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When reputation and residential satisfaction diverge

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Abstract: *In this paper an agent-based model for the choice of residential locations is presented, which is based upon Social Network Analysis. The model explains how the various reputations of a neighbourhood depend upon insiders' and outsiders' assessments of the area. For outsiders, reputations form a cheap alternative to the procurement of exact knowledge of the residential satisfaction at a specific location and are thus instrumental in the decision to settle or invest in an area. The procurement of insider information on the neighbourhood along social ties does help to make a more accurate assessment of the area and this shift in information flows could be very useful in tackling the stigmatization of neighbourhoods. The explanatory power of the model is then illustrated by developments in two Rotterdam neighbourhoods, both of whom are trying to shed their stigma in recent years with mixed results.*

1. Introduction

Reputation or image plays a central role in the way neighbourhoods develop over time. A bad reputation or stigma might have dire consequences for the ability to attract private investment and the demand for housing in the area. Residents of a stigmatized neighbourhood may feel that their place of residence impedes their access to the labour market and prevents them from forming bonds with those living outside of the area (Dean & Hastings, 2000; Atkinson & Kintrea, 2001). Whether residents are right or wrong in thinking that they are being stigmatized alongside their neighbourhood is beside the point. The simple fact that inhabitants feel bad about outsider's views on their neighbourhood (Tsftati & Cohen, 2003) should be enough reason for concern for professionals involved in improving the area. This consideration has received a new impetus due to the implementation of urban regeneration programs across Europe, especially in those cases where marked advances in the quality of life weren't met with an improved reputation of the neighbourhood.

While few involved in Urban Studies dispute the importance of a neighbourhood's reputation in the decision to live or invest in an area, the concept itself remains ill defined in the work of sociologists, anthropologists, social psychologists and social geographers. Ever since Suttles published his work on "the defended neighbourhood" in 1972, neighbourhood reputations were seen mainly as a defensive mechanism and have been cast in terms of an unfortunate division between internal and external reputations. Not only does this division lead to a prepossessed opinion about accurate appraisals made by residents and stereotypical images of the neighbourhood held by outsiders, but the definition in use doesn't reflect the more complex nature of reputations. This paper tries to fill in some gaps in the Neighbourhood literature by presenting a more thorough exposition on neighbourhood reputations and by showing how reputations are used as a cost saving rather than a defensive mechanism on the part of non-residents.

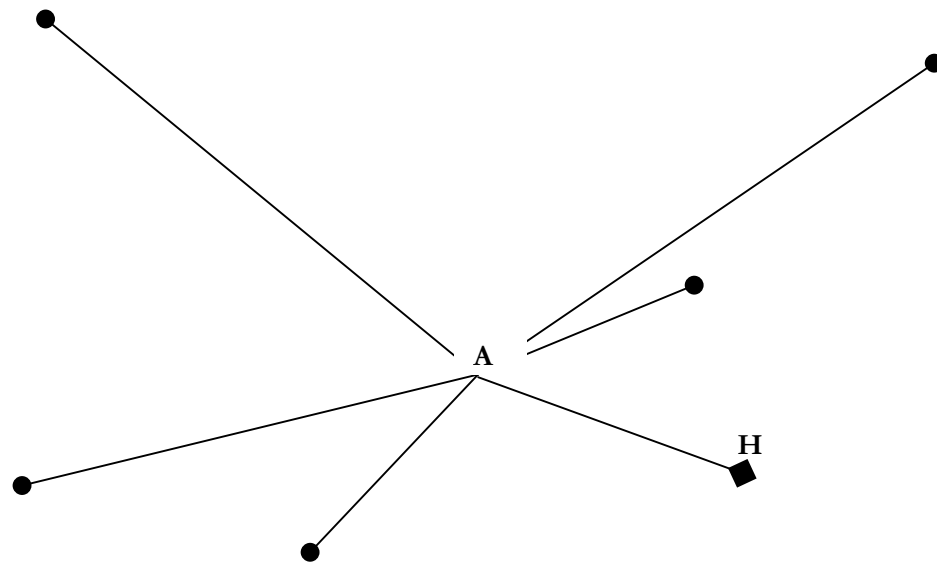
In section 2 a model for the choice of residential location is presented, which is based upon the agent-based or egocentric approach in Social Network Analysis. The role that reputation plays in this agent-based model for choice of location (ACL) can be traced back to the Regret system, which is used to establish the reputation of e-traders (Sabater & Sierra, 2001, 2002). The way in which reputations are part of the ACL-model is explained in section 3, while the dynamics of reputations and neighbourhood change will be presented in section 4. Recent experiences in two (formerly) ill-reputed neighbourhoods in Rotterdam, Schiedam in the Northwest and the Beverwaard in the Southeast, are used in section 5 to illustrate the power of the agent-based approach in Social Network Analysis in explaining the popularity of an area among residents, investors and visitors. The main findings of the previous sections and some policy-implications for dealing with stigmatized neighbourhoods are presented in the concluding section.

The model presented here doesn't try to explain how reputations are constructed, nor does it tell what might be the underlying causes for a bad or good reputation for the neighbourhood. Although some tentative comments will be made about the construction of reputations in section 5, the main purpose of this paper is to show how reputations are used in the choice of location for residing and investing and how policy-makers might want to deal with the stigmatization of neighbourhoods, rather than with how reputations are being formed and shaped.

2. An agent-based model for choice of location

Reputation and similar concepts such as image, prestige, standing and goodwill have long been studied in psychology, economics, marketing and sociology (for a review on the interdisciplinary use of reputation the reader is referred to Shenkar & Yuchtman-Yaar, 1997). Yet in all these fields of research reputations are cast along temporal lines; they are slowly built and quickly lost over time by individuals, groups and organizations, rather than being attached to certain places along both temporal and spatial lines. Social network models that deal with the existence of online communities or e-commerce in an environment where agents do not meet face-to-face (e.g. Kollock, 1994; Sabater & Sierra, 2001, 2002; Standifird, 2001), do lend reputation its temporal and spatial context. These types of models provide an excellent backbone for analyzing the role of neighbourhood reputations in the decision to reside in an area.

