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When Are Neighbourhoods Communities? Community in Dutch Neighbourhoods

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This study investigates the degree to which community can be found in Dutch neighbourhoods and attempts to explain why there is more community in some neighbourhoods than in others. We apply a perspective on community which assumes that people create communities with the expectation to realize some important well-being goals. Conditions that account for the creation of a local community are specified, i.e. the opportunity, ease, and motivation to do so. These conditions are realized when (i) neighbourhoods have more meeting places; (ii) neighbours are, given their resources and interests, motivated to invest in local relationships; (iii) neighbours have few relations outside of the neighbourhood, and (iv) neighbours are mutually interdependent. Data from the Survey of Social Networks of the Dutch on 1,007 respondents in 168 neighbourhoods are used. Results show that there is a sizeable amount of community in Dutch neighbourhoods and that all the four conditions contribute to the explanation, while interdependencies among neighbours have the strongest impact on the creation of community.

Introduction

Uncovering the conditions under which communities emerge is one of the major research goals in sociology. Traditionally 'community' is understood as a local entity, like a neighbourhood. Together with the family, the neighbourhood is one of the few places where a community can emerge without external interventions. In such a primordial social organization people realize well-being without rules of formal planning and collective decision-making, which are necessary in constructed arrangements like markets and organizations (Coleman, 1992). Yet, according to popular opinion and many sociologists as well, local communities are disappearing in present-day society. In addition, the recent influx of migrants in old migration countries, like the United States and Canada, and in new migration countries of Western Europe supposedly hastened this decline of community (Alesina and LaFerrara, 2000; Putnam, 2001; Costa and Kahn, 2003).

Empirical evidence for that long-term decline is scanty and mixed. Putnam (2000: 105–106) (see also Guest and Wierzbicki, 1999), for example, presents longitudinal data indicating a downward trend in neighbouring in the United States between 1975 and 1999. However, historical studies suggest that communities have not been omnipresent in the past either (e.g. Campbell, 1990). Furthermore, a number of recent cross-sectional studies on social networks in urban and non-urban areas show that people in both types of areas have many relations with their neighbours (e.g. Keane, 1991; Wellman, 1996; Thomese, 1998; Guest and Wierzbicki, 1999; Birenbaum-Carmeli, 1999). There is also other, less direct evidence suggesting that community still

matters. For instance, people look for rather similar others when they decide where to live, and therefore, neighbourhoods are more homogeneous in terms of race, ethnicity, and socioeconomic status than cities and countries (Feld and Carter, 1998; Grannis, 1998; Harris, 1999). Neighbourhood differences in crime rates are another proof that neighbourhoods differ in their level of community and that such differences are relevant to people's lives (Sampson *et al.*, 1997; see Sampson *et al.*, 2002 for a review of other neighbourhood effects; Halpern, 2005, 121–129).

While the discussion so far concentrated on the question whether community has declined, considerable fewer arguments have been developed on the conditions under which communities *occur*. This article aims to answer this question. We study to which degree and under what conditions community can be found in neighbourhoods. More precisely, we examine the degree to which Dutch neighbourhoods vary in their level of community and how differences between neighbourhoods in the level of local community can be explained.

The remainder of this article is organized as follows; the section on 'Local Community' elaborates on a theory of community based on the link between individual well-being, activities, and various forms of interdependencies. The section on 'causes of community' elaborates the specific conditions expected to be conducive to the creation of a local community. The section on 'Data, Measurements, and Analytical Strategy' describes the data and measurements used. The section on 'Results' presents the results of our analyses, and the last section draws conclusions and discusses our findings.

Local Community

There are a number of different conceptualizations of community. Already in 1955, Hillery counted 94 different definitions (McMillan and George, 1986 for a review). Most conceptualizations of community focus on 'neighbouring', which is often indicated by the *number* or the *quality of relationships* to neighbours (Hillery, 1955; Unger and Wandersman, 1982). Further, while many conceptualizations focus on community in the *local* neighbourhood, some are also directed to *relational* communities (Gusfield, 1975; see Wellman *et al.*, 1988 on 'personal' communities). Another distinction is made by Guest and Lee (1983) and by Adams (1992) who divide the research literature on community in a line focusing on emotional *sentiments* towards a community and a line on a more rational *community evaluation*. Further, within community psychology there is a discussion on 'a sense of community', mostly based on attempts to explore empirically the latent structure in statements supposedly related to local community (see *inter alia*, Obst *et al.*, 2002).

The variation and the fuzziness of the community concept is an obstacle if one is aspiring cumulative research. Most studies use different concepts and measurements, which prohibits comparison and accumulation of knowledge. Currently, the study of the causes and consequences of *community* in neighbourhoods receives relatively little attention, at least within sociology, whereas the number of studies on *neighbourhood* effects on individuals' life chances (see e.g. Forrest and Kearns, 2001; Sampson *et al.*, 2002) and on social relationships in neighbourhoods is growing (e.g. Utasi, 1990; Völker and Flap, 1997).

In this article, we build upon Fischer's choice constraint approach (Fischer *et al.*, 1977; Fischer, 1982) and Lindenberg's theory of community[1] (Lindenberg, 1997, 2002; Kassenberg, 2003). This theory is based on the assumption that community is an arrangement in which individuals derive important personal benefits for well-being from doing things together with others (joint production). The conditions for the degree of community that is realized among interacting people are the opportunity for doing things together, the ease with which this can happen, and the motivation to do things together. In this approach, individuals are seen as the producers of their own well-being. The most important benefit to be derived from joint activity with others is *multifunctionality* (Lindenberg, 1996), i.e. the realization of goals related to physical and social well-being. *Physical well-being* consists of having enough to eat, having a roof above the head, and feeling comfortable when walking around in the neighbourhood. *Social well-being* can be considered as being recognized and feeling accepted by others, being liked, and receiving confirmation for one's behaviour. People depend on others for the realization of these general goals of well-being—for that matter they create communities. When multifunctionality obtains, the realization of one goal reinforces the realization of the others, which is not only more efficient but also creates synergetic effects and thus a higher level of well-being. Therefore, the more goals one can realize in the *same* group, the better. So, we speak of *a community if individuals realize multiple well-being goals within the same group of others*. A community is therefore a collection of multifunctional relationships, i.e. of

relationships that help to achieve different aspects of well-being.

