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Christiaanse, Suzan; Haartsen, Tialda

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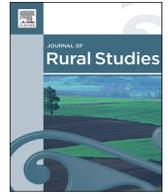
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# The influence of symbolic and emotional meanings of rural facilities on reactions to closure: The case of the village supermarket



Suzan Christiaanse\*, Tialda Haartsen

University of Groningen, Faculty of Spatial Sciences, Landleven 1, 9747 AD Groningen, The Netherlands

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## ABSTRACT

In depopulating rural areas, one of the main issues is how to deal with the decline of local facilities such as schools, post-offices and shops. It is often feared that closure of a local facility will negatively affect the accessibility of that service and the liveability of the village. This paper examines how villagers experience the loss of a small local supermarket. Building on the concept of sense of place, we examine how people's attitude towards place-change relates to the functional, social, symbolic and emotional meanings a supermarket can have for individuals and for a community. A survey ( $n = 312$ ) was conducted shortly before the closure of the supermarket in Ulrum, a depopulating village in the rural North of the Netherlands. The results show that negative evaluation of closure can be explained by individual emotional attachment to the supermarket and by the general symbolic value of a supermarket for a village. Contradictory to popular belief, perceptions of decreasing accessibility or diminishing liveability do not exemplify why many residents react negatively to the closure of the supermarket. In the Dutch rural context, access is only an issue for a relatively small group of people consisting mostly of elderly and less mobile citizens, while large groups of villagers may react negatively to closure of rural facilities. We propose that in different international contexts people may experience senses of loss and can react negatively to facility-decline due to the social, symbolic and emotional meaning of rural facilities.

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## 1. Introduction

In the age of globalisation and urbanisation, decreasing numbers of facilities in rural areas, such as schools, shops, post-offices, libraries and supermarkets, is a common source of concern (Paddison and Calderwood, 2007; Woods, 2005). In many countries facility-decline occurred predominantly in smaller villages due to economies of scale and increased levels of mobility (Paddison and Calderwood, 2007). In the Dutch context this has resulted in a loss of choice rather than significantly worsened accessibility, since the countryside is densely populated and has a well-developed road network (van Dam, 1995; Steenbekkers and Vermeij, 2013). We could therefore argue that, for most people in the Netherlands, access is not an issue. Nevertheless, rural facility-decline is still a major source of concern, and local media regularly report about closures and protests (Haartsen and Venhorst, 2010; Hospers, 2010). Although high levels of mobility counteract the effects of facility decline (Milbourne and Kitchen, 2014), there are

studies showing that insufficient public transport in rural areas (Stockdale, 1993) or a lack of motorized transport could still cause problems with access to services (Higgs and White, 1997; Milbourne and Kitchen, 2014). The decline of local facilities is also thought to affect the satisfaction of residents regarding their living environment, which is often referred to as the 'liveability' of a village (Gieling and Haartsen, 2016; Higgs and Langford, 2013). This suggests that there might be other factors apart from accessibility influencing local concern or protests when it comes to facility decline. A potential explanation is that change can be seen as a threat to rural character (Halfacree, 1995; Tilt et al., 2007; Woods, 2003), and rural facilities can have a social and symbolic meaning for a community (Amcoff et al., 2011; Cabras and Bosworth, 2014; Kearns et al., 2009; Svendsen, 2013). People may also feel emotionally attached to local facilities and closure can cause a 'sense of loss' (Devine-Wright, 2009; Fried, 2000). These added meanings of facilities are rarely taken into account in empirical research on rural facility decline. What is missing, both in lay and in academic discourse, is a conclusive argument as to why people have negative reactions when a local facility disappears, and what factors play a part. The relatively good accessibility of rural facilities

\* Corresponding author.

E-mail address: [s.christiaanse@rug.nl](mailto:s.christiaanse@rug.nl) (S. Christiaanse).

and services, makes the Netherlands an interesting case to investigate what other factors might influence reactions to closure of rural facilities. This paper investigates how villagers react to the loss of a local supermarket, and how this is influenced by the emotional, functional, social and symbolic meanings of this facility. We investigate the closure of a supermarket in Ulrum, a village facing population decline in the rural North of the Netherlands. In the spring of 2015 a survey was conducted ( $n = 312$ ) to examine reactions to closure of the local supermarket, which is comparable to a small grocery store. To question the different meanings the supermarket had for people and the community we used the concept of sense of place and its three dimensions: place attachment, place dependence and place identity.

The outline of the paper is as follows: In the theory-section we present an overview of the theoretical concepts and previous research that could be used to explain reactions to closure of local facilities. This is followed by a description of the case study, data collection and methodology. The results are presented in two sections. The first section describes how people evaluated and reacted to the closure of the supermarket. The different groups that experienced closure as negative, and those who indicated to be dependent on the supermarket for groceries are examined. In the second section we examine what meanings the supermarket had for respondents and what factors are significant for negative evaluation of closure. In the conclusion we discuss the findings and link these to the current debate on facility decline.

## 2. Theory

### 2.1. Consequences of rural facility decline

To be able to investigate negative reactions to closure we need to look at the negative consequences of rural facility decline. International research often focuses on accessibility of facilities such as schools (Talen, 2001), hospitals (Henderson and Taylor, 2003) and supermarkets (O'Dwyer and Coveney, 2006; Smoyer-Tomic et al., 2006), because they offer basic services for education, healthcare and food supply that everybody needs (Farmer et al., 2012a). However, as argued in the introduction, accessibility of (rural) services is relatively good in the Netherlands. Basic facilities such as the general practitioner, primary school and supermarket are on average available at 1.5 km distance and almost never more than 10 km away (Steenbekkers and Vermeij, 2013; CBS). Nevertheless, access to services is not just about distance and distribution of facilities, but also about 'accessibility of transport' (Hine and Kamruzzaman, 2012). In the Netherlands 90–94% of rural households own a car (Steenbekkers and Vermeij, 2013), but there is a 'small' group of people that are less mobile and might have problems with access to basic facilities and services. Previous studies have argued that people with low mobility such as the elderly, low income groups or other people without motorized transport are more vulnerable to closure of local facilities (Higgs and Langford, 2013; Hine and Kamruzzaman, 2012; Milbourne and Kitchen, 2014; Talen, 1998). Especially for this group the decline of local facilities combined with the decline of public transport services could be problematic (Stockdale, 1993). An inequitable distribution of rural facilities, that is not attuned to the needs of people with low mobility, could negatively affect a community's attitude towards facility decline.