Figure 1 The agent-based network

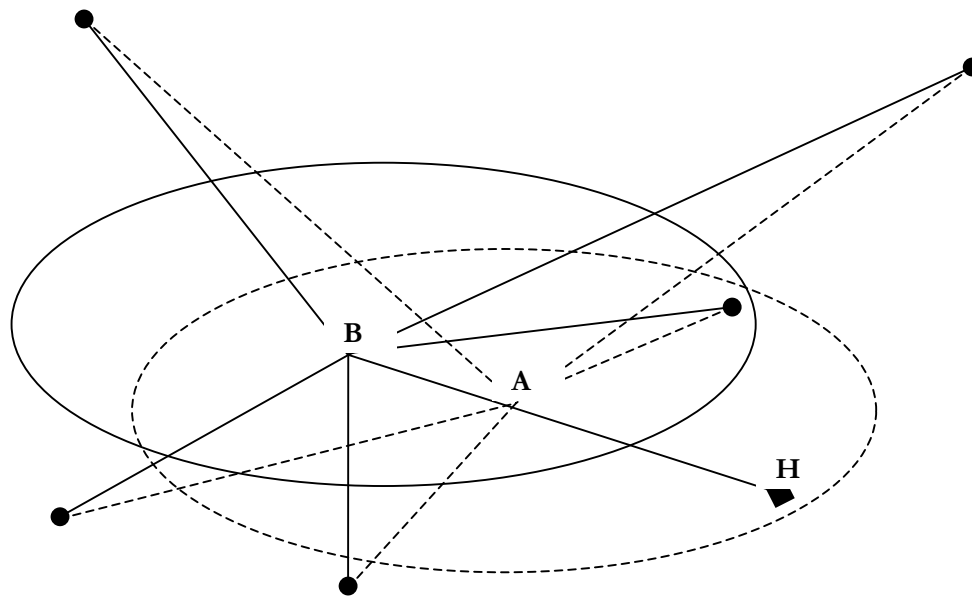


The starting point for the agent-based or egocentric approach in Social Network Analysis is the location of the agent or household on a physical plain and his or its activity space. The activity space is defined by the agent's connections to key locations such as school, place of work, homes of family and friends and other important places. Unlike the branches of Social Network Analysis that handle social exchanges relating to job opportunities (e.g. Granoveter, 1983), trade (e.g. Tesfatsion, 1997), collusion among firms (e.g. Goyal & Joshi, 2003) or establishing interpersonal relations (e.g. Putnam, 2000) and the theories that deal with the evolution of social exchange networks (e.g. Bala & Goyal, 2000), the agent-based approach takes the agent's ties to others and the quality of these social ties as given. Instead every place of interest to the agent is assigned its own weight, according to the amount of social capital embedded at this place or the utility derived from it. Graphically the network can be represented as a set of ties connecting the various nodes or locations of interest, where all ties originate from an imaginary centre of gravity (A in figure 1). The centre of gravity is not the agent's home node (H in figure 1), but the point on the plain where the distance between all nodes save the home node, multiplied by their respective weights, is minimized in each direction.

Neighbourhood 'push'

With the resulting framework in hand, it is now possible to illustrate the process of leaving a particular location and the search for a new one. The agent derives place utility from his home and its environment (Wolpert, 1965), which corresponds to the weight assigned to the home node in the ACL-model. Whenever the household becomes dissatisfied with its current dwelling or its immediate surroundings, place utility becomes a negative quantity. This results in a movement of the centre of gravity away from the home node (from A to B in figure 2) and subsequently the establishment of new ties towards the exiting nodes. If the weighted distance between the home and the centre of gravity exceeds the threshold in the range of action of the agent (the ellipse in figure 2), a residential move is desired. This range of action is defined by parameters such as the actual distance between the nodes, the accessibility of the space in between, the degree of mobility of the agent and his fondness for travelling. A counter example is easily constructed. If the agent assigns a large positive value to his home and its immediate surroundings, the weighted distance between his home and the centre of gravity doesn't have to exceed the threshold level, even though the actual distance may be far larger.

Figure 2 Neighbourhood 'push'



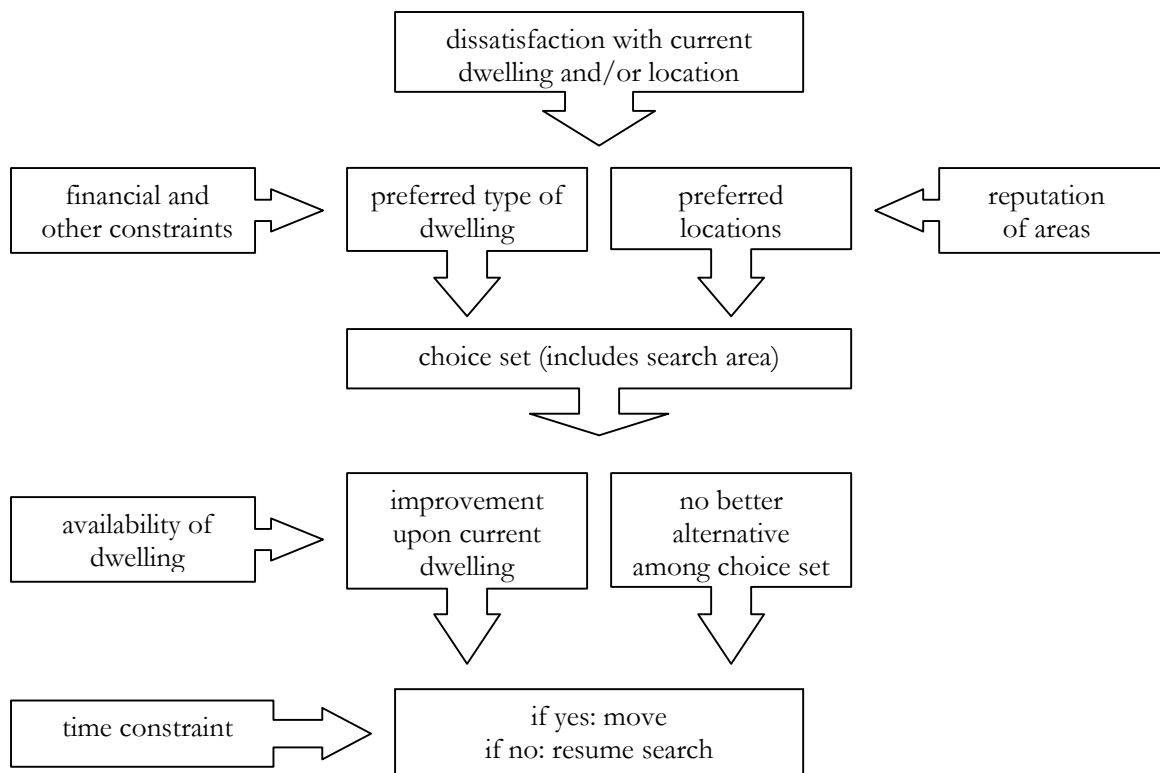
From the Housing Choice literature it is well known that dissatisfaction with the quality of the dwelling and its immediate surroundings can be an important push-factor in the decision to move (e.g. Speare, 1974; Ellen & Turner 1997; Parkes, Kearns & Atkinson, 2002). Moving house however is not without its costs. Aside from the actual cost of moving, the transaction and search costs in selling and buying a house are quite high. The transaction costs for tenants in the social housing sector are similarly high, because the acceptance of a dwelling means that they will re-enter the distribution of dwelling at the back of the queue. Effectively this means that a tenant remains stuck at his new location for at least a couple of years. Given the high current and future costs associated with moving, it is clear that the quality of the current location and that of any prospective location where the agent may want to settle, are essential pieces of information during the search for a new home, if only to avoid any further moves in the future.