In some respect, this conceptualization of community is not that different from previous conceptualizations and theories. Community is tied up with benefits individuals derive from it. For example, the theory of limited liability holds that neighbourhood involvement is depending on the degree to which people have invested in the neighbourhood and the attempt to safeguard these investments (see e.g. Greer, 1972; Janowitz, 1952; Hunter and Suttles, 1972; Lee *et al.*, 1991). Or take compression theory (e.g. Warren, 1986), which implies that the importance of neighbourhoods is related to the constraints upon people's options for the choice of interaction partners. For example, if people are restricted in their means for transportation they will develop more local contacts (Lee *et al.*, 1991).

Yet, in other respects the conception of community used here differs from traditional views. First, it implies that community is not necessarily a *local* entity. We consider locality as an empirical issue which we want to investigate and not as a conceptual one. Community can be created in the neighbourhood, but also, for example, at the work place or in a voluntary association. Community is local to the degree to which the realization of well-being goals takes place in the neighbourhood.

Second, our understanding of community is not a dichotomous one, but allows for several *degrees* of community. Many existing conceptualizations of community are constructed as a dichotomy. Viewing community as a continuum allows for more differentiation between social groups, places, or age cohorts.

Third, conceptualizing community as the achievement by a number of persons of various major goals within the same group of persons implies that a person can experience a community while having *not many* relationships. Of course, a large and rich network in the neighbourhood will facilitate the creation of community, but a pleasant relation with just a few neighbours can be enough to create some community. What counts is achievement of goals that are important for physical and social well-being (i.e. multifunctionality), not the number of people who participate in producing them. In other words, we conceive contacts among *neighbours as a precondition* for community, and not as a dimension of the concept. In this way, our perspective on community differs from research that equates community with neighbouring, measured by, for example whether one knows his neighbours by name (Campbell and Lee, 1990); whether one visits neighbours (see Taub *et al.*, 1977; Rossi, [1955] 1980) or the degree to which one turns to neighbours for sociability and support (Keller, 1968; Greer, 1972).

Fourth, our argument that community is created if people realize the different aspects of well-being in the same group of people implies specific measurements, which will be discussed subsequently. Usually, community is measured by certain relational patterns in a neighbourhood, like the degree of intimacy among neighbours, contact frequency, multiplexity of ties, or mutual support (Unger and Wandersman, 1982).

Fifth, our view on community provides another theoretical argument on why people create community at all. Community creation is not only conditioned by the benefits of being a member but also on the opportunity and ease of goal realization, that is, the costs of interaction.

Causes of Community

There are a number of conditions that stimulate the creation of community. As mentioned above the theory specifies opportunity, ease, and motivation for doing things together. Reviewing the research literature on neighbourhood community (e.g. Gans, 1962; Wellman, 1979; Campbell and Lee, 1992; Unger and Wandersman, 1985; Farell *et al.*, 2004), at least four major conditions for the creation, opportunity, ease, and motivation can be specified: (i) *meeting opportunities*, (ii) *individual motivation to invest* in others in the group, (iii) *alternatives* to realize individual goals, and (iv) *interdependencies*. First, these conditions involve opportunities people have to produce community, in particular the opportunities to meet each other. Second, individuals differ in the degree to which they are motivated to create community in their neighbourhoods. Third, people who have alternatives to the community in their neighbourhood, for example, people who experience community at their work place, will be less interested to have a community in their local neighbourhood. Fourth, to the degree that people depend on each other for the realization of their major goals in life, they will be interested in maintaining and investing in this community.

Meeting Opportunities

The first type of condition relates to having opportunities to meet, since there will be no 'mating without meeting' (Verbrugge, 1977; for a review see Kalmijn and Flap, 2001). Meeting opportunities refer not only to places where people come together like shops or recreation facilities, but also schools, parks, churches and so forth (Fischer *et al.*, 1977).

The more *facilities* in a neighbourhood, the greater the chance that people will meet and that a community will be created. Further, to meet each other, people have to spend a sizeable amount of time in the neighbourhood. The *length of residence* and the hours that a person spends outside of the neighbourhood for activities like *work* or recreation are of importance here. We expect that in general all conditions that make people spend more time in their neighbourhood increase the level of community in that neighbourhood. This will be the case if there is *little residential mobility*, if many residents are unemployed, and if more people are tied to their homes because they have *young children*. Moreover, people have to be in the neighbourhood at the same time. The greater the synchronization of people's time schedules, the better the community life is expected to be (Miller McPherson and Ranger-Moore, 1991; Blokland, 2003).

Investment Considerations

The second type of conditions is constituted by people's interests in having contact with others. In general, a person will be more interested in a relationship if the other person has valuable resources. This expectation follows from the theory of social capital (Flap, 1999). According to social capital theory the expected value of future help explains why people start a relationship and invest in each other. The expected value is larger if the person in question has more resources, such as a higher education or a high occupational prestige. Persons who have more instrumental resources, be they financial, social, or of any other type, are more attractive as members of one's own personal network. Further, the more resources one has, the better (although utility might decline at the margin). People attempt to relate to others who have more resources than themselves or, if that is not possible, to relate to those who have about the same amount of resources (see Laumann, 1966 on the status and the 'like me' hypotheses). This reasoning leads to the expectation that community is more likely to be created in neighbourhoods where the residents have many resources.

