

Article

Compact Urban Form: Neighbouring and Social Activity

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Abstract: Compact urban form has been widely suggested as a more sustainable development pattern that enhances different aspects of social liveability such as social exchange, collective interaction, and outdoor activity. Empirical research, however, challenges proposing a generic and universal understanding of compactness and its social advantages: compactness is perceived and lived differently in different socio-cultural contexts. This paper contributes to the call for gaining a more place-specific understanding from the compact urban form. To do so, it examines the social life of compact neighbourhoods in two study sites in Berlin. Social life is investigated by measuring the two dimensions of “neighbouring” and “social activities”: while the former explores how residents of the neighbourhood perceive different aspects of social life, the latter maps how urban space accommodates different types of social activity. Questionnaires and advanced mapping techniques are the primary sources of research obtained through intensive fieldwork and on-site observation. The research findings challenge some dominant assumptions attributed to the compact urban form orthodoxy: a compact neighbourhood can be perceived as safe, offer acceptable home and neighbourhood satisfaction, and, at the same time, suffer from low social networking and community engagement.

Keywords: compact urban form; urban neighbourhoods; neighbouring social activity; Berlin

1. Introduction

It has been widely argued that higher densities and compact urban form are more sustainable than other urban patterns [1–8]. The social dimension of compact urban form has been investigated by researchers to gain a better understanding of the social implications of living in a dense environment [4,9–24]. Research findings suggest a variety of social benefits for residents of higher densities: high density makes urban facilities more accessible and hence enhances urban equity [5,11,25,26], encourages people to frequently meet each other [27], promotes sense of community [28], encourages a more diverse, inclusive, and liveable urban environment [29], contributes to a higher quality of life and liveability [30–32], results in higher sense of safety [31,33] and higher social interactions [34–36], reduces social segregation [37], offers higher feeling of environmental quality [38], decreases violence and crime [13], and thus enhances social sustainability of communities. The growing scholastic attention to the environmental and social advantages of compact cities has convinced policy-makers across the globe to integrate densification schemes into their planning and development policies [4,39], such as the Green Paper on the Urban Environment (1990), the European Spatial Development Perspective (1999), and the Leipzig Charter on Sustainable European Cities (signed in 2007), to name but a few.

Despite the fact that in both research and policy, the search for achieving a more compact urban form, for example, through promoting densification policies, has been the dominant wisdom, some scholars have warned about the negative consequences of higher densities [40], or have raised concerns about the generality of this approach and its applicability to different cities [41–46]. The critique is

that there is no one-size-fits-all solution [47], so more scientific investigations and empirical evidence are needed from across the globe to gain a fine-tuned understanding from the social implications of compact urban form on the one hand, and to develop more place-specific development policies for different communities [48–50]. This paper is a response to this call.

As noted above, social aspects of compact urban form are manifold, and investigating social benefits associated with compact neighbourhoods can be conducted from different perspectives. To provide a focus on the research, this paper applies the two measures of “social activities” and “neighbouring” in order to study the social life of compact neighbourhoods in two neighbourhoods in Berlin. Social activity mapping studies the spatial distribution of different types of social activities in the neighbourhood space. Neighbouring explores how residents of the neighbourhood perceive and practice different aspects of social life. Questionnaires and advanced mapping techniques are used to collect first-hand data, supplemented by on-site observation. The research findings will be analysed and discussed in order to gain an in-depth understanding of the social life of the studied neighbourhoods on the one hand and to test some dominant assumptions with regard to the social advantages of compact urban form on the other. Focusing on the two measures of “social activities” and “neighbouring” does not offer a comprehensive understanding of the social life of compact neighbourhoods but provides us with sufficient insight into the social life of selected cases in order to provide empirical data and contribute to the debate.

