items were averaged and subsequently standardised to correct for different scales of measurement.

Other measures that were employed from the Socially Vital Countryside Database 2014 include a number of personal and village characteristics. These variables were: age categories, sex, educational level, whether a person was employed, car availability in the household, physical disability, church attendance, length of residence, village size and attractiveness of the landscape. In addition, one open question: 'What does your village mean to you?', was also used in the LCA analysis.

3.3. Latent class analysis

Latent class analysis (LCA) was applied to construct a typology of contemporary village attachment. This statistical method is a special case of finite mixture modelling and offers a systematic way to classify a range of self-reported characteristics into homogeneous groups (Vermunt and Magidson, 2002; Masyn, 2013). In contrast to other cluster methods, it allowed us to identify groups of respondents defined by similarity of response patterns, and to determine the specific probability of each respondent belonging to a certain latent class. Our LCA clustered rural residents into different types of village attachment (latent classes) based on several dimensions of place attachment. The number of classes was not fixed a priori but derived from the data and therefore not determined by the researcher's expectations. Consequently, LCA is more rigorous than other cluster methods such as K-Means Clustering or Hierarchical Clustering (Schreiber and Pekarik, 2014).

The weighted LCA was conducted in Mplus (Muthén and Muthén, 1998–2010, version 6.11) run from within Stata (Stata-Corp, 2015; version 14) by the runmplus adofile (version 2.0, 2013.05.26) written by Richard N. Jones. Several diagnostic statistics can be consulted to determine the appropriate number of classes (Nylund et al., 2007). Firstly, the most widely used criterion is the Bayesian Information Criterion (BIC). A smaller value of the BIC indicates that the model with a number of k classes fits the data better compared to the model with $k-1$ classes. Secondly, entropy

Table 1
Dimensions of place attachment used as variables in Latent Class Analysis.

LCA	Classes	N	Mean posterior probability	VLMR-LRT p -value	LMR-aLRT p -value
Classes = 1 BIC = 108084.356	1	7684	1.00	0.00	0.00
Classes = 2 BIC = 104631.789 Entropy = 0.804	1 2	5247 2437	0.954 0.926	0.00	0.00
Classes = 3 BIC = 103330.494 Entropy = 0.718	1 2 3	2632 3362 1691	0.877 0.813 0.933	0.00	0.00
Classes = 4 BIC = 102488.824 Entropy = 0.845	1 2 3 4	2391 1369 2970 954	0.909 0.943 0.892 0.976	0.00	0.00
Classes = 5 BIC = 102118.566 Entropy = 0.867	1 2 3 4 5	2527 2839 1356 823 139	0.915 0.914 0.879 0.935 0.910	0.00	0.00
Classes = 6 BIC = 101860.280 Entropy = 0.885	1 2 3 4 5 6	2403 310 1532 2215 41 1183	0.915 0.929 0.881 0.907 0.899 0.962	0.00	0.00
Classes = 7 BIC = 101417.495 Entropy = 0.783	1 2 3 4 5 6 7	194 715 1303 749 1868 1852 1004	0.969 0.927 0.826 0.867 0.735 0.833 0.873	0.00	0.00
Classes = 8 BIC = 101112.418 Entropy = 0.792	1 2 3 4 5 6 7 8	740 181 727 1885 44 1269 1007 1831	0.852 0.912 0.902 0.735 0.980 0.818 0.863 0.839	0.65	0.65

was examined as an estimation of how distinct the latent classes identified were from one another: values approaching 1 indicate a clear delineation of classes (Celeux and Soromenho, 1996). This estimation is often used in conjunction with the mean posterior probability, which indicates how well respondents fit into their classes. Thirdly, the Vlong-Lo-Mendell-Rubin likelihood ratio test (VLMR-LRT) and the Lo-Mendell-Rubin adjusted LRT (LMR-aLRT) were used to determine whether the present solution with k classes was significantly better than the solution with $k-1$ classes, as indicated by a p -value < 0.05 (Rumpf et al., 2014; van Gaalen and Dykstra, 2006). Additional analyses were conducted using Stata.

4. Results

4.1. LCA output: a seven-class model

The latent class analysis addressed the first research question. Following the common procedure, we started by computing a latent class model with only one latent class (no relationship between manifest indicators) and added one class after the other (Jung and Wickrama, 2008). In total, LCA with one to eight classes were performed resulting in a seven-class solution providing the best model fit (Table 2). The value of the BIC gradually decreased as the number of classes increased. This was an indication of improvement for each additional class. In addition, non-significant p -values (>0.05) of VLMR-LRT and LRM-aLRT indicated that the model with eight classes was not better than the preceding one, suggesting that the model with seven latent classes contained the

best fit. The values of the entropy scores showed a more ambiguous pattern, but overall can be considered high (Clark and Muthén, 2009). Therefore, the seven-class solution was considered the best option to further explore. The mean posterior probability scores indicated the likelihood of a respondent being assigned to each of the seven classes. This average probability was rather high for each class, as an average value close to 1 suggests high certainty about true class membership (Lanza et al., 2007).

In the next step, we represented the means of each of the five place attachment variables in a graph to visually depict the seven classes of village attachment (Fig. 1). All of the variables were standardised, which allowed us to compare scores relative to the scores of other classes. A score of +1 indicates a class scores one standard deviation higher than the total group's average. A score of -1 implies the opposite, namely a standard deviation lower than the total group's average.