Furthermore, *similarities* between people, especially in lifestyle characteristics, facilitate interpersonal contact (Kalmijn, 1998). People who are similar in certain respects are better able to reward each other or be emotionally attracted to one another because they share common interests or simply because they have more topics to talk about. We expect that community is more likely to be created in neighbourhoods where the residents are similar in life style features, in particular when dimensions like family status, household composition, or income are considered.

The idea that people invest in relations with others while taking future benefits into account, leads to the expectation that more community will be created in cases where the 'shadow of the future' is large (Axelrod, 1984). These are conditions like a person's *intention to stay*, but also *ownership* of the house in which a person lives. Home ownership increases not only a person's interest in the neighbourhood (Campbell, 1990), but it also enlarges the time horizon, 'the shadow of the future', of living in a particular neighbourhood (DiPasquale and Glaeser, 1999). If someone thinks s/he will stay in a particular neighbourhood s/he has a stronger incentive to invest in the community. We are aware that such a decision can also be a consequence of community, though (see below).

Alternatives

A third type of condition refers to the relational alternatives that a person has outside of the neighbourhood. The attractiveness of investments in neighbours and the readiness to engage in contacts with neighbours and create a community depend on the support that a person gets from participation in relations outside of the neighbourhood, for example, at the workplace. Wellman (1999, see also Wellman *et al.*, 1988) calls this type of network a 'personal community' (i.e. a community that is not necessarily bounded to a particular place). Hence, we expect that community in the neighbourhood is more likely to emerge if residents have *few alternatives* to neighbourhood contacts.

Interdependencies

The fourth type of condition relates to interdependencies. People who depend on each other will invest in each other and, as a result, will create more community at least as long as the expected advantages outweigh the hassles of being interdependent. Therefore, in order to know where and when a local community will be created we have to specify the conditions that make people interdependent. The 'sharing group' idea is a major way of looking at interdependencies among people (Lindenberg, 1986, 1997). If people in a local setting have to share goods and if they have to make arrangements concerning the use of goods, for example, the street they live in, parking lots, trash cans, playgrounds, they establish

contacts with each other and—sometimes as a byproduct—social networks and community emerge. According to this perspective people with few resources, i.e. those who have a lower education or income, are forced to share more commodities with each other (see Portes, 1998, on forced solidarity). Note that this expectation contradicts the 'investment considerations' discussed earlier.

There are still other types of sharing and interdependencies. *Sharing knowledge*, for example, knowledge on who belongs to the neighbourhood, is another example of an interdependency that will stimulate people to invest in each other and the community. A similar expectation can be formulated on the community-enhancing effects of *common activities* in a neighbourhood such as, for example, cleaning up the neighbourhood or signing a petition. These will also contribute to the creation of community. Further, interdependency also has a structural aspect. If there is already a social network in a neighbourhood, that is, if *neighbours have contact with each other*, it will be easier and more important for a newcomer to come into contact with others within that network (Verbrugge, 1977, 1979; Feld, 1981, 1984; Portes, 1998). One might summarize the above hypotheses and say that people want to join in with the others in the neighbourhood if there already exists a community in that neighbourhood (Glaeser, 2001).

A Note On the Relations Among the Four Conditions and the Issue of Contexts and Individuals

Our arguments so far imply that the four conditions for community matter simultaneously. Yet, theoretically, we can also argue that there is a sequence in the four conditions: first and basically, people have to *meet* to establish relationships in the neighbourhood; if the relationships are attractive, people will *invest* in each other and the more they will do that the fewer *alternatives* to these relationships will be created. In consequence, they will become *mutually dependent* on each other, and will create a community.

Furthermore, some of the conditions specified are probably more closely related to the concept of community itself than other conditions; some can even be considered as endogenous. This holds in particular for the interdependencies among neighbours, i.e. the degree to which one undertakes activities together, and for the number of neighbours in one's personal network, i.e. the relational alternatives. In the analyses, we therefore estimated additional models, which contained only exogenous conditions.

A further issue is the difference between contextual and individual determinants for community. Some conditions, presumed to be causal, are clearly at the contextual or neighbourhood level, as for example homogeneity of the neighbourhood. Yet, other conditions can be investigated on both levels and it is not clear whether aggregated indicators have a stronger impact on community than indicators measured on the micro-level. Therefore we also included for every condition on the individual level the average of the neighbourhood in the model and checked for an additional impact on community. However, we did not find any additional, stable effect of these macro-level conditions if the corresponding individual-level characteristics were already taken into account. Nor did the individual-level effects disappear or significantly decline in effect after the corresponding macro-level conditions had been included. We also inquired into interaction effects between micro- and macro-level indicators, following Poortinga (2006) who showed that individuals with more social support do report better social health in countries with high social capital than in countries with low levels of social capital. Again, we could not establish any stable result.

Data, Measurements, and Analytical Strategy

Data

The data for this study was gathered in 1999–2000 in the Survey of Social Networks of the Dutch (SSND). This data is the most detailed representative data on personal networks and neighbourhood communities in the Netherlands that exists. Moreover, the areas considered as neighbourhoods probably are a rather good approximation of what people understand to be their direct local environment (see also below). While many studies on local communities in the Netherlands compare only a small number of neighbourhoods, our study improves on existing studies by employing a representative sample of 168 neighbourhoods. Previous studies on community in neighbourhoods are mostly qualitative studies referring to one or a few neighbourhoods (for the Netherlands, see e.g. Blokland, 2003) or, if they are quantitative they often refer only to a particular social group (e.g. Dignum, 1997 and Thomese, 1998 on neighbourhood relationships of the elderly in the Netherlands).

