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Residential environment quality and neighborhood attachment in open and gated communities

Abstract

Our study evaluated the residential environment quality among residents of both traditional open communities and gated communities (fenced), with the latter becoming increasingly popular in Poland. For this purpose the Perceived Evaluation of Residential Environment Quality and Place Attachment Questionnaire (Dębek, Janda-Dębek, 2015) was used, which is a Polish adaptation of Abbreviated Perceived Residential Environment Quality & Neighborhood Attachment Indicators (APREQ & NA, Bonaiuto, Bonnes, Fornara, 2010). Sixty residents of two Wrocław communities (open and gated) were examined. Our study revealed that residents of the open community evaluate their residential environment better and they are more attached to it than residents of the gated community.

Keywords

open and gated communities, evaluations of residential environment, quality neighborhood attachment

Streszczenie

Celem niniejszego badania było sprawdzenie czy istnieją różnice w ocenie jakości środowiska mieszkalnego wśród mieszkańców tradycyjnych osiedli otwartych oraz, cieszących się w Polsce rosnącą popularnością, osiedli zamkniętych (grodzonych). Wykorzystano do tego celu Kwestionariusz Spostrzeganej Oceny Jakości Zamieszkiwanego Środowiska i Przywiązania do Miejsca (Dębek, Janda-Dębek, 2015) będący polską adaptacją narzędzia Abbreviated Perceived Residential Environment Quality & Neighbourhood Attachment Indicators (APREQ & NA, Bonaiuto, Bonnes, Fornara, 2010). Przebadano sześćdziesięciu mieszkańców dwóch wrocławskich osiedli – otwartego i zamkniętego. Wyniki badania wykazały, że mieszkańcy osiedla otwartego oceniają swoje środowisko zamieszkania lepiej oraz są bardziej do niego przywiązani niż mieszkańcy osiedla zamkniętego.

Słowa kluczowe

otwarte i grodzone osiedla, ocena zamieszkiwanego środowiska, jakość przywiązania do sąsiedztwa

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Introduction

People's tendencies to settle down in a particular place are determined by their assessment of such a place. Some theories concerning preference in choosing the environment predict that people tend to settle down in places where, on the one hand the view of the area is wide, on the other – the place provides a safe hideaway. Preferences are evolutionary in character (e.g. Bańka, 2009; Lewicka, Bańka, 2010; Orians, Heerwagen, 1992). Other environmental considerations are those that allow for the possibility to implement other, more complex needs and to gain overall life satisfaction by settling down in a particular place (Dębek, Janda-Dębek, 2013). Thus, people want to establish themselves in areas, in their opinion, that provide them with the greatest wellbeing (Mellander, Florida and Stolarick, 2011). This phenomenon can be observed on both macro and micro scales. The former – as people migrate among countries, the latter – as preferences to settle down in particular districts or specific types of buildings. Therefore, the question arises: what concrete and measurable environmental features are important in people's opinion? In other words, which environment properties prove its quality?

Environmental quality is not a structure which easily undergoes operationalization. It is an interdisciplinary concept, difficult to be defined unambiguously (Dębek, Janda-Dębek, 2013). Different researchers specify various dimensions constituting environmental quality . Aielo, Ardone and Scopelliti (2010) indicate physical, social, functional and contextual dimensions. Gifford (2007) indicates mobility, affluence, distance from services and amenities, as well as satisfaction with the place of residence. Van Kamp, Leidelmeijer, Marsman and de Hollander (2003) specify threat of crime, access to natural resources, environmental pollution, urban design, mobility, and others which were divided into five categories: safety, natural environment, natural resources, built-up environment, and access to services. Environment, through overcrowding or isolation, is also related to another important dimension of life quality – namely social relations. Bonaiuto, Fornara and Bones (2003) paid attention to this – apart from spatial, functional, and contextual aspects they distinguished social aspect as criteria related to the assessment of a residential environment. As Dębek and Janda-Dębek (2013) indicate, objectifying environmental quality seems to be impossible due to the fact that it relates environmental conditions to the needs, objectives and observations of groups inhabiting this environment. Moreover, people differ in terms of their needs related to the environment, not to mention the very basic ones like hideaway or access to water. Thus, the same environment may be characterized as both high and low in quality, depending on which group it is evaluated by (Dębek and Janda-Dębek, 2013). It should also be noted that residential environment assessment is perceived subjectively by people, which does not have to be

the same as objectively measuring its characteristics (Van Kamp, Leidelmeijer, Marsman and de Hollander, 2003).