Neighbourhood 'pull'

Whenever the agent starts the search for a new dwelling, his choice set is immediately curtailed due to financial and other constraints, such as the household's composition and preferences (see figure 3). Once the agent's preferences for a certain type of dwelling and price range are established, the next step is to find a dwelling on a suitable location. The number of locations within the agent's range of action is likely to be large and spatially dispersed. Each prospective location will have its own place utility attached to it, which will make some spots desirable, while others are immediately discarded. High costs of search and time limits do not permit the agent to assess the quality of every location within his range of action. As a consequence of this he will have to assign a common value to the place utility over a larger region than every single location. Whenever this common value is high enough to compensate for the disutility of being removed from the centre of gravity, the region becomes part of the agent's search area (shaded region in figure 4). In this particular example the search area consists of several disconnected regions, but the search area could be fully connected and extending beyond the range of action, as long as the place utility assigned to it is high enough.

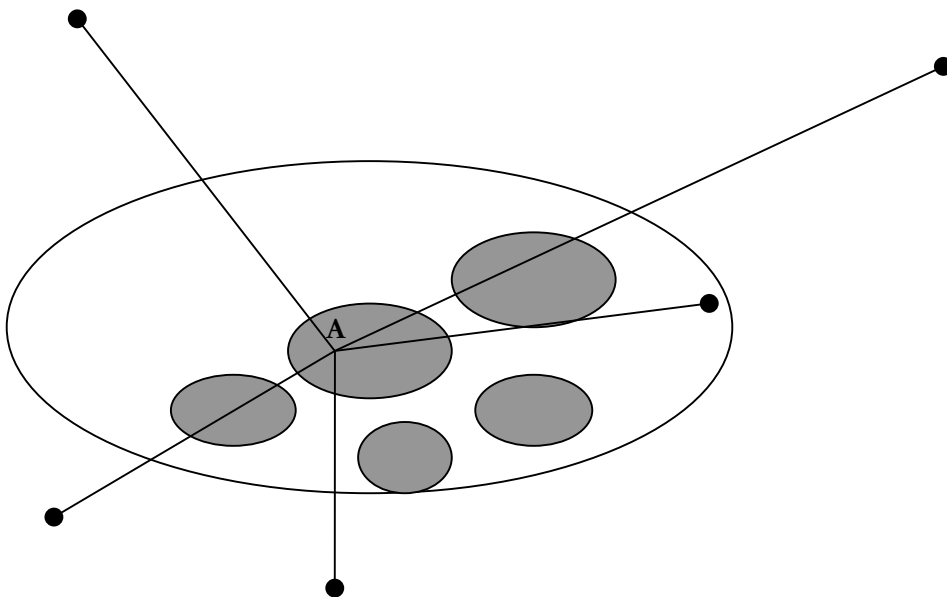
The pre-selection of desirable dwellings and the use of a search area allow the agent to limit his choice set to a manageable size. The search process is then continued through selecting a suitable dwelling within the search area, whenever one or more become available (Brown & Moore, 1971; Van der Vlist, Rietveld & Nijkamp, 2002). The most attractive dwelling with the highest level of expected place utility attached to it is then selected among all other alternatives. Equally important is that the new dwelling and its surroundings constitute an improvement upon the agent's current place of residence (Clark, Deurloo &

Figure 3 Decision tree for moving house



Dieleman, 2004). The question remains on which foundations the spatial dimensions of the search area are selected and how the agent decides that some places are within his choice set, while others are immediately discarded. As was already indicated in figure 3 the reputation of an area plays a pivotal role during this pre-selection process.

Figure 4 Neighbourhood 'pull' and search area



3. Neighbourhood reputations

Before the role of neighbourhood reputations in the choice of residential locations is highlighted, the attention is focused on the use of reputations within the Neighbourhood literature. As a starting point Galster's (2001) definition of the neighbourhood as 'a bundle of spatially based attributes' is listed here. One notices that structural (types of dwellings, scale, design, state of repairs, density, materials etc.), infrastructural (roads, sidewalks, streetlights, utilities) and environmental attributes of the neighbourhood, its accessibility and proximity and the level of public and private services therein, are either widely known qualities of the neighbourhood or this knowledge can be obtained by paying a visit to the area. Full knowledge on the demographic composition (household composition, ethnicity), the class status (income and educational level of inhabitants) and the political, social and sentimental characteristics of the neighbourhood is far harder to obtain, unless one is residing or working in the neighbourhood.

In as far as reputations solely depend upon the assessment of the social make-up of the neighbourhood; the notion of an internal and external reputation (Suttles, 1972) seems valid. Whilst resident's views on the social quality of their neighbourhood are more or less accurate, uninformed outsiders harbour only crude notions on the social circumstances. The (negative) views that non-residents embrace could as a third-person effect even prompt insiders to consider a move from the area (Tsfati & Cohen, 2003). Yet some of the views that non-residents have of the residents might hold a grain of truth in them. Furthermore some of the non-social attributes of the neighbourhood, such as the aesthetic value of buildings or the level of services could also be part of the external reputation (Hortolanus, 1995). A neighbourhood can for instance be seen as boring; an assessment that bears little reference to the people who live there. The external reputation of a neighbourhood doesn't have to be as ill-founded a notion as is frequently stated in the Neighbourhood literature (e.g. Suttles, 1972; Dean & Hastings, 2000; Permentier, Bolt & Van Ham).

There should be a genuine concern with assigning internal connotations to reputation, which by its very nature can be considered an outside mental construct. In this the Neighbourhood literature holds a position that is isolated from all other scientific disciplines (Shenkar & Yuchtman-Yaar, 1997). The one exception is formed by the literature on Organizational Standing, which frames the term internal reputation for the standing of an organization among its own employees (Jones, 1996). But the neighbourhood is even less of a separate entity from its residents than the organization from its employees. If the term internal reputation relates to residents deriving place utility, a group identity or a sense of well being from living in the area, residential satisfaction seems the more appropriate term.

External reputation and residential satisfaction are incommensurable from the start, since in essence they are attached to different entities. Residents perceive their neighbourhood boundaries as extending not much further than their own street and the main routes towards schools, shops, parks and other important venues (Kearns & Parkinson, 2001; Goetgeluk & Wassenberg, 2005) and this is the scale on which the residential satisfaction is based. Even when residents' perceptions of boundaries do overlap, the fact that individuals make different use of different places will make it hard for them to hold a universal view on the internal reputation of their neighbourhood (Reinders, 2004). There is a link between insiders' and outsiders' assessments, which comes to the forefront when reputation is seen as cost saving instead of a defensive mechanism. It is the information that is contained within reputations and the way that non-residents make use of it, that leads to a combinatory framework for neighbourhood reputations.