The LCA confirmed the existence of several types of rural inhabitants in terms of their village attachment. We attempted to label each class according to their most salient feature(s). The classes are presented below in the order of high to low in terms of the level of intensity of village attachment. In contrast to our expectations, the social and the environmental dimensions of place attachment in particular were found to be the cause of variation among classes to a large extent, while the functional and socio-cultural dimensions were less distinctive. Moreover, the breakdown of social place attachment into two different variables seems to be meaningful: access to a considerable number of local contacts does not necessarily contradict an active lifestyle beyond the village borders.

Table 2
Latent class analysis with five variables of village attachment.

LCA	Classes	N	Mean posterior probability	VLMR-LRT p -value	LMR-aLRT p -value
Classes = 1 BIC = 108084.356	1	7684	1.00	0.00	0.00
Classes = 2 BIC = 104631.789	1	5247	0.954	0.00	0.00
Entropy = 0.804	2	2437	0.926		
Classes = 3 BIC = 103330.494	1	2632	0.877	0.00	0.00
Entropy = 0.718	2	3362	0.813		
Classes = 4 BIC = 102488.824	3	1691	0.933	0.00	0.00
Entropy = 0.845	1	2391	0.909		
	2	1369	0.943		
	3	2970	0.892		
	4	954	0.976		
Classes = 5 BIC = 102118.566	1	2527	0.915	0.00	0.00
Entropy = 0.867	2	2839	0.914		
	3	1356	0.879		
	4	823	0.935		
	5	139	0.910		
Classes = 6 BIC = 101860.280	1	2403	0.915	0.00	0.00
Entropy = 0.885	2	310	0.929		
	3	1532	0.881		
	4	2215	0.907		
	5	41	0.899		
	6	1183	0.962		
Classes = 7 BIC = 101417.495	1	194	0.969	0.00	0.00
Entropy = 0.783	2	715	0.927		
	3	1303	0.826		
	4	749	0.867		
	5	1868	0.735		
	6	1852	0.833		
	7	1004	0.873		
Classes = 8 BIC = 101112.418	1	740	0.852	0.65	0.65
Entropy = 0.792	2	181	0.912		
	3	727	0.902		
	4	1885	0.735		
	5	44	0.980		
	6	1269	0.818		
	7	1007	0.863		
	8	1831	0.839		

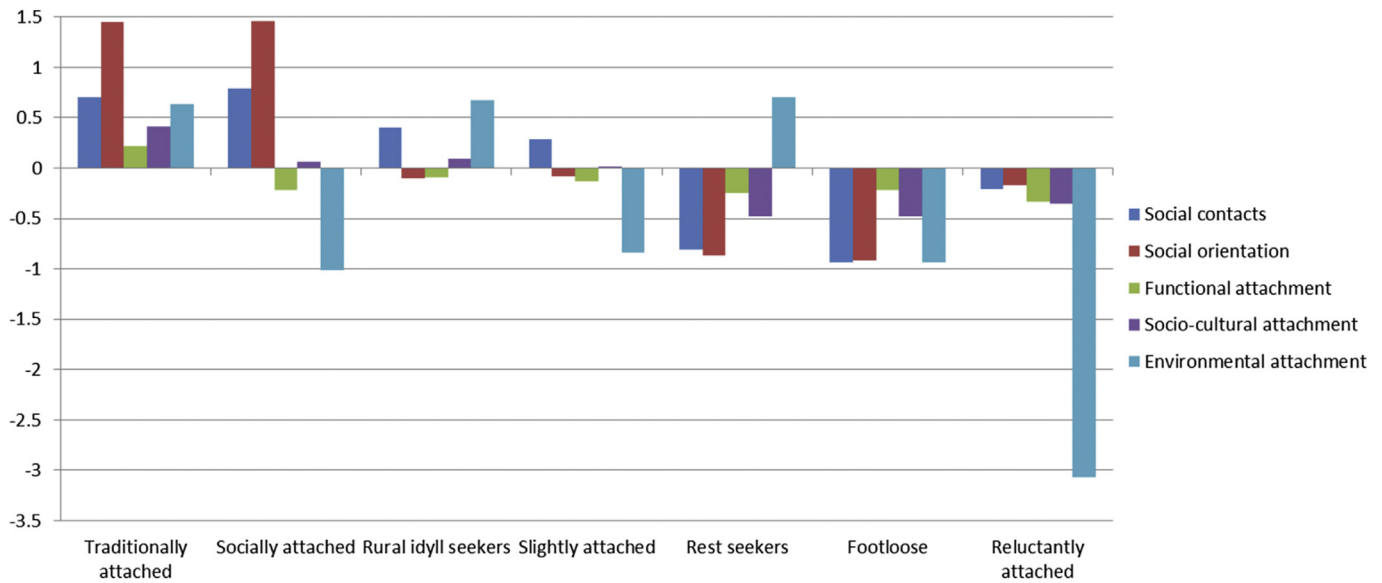


Fig. 1. Latent Class Analysis of rural residents' village attachment (Means) (N = 7684).

The Traditionally Attached class shows above-average scores for place attachment on each dimension. Those in the Socially Attached class report an above-average attachment on both dimensions of social attachment. The Rural Idyll Seekers combine a considerable number of local social contacts with an outward social orientation and also report an above-average attachment to the village environment. The class of Slightly Attached residents has a similar social orientation but combines this with a below-average attachment to the village surroundings. The Rest Seekers are unilaterally attached to the village's environmental qualities, while both those in the Footloose and the Reluctantly Attached classes do not show any form of attachment to the village. In particular, the latter class seems to be strongly opposed to the quietness and spaciousness of village life.