The data includes information on 1,007 individuals between the age of 18 and 65, representative of the

Dutch population. Out of the total 500 Dutch municipalities 40 were sampled representing the different Dutch provinces and regions while taking into account differences in the number of inhabitants per municipality. Subsequently, four neighbourhoods were randomly sampled in each municipality (sometimes five, if too few addresses were available in these neighbourhoods). A neighbourhood was defined by a zip code of five positions.[2] Such an area includes 230 addresses on average and corresponds to the route of a postman, i.e. this area is easy to walk and usually without great physical barriers. In each neighbourhood, we randomly sampled 25 addresses. In the first 12 households, we asked to interview the household member older than 18 years of age who was next in line to celebrate a birthday. We interviewed a member of the other 13 households only if there was a respondent who had a paid job. This way, we obtained two samples, one representative for the Dutch population ($n = 593$) and one representative for the Dutch labour force ($n = 728$). We used this procedure in order to guarantee enough interviews with working respondents, since other projects draw on information about working people. The total data set consists of 1,007 individual respondents in 168 neighbourhoods. In the description of our data, we use only a part of the sample that is representative of the Dutch population. In the explanatory analyses, the whole sample is used, controlling for the respondent's active participation in the labour force.

The data was further enriched with neighbourhood information from the Dutch Central Bureau of Statistics (called *Kerncijfers Wijken en Buurten*, CBS, 2001). This data provides information on the concentration of migrants in a neighbourhood, or the number of families with children. It has the disadvantage that neighbourhoods are defined as a much larger area than we did (it refers only to four-position zip codes). However, we assume that it provides a proxy for the degree of urbanization and neighbourhood composition, such as the percentage of migrants in the neighbourhood.

Measurements

Independent variables

To measure *meeting opportunities*, we asked about the presence of 30 different facilities in a neighbourhood, such as shops, parks, schools, workplaces and churches. For each facility, respondents indicated whether it was available in the neighbourhood and how frequently they made use of it. All 30 facilities constitute a scale with a reliability of 0.85 (Cronbach's α). The sum score was used in the analyses. The length of an individual's residence was measured directly as the number of years and months the respondent has lived at the given address. We also asked whether respondents had children in their household and whether they had a paid job (both variables were coded as dummy variables in the analyses). To establish the degree of residential stability in the neighbourhood, we asked the respondent to rate the degree of fluctuation (on a three-point scale).

With regard to the *investment considerations* of the respondent to engage in relationships to others in the neighbourhood and to create a community, we measured education as the highest finished education (an eight-point scale). Home ownership has been asked directly (coded as a dummy variable). The homogeneity of the neighbourhood was assessed by questions whether the residents were similar with regard to income and family composition. Finally, the respondents rated the likelihood that they would still live in the neighbourhood in about two years (on a three-point scale).

Relational *alternatives* were calculated as the proportion of non-neighbours in the network of the respondent. The number of network members is calculated as the sum of all different persons mentioned in response to 11 name-generating questions (see Fischer, 1982 for more information on name-generating items). The size of these networks varies between 1 and 30 persons with an average of 12 persons and an SD of 4 persons. Appendix 1 provides an overview of the name-generating questions in the SSND. Neighbours entered the network via these name-generating questions.

With regard to *interdependencies*, we asked not only about common activities, such as cleaning the neighbourhood together and calling municipal officials or the police if necessary, but also activities such as getting together for a coffee or a drink. The sum score of these activities was used in the analyses. Further, we asked whether the respondent was certain whether a person whom he met on the street lived in the neighbourhood (on a three-point scale). Finally, we asked for contacts among the neighbours of the respondent to indicate connectedness and structural interdependencies (coded as dummy).

In all the analyses, we controlled for sex and age of the respondent and whether he or she was married. That last control was added because earlier research demonstrated that married people differ from non-married people in their neighbourhood activity (see e.g. Greenbaum and Greenbaum, 1985; Campbell and Lee, 1990). In addition, we controlled for

the degree of urbanization of the neighbourhood and for the percentage of migrants. Urbanization is measured by a five-point scale and based on the number of addresses per square kilometre where a value of 1 indicates a very high urbanized neighbourhood with more than 2,500 addresses per square kilometre; while a value of 5 indicates an almost rural neighbourhood with less than 500 addresses per square kilometre. Both the variables for urbanization and the percentage of migrants are taken from the data provided by the Dutch Central Bureau for Statistics (CBS).

Table 1 provides a description of the variables used in the analyses.

Dependent variables

As discussed, we considered the *dependent variable* community, as the realization of multiple goals in one and the same group of people. Therefore, in order to measure the degree to which community is created in a certain neighbourhood, we measured the degree to which people realize their goals within their neighbourhoods. We distinguished between four basic well-being goals: comfort, stimulation, affection, and status (see Lindenberg, 1996). Table 2 presents the items used to measure the realization of these four goals in the neighbourhood.

Descriptive analyses of our data show that the majority of our respondents feel safe in their neighbourhood, i.e. realizes comfort (93 per cent), and considers the relationships as good in general, i.e. realizes affection (82 per cent). However, considerably fewer respondents felt that there was a lot going on in the neighbourhood. The neighbourhood does not seem to be the best place to realize stimulation (20 per cent). Finally, more than two-thirds of the residents realize personal status in their neighbourhood (70 per cent), a figure which is considerably high.

In the analyses, the four dimensions of community were used separately as well as combined into one score. We also used the number of neighbours in the personal network as an alternative dependent variable. The number of neighbours in a personal network as an indicator for neighbouring and community is more closely related to previous conceptualizations of community.

The zero-order correlation among the dependent variables and the four dimensions of community are presented in Table 3. The table shows that the four achieved goals are correlated to different degrees: the association between affection and status is strongest, followed by that between affection and comfort. Other correlations among the four goals are much weaker. Furthermore, the number of neighbours in personal networks is only weakly associated with the level of community.