2. Surveyed Neighbourhoods: Selection and Profile

A two-stage procedure was introduced to select two compact neighbourhoods in Berlin. First of all, informed by a content analysis of 36 sources of different types that investigated the idea of compact urban form, a set of selection criteria was developed that reflects the normative characteristics of a compact neighbourhood. These included relatively high population density (taking into account density profile of the given city); socially diverse population in terms of ethnicity, race, religion, immigration status, and income class; a mixed land use pattern within a compact and densely built-up urban layout with majority of mid-rise buildings of different typologies; and a high local and global (city-wide) connectivity through street networks and transportation systems. The search for potential study neighbourhoods was delimited to intermediate urban areas, between the city centre and suburbs with primarily residential character. These areas better represent typical compact neighbourhoods in Berlin, because central areas are mainly influenced by commercial and touristic activities and lack a neighbourhood character, and suburban areas normally do not possess typical characteristics of a compact neighbourhood in terms of density, urban pattern, and building typology.

Based on available data such as census data, density maps, and social diversity maps, nine potential urban areas were identified: Klausenerplatz, Moabit West, Moabit Ost, Brunnenviertel, Helmholtzplatz, Samariterkiez, Boxhagenerplatz, Oranienstrasse, and Wrangelkiez. After on-site observations and further investigations against the defined criteria, the two neighbourhoods of Klausenerplatz and Samariterkiez were selected as appropriate study sites.

Defining neighbourhood boundaries has been a widely debated topic [51–56]; scholars have proposed different methodologies for delineating neighbourhood space for empirical research [57–65]. Informed by these studies, a mixed method was applied to define neighbourhood boundaries in selected urban areas. First, a tentative border line was drawn, taking into account historical evolution, recent urban transformation, and spatial characteristics of the area such as man-made infrastructure (e.g., railways), major traffic arteries (e.g., Frankfurter Allee in Samariterkiez) and morphologic change of urban pattern and building typology (e.g., Samariterkiez). This was followed by a number of interviews with neighbourhood inhabitants (on average 15 each), inquiring about their mental map regarding neighbourhood boundaries. In all the cases, overall, clear-cut physical borders corresponded with the inhabitants’ perception of neighbourhood boundaries.

The study area of Samariterkiez (49.5 ha) is located in East Berlin, the borough of Friedrichshain-Kreuzberg, Friedrichshain district. It is bounded by the Frankfurter Allee, Ringbahn

(Circle Overground Railway), Eldenaer Street, and Proskauer Street (see Figure 1a). According to the FIS Broker database of the Senate Department for Urban Development and the Environment, this area has around 13,853 inhabitants (2014). In 2012, 10%–20% of the inhabitants were foreigners (residents without German nationality), which was within the Berlin average (13.5%). Inhabitants with immigration background (a person has a migrant background if he or she or at least one parent did not acquire German citizenship by birth) were about 20.64%, lower than the Berlin average (27.4%). The area has a population density of 279.8 pph. According to the site observation, 73% of the plots are mixed-use, scattered across the neighbourhood, though the density of mixed land use increases moving towards the Frankfurter Allee (see Figure 2i,j). There are 6 playing grounds, and the Schleiden Platz at the eastern corner is the main public green space. The study area has been developed following a gridiron-like urban pattern with building plots occupying the peripheries of urban blocks, providing empty spaces and courtyards towards the interior. It is well-connected to the city through the Frankfurter Allee; public transportation is available within walking distance, including over-ground (S-Bahn), underground (U-Bahn), tram, and bus services. Almost all of the residential units are flats, located in mainly 5- to 6-storey buildings.



Figure 1. Study neighbourhoods: (a) Samariterkiez study area; (b) Klausenerplatz study area (author).