4.2. A typology of village attachment

To answer the second research question we related a number of personal and village characteristics to the seven classes of resident village attachment. A number of interesting outcomes can be highlighted (Table 3). Before turning to these characteristics, we will first examine the group sizes, which differ significantly. Almost half of the rural inhabitants fit into the categories of Rural Idyll Seekers (25%) or Rest Seekers (24%). Around one quarter of the villagers are Socially (9%) or Traditionally Attached (14%), while the remaining inhabitants fall into the classes of Slightly Attached (17%), Footloose (9%) or Reluctantly Attached (2%).

The second outcome is that the different classes correlate with the socio-demographic characteristics of the rural residents, with each class deviating significantly from the total group average on several variables. By combining the outcome of the LCA (Fig. 1) and the socio-demographic data (Table 3) we can make a concise summary of each class. These summaries also include responses to one open question: 'What does your village mean to you?'. With regard to this question, we only selected the answers of respondents with a minimum probability score of > 0.8 as their answers were believed to be most representative.

4.2.1. Traditionally attached

Compared to other groups, this group is most strongly attached

to their village on each dimension of place attachment. Members of this category have many local contacts and report a strong inward orientation, which indicates that the majority of their social relationships are with people who often live in the same village. This group also reports a functional and cultural attachment to their village; that is, traditionally attached villagers are more focused on local or regional media and cultural traditions and also spend more of their time in the village and less time online. Looking at the demographics, this group consists of many elderly people and more than half are village-born residents. This category has similarities with Lewicka's (2011a) group of traditionally attached residents with a strong everyday enrootedness in village culture. The strong traditional attachment to the village is reflected in the statement of an older man (72 years old): 'This village means everything to me. I was born here and I will eventually also die here'. Nonetheless, having lived in an urban area does not rule out traditional attachment, as is apparent in the words of a younger respondents (female—30 years old): 'I really enjoy living in the countryside! When I was a student I lived in Leeuwarden for one year, but afterwards I decided to never live in a city again. It was very strange not to know the people who live around you, there was no social engagement and I did not feel very safe'.

4.2.2. Socially attached

Socially attached villagers have the majority of their social contacts and network living within the village. In contrast to the traditionally attached, they have only weak attachment on the cultural and functional dimensions. This relatively small category comprises many respondents younger than 45, as well as many village-born residents. This category's strong social orientation is highlighted by a 21-year-old female respondent, who equated her attachment to the village with her local social network: 'The moment I leave my parental house I definitely want to stay in this village. I play football and almost all my friends live in the village. We are a very close-knit group of friends'. This strong emphasis on local social ties among younger residents has also been recognised by Thissen et al. (2010), who emphasised that young residents tend to identify with village social ties and not with the environmental qualities. The importance of living in a close-knit community is reflected in a statement made by 42-year-old male respondent,

Table 3Description of each latent class individual and village characteristics. All variables are presented in weighted percentages.^a

	Traditionally Attached	Socially Attached	Rural Idyll Seekers	Slightly Attached	Rest Seekers	Footloose	Reluctantly Attached	Total
Age category								
15–29 years	14***	40***	14***	22	14***	25**	53***	20
30–44 years	20	19	19	20	20	22	10**	20
45–59 years	25**	22***	33*	31	34***	27	19***	30
60–74 years	27***	13***	26**	20	26	19*	11***	23
75 + years	13***	6*	9	7	7	7	8	8
Sex								
Female	47	41***	50	53**	49	51	46	49
Educational level								
Low	47***	35	34	34	27***	35	39	34
Medium	37	42**	37	39	34*	35	40	37
High	17***	22***	29	27	39***	30	21*	29
Paid employment								
More than 12 h/wk	54	60	57	59	57	53	40***	56
Car mobility								
No access to a car in household	5	4	4	5	5	5	12***	5
Physical disability^b								
Minor	8***	3***	5	5	6	7	7	6
Major	1	1	1	1	1	1	3*	1
Church attendance								
At least once a month	29***	18*	25***	23*	14***	15***	10***	21
Length of residence								
All life	51***	58***	28	33*	12***	16*	43***	30
Longer than 15 years	42	32***	51***	45	41	39*	29***	43
6–15 years	5***	7***	16	17	26***	27***	16	17
0–5 years	2***	3***	5***	5***	20***	18***	12	10
Village size								
100–999 inhabitants	20**	20*	25	24	27**	24	21	24
1000–1999 inhabitants	26	28	28	27	25	32**	28	27
2000–2999 inhabitants	22*	25***	19	21	13***	19	19	19
Outlying areas	32	27	29	27*	35***	26*	32	30
Attractiveness landscape^c								
Very attractive	32	28*	34	30	35*	30	28	32
Medium attractive	34	33	33	34	32	34	32	33
Less attractive	34	39*	33	36	33	36	40	35
N								
Weighted	1004	715	1868	1303	1852	749	194	7684
Unweighted	1074	713	1936	1288	1856	644	173	7684
%	14	9	25	17	24	9	2	100

* $P < 0.05$, ** $P < 0.01$, *** $P < 0.001$. Significance levels indicate whether each variable significantly differs from the variable's total average. Differences were measured by a differences in proportion test.

^a To improve the sample's representativeness, the percentages were weighted on the following characteristics: sex, age, household composition, ethnicity, income and source of income.

^b These variables are composed of questions related to one's physical condition. We asked whether a respondent had difficulties with either walking up and down stairs, sitting down and standing up, leaving the house, washing themselves or walking for 10 min without stopping. Each question had three answer categories: without difficulty, with difficulty, or only with the help of others. If the respondent answered at least one question 'with difficulty' or 'only with the help of others' they were classified as having minor disability or major disability respectively.