Table 1 Independent variables in the analyses ($n = 1{,}007$ respondents, description given for the representative sample only, $n = 593$)

	Individual respondents Average (SD)	Range
Meeting opportunities		
Facilities in the neighbourhood	8.32 (5.37)	0–24
Length of residence	11.90 (10.84)	0.1–53
R has a paid job	0.58 (0.49)	0–1
Children in household	0.25 (0.44)	0–1
Residential mobility	1.58 (0.84)	1–3
Investment considerations		
Education	5.04 (2.25)	1–8
Home ownership	0.65 (0.48)	0–1
Intention to stay	1.57 (0.83)	1–3
Homogeneity in neighbourhood with regard to		
Income	2.03 (0.89)	1–3
Family composition	2.01 (0.90)	1–3
Alternatives		
Relative network size within neighbourhood	20.65 (14.63)	0–100
Interdependencies		
Common activities	2.32 (2.21)	1–10
R knows where others met in the street live	2.60 (0.72)	1–3
Contacts among neighbours	0.55 (0.49)	0–1
Control variables		
Males	0.55 (0.49)	0–1
Married/cohabiting (proportion)	0.62	0–1
Age	47.3 (12.00)	19–66
Urbanization of neighbourhood (1 = highest)	3.03 (1.34)	1–5
Percentage migrants in neighbourhood	5.96 (8.03)	1–54

R, respondent.

Analytical Strategy

The data on individual respondents are nested in 168 neighbourhoods. These respondents might know each other as neighbours and influence each other's contribution to the creation of community. Because of that, the assumption of ordinary least square regression analyses on the independence of the

Table 2 Dependent variables in the analyses ($n = 593$)

Variable	How constructed/item example	Average (SD)	Range
Community	Sum score of four different goals: *Stimulation*: There are a lot of things going on in this neighbourhood. *Comfort*: I feel safe in this neighbourhood. *Affection*: The contacts in this neighbourhood are generally good. *Status*: I enjoy respect in this neighbourhood.	5.91 (1.34)	0–8
No. of neighbours in networks	Entered network via name generating questions/related on the total number of network members	0.19 (0.13)	0–1
Interdependency	Sum score of collective action, contacts among neighbours and knowledge on who lives in the neighbourhood	5.56 (2.54)	1–14
Goals/disaggregating community			
Stimulation	There are a lot of things going on in this neighbourhood.	0.59 (0.801)	0–2
Comfort	I feel safe in this neighbourhood.	1.92 (0.298)	0–2
Affection	The contacts in this neighbourhood are generally good.	1.83 (0.497)	0–2
Status	I enjoy respect in this neighbourhood.	1.56 (0.628)	0–2

Source: SSND, 593 respondents in 168 neighbourhoods.

Table 3 Zero-order correlation among dependent variables

	Community	No. of Neighbours (n)	Stimulation	Comfort	Affection
Community	1				
No. of neighbours (n)	0.13**	1			
Stimulation	0.65**	−0.03	1		
Comfort	0.34**	−0.02	0.04	1	
Affection	0.63**	0.02	0.07	0.18**	1
Status	0.65**	0.06	0.04	0.08*	0.40**

Source: SSND, 593 respondents in 168 neighbourhoods.
*Significance: **$p<0.01$; *$p<0.05$.*

observations is not valid. Therefore, we applied a multilevel (or hierarchical) linear regression model which takes the nested structure of the data into account (see Snijders and Bosker, 1999; Van Duijn *et al.*, 1999, for a general description of multilevel models). The respondent's neighbourhood is the higher level, while the respondent's variables are at the lower level. All explanatory analyses presented in the next section are based on such a multilevel regression model.

We are aware that the number of respondents within neighbourhoods is sometimes small (e.g. only five respondents). However, in multilevel analyses, the standard errors of the regression coefficients and variance parameters are not determined by the number of cases per cluster—in this case, the number of respondents per neighbourhood. Rather, these parameters are determined by the total number of clusters, i.e. the number of neighbourhoods. The limited number of respondents per neighbourhood does, however, imply that the estimation of the random coefficients might be unstable, yet this is not the focus of our analyses (see the aforementioned literature for more discussion on that issue).

Because of that we did not spend much effort to include random coefficients in our models; rather we estimated more straightforward multilevel models in which the variance is separated into a group variance and an individual-level variance. The random part of our models merely consists of the two types of variances on the group and the individual level, with other variables considered as being fixed.

In the tables presenting the multilevel analyses, we ordered the variables according to the theoretical arguments rather than the level of measurement. Each variable that is measured on the neighbourhood level is printed in capital letters and the variables on the individual level in small letters.

Results

When looking at the number of goals achieved, about 10 per cent of our respondents achieve no or only one goal in their neighbourhood and about the same number of respondents realizes all four goals in the neighbourhood. Those who realize two goals, about 26 per cent, realize mostly 'comfort' and 'affection'. 'Stimulation' is the goal which is only rarely achieved within a neighbourhood, either in combination with other goals or as a single one. The majority of the respondents, more than 50 per cent, realizes three of the four goals in their neighbourhoods.

Our explanatory analyses are organized as follows: First, we present the analyses on the separate dimensions of community (Table 4). Then, we present analyses on the combined score of community and on the alternative, more traditional indicator of community as well, i.e. the number of neighbourhood relationships. Lastly, coefficients for both dependent variables are estimated while including only conditions that are exogenous to community and the number of neighbours in one's network (Table 5).

In Table 4, the four goals are separately analysed under the conditions for community creation that follow from our theory. Considering the *opportunities to meet* others, the table shows that in particular the realization of the goals 'stimulation' and 'status' are explained by the indicators for meeting opportunities. People who have a job do experience more stimulation but realize less status in their neighbourhood. Children in the household contribute to the realization of 'affection' and 'status'. Furthermore, facilities in the neighbourhood make it more stimulating to live there.