Other negative consequences of facility decline that might influence how people perceive closures, include the possible effects on the village and the community. In media and public discourse, it is often suggested that the decline of local facilities negatively affects the satisfaction with the quality of the living environment, or the 'liveability' (Haartsen and Venhorst, 2010; Ruth and Franklin,

2014). However, recent studies imply that liveability is dependent on an array of local values in which the availability of facilities and services only plays a minor part (Gielsing and Haartsen, 2016; Perez et al., 2012). Moreover, villages without any facilities or services, can still be perceived as very liveable (Gardenier et al., 2011). The feared decline of liveability after closure of facilities may actually be more related to the social function that rural facilities can have for a community (Amcoff et al., 2011; Haartsen and Van Wissen, 2012; Kearns et al., 2009; Svendsen, 2013). In fact, public places that allow for informal social interaction, such as facilities, have been shown to be beneficial for the sense of belonging to a community or social cohesion (Mount and Cabras, 2015; Spaaij, 2009; Witten et al., 2001). The social function of rural facilities can be especially important for people with low mobility such as the elderly (Gardner, 2011; Rosenbaum, 2006). The increase of car-use in rural areas has facilitated people to maintain social networks further away, but people without a car are more dependent on local social networks and closure of local meeting places could lead to social isolation for this group (Gardner, 2011; Gray et al., 2006; Urry, 2002). However, even in cases where there are moderate negative consequences with regard to accessibility or liveability, the closure of rural facilities can be experienced as a 'disruption' of every-day live and lead to emotional responses and protests.

### 2.2. Reaction to closure of rural facilities: dealing with place change

Although there is little research about this in the context of facility-decline, negative reactions to place change could be caused by the disruption of emotional bonds between people and places, also known as 'place attachment' (Hidalgo and Hernández, 2001; Jorgensen and Stedman, 2001). Brown and Perkins (1992) distinguish three phases in the disruption of place attachment: In the pre-disruption phase people learn about the upcoming developments and can have responses in anticipation of change, in the disruption phase the changes occur and in the post-disruption phase people oppose change or accept it. By using social representations theory Devine-Wright (2009), Devine-Wright and Clayton (2010) surpasses Brown and Perkins (1992) with five stages of psychological response to place change: becoming aware, interpreting, evaluating, coping and acting. The first two stages are about personal perception: become aware of upcoming or past place change and interpreting the implications. In the third stage people evaluate change as positive, neutral or negative. After this assessment people show coping responses such as denial, resignation or emotional reactions such as anger. People may even have feelings of grief upon loss of a place that is important to them (Fried, 2000; Morgan, 2010). In the final stage people show behavioural responses to resist change or accept it. Devine-Wright (2009) argues that local opposition to place change, such as petitions or protests, are forms of 'place protective action' that arise from the disruption of place attachment. However, recent studies have found that high positive place attachment does not directly predict place-protective behaviour, since subjective norms and perceived behavioural control were more influential (Anton and Lawrence, 2016; Vorkinn and Riese, 2001). Positive place attachment did predict negative evaluations of change. Furthermore, place-protective behaviour, which can also be investigated in light of geographies of protest (Woods, 2003), does not necessarily account for silent discontent. In this paper we are therefore interested in resident's evaluation of change (phase 3) which precedes reactions to the closure of a rural facility (phase 4). In the following paragraph we present a theoretical framework of how bonds between residents and facilities influence evaluations of place change.

### 2.3. The process of giving meaning to place

Closure of a rural facility can be understood as a disruptive event because a facility can have special value or *meaning* for different people. The meaning attached to a spatial setting through bonding can be referred to as ‘Sense of Place’, which is often divided into three dimensions: place attachment, place identity and place dependence (Jorgensen and Stedman, 2001; Jorgensen, 2010; Lewicka, 2011; Shamai, 1991). Although there is a myriad of definitions, it is commonly agreed that ‘place attachment’ refers to the affective bonds between people and places, ‘place dependence’ relates to how a place serves a person’s actions and behaviour compared to other places, and ‘place identity’ relates to how a place can be significant for a person’s identity (Jorgensen and Stedman, 2001; Kyle et al., 2004; Lewicka, 2011; Morgan, 2010; Pretty et al., 2003). In line with these definitions, the dimensions of Sense of Place can be linked to the three components of attitude structure: place attachment is affective (emotional) in nature, place dependence is conative (behavioural) and place identity is a cognitive structure (knowledge, thoughts and beliefs). Using the components of attitude structure is useful in explaining reactions to place change since an attitude can be defined as a ‘response to an event, object or stimuli’ (Fishbein and Ajzen, cited in Jorgensen and Stedman, 2001), and each component has different effects on behaviour (Anton and Lawrence, 2016). Another dominant view in place-related research is that, in addition to the *process* of giving meaning to a place, also the characteristics of *place* and *person* are important (Lewicka, 2011; Scannell and Gifford, 2010; Stedman, 2002). A place, such as a facility, has specific physical attributes and functions, which influences the meanings a place can have for different people (Gustafson, 2001; Relph, 1976).

We have created a theoretical framework for the factors influencing place meaning, combining Scannell and Gifford (2010) ‘person, process and place’ model for place attachment, with Jorgensen, 2010 view of Sense of Place (Fig. 1). We choose to define Sense of Place as the overarching ‘*process-dimension*’, to be able to distinguish the effect of the different place-bonds related to attitude structure. We also expanded the subdivisions of ‘person’ and ‘place’. Scannell and Gifford (2010) divide the ‘*person-dimension*’ into group and individual, while Low and Altman (1992) distinguish individual, communal and cultural influences. We argue that the meaning a person gives to a place can be influenced by communal, cultural or personal beliefs, but also by the characteristics of that person. Hidalgo and Hernández (2001) have, for example, shown that the degree of place attachment can vary with

age or gender, and Hay (1998) has shown the influence of length of residence. The ‘*place-dimension*’ in Scannell and Gifford (2010) model is divided into social or physical. However, this does not allow for differentiation between functions and physical attributes. Facilities can host different functions, and especially in rural areas they can have secondary purposes (Paddison and Calderwood, 2007). For example, a rural supermarket can host a post office or pharmacy, and schools are often combined with day-care facilities. In addition, many rural facilities, such as post offices (Higgs and Langford, 2013), libraries (Svendsen, 2013), primary schools (Haartsen and Van Wissen, 2012), pubs (Cabras and Bosworth, 2014) or supermarkets (Amcoff et al., 2011), can have an important social function as a meeting place. A rural facility can also have an economic function for the region and local significance as it provides jobs (Farmer et al., 2012b; Paddison and Calderwood, 2007). The primary, secondary, social and economic functions of a facility, do not translate directly into congruent meanings, and neither do physical characteristics.