^c We employed data from the *BelevenisGIS* version 2 (ExperienceGIS) from Alterra, Wageningen (Roos-Klein Lankhorst et al., 2005). This instrument rates the attractiveness of geographical areas based on an empirically constructed model relating physical features of the environment to perceptions of attractiveness. In this model, an environment is considered more attractive when more nature, physical relief and historical landmarks are present and fewer buildings. We used the average perceived attractiveness of the landscape in a radius of 2 km around the CBS neighbourhood in which a respondent lived. The score was divided into three categories: very attractive (highest 33%), medium attractive (middle 33%) and less attractive (lowest 33%).

who enthusiastically explained that: 'My village means a lot to me. I was born and raised in this village and almost all my friends and family live here. My children go to school in this village and do their sports and have their friends living here. This is our home'.

4.2.3. Rural idyll seekers

Although the social attachment of this group is clearly weaker than that of the previous categories, rural idyll seekers combine an above-average environmental attachment with a substantial number of social contacts in the village. Because most residents assigned to this category are in-migrants, it appears to represent a group of residents in search of the 'rural idyll' (van Dam et al., 2002). This group often lives in the village and also exhibits a weak but positive attachment to the cultural qualities of the village and region. One location where rural idyll seekers might meet their

social contacts is at church events, as they indicated that they attend church relatively frequently. One of the respondents addressed an interesting issue, as he (male–53 years old) had concerns that incoming tourists might negatively affect the peaceful and harmonious living environment. Another respondent (male–54 years old) formulated the bond with the village succinctly: '[My village] is a nice, scenic and quiet living environment on the banks of the river Meuse. The open character of the rural offers me peace and a natural and organised residential area'.

4.2.4. Slightly attached

This group does not diverge much from the total group's average on most personal and village characteristics. Slightly attached respondents indicated relatively low attachment to the environment of the village but did have a few more friends and acquaintances

living in the village than on average. Many of the respondents in this group still work, have lived in the village for quite a number of years and are middle-aged, suggesting that many of them may have children. As a 52-year-old man explained, for him, the village 'is a peaceful place to live, very spacious and a good environment to raise my children'. Other slightly attached residents did not identify greatly with their place of residence. As a 17-year-old female respondent reported, she perceived the village as 'a place to live ... my family lives here, but besides that the village does not mean much to me'.

4.2.5. Rest seekers

This group is unilaterally attached to the environmental qualities of the village: its quietness, space and nature. The other dimensions of attachment are of less concern to this group. The majority of their social contacts live elsewhere. Rest seekers have the shortest residential history and the highest level of education. More often than others, they live at some distance from the actual village and most frequently live in very small villages near the most attractive landscape. The strong emphasis on quietness and greenery is expressed by a 73-year-old male resident, who stated that he 'moved to this village to live close to a national park. The village itself is not of much interest to me'. This seems to be in accordance with other studies reporting that in-migrants quickly establish strong attachment to the village's environmental qualities (Brehm et al., 2006; Scannell and Gifford, 2010). Another recurring element is the appeal of a quiet life away from village social life. The fact that many people in this group do not actually live in the village confirms this observation. As one respondent (female—46 years old) put it: 'I only occasionally drive to the village to use the mailbox, to vote and that's about it'.

4.2.6. Footloose

The respondents allocated to this group expressed below average levels of place attachment on every dimension. Other studies also report on residents who do not feel rooted to their place of residence due to a history of repeated migration or because they have chosen to live an independent and autonomous lifestyle (McHugh and Mings, 1996). Apart from the finding that members of this group have a relatively short length of residence in the village, they are a diverse group in terms of socio-demographic

background. Some had only recently moved to the village and had not yet developed any form of attachment to their new residential area. On the question of what does your village mean to you, a 24-year-old female respondent answered: 'Very little. I am not originally from this village and there is not much to do. Due to a lack of services I do not see any reason to connect to it. For me, the village is nothing more than a place to live'. Other respondents explained that their village attachment had declined after having lived in the village for many years; for example, because their children left or because of poor health. For an 85-year-old female resident, the village 'doesn't mean much anymore because of my physical and mental condition'.

4.2.7. Reluctantly attached

This group was few in number, reporting below-average scores on several dimensions of place attachment. In particular, this group expressed a relatively negative attitude towards the natural environment, suggesting that the quiet, spacious and green environment might appal rather than appeal to them. Understandably, young adults are strongly overrepresented in this group, with many of them still living in their parental home. These young adults have normally not chosen to live in the countryside and may perceive the rural environment to be 'dull' (Rye, 2006; Haartsen and Strijker, 2010). In particular, the lack of leisure facilities appeared to bother many young adults. In the words of a 22-year-old male respondent: 'I have never been very excited about this small village. I have got some good friends here, but there is hardly anything to do in the village. As I still live with my parents, this village means nothing more than a place to live'. However, reluctant attachment to the village is not limited to young residents. Other circumstances can also lead people to live in places they did not choose, resulting in an uneasy attachment to their village (Brown and Perkins, 1992). This is exemplified by a 56-year-old woman who explained that: 'I have nothing [to do] with this village. I have to live here [a nursing home] because of my physical disabilities'.