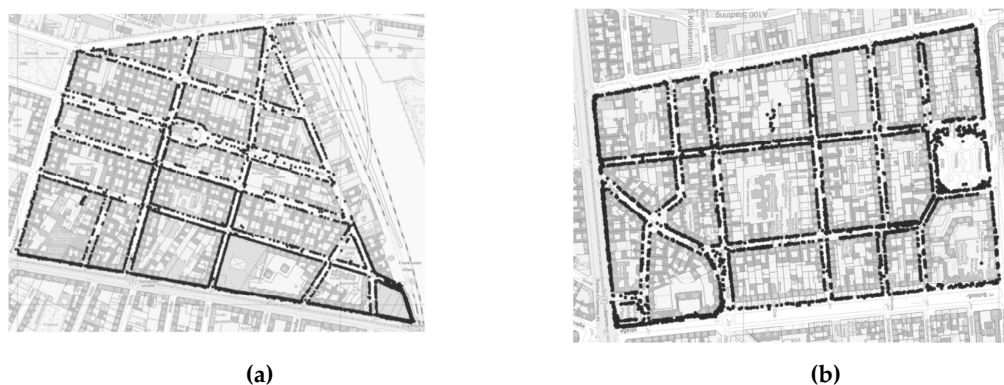


Figure 2. Cont.