Researchers involved in the assessment of environment quality attempted to investigate which environment is better and which is worse when evaluated by the locals. The results of these studies are often surprising. For instance, both studies conducted in Rome (Aielo, Ardon and Scopelliti, 2010) as well as in Paris (Moser, Robin, 2006) revealed that people inhabiting the city's central districts are more satisfied with their residences than inhabitants in the suburbs. Studies comparing the quality of village life and city inhabitants presented different results and did not answer clearly the question whether there is greater residential satisfaction in urban or rural areas. In turn, research concerning the relationship between environment aesthetics (Florida, Melandri, Stolárik, 2010) and green-area maintenance (Oktay, Marans, 2011; Duque, Panagopoulos, 2010) revealed that these aspects are significantly related to residential environment evaluations. An environmental aspect strongly associated with its evaluation is the perceived level of its safety. Fear decreases assessment, as well as inhibiting its exploration and establishing social bonds, which leads to a lower sense of life quality. Probably, the sense of security in the inhabited environment is one of the strongest and universal quality assessment predictors (Gifford, 2007). Another important aspect is access to services, shops, and recreational points. Among other things, this is the reason why central districts are evaluated better than suburbs. Residents care for convenient access to these conveniences, and to a large extent, this aspect determines overall environmental quality assessment (Aielo, Ardon and Scopelliti, 2010).

The aforementioned difficulties in clear conceptualization, hence in creating appropriate tools to measure environmental quality, make it difficult to conduct and compare studies carried out within this area. However, there are reliable and empirically verifiable measurement methods for certain areas of the relationship between human and the environment. Such a method is the Abbreviated Perceived Quality & Environment Residential Neighborhood Attachment Indicators questionnaire (APREQ & NA, Bonaiuto, Bonnes, Fornara, 2010). Also the Index, which is simply a shortened version of this same tool ((PREQ & NA, Aiello, Bonaiuto, Bonnes et al 1999)). Its first version comprises 126 statements constituting 11 scales, referring to certain environmental aspects: (1) architectural and urban planning; (2) organization of accessibility and roads; (3) green areas, (4) sociorelational features, (5) welfare services, (6) recreational services, (7) commercial services, (8) transport services, (9) peaceful life, (10) environmental health, and (11) upkeep. An additional twelfth scale included in the questionnaire is attachment to place (Bonaiuto, Bonnes, Fornara, 2003). The shortened version kept the separated scales and factors but reduced the number of claims to 66. The Bonaiuto

et al. questionnaire (2010) is a tool characterized by satisfactory statistical properties and has been repeatedly used in studies. The questionnaire's Polish adaptation was made by Dębek and Janda-Dębek (2015). Qualitative research on the opinion of Poles about their residences (PL- APREQ&NA (Dębek, Janda-Dębek, 2015) revealed that environmental aspects, proposed and verified by the Italian version, are also important in Poland. Particular scales also showed satisfactory reliability, and can be useful in Polish studies concerning environmental psychology.