An overview of the six categories reveals a weak relationship between length of residence and village attachment (Fig. 2). While village-born residents are overrepresented in the groups of the Traditionally Attached and the Socially Attached, which have the strongest levels of village attachment, the majority of village-born residents are found in other groups. A considerable number of

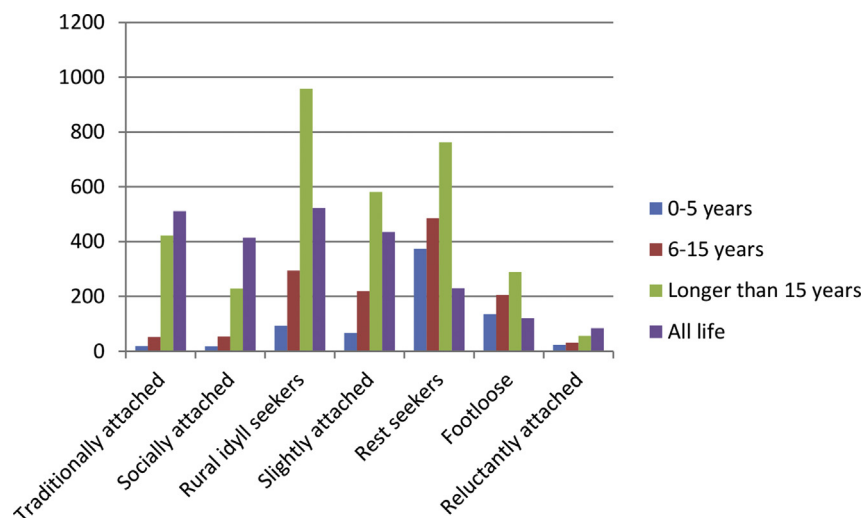


Fig. 2. Distribution of respondents (in absolute numbers) on length of residence and village attachment (N = 7684).

them can be found in the groups of Rural Idyll Seekers (22%) and the Slightly Attached (19%) and some are even among the Rest Seekers (9%), Footloose (5%) and Reluctantly Attached (3%). In other words, village-born residents are not necessarily strongly attached to their village. Newcomers, by contrast (with a length of residence of less than five years), are predominantly found in the categories of Rest Seekers (51%) and Footloose (19%), but again, not exclusively. In-migrants with a longer length of residence are most likely to be found in the groups of Rural Idyll Seekers, Slightly Attached and Rest Seekers.

5. Discussion

The main aim of this paper was to explore different types of village attachment based on various dimensions of place attachment. Latent class analysis on five dimensions of place attachment revealed seven types of village attachment: Traditionally Attached, Socially Attached, Rural Idyll Seekers, Slightly Attached, Rest Seekers, Footloose and Reluctantly Attached. The social and environmental dimensions of place attachment emerged as the most important indicators of village attachment. Different combinations of these dimensions were able to describe six out of seven types of village attachment. Functional and socio-cultural attachment added little to the interplay between the social and the environmental dimensions of place attachment.

The division of the social dimension of place attachment into two different subdimensions (local contacts and social orientation) was found to be meaningful: different patterns of the two social subdimensions could be found among different groups of rural residents. Most types of village attachment exhibited either high or low social attachment on both dimensions, but the Rural Idyll Seekers and Slightly Attached residents combined an outward orientation with a large number of local contacts, showing that an outward orientation does not necessarily exclude active involvement in local networks. Additional analyses showed that people in these groups are equally likely to volunteer to be involved in village life as Traditionally and Socially Attached residents (Vermeij and Gieling, 2016).

This finding sheds optimistic light on the development of rural communities. While mobility and technology might cause rural residents to be more outwardly oriented, and this development has long been feared to threaten local life, this study showed that outwardly oriented residents appear to be motivated to invest in local contacts. In fact, it is understood that vital and resilient village communities thrive by combining both bonding and bridging social capital (Agnitsch et al., 2006; Besser, 2013). Bonding social capital may facilitate internal solidarity and coordination, while bridging social capital can connect the local community with external markets, resources and networks. Residents who combine an outward orientation with a substantial number of local social contacts may therefore play a leading role in the creation of more sustainable rural communities.

Two groups reported below-average attachment to their village: the Reluctantly Attached and the Footloose. An important question which needs to be answered in this regard is whether below-average levels of attachment imply lower levels of satisfaction and perceived quality of life. This could be the case, but not necessarily. Some residents make a well-informed decision to live an autonomous and independent life without involvement in local social or cultural life (Barcus and Brunn, 2010; McHugh and Mings, 1996). However, following Lewicka (2011a), non-attachment and

estrangement from the local environment may result in feelings of alienation and dissatisfaction. In particular, when residents have no choice but to live in the countryside, such as adolescents living in their parental home or residents who cannot afford to live elsewhere, an uneasy relationship with the residential area may occur. Future research using qualitative methods should target this specific group of non-attached rural residents to better understand how they experience and value their lives in the countryside.

One question of interest was the extent to which the different types of village attachment found in the present-day rural population would coincide with the frequently made distinction between locals and newcomers. Our results confirm that village-born residents are on average more strongly attached to the village than in-migrants and that long-term in-migrants generally have stronger attachments to the village than residents who only recently moved to the countryside. However, in contrast to the commonly held view, we found these relationships to be far from absolute. Ample exceptions appeared to challenge the assumption that village-born residents are by definition strongly attached to their living environment. Moreover, all types of village attachment were found among newcomers. This shows that conventional categorisations of 'locals' and 'newcomers' are no longer sufficient to describe contemporary rural population dynamics, as the origin and length of residence are not conclusive in predicting levels of village attachment.

Our finding that some residents are unilaterally attached to the village's environmental qualities is relevant for rural policymakers. Many local policies aim to enhance village social cohesion by distributing financial aid to organise social events. In particular, in 'big societies', where active residents have greater opportunity to direct local policies, it is important that local governments do not ignore those inhabitants who are not likely to participate in social events or consultation processes (Gielsing and Haartsen, 2016). The results found in this study may assist policymakers, village organisations and campaign groups to target specific rural groups in order to ensure a better response rate and to implement policy measures that are in compliance with the needs and requirements of different types of village inhabitants. Moreover, the results of this study provide more insight into changing patterns of village attachment, in which traditional forms of attachment will gradually be replaced by elective forms of village attachment (Savage et al., 2005).