Functional, social, symbolic, emotional or economic meanings of a place are constructed through affective, cognitive and conative processes, and are influenced by personal and place characteristics (Fig. 1). A person can, for instance, feel dependent on a facility based on functional or social features, and at the same time have beliefs (place identity) regarding the economic value of that facility for the local economy. An empirical study of the closure of a local diner showed that this facility did not only have a primary function (food consumption) and a social function (seeking social companionship), but also emotional meaning for many customers (Rosenbaum, 2006). The process of giving meaning to a place is mostly influenced by the way people experience a place, but people can also give meaning to a place they hardly interact with (Kyle et al., 2004). For instance, a rural facility such as a school can have meaning for a person without children as a symbol of a vital community. The availability of local facilities might still be a part of the ‘rural idyll’ (Halfacree, 1995), and such an idealised view of rurality could very well play into the symbolical value of a rural facility. Farmer et al. (2012b) argue that symbolic value can be accumulated based on social, economic or cultural significance of a facility for a community. These ‘symbolic values’ of a setting based on personal and shared beliefs are often attributed to place identity (Fried, 2000; Gustafson, 2001; Jorgensen and Stedman, 2001; Proshansky et al., 1983). Also historical or physical features, such as remarkable architecture or a geographical central position, can influence the symbolic meaning of a place (Proshansky et al., 1983; Stedman, 2003), for example a beautiful church can have a

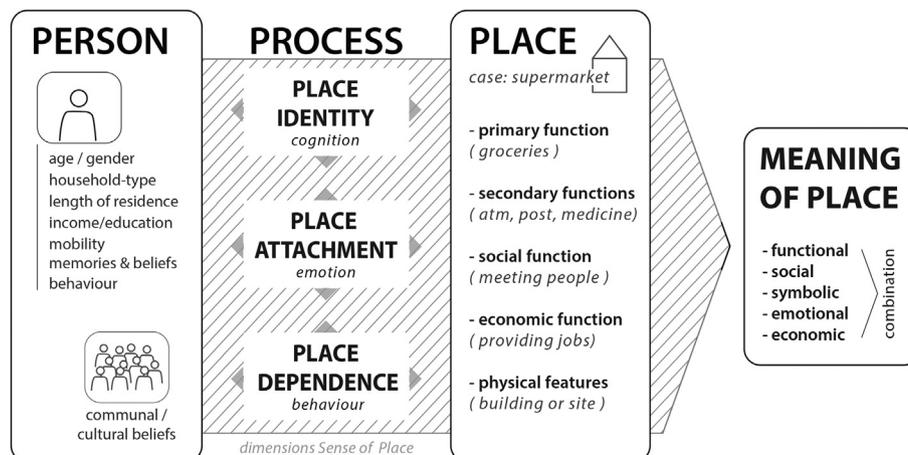


Fig. 1. Schematic representation of the factors influencing place meaning.

symbolic value for a village.

In the next section (methods) we will explain how we operationalise the theoretical framework, to investigate how place meanings influence people's evaluation of change, and reaction to closure of a local supermarket.

### 3. Methods

#### 3.1. Case: closure of the Spar supermarket in Ulrum

Ulrum is a village in the north of the Netherlands, in the depopulating municipality De Marne, Province of Groningen (Fig. 2). Population decline in Ulrum was 22% over the last 20 years (Statistics Netherlands), and in that period Ulrum has seen a lot of

local facilities and services disappear such as the post office, two banks, police station, general practitioner, pharmacy, two primary schools, bakery, grocer, shoe store, café, restaurant, library, hardware store, clothing store and bike repair shop (LISA-database). Many people still remember Ulrum as the vibrant village it once used to be, but the former shopping street 'de Noorderstraat' now looks empty apart from a drug store. On the first of June 2015 the last place to do grocery shopping in Ulrum, the locally owned small supermarket, 'the Spar', closed its doors (Fig. 4). With the closure of the supermarket Ulrum did not only lose one of the last 'key' facilities in the village, but also an atm, pickup point for medicine and a postal-service. Although some residents actively tried to keep the shop open, this did not seem to resonate with the entire village. A possible explanation for this could be that in rural areas people