Our study examined the assessment of the environmental quality for two different urban residential environment types – open and gated communities. Gated communities have become a worldwide socio-urban phenomenon. This new type of buildings, initially widespread in the United States , can be currently met in many countries around the world. In some cities, such as Sao Paulo in Brazil, these buildings have become so widespread that they are called the cities of walls (Cladeira, 1996). In eastern and central Europe, where gated communities were not known before 1989, currently a massive increase in their number has been observed (Gądecki and Smigiel, 2009). Fenced communities have also become extremely popular in Poland; in 2007 in Warsaw there were already about 400 of them (Lewicka and Zaborska, 2007) while, for comparison, in Berlin there was only one such community (Michałowski, 2007). Their outstanding popularity in Poland is probably related to socio-economic changes that have taken place after 1989. Public space, including living space built during communist times, is associated with senility, decline, and negligence, whereas private space – with purity, order and exclusivity. Gated communities have become a sign of socio-economic status. In opposition to crowded living space and close neighborhood connections, which are identified with the old system, gated communities represent privacy and isolation from undesired contacts (Vergara Polanska, 2013). Fencing is probably associated with ongoing socio-economic polarization. As Lewicka and Zaborska claim (2007, quotation, page 139) *the greater social stratification, probably, the greater the need for separating ourselves from others.* This thesis is also confirmed by other researchers, mentioned earlier in connection with Sao Paulo – the city of walls, a city with one of the most unequal distributions of wealth in the world (Cladiera, 1996). On the other hand, Michałowski (2007), draws attention to the relationship between fencing specifics and the nobility-peasant tradition (connected with exceptionally strong socio-economic diversity) which is likely to prevail in contemporary Polish cities, as opposed to the bourgeois tradition, where tenements are located on the street (therefore close to strangers) and are the symbiosis of different social groups. For many people, gated communities have become the embodiment of dreams and socio-economic success, new aesthetics, stability and prosperity. They offer not only living space but a specific style of life and therefore are easily sold (Gądecki, 2007).

Due to the current popularity of gated communities in Poland, it may be assumed that their residents' environmental quality assessments should be higher than assessments by people living in „normal" open communities. People's tendency to settle down in gated communities should be related to their belief that this type will meet their needs to a greater extent, hence increase the general feeling of their life quality. Research using the Perceived Residential Environment Quality and Neighborhood Attachment Questionnaire, conducted by Dębek and Janda-Dębek (2015), showed a positive relationship between environmentally assessed quality and the price of real estate in a given area. This means that there is a link between subjective and objective assessments – which is housing prices. It seems that a similar relationship should occur between the high popularity of gated communities, where the indicator is, for example, their increasing numbers, and the quality assessment among their residents. The increasing presence of a specific type of settlement should be related to the fact that it meets residents' needs in the best way, so it is characterized by a higher quality level than other residential environment types.

Method

To measure how residential environmental quality is assessed, the previously described Perceived Evaluation of Residential Environment Quality and Place Attachment Questionnaire was used – PL-APREQ & NA (Dębek, Janda-Dębek, 2015) – a tool adapted from Abbreviated Perceived Residential Environment Quality & Neighborhood Attachment Indicators (PREQ & NA, Bonaiuto, Bonnes, Fornara, 2010). The questionnaire consists of 66 questions to which respondents referred on a seven-point Likert-type scale

(1 – definitely no, 2 – no, 3 – rather no, 4 – neither yes nor no,
5 – rather yes, 6 – yes, 7 – definitely yes).

The study was conducted among residents of two Wrocław neighborhoods, one being an open community, the other one gated. Both estates are located in the same Wrocław district (Fabryczna). The open community is located on Idzikowskiego Street, whereas the gated one on Zdrowa and Pochyła Streets. The estates consist of multi-storied and multiple dwelling buildings. The gated community is surrounded by a fence, monitored, guarded by a security company. On its territory there are premises in which security guards are stationed, incessantly watching the area. According to the typology of Polish gated communities (Gąsior-Niemiec et al., 2007) this estate belongs to the third, final group of gated communities – those which are most isolated and guarded because apart from the physical demarcation they are characterized by a developed security structure. The open community is not characterized by fencing or stationed guards. The estates were chosen mainly by the fact that both are new, built at roughly the same time and

represent a high standard. Therefore, there was a greater probability that the examined residents would be similar to each other in terms of age, length of residence time and socio-economic status.