In conclusion, this study revealed the existence of new forms of people-place relationships in the Dutch rural context. This paves the way for additional inquiries into the relationship between different types of rural residents and their experiences of rural life, in terms of liveability, participation and social innovation. Finally, one other issue to be addressed concerns the generalisability of our study. We expect that similar groups and types of village attachment can be found in countries with a comparable level of mobility, urbanisation and population density, but that their exact number and composition will depend on the specific context of each country. Therefore, an international comparison is recommended to further explore the different types of village attachment of rural residents beyond the Dutch setting.

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Appendix A

Factor loadings, principal component, rotated (loadings >0.30).

Dimensions and corresponding items	Social attachment	Socio-cultural attachment	Functional attachment	Environmental attachment
Approximately how many village inhabitants do you know by their first name?	0.76			
Approximately how many village inhabitants visit your home from time to time?	0.83			
With approximately how many village inhabitants do you discuss personal matters?	0.75			
Approximately how many village inhabitants could you ask for help? (e.g. with a small job around the house)?	0.73			
Approximately how many of your acquaintances live in (or around) your village?	0.73			
Approximately how many of your friends live in (or around) your village?	0.70			
In a normal week, approximately how many days do you leave the village (or the immediate surroundings of the village)?			0.76	
In a normal week, approximately how many days do you go to a city?			0.73	
In your spare time, how often do you use email, text messaging or online chat?			0.62	
In your spare time, how often do you:				
listen to a local radio station?		0.75		
watch a local or regional television channel?		0.74		
speak a local dialect or language?		0.63		
eat local dishes or ingredients typical of the region?		0.65		
listen to local music?		0.77		
How important are the following things for living pleasantly?				
Quietness and space				0.87
The landscape surrounding me				0.87
Eigenvalue	3.95	2.52	1.55	1.48

References

- Agnitsch, K., Flora, J., Ryan, V., 2006. Bonding and bridging social capital: the interactive effects on community action. *Community Dev.* 37 (1), 36–51.
- Antonsich, M., 2010. Searching for belonging: an analytical framework. *Geogr. Compass* 4 (6), 644–659.
- Barcus, H., Brunn, S., 2010. Place elasticity: exploring a new conceptualization of mobility and place attachment in rural America. *Geogr. Ann. Ser. B Hum. Geogr.* 92 (4), 281–295.
- Bauman, Z., 2000. *Liquid Modernity*. Polity Press, Cambridge.
- Bell, D., 2006. Variations on the rural idyll. In: Cloke, P., Marsden, T., Mooney, P.H. (Eds.), *Handbook of Rural Studies*. Sage Publications, London, pp. 149–160.
- Bell, M., Osti, G., 2010. Mobilities and ruralities: an introduction. *Sociol. Rural.* 50 (3), 199–204.
- Benson, M., O'Reilly, K., 2009. Migration and the search for a better way of life: a critical exploration of lifestyle migration. *Sociol. Rev.* 57 (4), 608–625.
- Besser, T., 2013. Resilient small rural towns and community shocks. *J. Rural Community Dev.* 8 (1), 117–134.
- Bijker, R., Haartsen, T., Strijker, D., 2012. Migration to less-popular rural areas in The Netherlands: exploring the motivations. *J. Rural Stud.* 28 (4), 490–498.
- Boyle, P., Halfacree, K., 1998. *Migration into Rural Areas: Theories and Issues*. Wiley, Chichester, UK.
- Brown, B., Perkins, D., 1992. Disruptions in place attachment. In: Altman, I., Low, S. (Eds.), *Place Attachment*. Plenum Press, New York.
- Brehm, J., Eisenhauer, B., Krannich, R., 2006. Community attachments as predictors of local environmental concern. The case for multiple dimensions of attachment. *Am. Behav. Sci.* 50 (2), 142–165.
- Burholt, V., 2012. The dimensionality of “place attachment” for older people in rural areas of South West England and Wales. *Environ. Plan. A* 44 (12), 2901–2921.