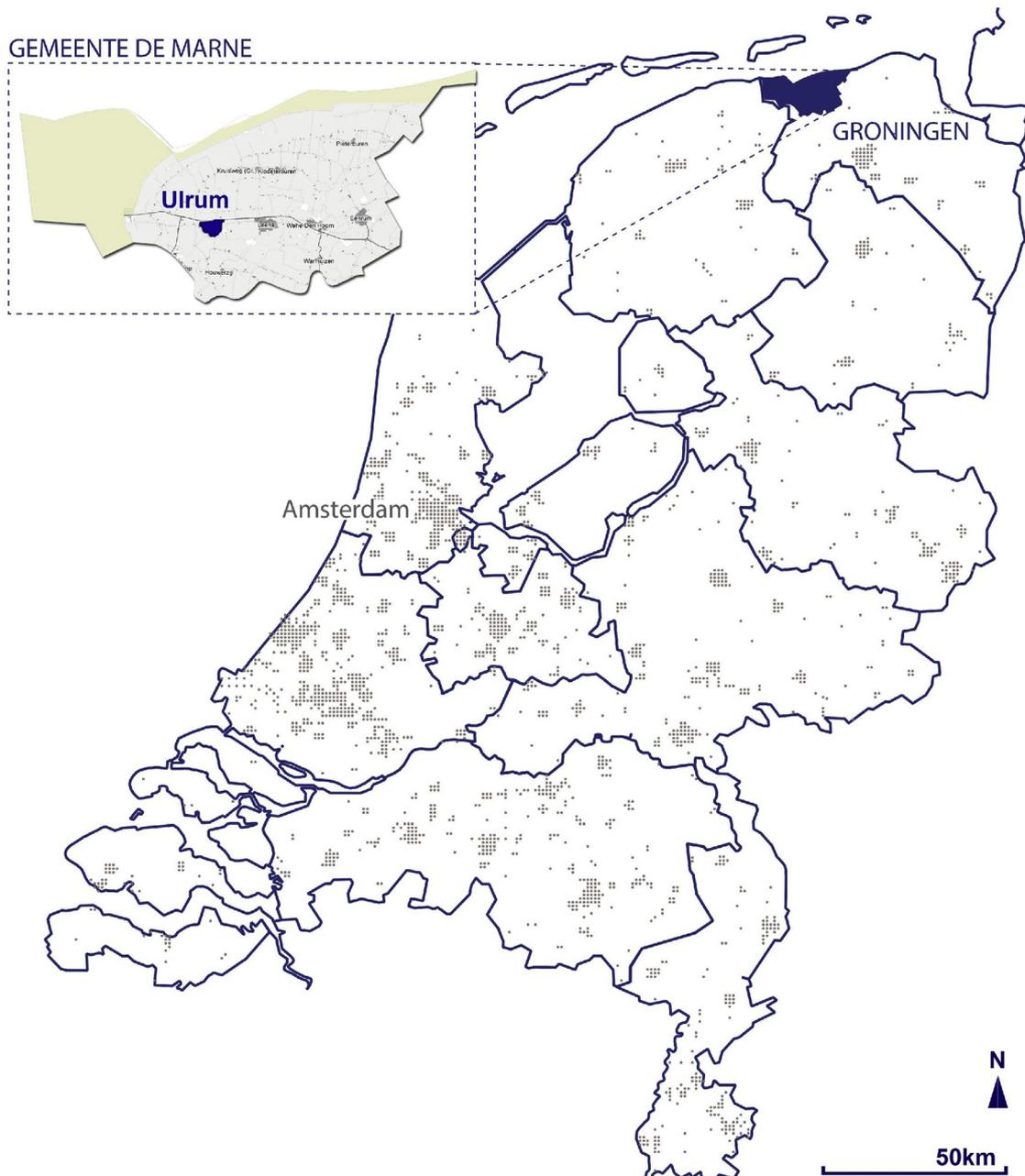


Fig. 2. Map of Netherlands, location of Ulrum.

often shop on the way to and from work (Findlay et al., 2001) and there are larger and cheaper supermarkets in close proximity around Ulrum (Fig. 3). Two supermarkets in the village of Leens can be accessed in 5 min by car or 10 min by bike from the centre of Ulrum. In addition, there was a mobile shop with a limited supply of groceries that serviced the farms and outer fringes of the village. To investigate how people felt about the Spar closing and what factors are mostly relevant to their reaction, we conducted a survey in May 2015, shortly before closure.

### 3.2. Data collection process, structure of the survey and statements on meaning of supermarket

We handed out 653 surveys door to door asking one adult person per household to fill in the survey. Participants were given the choice to have the survey collected, or to return it in a post-paid envelope. In total, we received 312 responses resulting in a 48% response rate. The survey consisted of three parts: use of the Spar, the reaction to closure and a section about personal characteristics. In the first section participants were asked to answer questions about which functions of the Spar they used most, their feelings of connectedness with the village and satisfaction with liveability. The second section consisted of an open question about respondents first reaction, and a closed question on how they felt about closure, which people could rate from 1 'not regrettable at all', to 5 'very regrettable'. Furthermore, six statements (Table 1) were added based on the framework for place meaning (Fig. 1). The first three statements are related to general beliefs about the meaning of a supermarket for a village and the last three statements are related to personal memories, emotions and behaviour about this specific supermarket. Place attachment and place dependence are only questioned at the individual level since these dimensions manifest mostly on an individual level (Pretty et al., 2003). Not all place aspects that are mentioned in Fig. 1 are used. In the case of Ulrum, we did not expect the physical features (building or site), the secondary functions (atm and pick-up point for medicine and post) or the economical function of the supermarket to be meaningful for negative evaluations of closure. The first two statements relate indirectly to a symbolic meaning a supermarket can have for a

village based on functional and social features of place, while the third statement directly questions if 'collectively having' a supermarket is important for the identity or status of a village.

### 3.3. Methods of analyses

The aim of this paper is to investigate how people react to the closure of the local supermarket and why they might perceive closure to be negative. We expect to find a small group of people for whom closure is negative in terms of accessibility and a larger group of people who experience closure as negative due to the social, symbolic or emotional meaning the supermarket. It should be noted that there are more factors that influence access to services than just the geographical distance, such as cost, reputation, convenience and personal mobility (Comber et al., 2012). For this reason we question 'perceived accessibility' by asking if the next shop is too far. Elderly and people without motorized transport are more likely to evaluate closure as negative due to their functional dependence on the supermarket.

The results are presented in two sections. In the first section we will investigate the following research questions using descriptive analyses:

1. How do people react to closure of the supermarket?
2. Who (different groups) evaluate closure as negative?
3. Who (different groups) indicate to be dependent on the supermarket for groceries?

In the second section we will present the scores on place meaning and conduct a linear regression on evaluation of closure to investigate the following research questions:

4. What meaning does the supermarket have for respondents?
5. What factors are significant for increasingly negative evaluations of closure of the supermarket?
6. Are 'place meanings', constructed through dimensions of Sense of Place, useful in understanding negative attitudes to closure of the supermarket?

To answer the last research question, two linear regressions on the question 'How do you feel at this moment about the Spar closing?' were conducted. In the first regression the explanatory variables include: sex, age, household-type, length of residence, personal mobility, frequency of visits, access to next shop, village bonding and satisfaction with liveability. The choice for these variables is based on previous research and popular beliefs regarding negative consequences of facility decline. In the second regression the six statements on 'place meaning' are added as explanatory variables.

### 3.4. Limitations and assumptions of the linear regression models

For the linear regression models we assume equidistant intervals and for handling missing data we exclude cases pairwise. Quite a few people did not fill in the entire survey; a problem we would not have had with web-based surveys, but web-based surveys generally have a low response rate (Brown and Weber, 2012). For all models there is no collinearity and VIF <4 with tolerances >0.2. The independent variables were checked for correlation using a correlation matrix and none of the correlations exceeded 0.8, of which only the variables on place meaning exceeded 0.5. The Durbin Watson test was between the critical values of 1.5 and 2.5 indicating no first order linear auto-correlation (the residuals are independent). The residual plots do not show autocorrelation and do show homoscedasticity. Cook's distance was smaller than 1 in all models.