Residents, local investors and professionals working in the area gradually gather insider information at no apparent cost, while the sacrifices that an outsider has to make to gain this firsthand experience are just too excessive. Any particular location will be one out of many different areas that the agent has to become acquainted with. Faced with a risky choice in an uncertain environment, non-residents make use of reputations in order to minimize costly gathering of information (Weizsacker, 1980). Reputations of the neighbourhood can thus be considered a substitute for the firsthand experience of living in the area. They open up the way for trust in the area and its future development, which in turn could convince the agent to take up residence or invest there. It would however be naive to think that outsiders do not find ways to gain access to insider knowledge on the neighbourhood; this is just too valuable a source of information to be neglected when searching for a new home.

Direct Reputation

Within the Regret system used for analyzing e-trade one distinguishes four types of reputation: direct, witness, neighbourhood and system reputation (Sabater & Sierra, 2001, 2002). The ACL-model departs from the Regret system in the way that neighbourhood and system reputation are defined. The assessment of the quality of life in the neighbourhood that residents of the area undertake is defined as the direct reputation of the place. Direct reputation is defined as the actual residential satisfaction that the inhabitants beget from living at the location and as such conforms to the place utility embedded in the home node within the ACL-model. Residential satisfaction may be coloured by various subjective or irrational beliefs. It has for instance been noted that inhabitants who remain tied to the neighbourhood tend to view their area in a much more favourable light than those who are planning to move (Deans & Hastings 2000). Despite its reliance on mental processes such as cognitive dissonance, residential satisfaction reflects the actual well being of residents with their immediate surroundings.

Witness reputation

An outsider trying to assess the quality of a specific location will consider the knowledge of residents on the spot the most valuable source of information. One way of weighing up the quality of the location is through the transmission of information along social ties in the social network of the agent. This type of indirect evidence is called witness reputation. The main problem for the agent is in assessing the credibility of the witness on the spot. As long as the witness is a family member, friend or co-worker the agent has no problem at all in establishing the credibility and the content of the information carried by this witness. Bonding ties in social networks stretching across neighbourhood boundaries (Putnam, 2000) thus serve as a valuable informational pathway during the pre-selection phase. The dissemination of witness reputation along social ties can be both fast and costless. The process of gentrification serves as good example for the power of social ties in spreading insider information and changing the course of the neighbourhood. Of course the lack of financial constraints and the ready availability of property mean that the purchase of homes can be accomplished with relative ease during gentrification. It is far more difficult for tenants who are members of the same social network as the existing residents to obtain a dwelling on the exact location, especially when shortages occur in the rental sector. Tenants do have an alternative at their disposal to figure out the quality of locations within a wider range around the homes of their fellow network-members.

Neighbour reputation

Within the Regret system knowledge on the quality of an e-trader can be obtained by investigating his ties to other traders whose quality is known to the agent. This kind of indirect assessment of the quality of the trader is coined neighbourhood reputation. In a sense neighbourhood reputation is equivalent to witness reputation, except that the dissemination of information is now along weak ties as opposed to bonding ties (Granovetter, 1983). To avoid any misunderstandings the term neighbour reputation is used within the ACL-model to describe the second type of indirect information on the quality of the neighbourhood. The model further departs from the Regret system in the way that neighbour reputation is defined. While residents know the exact quality of their immediate surroundings, residents who live at adjacent locations should also be able to make a fair assessment on the quality of life at the location in question. They are frequent visitors to the area and it is more than likely that they know some of the residents who live at the location. The information on the location that the agent gathers from residents who live in the vicinity constitutes neighbour reputation, taking into account the witness's ability to assess the quality of the location and their credibility as a witness.

System reputation

The final piece of evidence on the quality of the neighbourhood is available through system reputation, which is assumed to be common knowledge to outsiders. In the Regret system this term is coined for the reputation of the online marketplace in relation to other online marketplaces. For the purpose of selecting a suitable location the appropriate frame of reference is the rank of the neighbourhood among the hierarchy of neighbourhoods competing for the same residents, investors and visitors in the wider local

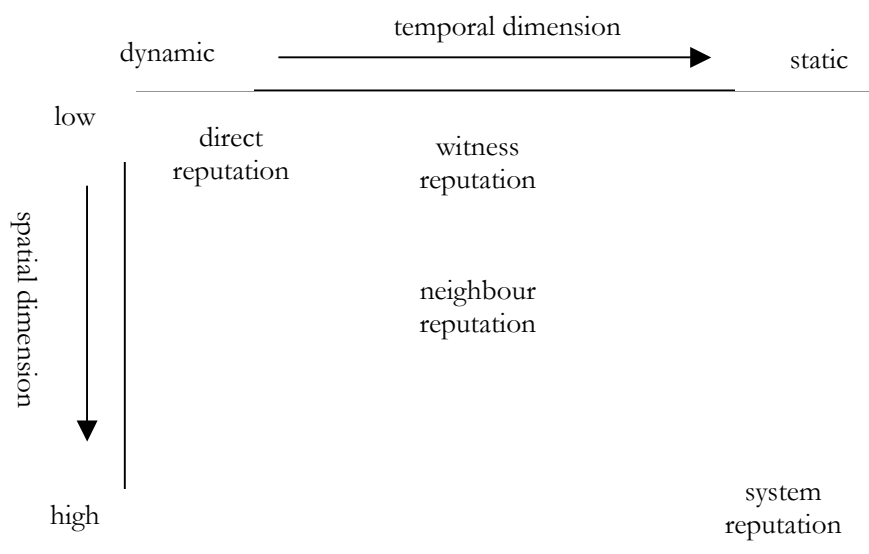
housing and real estate market (Suttles, 1972; Hunter, 1974). Doubts have been cast on the relevance of administrative boundaries in defining the dimensions of the neighbourhood in the literature (e.g. Galster, 2001; Lupton, 2003). This objection should hold for most attributes of the neighbourhood, yet for freely available information on the neighbourhood administrative boundaries are in common use. This tends to be the scale at which information on the neighbourhood is presented in official statistics, real estate listings and media coverage.

4. Neighbourhood change and reputations

If the categorization of neighbourhood reputations in the ALC-model is examined, one can detect a gradual worsening of the informational content alongside increasing spatial and temporal dimensions (see figure 5). Direct reputation as experienced by residents, shopkeepers, private investors and professionals remains the most faithful report on the residential satisfaction at the location. Insiders should also be the first ones to notice that changes are taking place in the neighbourhood and they are most able in predicting whether these changes are short-lived or lasting. To gain insider knowledge on various physical attributes of the neighbourhood, agents could simply visit the area. For the procurement of insider knowledge on social attributes agents will have to put their social networks to use. In the case of witness reputation this information will be almost as accurate as direct reputation, especially if the agent has good reasons to trust the assessment of his witnesses. It should not take long before witness reputation reaches the agent, but he is faced with a new problem.