- Castells, M., 1996. *The Rise of the Network Society*. Blackwell, Malden, MA.
- Celeux, G., Soromenho, G., 1996. An entropy criterion for assessing the number of clusters in a mixture model. *J. Classif.* 13, 195–212.
- Clark, S., Muthén, B., 2009. Relating latent class analysis results to variables not included in the analysis. Retrieved from: <https://www.statmodel.com/download/relatinglca.pdf>.
- Cloke, P., Milbourne, P., Thomas, C., 1997. Living lives in different ways? Deprivation, marginalization and changing lifestyles in rural England. *Trans. Inst. Br. Geogr.* 22 (2), 210–230.
- Cresswell, T., 2011. Mobilities I: catching up. *Prog. Hum. Geogr.* 35 (4), 550–558.
- van Dam, F., Heins, S., Elbersen, B., 2002. Lay discourses of the rural and stated and revealed preferences for rural living. Some evidence of the existence of a rural idyll in The Netherlands. *J. Rural Stud.* 18, 461–476.
- Driessen, G., 2005. In Dutch? Usage of Dutch regional languages and dialects. *Lang. Cult. Curric.* 18 (3), 271–285.
- Easthope, H., 2009. Fixed identities in a mobile world? The relationship between mobility, place, and identity. *Identities* 16 (1), 61–82.
- Franquesa, J., 2011. We've lost our bearings": place, tourism, and the limits of the "mobility turn. *Antipode* 43 (4), 1012–1033.
- van Gaalen, R., Dykstra, P., 2006. Solidarity and conflict between adult children and parents: a latent class analysis. *J. Marriage Fam.* 68, 947–960.
- Gallent, N., 2014. The social value of second homes in rural communities. *Hous. Theory Soc.* 31 (2), 174–191.
- Gielsing, J., Haartsen, T., 2016. Liveable villages: the relationship between volunteering and liveability in the perceptions of rural residents. *Sociol. Rural.* 0 (0), 1–22.
- Groot, J., 1989. Dorpsbinding en Lokaal Bewustzijn. In: Huigen, P., van der Velde, M. (Eds.), *De Achterkant van Verstedelijkt Nederland. De Positie en Functie van Landelijke Gebieden in de Nederlandse Samenleving*. KNAG/GIRU, Amsterdam & Utrecht.
- Goodwin-Hawkins, B., 2015. Mobilities and the english village: moving beyond fixity in rural West Yorkshire. *Sociol. Rural.* 55 (2), 167–181.
- Gustafson, P., 2001. Meanings of place: everyday experience and theoretical conceptualizations. *J. Environ. Psychol.* 21 (1), 5–16.
- Gustafson, P., 2006. Place attachment and mobility. In: McIntyre, N., Williams, D., McHugh, K. (Eds.), *Multiple Dwelling and Tourism: Negotiating Place, Home and Identity*. CABI Head Office, Oxfordshire.
- Gustafson, P., 2009. More cosmopolitan, no less local. *Eur. Soc.* 11 (1), 25–47.
- Gustafson, P., 2013. Place attachment in an age of mobility. In: Manzo, L.C., Devine-Wright, P. (Eds.), *Place Attachment: Advances in Theory, Methods and Applications*. Routledge, Abingdon.
- Haartsen, T., Strijker, D., 2010. Rural youth culture: *keten* in The Netherlands. *J. Rural Stud.* 26, 163–172.
- Halfacree, K., 2012. Heterolocal Identities? Counter-urbanisation, second homes, and rural consumption in the era of mobilities. *Popul. Space Place* 18 (2), 209–224.
- Hannam, K., Sheller, M., Urry, J., 2006. Editorial: mobilities, immobilities and moorings. *Mobilities* 1 (1), 1–22.
- Hay, R., 1998. Sense of place in developmental context. *J. Environ. Psychol.* 18, 5–29.
- Hedberg, C., do Carmo, R., 2012. Translocal ruralism: mobility and connectivity in european rural spaces. In: Hedberg, C., do Carmo, R.M. (Eds.), *Translocal Ruralism. Mobility and Connectivity in European Rural Spaces*. Springer, Dordrecht (et al).
- Hidalgo, M., Hernández, B., 2001. Place attachment: conceptual and empirical questions. *J. Environ. Psychol.* 21, 273–281.
- Hjort, S., Malmberg, G., 2006. The attraction of the rural: characteristics of rural migrants in Sweden. *Scott. Geogr. J.* 122, 55–75.
- Hunter, A., Suttles, G., 1972. The expanding community of limited liability. In: Suttles, G.D. (Ed.), *The Social Construction of Communities*. University of Chicago Press, Chicago, pp. 44–80.
- Jung, T., Wickrama, K.A.S., 2008. An introduction to latent class growth analysis and growth mixture modeling. *Soc. Pers. Psychol. Compass* 2 (1), 302–317.