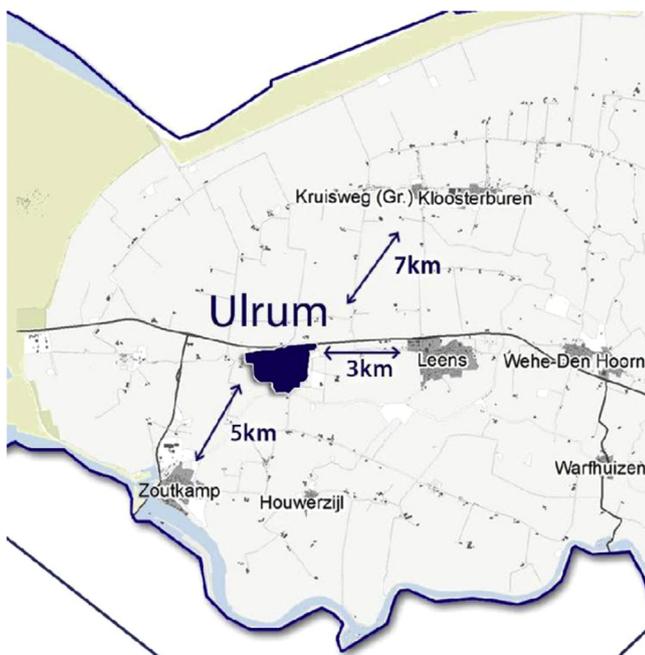


Fig. 3. Distance of supermarkets from Ulrum.



Fig. 4. Photo of the Spar in Ulrum, October 2014. Credit: Peter de Kock, deelnulrum.nl.

Table 1

Six statements on place meaning, related the dimensions of Sense of Place and place features.

Statements in survey	Person	Process	Place	Meaning
1 It is important that a village has a supermarket to do grocery-shopping	General Beliefs	Place Identity	Primary function	Symbolic and functional meaning
2 It is important that a village has a supermarket as a local meeting place		Place Identity	Social function	Symbolic and social meaning
3 It is important that a village has a supermarket for its identity/Status		Place Identity	*	Symbolic meaning, based on status
4 I have positive memories (events or experiences) about the Spar in Ulrum	Personal relation to Spar in Ulrum	Place Identity ( <i>cognitive</i> )	*	Combination
5 To me the Spar is a valuable place		Place Attachment ( <i>affective</i> )	*	Emotional meaning
6 I am dependent on the Spar to do grocery-shopping		Place Dependence ( <i>behavioural</i> )	Primary function	Functional meaning

\*Not related to specific place features.

Table 2

Characteristics and representativeness of the respondents.

Respondent-category:	% respondents Survey Ulrum <sup>a</sup>	De Marne municipality <sup>b</sup>	Ulrum village <sup>b</sup>
Household: Living alone	30%	36%	36%
Household: Couple without children	38%	33%	29%
Household: Couple with children	25%	31%	34%
Household: Single parent with children	6%		
man	34%	51%	51%
woman	66%	49%	49%
0–18	–	18%	0–25
18–25	4%	8%	28%
25–45	23%	21%	23%
45–65	38%	31%	28%
65–75	17%	13%	65+
75 + years and older	18%	9%	21%
65 + years and older	35%	22%	1.1
Average number of cars per household	1.1	1.1	1.1

<sup>a</sup> n = 309. Numbers in valid percent. Households were asked for respondent over 18.

<sup>b</sup> Data CBS Statistics Netherlands. [www.Statline.cbs.nl](http://www.Statline.cbs.nl) accessed on 6-9-2016. For some age groups no data on village level.

### 3.5. Representativeness of sample

In this survey 94% of the respondents indicated to have used the Spar for grocery shopping, and 72% visited the Spar once a week or more. This is high considering the supermarket went out of business due to lack of clientele. It is possible that respondents visited the shop for a few items, but did their main shopping elsewhere. However, while handing out the survey some people told us that they did not participate because they did not use the Spar. We convinced most of these people to fill in the survey, but Table 2 still

shows a slight overrepresentation of woman, elderly and household-type 'couples without children'. This may indicate a possible bias of the response towards groups that make more use of a local supermarket. We argue that this will not cause problems for our analysis, given that we want to investigate the reasons behind negative reactions to closure. We focus on the 'why' rather than the 'how many'. Apart from the elderly also people with low-income and people without a car are thought to be more vulnerable to closure of rural facilities. Although we have no data on income, we do see that the education level is lower than the national average:

**Table 3**  
Scores within categories of respondents for negative evaluations of closure and place dependence.

Respondent-category	% respondents in this category	% of this category with negative evaluation of closure <sup>a</sup>	% of this category that feels dependent <sup>b</sup>
All respondents n:312	100%	85% n:309	30% n:284
n:309 Man	34	84	23
woman	66	85	33
n:307 Household: Living alone	30	88	51
Household: Couple without children	38	86	28
Household: Couple with children	25	79	9
Household: Single parent with children	6	83	18
Households without motorized transport	19	100	90
n: 309 18–25	4	92	31
25–45	23	75	11
45–65	37	82	16
65–75	17	88	32
75 + years and older	18	98	85
Last two groups added: 65 + years and older	35	93	58
n:307 People that feel connected to Ulrum (bonding)	62	93	38
n:291 People with high education level (BA/MA)	14	88	17
n:290 People that visit the spar often (once a week or more)	73	95	42
n:263 People that say the next shop is too far	23	97	63
n:288 People that are unsatisfied with liveability in Ulrum	23	92	39
n:287 People that are unsatisfied with facilities in Ulrum	60	89	33

<sup>a</sup> Valid percent of this category that finds closure regrettable or very regrettable. 3 missing cases.

<sup>b</sup> Valid percent of this category that agrees or very much agrees with the statement 'I am dependent on the Spar for groceries'. 28 missing cases. For example: 90% of respondents without motorized transport feels dependent, for n = 282.

14% of the respondents have a BA or MA degree versus 29% nationally (Statistics Netherlands). Table 2 shows that the sample is representative for age, household composition and for average household car-ownership, but it is important to note that this is not a perfect proxy for personal mobility. In our survey 59 of 310 respondents (19%) indicated not to have a car, whereas in the Netherlands on average 7% of households in small remote villages do not have a car (Steenbekkers and Vermeij, 2013). This suggests a high number of respondents with low mobility.