Residents of adjacent locations far outnumber witnesses on the spot itself, which makes neighbour reputation a more prevalent source of information for the agent than witness reputation. There are just not enough witnesses around to solely rely on witness reputation, if the agent doesn't want his search area to be confined to a couple of locations. Only in rare cases such as a move to the street where one of his fellow network-members lives, should the agent rely on witness reputation. Neighbour reputation is disseminated along the same social ties and at a similar speed, yet the knowledge of the inhabitants of adjacent areas remains slightly inferior to the firsthand experience of existing residents. Nearby residents are also prone to fall victim to out-group biases (Dean and Hastings, 2000), but in as far as their values reflect those of the agent, neighbour reputation mirrors the agent's own assessment of the area. The main reason for the lesser reliability of neighbour reputation as opposed to witness reputation can be traced back to the larger spatial dimensions of the former. Neighbour reputation applies to a wider region surrounding the residential locations of all the fellow network-members, provided that the locations are within the agent's range of action. In this respect the structure of neighbour reputation mimics that of system reputation, since a common place utility is assigned to larger areas enclosing the locations and these areas are subsequently either placed in or dropped from the agent's choice set (see figure 3).

Figure 5 Spatial and temporal dimensions of neighbourhood reputations



Neighbour vs. system reputation

When it comes to moving to or investing in an area the main sources of information open to non-residents will be neighbour and system reputation. The major difference between these more common types of reputation is that in the case of neighbour reputation the accompanying search area covers areas within the same neighbourhood or at most a few connected neighbourhoods. In the case of system reputation the search area is defined on a larger scale; it is based upon the status of entire neighbourhoods within the same housing or real estate market. The other dissimilarities between neighbour reputation and system reputation relate to the differences in temporal scale and the fact that they are derived from alternative sources of the information.

Neighbour reputation is derived from the assessment of insiders, while system reputation is founded upon widely held views and freely available information on the neighbourhood and its inhabitants. Whenever information on the neighbourhood becomes scarce, extra onus will be put on every bit of information that's available, for instance the coverage it receives in the local media. Without dissemination along social ties it could take a long time before changes in the neighbourhood are observed from the outside. When the changes do get picked up; it will not transform the non-residents' view overnight. As far as they are concerned, any short-term change is reversible and loss aversion and regret may also come into play (Tversky and Kahnemann, 1991). Loss aversion means that small losses are not entirely offset by the benefits from equivalent gains. This asymmetry in the risk assessment puts on extra weight when an agent feels that he could make the wrong choice when safer alternatives are at his disposal. Loss aversion could explain why it seems so much easier to lose a reputation than to improve or regain it (Standifird, 2001). When it comes to the risky choice of residing or investing in an area, potential residents and investors will take a long and hard look at neighbourhood reputations and they will avoid any risks.

The stigmatized neighbourhood

A low system reputation in itself doesn't have to make a neighbourhood unpopular. That there are neighbourhoods on the other side of town with a worse reputation is fully irrelevant to a household in deciding whether to live or invest in the locality, since these areas are not within its range of action. Combined with a low status vis-à-vis adjacent neighbourhoods, a stigma can be very detrimental for the development of neighbourhood. More often than not, outsiders' perceptions of a stigmatized neighbourhood will be far worse than the actual residential satisfaction at various places in the area. There are no preset conditions in the ACL-model, which dictate that direct and system reputation should be different from one another as long as conditions remain static. Although outsiders are less well informed about the actual circumstances in the neighbourhood, they're assessment might be just as accurate as those of the residents.

The neighbour and system reputation do diverge due to the heterogeneity and changes within the neighbourhood. Troubled spots push down the system reputation at the expense of calm spots. Misinformed and risk-averse non-residents could even see the more publicized circumstances at the troubled spots as symptomatic for the whole neighbourhood. As a result of this the entire neighbourhood will be downgraded. Neighbour reputation does distinguish between troubled and calm spots, and relies upon a more detailed and accurate description of the circumstances at specific places within the neighbourhood. The calm spots could thus achieve some popularity among the more knowledgeable outsiders even if the entire neighbourhood carries a stigma.

When changes for the better are taking place in an ill-reputed neighbourhood a rift between neighbour reputation and system reputation is bound to occur. Households who know some of the residents of the area quickly pick up the improvement in the quality of the neighbourhood. Non-residents who lack social ties in the neighbourhood are more sluggish in adjusting to new information, especially if there is a general drought of information on the neighbourhood. Improvements at certain spots inside the neighbourhood are even more liable to go unnoticed by outsiders, since their progress will be obscured by the stagnant circumstances at the more troubled spots. Furthermore risk avoidance on the part of outsiders may cause them to downgrade the system reputation even further when trouble spots are present in the area.

The analysis up until now leads to a few important considerations for policy-makers who wish to tackle the stigmatization of neighbourhoods. If the system and neighbour reputation diverge, any increase in information flows and shift towards the dissemination of information along social ties should be beneficial. Visiting the area need not change the outsiders' perceptions of the social circumstances in the neighbourhood, but it may increase their knowledge of the physical characteristics of the neighbourhood and hence improve the reputation. If a stigma is warranted for the troubled spots within the neighbourhood but undeserved for calmer places, the dissemination of neighbour reputation allows for differentiation among these areas. When improvements are taking place within the neighbourhood, neighbour reputation makes for a speedier dissemination of this information and may also lead to an improved opinion on the entire neighbourhood. The physical and social isolation of a neighbourhood, in terms of its distance from other neighbourhoods with similar status in the larger property and real estate market and the lack of bonding social ties crossing neighbourhood boundaries, will make it harder to achieve a transition from system towards neighbour reputation.

5. Changing reputations in Schiemond and the Beverwaard

The programme of urban renewal in Rotterdam during the 1980's called for the development of social housing projects to accommodate the displaced residents of restructured areas. Among these projects were the newly constructed neighbourhoods of Schiemond in the Northwest and Beverwaard in the Southeast of the city. During the 1980's and 1990's both neighbourhoods experienced an influx of low-income groups and ethnic minorities and an increase in social problems, especially in Schiemond. A fall in popularity and stigmatization of both neighbourhoods quickly followed suit. Both of them were among the five least popular neighbourhoods within the social rental sector in Rotterdam in 2000 (COS, 2004).

Schiemond is situated just to the west of the city centre, bordering on the river Mose. Because of its high-rise estates the neighbourhood was named 'Klein Bijlmer' ('Little Bijlmer') after the once notorious high-rise project in the Southeast of Amsterdam. Its already substantial social problems were deepened by the retreat of nearly all public and private services from the area. The allotment of a street prostitution area at a nearby industrial site (eventually closed down in 2005) by the municipality placed an extra burden on the residents, when activities started to spread into the neighbourhood. Schiemond began to be associated with street prostitution, drug use, drug dealing and associated crime. Other constituents of the bad reputation of Schiemond were the high percentage of ethnic minorities and single parent households and the unattractive physical make-up of the neighbourhood, suitably dubbed 'pill-boxes'.