With regard to the importance of *investment considerations* for the creation of a community, the higher educated people feel more easily bored in their neighbourhood. Owning the house one lives in has no effect on all aspects of community considered, yet the intention to leave the neighbourhood shows a strong association with all the four goals: the lower this intention, the more one achieves comfort, stimulation, affection, and status in ones neighbourhood. Apparently, planning to leave the neighbourhood affects investment decisions immediately. Furthermore, a neighbourhood that is homogeneous with respect to income enhances the realization of the goals 'comfort' and 'affection', while a neighbourhood that is homogeneous with respect to family composition enhances the realization of the goal 'status'.

The number of neighbours in the personal network, as a reversed measure of the relational *alternatives* that one has, has a positive impact on the realization of 'affection' and 'stimulation'.

Considering the *interdependencies*, it turns out that common activities enhance the realization of 'stimulation', 'affection', as well as 'status'. Furthermore, if respondents know where others whom they meet in the street live, they feel more affection, more comfortable, and they realize more status, but they do not feel more stimulated. More contacts among a respondent's neighbours contribute to the realization of the goal 'affection'. In general, the indicators for interdependencies contribute most to 'affection' and least to 'comfort'.

Of the control variables on the level of the individual, effects of age go in both directions for the different goals: older people realize more status in their neighbourhoods but younger people realize more stimulation. We did not find any effect of being married or of gender in these models. Considering the control variables on the neighbourhood level, the analysis shows that the percentage of migrants in a neighbourhood dampens comfort and affection.

According to these analyses, 'status' and 'affection' are better explained than 'stimulation' and or even more so than 'comfort'. The latter is due to the fact that comfort and stimulation do not vary much among our respondents. For all analyses, the neighbourhood-level variance is much smaller than the individual-level variance, but the percentage of explained variance is higher at the neighbourhood level than at the individual level.

Table 5 shows the models for the two dependent variables, i.e. the two conceptualizations of community. The first two columns summarize full models while the two right hand columns summarize models that include only exogenous conditions.

Table 4 Multilevel analysis of different aspects of community in the neighbourhood (β-coefficient, SE parentheses)

	Comfort	Stimulation	Affection	Status
Meeting opportunities				
FACILITIES	0.009 (0.010)	0.097 (0.027)*	0.022 (0.016)	0.008 (0.019)
Length of residence	0.009 (0.012)	−0.005 (0.030)	0.018 (0.019)	0.020 (0.022)
R has a paid job	−0.008 (0.010)	0.047 (0.026)***	−0.025 (0.016)	−0.040 (0.020)**
Children in household	0.002 (0.011)	0.016 (0.028)	0.030 (0.016)***	0.035 (0.017)**
RESIDENTIAL MOBILITY	−0.007 (0.012)	−0.024 (0.035)	0.005 (0.017)	−0.032 (0.021)
Investment considerations				
Education	0.010 (0.011)	−0.050 (0.025)**	−0.018 (0.017)	−0.027 (0.010)
Home-ownership	0.006 (0.011)	−0.023 (0.028)	0.021 (0.017)	0.007 (0.021)
Intention to leave	−0.043 (0.011)*	−0.066 (0.027)**	−0.066 (0.017)*	−0.055 (0.020)*
HOMOGENEITY: income	0.020 (0.011)***	−0.019 (0.033)	0.030 (0.016)***	0.002 (0.020)
HOMOGENEITY: family composition	0.006 (0.012)	−0.031 (0.034)	−0.001 (0.017)	0.051 (0.020)**
Alternatives				
Relative number of neighbours in the network	0.005 (0.010)	0.044 (0.024)***	0.049 (0.016)*	0.024 (0.019)
Interdependencies				
Common activities	0.009 (0.010)	0.096 (0.026)*	0.063 (0.016)*	0.064 (0.019)*
R knows where others met in the street live	0.018 (0.010)***	0.034 (0.027)	0.064 (0.016)*	0.109 (0.020)*
Contact among neighbours	0.007 (0.010)	0.029 (0.025)	0.039 (0.016)**	0.025 (0.019)
Individual-level control variables				
Gender	0.007 (0.010)	0.023 (0.025)	−0.012 (0.016)	−0.030 (0.019)
Being married	−0.003 (0.012)	0.005 (0.030)	0.007 (0.018)	0.001 (0.022)
Age	−0.021 (0.012)	−0.123 (0.031)*	0.014 (0.019)	0.082 (0.023)*
Neighbourhood-level control variables				
URBANIZATION	0.006 (0.012)	−0.011 (0.036)	0.020 (0.018)	0.026 (0.021)
% MIGRANTS	−0.019 (0.010)	0.018 (0.035)	−0.033 (0.016)**	0.015 (0.020)
Intercept	2.915 (0.011)	1.619 (0.031)	2.810 (0.015)	2.548 (0.018)
Deviance	427.363	227.604	1315.435	1669.764
Explained variance				
Total	5%	8%	17%	19%
At neighbourhood level	43%	15%	86%	96%
At individual level	2%	7%	15%	12%

Note: Variables at the neighbourhood level are indicated by capital letters.
Source: SSND, 1,007 respondents in 168 neighbourhoods. All variables are centred.
*Significance: *$P<0.01$; **$P<0.05$; ***$P<0.10$; R, respondent.*
Bold letters indicate headers for the different theoretical conditions.

The creation of *community* as a group in which people realize multiple well-being goals depends on the facilities in the neighbourhood, but is not influenced by residential mobility or length of residence. Children in the household do enhance community creation. Further, in neighbourhoods with few income differences more community is created. Interestingly, people with lower education create more community in their neighbourhoods. As in the previous models one's intention to leave has a negative effect on the creation of community. The degree of community in neighbourhoods is higher if people have fewer alternatives to relations with neighbours. Lastly, all three indicators of interdependency have a strong impact on community creation.