- Kasarda, J.D., Janowitz, M., 1974. Community attachment in mass society. *Am. Sociol. Rev.* 39, 328–339.
- Lanza, S., Collins, L., Lemmon, D., Schafer, J., 2007. PROC LCA: a SAS procedure for latent class analysis. *Struct. Equ. Model.* 14 (4), 671–694.
- Larsen, J., Urry, J., Axhausen, K., 2006. *Mobilities, Networks, Geographies*. Ashgate Publishing Limited, Hampshire.
- Lewicka, M., 2005. Ways to make people active: the role of place attachment, cultural capital, and neighborhood ties. *J. Environ. Psychol.* 25, 381–395.
- Lewicka, M., 2011a. On the varieties of People's relationships with places: hummon's typology revisited. *Environ. Behav.* 43 (5), 676–709.
- Lewicka, M., 2011b. Place attachment: how far have we come in the last 40 years? *J. Environ. Psychol.* 31, 207–230.
- Mak, G., 2001. *Jorwerd: the Death of the Village in Late 20th Century Europe*. Harvill Press, London.
- Masyn, K., 2013. Latent class analysis and finite mixture modeling. In: Little, T.D. (Ed.), *The Oxford Handbook of Quantitative Methods in Psychology: Vol. 2: Statistical Analysis*. Oxford University Press, New York.
- Marsden, T., Murdoch, J., Lowe, F., Munton, R., Flynn, A., 1993. *Constructing the Countryside*. UCL Press Limited, London.
- McHugh, K., Mings, R., 1996. The circle of migration: attachment to place and aging. *Ann. Assoc. Am. Geogr.* 86, 530–550.
- Milbourne, P., Kitchen, L., 2014. Rural mobilities: connecting movement and fixity in rural places. *J. Rural Stud.* 34 (2), 326–336.
- Muthén, K., Muthén, B., 1998–2010. *MPlus User's Guide*, sixth ed. Muthén & Muthén, Los Angeles.
- Nichols, G., Tacon, R., Muir, A., 2012. Sport clubs' volunteers: bonding in or bridging out? *Sociology* 47 (2), 350–367.
- Noack, E., 2011. Are rural women mobility deprived? - A case study from Scotland. *Sociol. Rural.* 51 (1), 79–97.
- Nylund, K., Asparouhov, T., Muthén, B., 2007. Deciding on the number of classes in latent class analysis and growth mixture modeling: a monte carlo simulation study. *Struct. Equ. Model. A Multidiscip. J.* 14 (4), 535–569.
- Oliva, J., 2010. Rural melting-pots, mobilities and fragilities: reflections on the Spanish case. *Sociol. Rural.* 50 (3), 277–295.
- Ralph, D., Staeheli, L.A., 2011. Home and migration: mobilities, belongings and identities. *Geogr. Compass* 5 (7), 517–530.
- Raymond, C.M., Brown, G., Weber, D., 2010. The measurement of place attachment: personal, community, and environmental connections. *J. Environ. Psychol.* 30 (4), 422–434.
- Relph, E., 1976. *Place and Placelessness*. Pion Limited, London.
- Roos-Klein Lankhorst, J., Vries de, S., Buijs, A., Berg van den, A., Bloemmen, M., Schuiling, C., 2005. *BelevingsGIS versie 2. Waardering van het Nederlandse landschap door de bevolking op kaart*. Alterra, Wageningen.
- Rubinstein, R.L., Parmelee, P.A., 1992. Attachment to place and the representation of the life course by the elderly. In: Altman, I., Low, S.M. (Eds.), *Place Attachment*. Plenum Press, New York.
- Ruiz, J., Domon, G., 2012. Relationships between rural inhabitants and their landscapes in areas of intensive agricultural use: a case study in Quebec (Canada). *J. Rural Stud.* 28 (4), 590–602.
- Rumpf, H., Vermulst, A., Bischof, A., Kastirke, N., et al., 2014. Occurrence of internet addiction in a general population sample: a latent class analysis. *Eur. Addict. Res.* 20 (4), 159–166.
- Rye, J., 2006. Rural youth's images of the rural. *J. Rural Stud.* 22 (4), 409–421.
- Salemink, K., Strijker, D., Bosworth, G., 2016. Rural development in the digital age: a systematic literature review on unequal ICT availability, adoption, and use in rural areas. *J. Rural Stud.* 0 (0), 1–12.
- Savage, M., Bagnall, G., Longhurst, B., 2005. *Globalization & Belonging*. Sage Publications, London.
- Scannell, L., Gifford, R., 2010. The relations between natural and civic place attachment and pro-environmental behavior. *J. Environ. Psychol.* 30 (3), 289–297.
- Schreiber, J., Pekarik, A., 2014. Technical note: using latent class analysis versus K-means or hierarchical clustering to understand museum visitors. *Curator Mus. J.* 57 (1), 45–59.
- Sheller, M., Urry, J., 2006. The new mobilities paradigm. *Environ. Plan. A* 38, 207–226.
- Smith, M.D., Krannich, R.S., 2000. Culture clash revisited: newcomer and long-term residents' attitudes toward land use, development, and environmental issues in rural communities in the rocky mountains west. *Rural. Sociol.* 63 (3), 396–421.
- Smith, D., Phillips, D., 2001. Socio-cultural representations of greentified pennine rurality. *J. Rural Stud.* 17, 457–469.
- Smith, D., 2007. The changing faces of rural populations: “(re) fixing’ the gaze” or “eyes wide shut”? *J. Rural Stud.* 23 (3), 275–282.
- Spinney, J., Scott, D., Newbold, K., 2009. Transport mobility benefits and quality of life: a time-use perspective of elderly Canadians. *Transp. Policy* 16 (1), 1–11.
- Steenbekkers, A., Simon, C., Veldheer, V., 2006. *Thuis op het Platteland. De Leefsituatie van Stad en Platteland Vergeleken*. The Netherlands Institute for Social Research, The Hague.
- Steenbekkers, A., Vermeij, L., 2013. *De Dorpenmonitor. Ontwikkelingen in de Leefsituatie van Dorpen*. The Netherlands Institute for Social Research, The Hague.
- Stockdale, A., 2015. Contemporary and “messy” rural in-migration processes: comparing counterurban and lateral rural migration. *Popul. Space Place* 22 (6), 599–616.
- Thissen, F., Drooglever Fortuijn, J., Strijker, D., Haartsen, T., 2010. Migration intentions of rural youth in the westhoek, Flanders, Belgium and the veenkoloniën, The Netherlands. *J. Rural Stud.* 26, 428–436.
- Tonts, M., Atherley, K., 2010. Competitive sport and the construction of place identity in rural Australia. *Cult. Commer. Media Polit.* 13 (3), 381–398.
- Urry, J., 2007. *Mobilities*. Polity Press, Cambridge.
- Vermeij, L., 2015. *Dichtbij Huis. Lokale Binding en Inzet van Dorpsbewoners*. The Netherlands Institute for Social Research, The Hague.
- Vermeij, L., Gieling, J., 2016. *De Dorps Doe-democratie. Lokaal Burgerschap Bekeken Vanuit Verschillende Groepen Dorpsbewoners*. The Netherlands Institute for Social Research, The Hague.
- Vermunt, J.K., Magidson, J., 2002. Latent class cluster analysis. In: Hagenaars, J.A., McCutcheon, A.L. (Eds.), *Applied Latent Class Analysis*. Cambridge University Press, Cambridge (et al).
- van Wee, B., Rietveld, P., Meurs, H., 2006. Is average daily travel time expenditure constant? In search of explanations for an increase in average travel time. *J. Transp. Geogr.* 14 (2), 109–122.
- Williams, D., Vaske, J., 2003. The measurement of place attachment: validity and generalizability of a psychometric approach. *For. Sci.* 49, 830–840.
- Woods, M., 2011. *Rural*. Routledge, London & New York.
- Zwiers, S., Markantonii, M., Strijker, D., 2016. The role of change- and stability-oriented place attachment in rural community resilience. *Community Dev.* 0 (0), 1–20.