The Beverwaard earned itself the derogatory name of 'Negerwaard' ('Negrowaard'), following the influx of initially Surinamese and later on Antillean residents. The neighbourhood soon experienced high turnover and vacancy rates (De Graaf & Van Duin, 1995). Part of the unpopularity of the area could be explained by the relative isolation of the neighbourhood and its physical structure. The Beverwaard is situated on the edge of Rotterdam, bordering on the municipality of Ridderkerk, and separated from other Southeastern neighbourhoods by a highway to the west of the neighbourhood. The Beverwaard is exemplary for the 1980's low-rise housing estates in the Netherlands or in less flattering terms 'a maze'. At the same time, this type of housing estate has never been that unpopular in equally isolated suburbs and new towns across the country. Although neither residents nor statistics endorse the negative image of the Beverwaard as a criminal and ethnic neighbourhood, the area does house two identifiable trouble spots: a predominantly Antillean area in the North-eastern quadrant and trailer park 'De Kieviet' ('The Lapwing') in the South-eastern quadrant of the Beverwaard.

Neighbourhood change in Schiemond and the Beverwaard

Around the turn of the millennium both neighbourhoods were earmarked for an increase of public investments, noting that their relatively young age and above standard social housing warranted more investments in the social than in the physical sphere. In 2001 the housing association that owns nearly all the property in Schiemond intervened by setting up shop in the area, initiating a one-off cleanup, undertaking some minor physical adjustments to the estate and evicting a small number of households. The improvements in Schiemond in terms of both residential satisfaction and safety proved spectacular, although other Northwestern neighbourhoods did go through a similar phase (see table I).

Table I The quality of life in Schiemond, the Beverwaard and adjacent neighbourhoods

		Index of safety		Nuisance reports (% of population)		Perception of neighbourhood (100 city average)	Perception of neighbourhood change (100 city average)
		2001	2004	2000	2003	2004	2004
Northwest	Delfshaven	3,9	5,6	10,2	8,8	97	125
	Bospolder	3,8	5,3	8,9	6,9	94	104
	Tussendijken	3,3	5,8	10,5	7,7	88	115
	Spangen	2,5	4,5	11,5	8	78	116
	Nieuwe Westen	4,1	5,4	11,3	8	88	119
	Middelland	3,7	5,0	15,4	10,1	89	117
	Schiemond	4,1	6,0	10,3	6,2	86	119
Southeast	Lombardijen	6,1	7,4	6,9	7,1	87	83
	Groot-IJsselmonde	6	6,7	6,3	6,4	102	84
	Beverwaard	6,2	6,6	4,8	4,1	98	97

Sources: COS Municipal statistics office; Woontest Rotterdam; Projectburo Rotterdam Veilig.

In 1999 the local municipality and two housing associations combined their resources to increase the quality of life in the area. Some plans were developed to improve the physical quality, in particular the renovation of the local shopping centre. Most efforts however were directed at the social circumstances in the neighbourhood. The social investments were successful in that they led to enhanced citizen participation and an increase in social cohesion (Huygen & Lammerts, 2005). Furthermore the accessibility of the neighbourhood was improved in 2003 through the construction of a direct tram connection to the city centre. Though not as spectacular as in Schiemond, the residents of the Beverwaard also experienced a slight improvement in the quality of life (see table I).

Yet this is where the similarities between the developments in the two neighbourhoods seem to end. Whereas most criterions still point at a better quality of life in the Beverwaard, it is Schiemond that's shedding its stigma while no noticeable change is taking place for Beverwaard. The Rotterdam municipality appointed Schiemond as a 'groeibriljant' (growth brilliant), one out of a small number of areas that are earmarked for future development. Furthermore the change in the neighbourhood was put forward as an example of good governance and the promotion of citizen participation in the Netherlands by a government think-tank (Hazeu, Boonstra, Jager-Vreugdenhil & Winsemius, 2005). Meanwhile the Beverwaard became the focus of the national media on three separate occasions: the crackdown on the cultivation of cannabis at trailer park 'De Kievit' and the surrounding area, the gang rape of a 14-year-old girl by minors and gang related shootings in the Northeastern quadrant. Despite the apparent severity of these events, they remain isolated incidents. Similar events in more established Rotterdam neighbourhoods have never seriously tarred the image of these areas.

The coverage in the local media is indicative of the changing attitudes towards Schiemond and the persisting stigma of the Beverwaard. In the years prior to 2001 both neighbourhoods received their share of positive and negative publicity in 'Het Rotterdams Dagblad', the only local daily paper, and RTV Rijnmond, the local radio and television station (see table II). From 2001 onwards, the number of articles on neighbourhood affairs and human-interest stories slightly increased for Schiemond. Most of the articles on neighbourhood affairs in Schiemond had a positive connotation. These were mainly about community

Table II Media coverage on Schiemond and the Beverwaard 1996-2005

	The Beverwaard			Schiemond	
	sports	human interest & neighbhd. affairs	crime & nuisance	human interest & neighbhd. affairs	crime & nuisance
Rijnmond RTV 2001-2005	5	21 (39,6%)	32 (60,4%)	11 (78,6%)	3 (21,4%)
Rotterdams Dagblad 1996-2000	31	37 (82,2%)	8 (17,8%)	54 (87,1%)	8 (12,9%)
2001-2005	41	71 (70,3%)	30 (29,7%)	57 (91,9%)	5 (8,1%)

initiatives, such as the establishment of neighbour watch groups and citizen mediation. Similar initiatives were also present in the Beverwaard at the time, yet they went unnoticed. Leaving the reports on the local national league baseball team to one side, an increasing proportion of articles on the Beverwaard dealt with crime and nuisance reports. In one instance where neighbourhood affairs in Beverwaard did come to the forefront, more emphasis was put on the slowdown during the initial proceedings of the renovation of the local shopping centre than on the expected improvement for the area and its residents. In order to clarify this difference in outsider perceptions of both neighbourhoods a couple of explanations can be put forward based on the analysis in the previous chapters.

Initial conditions, status and image building

By the turn of the century conditions in the deprived Northwest of Rotterdam had gotten out of control. This sparked off a concerted effort by the local authorities, police and the housing associations to improve the quality of life in the various neighbourhoods of the Northwest. Measures such as the cleanup of the neighbourhoods and more visible policing had an immediate impact. Even non-residents must have been aware of the dramatic and chiefly visible changes that were taking place within these neighbourhoods, not in the least because of all the emphasis that the municipality put on this successful approach. The social investments in the Beverwaard on the other hand went largely unnoticed, if only because the initial circumstances were so much better than in for instance Schiemond. The physical isolation of the Southwest in general and the Beverwaard in particular may also have played an imported role in this neglect. The entrance of Schiemond is clearly visible from a major connecting road to the city centre. The Beverwaard on the other hand is shielded from view and up until 2003 had no direct connections to the city centre by public transport. It houses no venues of importance, which would warrant a visit to the neighbourhood, unless one has friends or family living there.