Studies were conducted in residents' homes using paper questionnaires. The study involved 60 people (30 from each housing estate). Among the gated community residents 13 women and 17 men, aged between 19 and 73 (M=30.20; SD=10.99), were examined. The majority of respondents (23 people) had higher education, seven had secondary education. Respondents' time of residence was four months (the shortest) up to seven years (the longest) (M=30 months; SD= 22 months). Average, subjective assessment of their financial situation amounted to 5.4 on a seven-point scale (SD = 1). Among the open community residents 16 women and 14 men, aged between 22 and 81 (M=38.30; SD=14.08) were examined. Twenty-seven had higher education and three had secondary education. Respondents' time of residence was five months (the shortest) up to 15 years (the longest) (M=39 months; SD=37.68 months). Average, subjective assessment of their financial situation amounted to 5.23 on a seven-point scale (SD=1.04).

The respondents' distributions concerning their residence length on the housing estate, education, age, and their own finances differed significantly from the normal distribution. The Mann-Whitney's U Test analysis did not show significant differences between the groups in terms of residence length on the housing estate ($Z=1.09$; $p>0.05$) and education ($Z=0.89$; $p>0.05$). The groups, however, differed significantly in their age. Open community residents were significantly older, on average, than those in the gated community ($Z=2.96$; $p<0.01$). However, it should be taken into account that age difference between the groups is not large, in both the open and gated communities the average age was over 30. The residents of both communities also did not differ in their own financial assessments ($Z=0.43$; $p>0.05$).

Results

Our study, using the Abbreviated Perceived Residential Environment Quality and Neighborhood Attachment Questionnaire (PL-APREQ&NA), showed high reliability (Cronbach's α): – 0.93. Variance between studied groups proved to be inhomogeneous.

Table 1.

Normality of distributions and homogeneity of variance.

	p normality$_{open}$	p normality$_{gated}$	p variances
PREQ	0.74	0.4	0.03*

***p<0.001; **p<0.01; *p<0.05

The Mann-Whitney U Test analysis showed that the average residential environment assessment among the open community residents (M_{open}=319.43; SD_{open}=26.06) is statistically significantly higher than the average residential environment assessment among the gated community residents (M_{gated}=279.97; SD_{gated}=39.18), Z=3.89; p<0.01.

The differences between open and gated community residents appeared in several dimensions of residential environment quality assessment:

1. Architectural and Urban Planning Space

Open community residents assessed *architectural and urban planning space* dimension higher (M_{open}= 43.83; SD_{open}=5.26 and M_{gated}=39.2; SD_{gated}=7.84) *Z*=2.35; *p*<0.05. Data about particular subscales of this dimension are presented in the table below.

Table 2.

Differences between groups in particular subscales of residential environment assessment – Architectural and Urban Planning Space.

subscale	M_{open}	SD_{open}	M_{gated}	SD_{gated}	Z	P
Building Aesthetics	15,87	1,68	12,6	3,55	3,71***	0,001
Building Density	11,6	3,35	11,97	3,94	0,53	0,59
Building Volume	16,37	2,3	14,63	3,22	2,13*	0,03

***p<0.001; **p<0.01; *p<0.05

2. Green Areas

Residents of the open community assessed *green areas* dimension higher (M_{open}=21.67; SD_{open}=3.39 and M_{gated}=16; SD_{gated}=5.5) *Z*=4.02; p<0.01.

3. Sociorelational Features

The open community residents assessed *sociorelational features* higher (M_{open}=41.57; SD_{open}=3.64 and M_{gated}=38.1; SD_{gated}=5.34) *Z*=2.55; *p*<0.05. Results of particular subscales of this dimension are presented in the table below.

Table 3.