#### 4. Results

##### 4.1. Closure of the Spar supermarket: negative evaluations and emotional reactions

To the question 'How do you feel at this moment about the Spar closing?' 65% of respondents answered 'very regrettable', 20% answered 'regrettable', 6% was neutral, 7% found it 'not regrettable' and 2% 'not regrettable at all'. This comes down to 85% of the respondents that had a negative evaluation of the supermarket closing (Table 3). In the survey we also asked respondents 'What was your first reaction when you heard of the closure of the Spar?' in an open question. A lot of respondents found the closure of the Spar to be regrettable (129 out of 290 responses) and 34 said they are angry. However, more than half of the people that answered the

open question indicated that they had expected the closure and they seemed resigned to it (167 out of 290 responses). Many respondents found the closure to be regrettable, while at the same time indicating that it was to be expected. It was often mentioned that villagers increasingly buying their groceries at two new larger supermarkets in the neighbouring village of Leens (at 3 km distance), that offer a wider assortment of products at lower prices.

*"I think it's a loss for the village, but we have done it together. With each other, I mean all the villagers. On the other hand, I find 'the Spar' an expensive concept [...]" (R77)*

*"Not a surprise [...] The working population of Ulrum are mostly commuters, and they can easily do their grocery shopping on the drive back from work in Zoutkamp, Leens, Winsum etc." (R85)*

As stated, 94% of the respondents indicated to make use of the Spar, and 72% shopped there once a week or more. By far most respondents used the Spar for the primary function of the supermarket, buying groceries, but there are also people that indicated they often made use the Spar for the atm (32%), post-office function (32%), to pick up medicine (22%) and as a social meeting place (23%). The elderly respondents made the most use of secondary and social functions of the Spar. This was also reflected in some of the responses to the open questions.

*“We were very disappointed: the young people that shop elsewhere have no idea what they are giving up [with this supermarket]. Especially for the elderly people this is a disaster!!!”* (R27)

*“Too bad the supermarket is closing. It also has a social function for the elderly villagers.”* (R35)

The responses to the closed question ‘How do you feel at this moment about the Spar closing?’ (Table 3) showed that respondents under 25 and the elderly were on average more negative about closure, with people over 75 being more negative than people over 65. This could be partly related to lower mobility of elderly people. Households without motorized transport were unanimously negative about closure. Respondents that live alone were slightly more negative about closure. Only families with children and respondents aged 25–45 and 45 to 65 were less negative on average about closure (Table 3). Other questions that showed a much higher average of negative evaluations are: connectedness to village, frequency of visits, access to the next shop and satisfaction with liveability (Table 3). It is often believed that the decline of facilities affects the liveability of a village, although Table 2 shows that 23% of the respondents rated the liveability insufficient whereas 60% rated the level of facilities insufficient. The considerable difference suggest that people can be unsatisfied with the level of facilities but still satisfied with the liveability of the village. Some respondents did comment that the village is becoming ‘empty’ or ‘less lively’ (19 out of 290 in open question) but emotions about this vary.

*“[the closure of the Spar was] To be expected. Natural course of events in a village where everything is getting worse. A lot of shops have closed already.”* (R255)

*“This cannot be true, a village like Ulrum without a supermarket!!! There were 5 grocery stores in this village 45 years ago. I have made my discomfort about this very clear [...]”* (R270)

*“Very regrettable! A school and a shop belong in a village, for social contacts but also for general liveliness in the village.”* (R267)

The same respondent categories in Table 3 that are more negative about closure, apart from ‘high education level’, also score high on feeling dependent on the Spar for groceries. This points to a possible relationship between negative emotional reactions to closure and place dependence, although 55% of the respondents had negative evaluations of closure without being dependent on the Spar themselves (Table 3).

*“Angry. This way there will be nothing left in the village. Especially for the people that are dependent on the supermarket.”* (R234)

Elderly people and people without motorized transport are thought to be more dependent on local facilities and could possibly experience problems with access to the supermarket in Leens. In this survey 19% of respondents did not have motorized transport and 18% of the respondents were over 75 years old (Table 3). Both groups of respondents were almost unanimously negative about the closure of the Spar. The 30% of respondents that agreed or very much agreed with the statement ‘I am dependent on the Spar for groceries’ were unanimously negative about closure. This supports the idea that respondents without motorized transport, elderly and respondents that felt dependent on the Spar were more negative about closure. However, many respondents were negative about closure but not dependent on the Spar. Furthermore, there is an overlap between the variables ‘not having motorized transport’, ‘age’ and ‘place dependence’. Of the respondents that indicated to be dependent on the Spar for groceries, 48% was over 75 years old and 54% did not have motorized transport. This indicates that there were also respondents under 75 with motorized transport that felt

dependent on the Spar. Looking at this group with cross-tabulation we see that these respondents all visited the Spar once a week or more. It is possible that there are people who have a car, but this vehicle is mostly used by a family member so they are still dependent on the local Spar for groceries. In our survey 21% of the respondents from a household with one car indicated to be dependent on the Spar for groceries, while for households with 2 or more cars, this is only 4%. We see that there is a large group of people (85% of the respondents) that experience the closure of the supermarket as regrettable, and within that group there is a smaller group (30%) for whom the closure of the supermarket is possibly problematic because they feel dependent on that shop for their groceries.

#### 4.2. Factors determining negative evaluation of closure: the influence of place meaning

In this section we will investigate how negative attitudes to closure are influenced by the variables in Table 3, as well as the statements on place meaning. Before presenting the results of the linear regressions we will discuss the responses to the six statements on meanings of the supermarket (Fig. 5). With 96%, most of the respondents agreed or very much agreed with the first statement that ‘It is important that a village has a supermarket to do grocery-shopping’. Strikingly, more respondents (83%) indicated that it is more important for a village to have a supermarket ‘for its identity/status’, rather than for its function ‘as a local meeting place’ (66%). The belief that a supermarket is important as a social meeting place might be more a shared belief since only 46% of the respondents indicated they are actually focussed on Ulrum for social contact, although for elderly respondents this was 65%. These first three statements all scored very high indicating that there is a common belief that a supermarket has an important symbolic meaning for a village which is partly based on functional or social features (Table 1). The last three statements on the more personal relationship with the Spar scored lower, but still more than half of the respondents indicated they had positive memories regarding the Spar (67%) and found it a valuable place (60%). This is indicative of cognitive and affective attitudes towards the Spar and can be linked to a combination of meanings, of which the emotional meaning is more prevalent. The last statement relating to a behavioural attitude of dependency had the least number of respondents agreeing with 30%. We have already established the overlap between people that feel dependent on the Spar, frequency of visits, age and motorized transport. We will now investigate the relationship between these variables and negative evaluations of closure with two linear regressions.