The model on community as the *number of neighbours* in the social network shows some interesting differences in comparison with the model on community. First, the number of facilities in the neighbourhood does not matter for the number of neighbours in the personal network. Furthermore, if one does not have a paid job, the chance that one

Table 5 Multilevel models on neighbours in the networks, interdependency, and community

	Community	No. of neighbours	Community (exogenous conditions only)	No. of neighbours (exogenous conditions only)
Meeting opportunities				
FACILITIES	0.146 (0.043)*	0.016 (0.032)	178 (0.044)*	0.034 (0.033)
Length of residence	0.041 (0.048)	−0.035 (0.038)	–	–
R has a paid job	−0.017 (0.042)	−0.056 (0.033)***	−0.009 (0.044)	−0.053 (0.034)
Children in house	0.081 (0.040)**	0.047 (0.035)	0.094 (0.046)**	0.049 (0.035)
RESIDENTIAL MOBILITY	−0.040 (0.052)	0.021 (0.033)	−0.116 (0.044)**	−0.038 (0.033)
Investment considerations				
Education	−0.086 (0.043)**	0.128 (0.034)*	−0.110 (0.044)**	0.123 (0.033)*
Home-ownership	0.032 (0.045)	0.004 (0.035)	0.106 (0.047)**	0.035 (0.035)
Intention to leave	−.247 (0.044)*	0.066 (0.035)***	–	–
HOMOGENEITY: income	0.098 (0.040)**	0.003 (0.031)	0.142 (0.042)*	0.012 (0.032)
HOMOGENEITY. Family composition	0.036 (0.041)	0.028 (0.032)	0.064 (0.042)	0.041 (0.033)
Alternatives				
Number of neighbours	0.118 (0.041)*	–	–	–
Interdependencies				
COMMON ACTIVITIES	0.231 (0.042)**	0.151 (0.032)**	–	–
R knows where others live who are met in the street	0.185 (0.054)*	0.053 (0.033)***	–	–
Contact among neighbours	0.109 (0.040)*	0.062 (0.031)**	–	–
Individual-level control variables				
Gender	−0.002 (0.040)	−0.014 (0.032)	0.009 (0.042)	−0.014 (0.032)
Being married	0.018 (0.054)	0.054 (0.037)	0.082 (0.049)	0.077 (0.037)***
Age	−0.044 (0.049)	0.063 (0.038)***	0.073 (0.045)	0.088 (0.034)**
Neighbourhood-level control variables				
URBANIZATION	−0.033 (0.061)	−0.039 (0.037)	0.092 (0.055)***	0.023 (0.038)
% MIGRANTS	−0.022 (0.053)	−0.068 (0.032)**	−0.060 (0.055)	−0.078 (0.037)**
Intercept	5.902 (0.046)	0.003 (0.033)	5.903 (0.050)	−0.003 (0.034)
Deviance	3188.151	2705.433	3298.518	2746.597
Explained variance				
Total	10%	9%	10%	5%
At neighbourhood level	46%	8%	23%	5%
At individual level	17%	42%	8%	24%

Note: Variables at the neighbourhood level are indicated by capital letters.
Source: SSND, 1,007 respondents in 168 neighbourhoods. All variables are centred.
*Significance: *$P<0.01$; **$P<0.05$; ***$P<0.10$; R, respondent.*
Bold letters indicate headers for the different theoretical conditions.

includes more neighbours in the network is slightly higher. Second, higher educated people include more neighbours in their network, but, as mentioned, they realize less community in their neighbourhoods than lower educated people. The intention to leave matters more for the creation of community than for the inclusion of neighbours in the network. In addition, the homogeneity of the neighbourhood has no relation with the number of neighbours. Furthermore, the indicators for interdependence are also not as strongly related to neighbouring than to community, although in particular common activities are an important predictor. Lastly, the percentage of migrants in the neighbourhood affects the number of neighbours in the network negatively.

When considering the models which include only exogenous conditions, it can be noticed that residential stability and home-ownership become important predictors of community.[3] Furthermore, a weak effect of urbanization is found: in more rural areas slightly more community is created. In the model on neighbourhood relationships the predictors such as age, being married and percentage of migrants gain in importance.

Conclusion and Discussion

Conclusion

The first conclusion of our analyses is that there is, or still is, a considerable amount of community within local neighbourhoods in the Netherlands. More than 50 per cent of our respondents realize three of the four goals in the neighbourhood in which we have inquired. Yet, there is also a considerable variation in the level of community. Furthermore, the association between the number of neighbours in residents' social networks and community is substantial, but there are other conditions that are even more important.

Second, we tested four main hypotheses on differences in community between neighbourhoods and found empirical support for all of them. Most important for the creation of community are interdependencies among neighbours, followed by investment considerations, i.e. the intention to stay in the neighbourhood. Particularly, people who are more tied to the neighbourhood because of having young children realize more local community. Furthermore, in a neighbourhood with more facilities, the level of community is higher, probably because there are more opportunities to meet other residents. This finding refutes the popular opinion that urbanization diminishes community, since many neighbourhood facilities are found in urban areas. Facilities—even if they are related to the market, such as shops—function as meeting places for neighbours and as such they enhance the emergence of communities. Homogeneity of the neighbourhood with respect to income also enhances the degree of community. Contrary to our expectation, those with fewer resources such as education, create more community. It also became clear that having relational alternatives outside of the neighbourhood detracts from community life within the neighbourhood. We did not find an effect of length of residence and mobility, yet when estimating the model without interdependencies and alternatives residential mobility and ownership became important conditions for community.

A third result is a by-product of our analyses: we discovered that urbanization and ethnic heterogeneity, both of which are in the research literature often held responsible for the decline in community have no effect in multivariate analyses. In the model with only exogenous conditions included, urbanization has a weak effect: in smaller towns people create more community.