Differences between groups in particular subscales of residential environment assessment – Sociorelational Features.

subscale	M_{open}	SD_{open}	M_{gated}	SD_{gated}	Z	P
Discretion and civility	14,50	2,01	14,90	2,35	0,64	0,52
Security and tolerance	13,9	2,29	11,63	3,38	2,71**	0,01
Sociability and cordiality	13,16	1,98	11,57	2,79	2,26*	0,02

***p<0.001; **p<0.01; *p<0.05

4. Recreational Services

Residents of the open community assessed *recreational services* higher (M_{open}=28.63; SD_{open}=4.58 and M_{gated}=21.97; SD_{gated}=7.31) Z=3.45; p<0.01. Data about particular subscales of this dimension are presented in the table below.

Table 4.

Differences between groups in particular subscales of residential environment assessment – Recreational Service.

subscale	M_{open}	SD_{open}	M_{gated}	SD_{gated}	U	p
Sport service	16,93	2,55	11,87	4,28	4,6***	0,001
Socio-cultural activities	11,7	2,97	10,1	3,92	1,61	0,1

***p<0.001; **p<0.01; *p<0.05

5. Commercial Services

Residents of the open community assessed *commercial services* higher (M_{open}=21.27; SD_{open}=3.40 and M_{gated}=15.83; SD_{gated}=5.68) Z=3.85; p<0.01.

6. Peaceful Life

Residents of the open community assessed *peaceful life* higher (M_{open}=28.23; SD_{open}=3.3 and M_{gated}=24.2; SD_{gated}=4.28) Z=3.53; p<0.01. Data about particular subscales of this dimension are presented in the table below.

Table 5.

Differences between groups in the particular subscales of residential environment assessment – Peaceful Life.

subscale	M_{open}	SD_{open}	M_{gated}	SD_{gated}	Z	p
Relaxing versus distressing	17,23	2,3	14,63	2,5	3,66***	0,001
Stimulating versus boring	11	2,22	9,57	2,93	2,2*	0,03

***p<0.001; **p<0.01; *p<0.05

7. Environmental Health

Residents of the open community also assessed *environmental health* higher (M_{open}=19.8; SD_{open}=2.93 and M_{gated}=17.37; SD_{gated}=3.45) Z= 2.71; p<0.05.

8. Neighborhood Attachment

Moreover, differences between open and gated community residents occurred in *neighborhood attachment*. Open community residents obtained higher results than gated community residents in the neighborhood attachment scale (M_{open}= 19.27; SD_{open}=3.71 and M_{gated}=14.17; SD_{gated}=5.4) Z= 3.82; p<0.01.

No differences between gated and open community residents were noted in the following dimensions: *Organization of Accessibility and Roads, Welfare Services, Transport Services, and Upkeep*.

Calculations of correlation between NA (Neighborhood Attachment) and other dimensions and PL-APREQ subscales have also been done. Correlations that varied between the communities have been observed. Among the open community residents, attachment to the place most strongly correlated with the assessment of residential environment as healthy, peaceful and relaxing. Concerning the gated community residents, the strongest correlation was observed between neighborhood attachment and perceiving life in this place as peaceful with access to recreational services. Lewicka (2012) obtained similar research results – it turned out that neighborhood (district) attachment more strongly correlates with perceiving it as relaxing, than exciting. As Lewicka (ibidem) writes, neighborhood attachment is determined by the extent to which it can be a source of relaxation, peace and rest. Other factors such as buildings aesthetics, access to socio-cultural activities and neighborly relations turned out to be neighborhood attachment covariates. The exact data concerning these relationships are presented in the following tables.

Table 6.

Open community: correlations between PREQ neighborhood attachment and other PL-APREQ dimensions and subscales.

Pearson's r	Neighborhood attachment
Overall result PL-APREQ	0.47
Environmental health (PL-A PREQ dimension)	0.63
Relaxing versus distressing (subscale, PL-APREQ dimension: peace of life)	0.51
Peace of life (PL-APREQ dimension)	0.5
Buildings aesthetics (subscale, PL-APREQ dimension: architectural and urban planning)	0.46

Significant values $p<0.05$

Table 7.