The physical isolation of the Beverwaard might have contributed to the stagnant system reputation, but the neighbourhood is by no means isolated in a social sense. Of the new tenants in 2004 whose former place of residence could be tracked down, fully 57 % already lived in the Southeast while over 80 % came to the Beverwaard from neighbourhoods on the South bank of Rotterdam. The current shortages within the social rental sector and the diversity that is present in the neighbourhood, both in terms of the mix between rental and owner-occupied dwellings and dwelling types, do hide some of the differences in popularity of areas within the neighbourhood. Yet it still seems remarkable that 4-room apartments in the central and the north-western part of the Beverwaard might get over 400 subscriptions when offered on the social rental market, while in some cases less than 50 candidates subscribed to similar dwellings in the Eastern side of the neighbourhood. A more thorough analysis is needed to prove the conjecture that tenants make use of neighbour reputation in their search for a new home. The way in which they differentiate between areas does suggest that those tenants that live in the same part of the city know much more about the various neighbourhoods within than just its system reputation. It is also more than likely that they acquired this knowledge through their contacts with existing residents.

Table III Social and physical attributes of Schiemond, the Beverwaard and adjacent neighbourhoods

	social attributes				physical attributes		
	households below poverty line (% of all households)	ethnicity (% of all persons)	single family households (% of all households)	long term unemployed (% of working population)	social rental dwellings (% of total dwellings)	average value of social rental dwellings	average value of owner- occupied dwellings
	2002	2005	2005	2004	2004	2004	2004
Delfshaven	25	61	14	11	89	60927	67717
Bospolder	23	78	15	14	91	56277	71198
Tussendijken	28	77	13	16	93	52092	52379
Spangen	33	87	20	16	93	55658	54870
Nieuwe Westen	25	73	15	12	84	64430	115437
Middelland	23	64	14	10	79	70058	117597
Schiemond	32	75	26	16	96	75263	98319
Lombardijen	14	41	11	9	78	65426	92184
Groot- Ijsselmonde	12	32	12	8	79	73069	104169
Beverwaard	15	49	19	8	68	77074	109370

Source: COS Municipal statistics office.

On the basis of most socio-economic and demographic indicators the Beverwaard outscores Schiemond by a heavy margin (see table III). Schiemond however is enclosed by similarly or worse deprived areas. Its high-quality dwellings and location near the waterfront still make Schiemond an attractive alternative compared to nearby neighbourhoods like Spangen or Tussendijken. In Schiemond's case both the low initial starting point and the proximity of equally deprived neighbourhoods explains some of the ease with which the stigma of the neighbourhood was tackled. The Beverwaard is part of the less deprived Southeastern district of Rotterdam. Apart from the higher number of ethnic minorities and single-family households in the area, there is still very little that distinguishes The Beverwaard from the nearby neighbourhood of Lombardijen, while it stands out favourably compared to some neighbourhoods on the South bank. Another explanation has to be put forward for the unwarranted stigma of the Beverwaard.

The housing association that owns virtually all the property in Schiemond, Woonbron, adopted an interesting strategy in tackling the stigma of Schiemond. Rather than stressing the good sides of the neighbourhood a concerted effort was made to attack the stereotypes that clung to Schiemond. The local press was invited on a number of occasions to visit the area and talk to the residents. This type of direct and informative evidence on the neighbourhood presented by an (on the face of it) independent source conforms to the notion of witness reputation. In the mid 1990's an unsuccessful attempt was made to enhance the reputation of the Beverwaard by placing billboards and advertising on buses and in local papers. Yet when the information carries little substance this type of place promotion of a stigmatized neighbourhood is futile in affecting the system reputation. In 2000 the local municipality and the housing associations (Woonbron and De Nieuwe Unie) that own property in the Beverwaard, started another promotional campaign. This time the campaign stressed the positive sides of the neighbourhood for families with children, which made it ineffective in changing outsiders' opinions. Contacts between the main stakeholders and the local media are also sparse. One professional professed to the fact that reporters were not invited to social events in the Beverwaard for fear of public disturbances and further stigmatization of the area. With no witness reputation in hand it may take a very long time before any positive developments in the area reaches the outside world.

6. Summary and policy-implications

Within the Neighbourhood literature the reputation of the neighbourhood is usually cast in terms of an internal and external reputation. The notion of an internal reputation of the neighbourhood can be refuted on the grounds that residents themselves form an integral part of the neighbourhood. Furthermore they will find it hard to agree upon a common identity for their neighbourhood. In as far as they attach connotations to their immediate surroundings place utility or residential satisfaction seems the more appropriate concept. The street level that residents attach to their neighbourhood makes any measure of residential satisfaction incommensurable from the start with the external reputation, since the latter is attached to the entire neighbourhood. The remaining link between residential satisfaction and the outsiders' view on the neighbourhood runs through the information contained within.

A distinction can be made between direct, witness, neighbour and system reputation. Direct reputation conforms to the actual residential satisfaction at the location, while witness reputation relates to the direct reputation as transmitted by the witnesses on the spot. Neighbour reputation makes use of the same social ties as witness reputation to disseminate information on the quality of the neighbourhood. The major difference between these two types of indirect evidence is that the neighbour reputation applies to larger areas surrounding the location of the same witnesses and as result will be a more prevalent source of information for outsiders. System reputation is similar in structure to neighbour reputation, yet is based on widely held views and freely available information on the entire neighbourhood. It thus conforms to the notion of the external reputation, yet the incorporation of known non-social attributes of the neighbourhood might not make it as ill-founded a notion as is assumed in the Neighbourhood literature. Stigmatization thus occurs when the level of residential satisfaction is not reflected in the poor system reputation for the area.

Several policy-implications can be proposed for dealing with stigmatized neighbourhoods on the basis of the analysis in this paper. Any increase in information on little-known qualities of the neighbourhood or information geared at the rebuttal of stereotypical images and any shift of information flows towards the dissemination along social ties and a reduction in scale should prove beneficial. It is common practice among realtors to sell the street rather than the neighbourhood in areas with a low status. Additional information on the quality of life might also give outsiders a reason to take a second look at the area when they are in search of a house or a location to invest in. If the neighbourhood houses troubled spots the dissemination of neighbour reputation allows for differentiation among troubled and calmer places. When improvements are taking place within the neighbourhood, neighbour reputation makes for a speedier dissemination of this information and may also lead to an improved outside opinion on the entire neighbourhood.

The physical and social isolation of a neighbourhood and low status vis-à-vis adjacent areas will make it harder to achieve a transition from system towards neighbour reputation. Visiting the area may increase outsiders' knowledge of the physical characteristics of the neighbourhood and hence enhance the reputation. It is thus instrumental that the main venues and the transit routes are among the best spots of the neighbourhood. Direct contacts between residents and professionals in the area and the local media could be a useful alternative when residents lack social ties with non-residents.