Fourth, we showed that the number of personal relations in the neighbourhood did not have such a strong effect on the level of community as assumed in many other studies. However, the comparison between community and the number of neighbours in personal networks as an alternative measures for community, teaches that some conditions that are important for the creation of community do not at all influence the number of neighbours in a personal network. While community is created if residents intend to stay in the neighbourhood, this is not important for the inclusion of neighbours in the personal network. Furthermore, higher educated people include more neighbours in their network, yet they create less community and the number of neighbourhood facilities enhances community but not the inclusion of neighbours in the network. Interestingly, the percentage of migrants in the neighbourhood correctly predicts a lower number of neighbours in a personal network.

Finally, it has to be emphasized that the analyses presented here are an improvement upon existing analyses in the sense that are they are based on a rather large data set that is representative of the Dutch population and also largely representative of Dutch neighbourhoods. In addition, in our study neighbourhoods seem to correspond relatively clearly to what people consider to be their neighbourhood compared with most existing research that employs data on much large areas and larger groups of 'neighbours'.

Discussion

The fear that community might disappear is related to the alleged consequences of community. When people live in a community—local or non-local—they are expected to be more helpful, loyal, have fewer conflicts with each other and the like, in short, they are expected to show more solidarity behaviour. In a first analysis (data not shown), while measuring solidarity behaviour as a sum score of helping in need, contributing to collective goods, making up for mishaps, and resisting the temptation to breach agreements, community affects solidarity behaviour quite strongly, but there are also effects of other conditions that were considered earlier in the analysis of neighbourhood community. More in detail, being interdependent, having no relational alternatives outside of the own neighbourhood, owning one's house, being married, living in a neighbourhood with little residential mobility, and earning a high-income homogeneity promote solidarity behaviour. Interestingly, a high urbanization and living in a neighbourhood with migrants do affect solidarity behaviour negatively, whereas they do not affect the degree of community.

We aimed to corroborate the argument that the ease with which community can be created and maintained is a major facilitator in the creation of a community. We provided some empirical support for this, for example, if people have more similar lifestyles it is generally easier to create a community. Yet, this educated guess might be made more productive theoretically in terms of predictions by coming up with other adequate auxiliary assumptions on the social conditions that make social interaction easier and less costly, for example on sharing the same language.

A criticism of our interpretations might be that we cannot always clearly disentangle causes and effects of local community. For example, the intention to stay in a neighbourhood can be a cause of community, as we assumed, but it might also be a consequence of community. Similarly, the number of common activities might be due to the strength of community rather than being the cause of the high degree of community. However, other conditions, such as similarities in income, or the number of neighbourhood facilities can hardly be a consequence of local community. This study takes the causes and effects of local community together in a sketch of a theory on community and puts it to an empirical test. Earlier studies met with the same difficulty of separating causes and effect (see e.g. Sampson, 1988; Campbell and Lee, 1992). This problem will be partially solved once longitudinal data become available.

In future studies, on the conditions that promote community we will differentiate more between the neighbourhood facilities. For example, schools might have another effect than shops and effects might also differ among groups of individuals. In addition, the number of times a resident visits a particular facility is probably of importance too. Another question we are working on is the relationship between alternatives to neighbourhood relationships and the bundling of social settings: if social settings such as work, neighbourhood, and family are bundled, there will probably be more community (Logan and Spitze, 1994). Yet, one might also expect that strong ties to family weaken involvement in neighbourhood communities. Further, it would be interesting to inquire into the costs of being structurally (or otherwise) dependent. Having contact with many people is not always a pleasure, and certainly not in a neighbourhood. Costs, or liabilities, of having strong contacts may include intrusion into one's privacy or a high degree of social control (Völker and Flap, 1997).

To conclude, neighbourhoods in the Netherlands differ in the degree to which people realize community. For the differences at the neighbourhood level the number of facilities, i.e. meeting opportunities, has been shown to have an impact on community creation. At the level of the individuals, the most important association with community creation has been found for the interdependencies among neighbours.

Notes

1. On the basis of his prior theories of goals, well-being and sharing groups, Lindenberg developed this theory of community in the context of a multiple study project on community in neighbourhoods, schools (see Kassenberg, 2002), vacations (Philips *et al*., 2002), and Local Exchange Trading systems (see Hoeben, 2003). This project was financed by the Netherlands Organization for Scientific Research.
2. The zip code system in the Netherlands consists of four numbers and two letters for every address. The more identical positions in a zip code, the closer the addresses are located (e.g. 3512EW is closer to 3512EX than to 3584CS). Each six-position zip code has 20 addresses on average. We chose to define a neighbourhood by the addresses within a zip code area of four numbers plus one letter (e.g. 3512E). Such an area includes 230 addresses on average and corresponds to the walk of a postman.
3. Strictly speaking, the degree of residential mobility can also be an outcome of community. Leaving it out of the models does not affect the coefficients of the other conditions.

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Appendix 1

Name-generating items in the Survey of Social Networks of the Dutch (SSND):

1. *Getting a Job:* Who helped you get your current job?

2a. *Asking for Advice:* If you have a problem at work, whom do you ask for advice?

2b. *Providing Advice:* Are there any colleagues who come to you and ask for advice regarding a problem at work?

3. *Sour Social Capital*: People at work do not always get along and sometimes get in each other's way. Are there any persons who cause you trouble at work?
4. *Cooperation:* Who are the two colleagues with whom you cooperate most frequently?
5. *Supervisor:* Who is your boss?
6. *Getting a House:* Who are the persons who helped you get your house/apartment, or the persons from whom you bought your house/apartment?
7. *Minor Repairs:* If you are doing minor repairs in or around your house and you need help, whom do you ask?
8. *Keys:* Is there somebody outside of your household who has a key to your house/apartment?
9. *Direct Neighbours:* Who are your direct neighbours? May I have the names of two of them?
10. *Visiting:* Who are the persons you visit from time to time?
11. *Core Discussion Network:* With whom did you discuss important personal matters during the last half year?
12. *Open Question:* If you look at the list of names we made during this interview, are there persons who are important to you in whatever area of your life, who should be added?

For every name generator a maximum of five different persons could be mentioned.