For the first step in investigating negative evaluations of closure, a multiple linear regression was conducted to predict people’s response to the statement ‘How do you now feel about the Spar closing?’ (on 5-point scale with 1 ‘not regrettable at all’, 2 ‘not regrettable’, 3 ‘neutral’, 4 ‘regrettable’ and 5 ‘very regrettable’) with the following independent variables: gender, age, household type (living alone versus not living alone), length of residence, lack of motorized transport, frequency of visits, access to the next supermarket, feelings of connectedness to Ulrum and satisfaction with liveability. A significant regression equation was found  $F(10,233) = 9541$   $p < 0,000$ , with an  $R^2$  of 0,29. Without the six statements on place meaning, the independent variables gender (female), increasingly older age, frequency of visiting the Spar and feeling connected to Ulrum were significant predictors for an increasingly negative evaluation of closure (Table 4).

In the second step another regression was conducted, adding the six statements on place meaning as explanatory variables. A significant regression equation was found  $F(16,227) = 16,392$

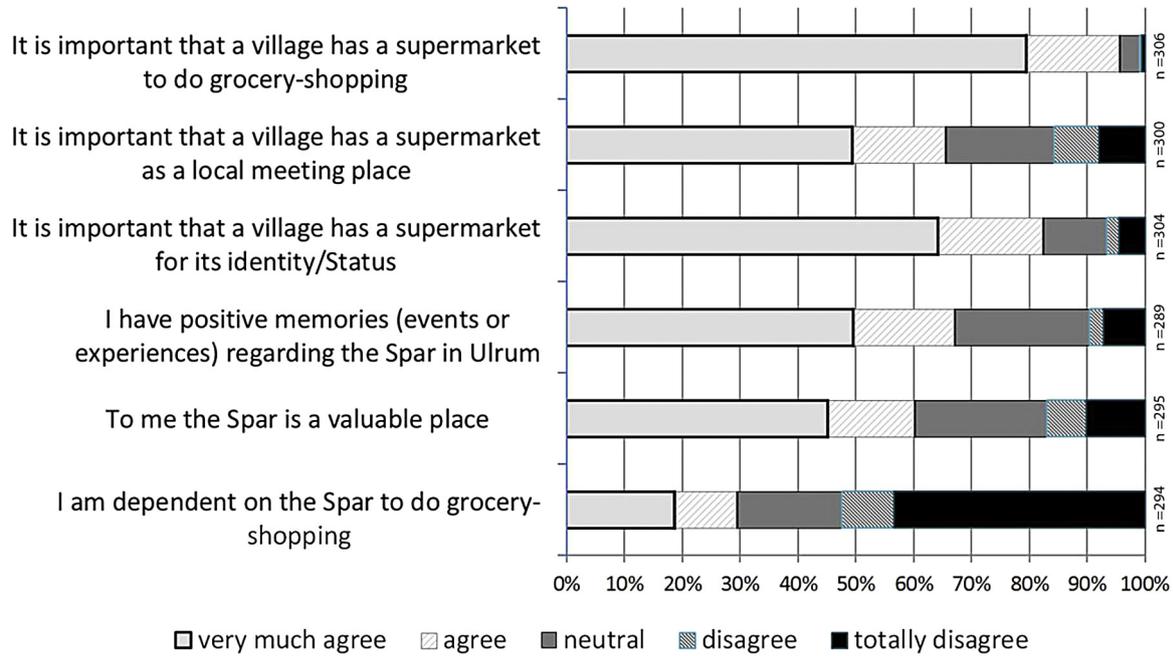


Fig. 5. Responses to statements on place meaning (1 = not agree at all to 5 = very much agree).

Table 4  
Linear regression on negative reaction to closure.

Regression on: 'How do you feel about the Spar closing?'		Regr 1 B	Regr 2 B
1 = totally not regrettable 2=not very regrettable 3=neutral 4=regrettable 5 = very regrettable			
Personal Characteristics	Gender [male = 0 females = 1]	,250*	,085
	Age [continuous, increase in years]	,008*	,001
	Household: living alone <sup>a</sup> [0 = no 1 = yes]	-,048	-,034
	How long living in Ulrum [continuous]	-,003	-,001
	Low education level [0 = BA or MA degree 1 = no BA/MA degree]	-,100	-,101
	Not having motorized transport [0 = has 1 = has not]	,183	-,054
	Frequency of visits [0 = not often 1 = often meaning more than once a week]	,768**	,236
	The next Grocery-shop is too far [0 = no 1 = yes]	,123	-,062
	I feel connected to Ulrum [1 = not agree to 5 = very much agree]	,181**	,056
	Satisfied with liveability [1 = very unsatisfied - 5 = very satisfied]	-,079	-,036
Place Meaning	<b>It is important that a village has a supermarket to do grocery-shopping</b>		<b>,522**</b>
	It is important that a village has a supermarket as a local meeting place		,055
	It is important that a village has a supermarket for its identity/Status		-,041
	I have positive memories (events or experiences) regarding the Spar		,005
	<b>To me the Spar is a valuable place</b>		<b>,240**</b>
I am dependent on the Spar to do grocery-shopping		,076	
<i>n</i> =312// <sup>*</sup> significant for <i>p</i> < 0.05 <sup>**</sup> significant for <i>p</i> < 0.01		<b>R<sup>2</sup>=0,29</b> <i>n</i> : 213 <sup>b</sup>	<b>R<sup>2</sup>=0,54</b> <i>n</i> : 193

Bold are the variables that are significant in the full regression analysis.

<sup>a</sup> Reference category are households 'not living alone', so couples and families which are 69% of the respondents. Tests with more types of household did not result in other significant outcomes and neither did age-groups instead of age as a continuous variable.