Gated community: correlations between PL-APREQ neighborhood attachment and other PL-APREQ subscales.

Pearson's r	Neighborhood attachment
Overall result PL-APREQ	0.68
Peace of life (PL-APREQ dimension)	0.58
Access to recreational services (PL-APREQ dimension)	0.53
Socio-cultural activities (subscale, PL-APREQ dimension: access to recreational services)	0.51
Stimulating versus boring (subscale, PL-A PREQ dimension: peace of life)	0.47
Relaxing versus distressing (subscale, PL-APREQ dimension: peaceful life)	0.44
Sociability and cordiality (subscale, PL-APREQ dimension: people and social relations)	0.43

Pearson's r	Neighborhood attachment
Buildings aesthetics (subscale, PL-APREQ dimension: architectural and urban planning)	0.43
Sport service (subscale, PL-APREQ dimension: access to recreational services)	0.42
Access to commercial services (PL-APREQ dimension)	0.39
Greenery (PL-APREQ dimension)	0.38

Significant values $p<0.05$

Discussion

As mentioned in our research aim, comparative quality assessments of two inhabited environment types – a gated community and an open community – have been done. To assess the residential environment quality and neighborhood attachment, a Polish adaptation of APREQ & NA (Bonaiuto, et al. 2010) has been used. The studies included previous postulates set by Lewicka (2012) aligning the residents' age with residence mean time in a particular place.

The analyses indicate that open community residents obtained significantly higher results in most PL-APREQ dimensions than gated community residents. Trying to understand the reasons for these differences, it should be taken into account that both communities were so-called modern buildings with high standards and quite similar architecture outside and inside. Both communities were located in close proximity to other residential units, as well as in comparable distances from the nearest main street. The open community was located slightly further away from the city center and had closer access to green areas, which may explain the assessment differences in some PL-APREQ dimensions; however, it is certainly not the only reason. It is also worth paying attention to gated communities disadvantages (indicated by architects and urbanists) which may contribute to downgrading their value assessment. Gated communities are often characterized by excessive building development intensity, insufficient road widths, and reduced access to services and recreational areas, which certainly result in their quality deterioration (Sylwestrzak, 2009).

Lower overall residential quality assessments among gated community residents may be explained by the fact that people residing in such communities have higher demands towards than people living in open communities, which entails stricter environmental assessment. Residents entering gated communities, which are commonly associated with greater luxury, exclusivity and (above all) security, notice their imperfections more easily, which results in lower assessment. The mere fact that some space is fenced from the rest of the neighborhood is a signal that this space is somewhat unique, in this case, better. This entails higher expectations from its potential residents.

One PL-APREQ&NA questionnaire dimension, in which some interesting differences between gated and open community residents appeared, is *sociorelational features*. Open community residents assessed the residential environment higher in *security* and *sociability and cordiality*. Thus, open community residents assessed their place of residence as safer and ensuring better social contacts than gated community residents. It could be carefully concluded that fencing a community does not increase the actual feeling of safety among its residents. However, it should be taken into account that if the community was not gated, the inhabitants' feeling of safety would be even lower. The examined open and gated communities were not adjacent to each other directly. The safety assessment could be a matter of wider area judgement, in which they are located, and not only in the particular complex of buildings. To check whether fencing actually affects the safety level, or even paradoxically reduces it, the residents should be examined before and after fencing a community, or else two directly adjacent communities (built at the same time, with similar standards) should be examined–one gated and the other open. Both research procedures are very difficult to conduct, hence a clear answer to the question about how residents feel concerning their actual safety increase when fenced in in is still missing.

Analyzing the respondents' *sociorelational features* further, it is also worth noticing that environmental safety assessment affects overall quality assessment (Gifford, 2007). Insecurity entails a reduction in the place assessment, as well as inhibiting its exploration and establishing neighborly relationships. This seems to be consistent with the results which indicate that open community residents obtained higher overall PL-APREQ&NA results. They assessed the safety level higher, as well as considering that their neighbors were more sociable and cordial than the residents of gated community.