A final word of warning is in place here. In the same vein that efforts to improve the quality of life in the neighbourhood should be directed at the existing residents, any attempt to tackle the stigma of a neighbourhood should be geared at changing the views of non-residents. If there is a genuine concern among the residents that the stigmatization of their neighbourhood forms an impediment to finding a job or establishing bonds with non-residents, the only viable option is to change outsiders' opinions. However, if residents are impartial to the negative views of outsiders, a stigma might not be too detrimental. The more knowledgeable among the non-residents could still be persuaded by their friends and families in the area to settle there. But if the neighbourhood has to compete with a large number of places to attract owner-occupiers, investors and businesses, dealing with stigmatization becomes a prerequisite for any successful development of the area.

Literature

Atkinson R., & Kintrea K (2001). Disentangling area effects: Evidence from deprived and non-deprived neighbourhoods. *Urban Studies*, 38(12), 2277-2289.

Bala V., & Goyal, S (2000). A non-cooperative model of network formation. *Econometrica*, 58(6), 1181-1229.

Brown L., & Moore, E (1971). The intra-urban migration process: a perspective. In L.S. Bourne (ed.) (1971). *The internal structure of the city*. Oxford, Oxford University Press, 200-209.

Clark A., Deurloo M., & Dieleman, F (2004). Residential mobility and neighbourhood careers. Paper prepared for the ENHR Conference 2- 6 July 2004, Cambridge.

Dean J., & Hastings, A (2000). Challenging images. Housing estates, stigma and reputation. Joseph Rowntree Foundation, Glasgow.

Ellen I., and Turner, M (1997). Does neighbourhood matter? Assessing recent evidence. *Housing Policy Debate*, 8(4), 833-866.

Galster, G (2001). On the nature of neighbourhood. *Urban Studies*, 38(12), 2111-2124.

Graaf P. De, & Van Duin, R. (1995). *De Beverwaard in vogelvlucht*. (A bird's eye view on the Beverwaard). Rotterdam, COS.

Goetgeluk R., & Wassenberg, F 2005. What about people in the neighbourhood? Do spatial data corrupt analyses of migration, residential mobility and housing policy? Paper prepared for the ENHR Conference 29 June- 2 July 2005, Reykjavik.

Goyal S., & Joshi, S (2003). Networks of collaboration in oligopoly. *Games and Economic Behaviour* 43(1), 57-85.

Granovetter, M (1973). The strength of weak ties. *American Journal of Sociology* , 78(6), 1360-80.

Hazeu A., Boonstra N., Jager-Vreugdenhil M., & Winsemius, P. (2005). *Buurtinitiatieven en buurtbeleid in Nederland anno 2004* (Neighbourhood initiatives and policy in the Netherlands in the year 2004). The Hague, Webpublication no.9, WRR.

Roelof Hortolanus (1995). *Stadsbuurten: Een studie over bewoners en beheerders in buurten met uiteenlopende reputaties* (City-neighbourhoods: A study of residents and administrators in neighbourhoods with divergent reputations). The Hague, Vuga.

Astrid Huygen & Rob Lammerts (2005). *Quicksan sociaal investeren in de Beverwaard* (Social investments in the Beverwaard). Utrecht, Verwey-Jonker Instituut.

Hunter, A (1974). *Symbolic communities: The persistence and change of Chicago's local communities*. Chicago, University of Chicago Press.

Jones, O (1996). Human resources, scientists and internal Reputation: The role of climate and job satisfaction. *Human Relations*, 49(3), 269-294.

Kearns A., & Parkinson, M (2001). The significance of neighbourhood. *Urban Studies*, 38(12), 2103-2210.

Peter Kollock (1994). The emergence of exchange structures: An experimental study of uncertainty, commitment and trust. *American Journal of Sociology*, 100(2), 313-345.

- Lupton, R (2003). *Neighbourhood effects: Can we measure them and does it matter?* London, Centre for Analysis of Social Exclusion, LSE 73.
- Parkes A., Kearns A., & Atkinson, R. (2001). What makes People dissatisfied with their Neighbourhood? *Urban Studies*, 39(13), 2413-2438.
- Permentier M., Bolt G., & Van Ham, M (2005). Behavioural consequences to neighbourhood reputations. Paper prepared for the ENHR Conference 29 june- 2 july 2005, Reykjavik.
- Robert Putnam (2000). *Bowling alone: The collapse and revival of American community*. New York: Simon and Schuster.
- Leeke Reinders (2004). *Merkwaardige wijken. De rol van identiteit bij de transformatie van stadswijken: een verkenning (Strange neighbourhoods. The role of identity in the transformation of city-neighbourhoods: an exploratory study)*. Delft, OTB Research Institute, Delft University Press.
- Sabater J., & Sierra, C (2001). Regret: A reputation model for gregarious societies. In *Proceedings of the Fourth Workshop on Deception, fraud and Trust in Agent Societies*, Montreal, 61-69.
- Sabater J., & Sierra, C (2002). Reputation and social network analysis in multi-agent systems. In *Proceedings of First Joint International Conference on Autonomous Agents*, Bologna, 475-482.
- Shenkar O., & Yuchtman-Yaar, E (1997). Reputation, image, prestige and goodwill: A interdisciplinary approach to organizational standing. *Human Relations*, 50(11), 1361-1381.
- Speare, A (1974). Residential satisfaction as an intervening variable in residential mobility. *Demography*, 11(2), 173-188.
- Standifird, S (2001). Reputation and e-commerce: eBay auctions and the asymmetrical impact of positive and negative ratings. *Journal of Management*, 27(3), 279 - 296.
- Suttles, G (1972). The defended neighborhood. In *The social construction of communities*. Chicago, University of Chicago Press, 21-43.
- Tesfatsion, L (1997). A trade network game with endogenous partner selection," In H. M. Amman, B. Rustem, and A. B. Whinston (eds.), *Computational approaches to economic problems*, Kluwer Academic Publishers, 249-269.
- Tsfati Y., & Cohen, J (2003). On the effect of the third person effect: Perceived influence of media coverage and residential mobility intentions. *Journal of Communication*, 53(4), 711 -727
- Tversky A., & Kahneman, D (1991). Loss aversion in riskless choice: A reference-dependent model. *Quarterly Journal of Economics*, 106(4), 1039-1061.
- C.C. Weizsacker (1980). *Barriers to entry: A theoretical treatment*. New York: Springer-Verlag.
- Van der Vlist A., Rietveld P., en Nijkamp, P (2002). Vacancies and residential search in an equilibrium search model. *Journal of Real Estate Finance and Economics* 24(3), 277-299.
- Wolpert, J (1965). Behavioral aspects of the decision to migrate. *Papers and Proceedings of the Regional Science Association*, 15, 159-169.