<sup>b</sup> Conducting this regression with *n* = 193 for both steps, results in the same significant outcomes in both steps. R<sup>2</sup> for the first step would be 0,3 instead of 0,29 and R<sup>2</sup> for the second step would still be 0,54.

*p* < 0,000), with an R<sup>2</sup> of 0,54. Participants 'predicted evaluation of closure' increased 0.522 points on the 5-point Likert-scale (becoming more negative) for each point they agreed more with statement 1 'It is important that a village has a supermarket to do grocery-shopping'. The significance of this statement indicates the symbolic value a supermarket can have for a village based on functional features of that place. Instead of a general connection to the village, it is actually the personal emotional attachment to this specific place that is another predictor for negative evaluations in the second step. Participants 'predicted evaluation of closure' increased 0.240 points on the 5-point Likert-scale (becoming more negative) for each point they agree more with statement 5 'To me the Spar is a valuable place'. The significance of this statement shows

how emotional meaning of a place can be influential in negative attitudes to place change. It is interesting that, although place attachment and length of residence were correlated (0.23), length of residence was not significant in either one of the regressions. Mobility or liveability, which are often mentioned in the context of facility decline, were also not significant for a negative evaluation of closure.

The changed significant results together with the increased explanatory value of the model from 29% in the first regression, to 54% in the second regression, indicates that place meanings are more important in explaining negative evaluations to closure of the Spar than the other variables. The general belief that a village should have a supermarket for groceries is the strongest predictor

for a negative evaluation of closure followed by personal emotional attachment.

## 5. Conclusion

In rural communities the closure of facilities is often seen as a negative development. Local facilities can be seen as a sign for a vital community, and part of the rural identity (Woods, 2005). When changes to a meaningful place are evaluated negatively, people can have emotional reactions and even show place protective behaviour (Anton and Lawrence, 2016; Devine-Wright and Clayton, 2010; Devine-Wright, 2009). In this paper we investigated how residents of the village Ulrum reacted the closure of their local supermarket. The results show that negative evaluations were influenced by the meanings people give to a place through a process of place attachment, place dependence and place identity. Respondents first reaction to closure ranged from angry to sad or neutral, but at the same time people often indicated that it was 'to be expected'. Nevertheless, eighty-five percent of respondents evaluated closure of the local supermarket as negative (regrettable or very regrettable). Elderly respondents and households without motorized transport were very negative about closure, often found the next shop too far and felt more dependent on the local supermarket for their groceries. This is consistent with the view that the elderly and immobile are more vulnerable to closure of rural facilities. However, this group could not account for the large amount of negative responses in the survey.

From the two regressions on 'evaluation of closure' (Table 4) it became clear that including place meanings significantly increased the explanatory value of the model (from  $R^2 = 0,29$  to  $0,54$ ). Contradictory to popular belief, lack of access or mobility did not cause negativity about closure of the supermarket and neither did satisfaction with liveability or length of residence. While the first regression picked up gender, age, frequency of visits and village bonding as significant for an increasingly negative evaluation of closure, including statements on place meaning showed that: most significant was the *general belief* that a village should have a supermarket for groceries, which indicates the symbolic meaning of a supermarket for a community based on functional features. The personal attachment respondents felt to this specific place was also significant, which indicates how the emotional meaning of a place can influence negative attitudes to place change. The high scores on the general statements on place meaning show that there is a strong sense of place identity based on general beliefs, more than personal bonds with this specific supermarket. The symbolic meaning of a supermarket for a village was mostly based on its function for grocery shopping, status of the village and, to a lesser extent, as a social meeting place. The results of this paper show that although a 'small' group of respondents feel dependent on the Spar for groceries (30%), most respondents actually rated closure negatively because of the symbolic and emotional meaning of the supermarket.

We suspect that in different contexts facilities may have a mix of functional, social, economic, symbolic or emotional meaning for residents, which can result in feelings of loss upon closure. Especially in rural communities the closure of local facilities can be perceived as threatening, because rural facilities can have additional functions, there are less alternatives than in cities, but also because rurality is associated with less change than in urban areas (Halfacree, 1995). For instance, a study among elderly residents found that the closure of services and the diminishing rural 'way of life' resulted in feelings of loss (Cook et al., 2007). In our study, respondents complained about a village feeling 'empty' following the closure of facilities. However, these feelings of emptiness and senses of loss might be more related to symbolic meaning and

emotional attachments to places, rather than a 'dissatisfaction with liveability'. Losing a meaningful place is especially a threat when it is central to our identity (Devine-Wright, 2009) or emotionally meaningful (Fried, 2000; Morgan, 2010). In rural areas, it is likely that facilities are part of a 'shared identity'. Having facilities in a small or remote village is often seen as a sign of resilience and a symbol for a vital rural community (Farmer et al., 2012b).

This paper's theoretical framework (see Fig. 1) could be used for other rural facilities, but the type of rural facilities that are valued might differ per country or region. Cabras and Bosworth (2014) have, for instance, discussed the social meaning of rural pubs in the UK, and Svendsen (2013) mentioned the value of public libraries as a meeting place for rural communities in Denmark. Future research could also focus on how sentiments change over time, since place bonds are not static (Brown and Perkins, 1992; Devine-Wright, 2009; Hay, 1998). Egelund and Laustsen (2006) have found that after closure of a school other places managed to facilitate the informal social function, while Amcoff (2012) found that the social function of village shops in Sweden was hard to replace. Interestingly, in our study the symbolic value of the supermarket for the status of a village was found to be more important than the value as a local meeting place. To investigate the change in sentiments over time we will conduct another survey in Ulrum two years after closure. Another line of future research could focus on mobile or online services, since (not very recent) Dutch case studies show minimal effects of e-shopping on rural retailing (Farag et al., 2006; Weltevreden and RietbergenVan, 2009). The relatively low immobility and dependence on the supermarket in this study, is in line with our previous assertion that access to facilities is not an issue for most people in the Netherlands, but continuing rural depopulation and clustering of facilities might change this (Ritsema van Eck et al., 2013; Steenbekkers and Vermeij, 2013). From a policy-perspective it is worth considering the accessibility of facilities in rural areas for the elderly and less mobile residents. However, this might not soften the blow for a community when a facility closes because meanings of a place can influence negative evaluations and reactions to change. The major challenge might not necessarily lie in restructuring facilities, but in supporting a community's emotional process of 'loss'.

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