A higher result of open community residents concerning *sociability and cordiality* may indicate closer neighborly relations than the case is with gated community residents. If we find our neighbors sociable and cordial, this means that we keep relatively close relationships and we like them. This result is consistent with previously reported theories about the relationships between open and gated community residents. Gated community residents may be more inclined to protect their privacy, which leads to less frequent and less intensive contacts with neighbors. In literature more features associated with isolation and mistrust of people are assigned to gated communities (Szatan, 2012). Contemporary researchers indicate that gated communities may be an example of „neighborhood without neighbors". Once, a neighbor was someone about whom we had extensive knowledge, we shared experience and considered him as a partner. Today physical closeness is often not coordinated with emotional-cognitive closeness (Furedi, 2006). Assuming that the mentioned properties characterize gated communities more,

it may explain the lower assessment of social aspects associated with residence place among gated community residents.

Open community residents turned out to be more attached to their place of residence than gated community residents. It should be recalled that the average period of residence was similar in both communities; therefore this difference cannot be explained by referring to the growth of neighborhood attachment over time. This is an important factor that often impedes linking the strength of attachment to the place, or neighborly relationships with the type of community. For example, in Lewicka's studies (2012) a higher neighborhood attachment level and stronger neighborly relationships were observed in Warsaw's open communities than in gated ones. These differences, however, were leveled after taking into account residence time, which was longer in open communities. In our present study, where time is not significantly different, it may be concluded that there are direct relationships between fencing and the strength of neighborhood attachment. Also in Zaborska's research (Zabroska, 2010) conducted on three Wrocław housing estates, neighborly relations and trusting neighbors, which are an important neighborhood attachment predictors, were significantly higher among open community residents, as well as communities built in accordance with the assumptions of the *Secure by Design* program, than among gated community residents. Comparative studies between the residents of open and closed communities in Warsaw revealed that gated community residents were less associated with the city and more with their own apartment than open community residents (Owczarek, 2011). Trying to compare those results with the results of our study, it should be considered whether attachment to a community is closer to attachment to an apartment (private space) and therefore the results would be inconsistent with Owczarek's results, or it is closer to attachment to a city (public space) and these results would be consistent. As Owczarek writes, a strong attachment of gated community residents to their apartment reflects increasing privatization and separation from social, and even neighborhood life. Attachment to the community seems to be a kind of bond that goes beyond their own privacy, concerning space and community ownership. Therefore, it can be concluded that also these studies confirmed a stronger neighborhood attachment (community) among open community residents. To understand this difference, Owczarek's explanations can be used – indicating a stronger connection of gated community residents with what is private, and a weaker connection with what belongs to the community. Also a weaker level of neighborly bonds causes a decrease in neighborhood attachment. These results, repeated in many studies (both Polish and foreign), suggest that although gated communities, generating sharp boundaries between the areas inhabited by natives and strangers, may be perceived as a good way to create strong neighborly and emotional relationships with the place; in fact,

they do not fulfil such a role and their residents are less connected with residential surroundings and local communities than the residents of traditional open communities.

Limitations

Our research results obviously have their limitations. Firstly, the sample used in the research is not numerous and it is not a representative sample. Secondly, the studies have been exceptionally arduous due to the large number of items in the PL-APREQ&NA questionnaire, which caused respondents to become impatient sometimes. Thus, the fundamental postulate that should be taken into consideration in future questionnaire studies, is to use the maximally shortened version. Although the original APREQ&NA questionnaire by Bonaiuto, Fornara and Bonnes is already a shortened version (compared to its first version), it is still difficult to use in the research field. Another requirement concerns deepening the respondents' characteristics. Although in our study the respondents' groups were homogeneous age wise, it is worth enriching the data with better – than our project did – socio-demographic group profiles. This would enable more detailed analysis and interpretation of results.

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