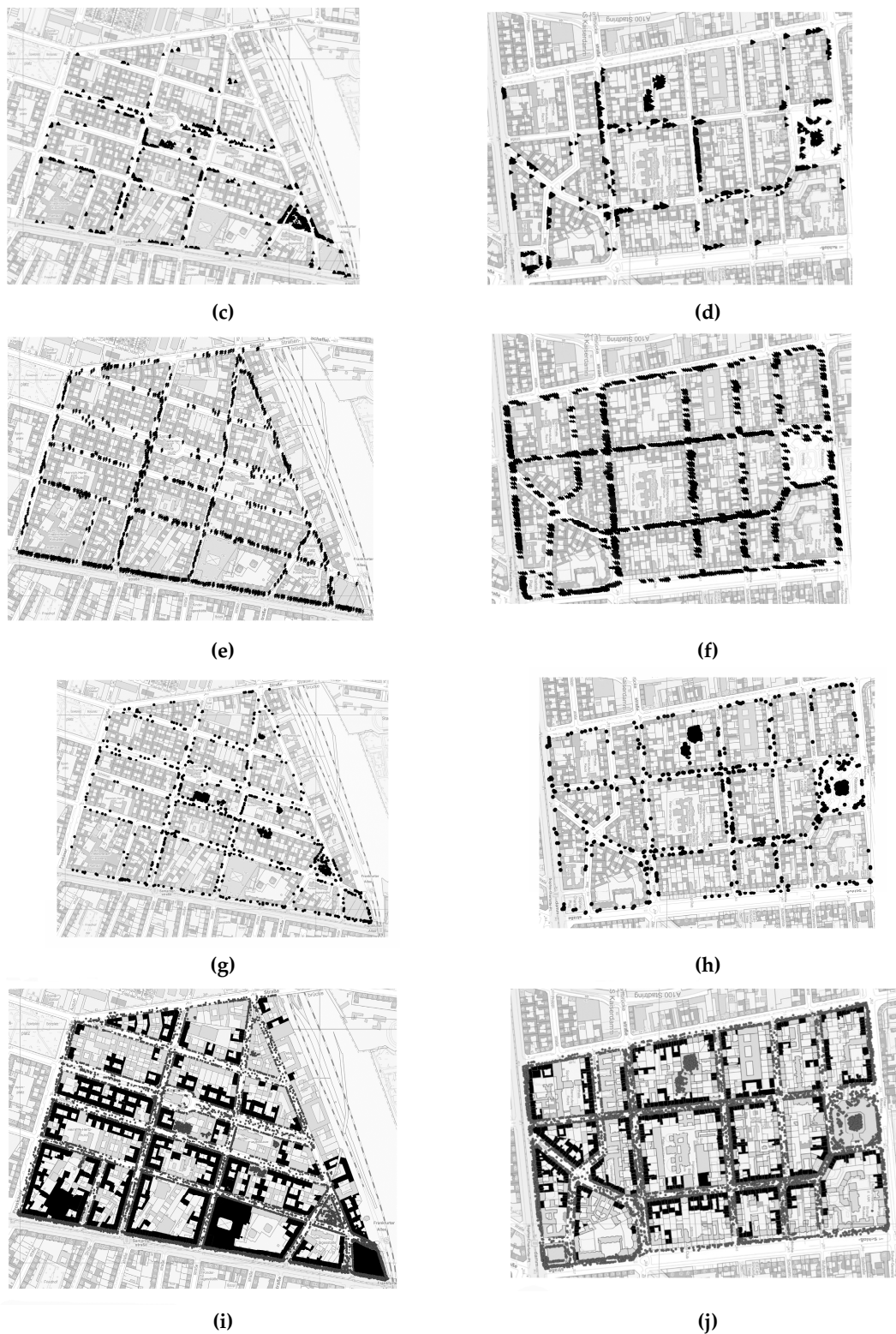


Figure 2. Spatial pattern of outdoor activities: (a) Spatial pattern of all walking activities, Samariterkiez; (b) Spatial pattern of all walking activities, Klausenerplatz; (c) Spatial pattern of all sitting activities; Samariterkiez; (d) Spatial pattern of all sitting activities; Klausenerplatz; (e) Spatial pattern of all cycling activities; Samariterkiez; (f) Spatial pattern of all cycling activities; Klausenerplatz; (g) Spatial pattern of all activities of children; Samariterkiez; (h) Spatial pattern of all activities of children; Klausenerplatz; (i) Overlap of all activities and mixed land use; Samariterkiez; (j) Overlap of all activities and mixed land use; Klausenerplatz (author).

The study area of Klausenerplatz (55.2 ha) is located in the western part of Berlin and belongs to the Borough of Charlottenburg-Wilmersdorf, district of Charlottenburg. It is bounded by Schloßstraße to the east, Spandauer Damm to the north, Sophie-Charlotten-Straße to the west, and Kaiserdamm to the south (see Figure 1b). The area is inhabited by 13,668 (2014) inhabitants. In 2012, 20%–30% of the inhabitants were foreigners, which was higher than the Berlin average (13.5%), and inhabitants with an immigration background were about 45.63% in 2012, higher than Berlin average (27.4%). The area has a population density of 247.6 pph. Our site observation shows that 60% of the plots are mixed-use, scattered across the neighbourhood, with no dominant concentration pattern (see Figure 2i,j). Urban blocks are generally residential but accommodate some non-residential land uses such as educational, commercial, and urban services. Urban layout follows a gridiron-like pattern, with mainly 5- to 6-storey buildings divided into flats. Public transportation is available within walking distance including U-Bahn in the south, S-Bahn in the west, and bus services. Most of the areas within the neighbourhood are “Verkehrsberuhigter Bereich” (Traffic Calming Areas) and this makes streets walkable, pedestrian-friendly, and safe for cycling.

3. Social Activity Mapping and Neighbouring: Methodology

To investigate outdoor social activity in selected neighbourhoods, a new methodology was developed. The aim was mapping different types of activities that take place in public and semi-public neighbourhood spaces, such as streets, parks, communal gardens, and driveways [66]. The proposed method was informed by the literature and techniques developed for behavioural mapping [67–72], observation techniques in sociology, urban ethnography, and urban design [73–78], and recent advances in using the ArcGIS programme for data processing in urban planning and urban design disciplines [38,64,79–88]. In this research, the concept of “incident” was introduced, which indicates a person of a certain gender and age doing a specific type of activity. This was recorded using a tripartite code of XYZ: X (activity type), Y (gender), and Z (age of the actor). The main types of activities that normally take place at outdoor spaces could be categorised as follows: Walking (W), Sitting (S), Standing (I), Playing (P), Conversation (C), Cycling (Y), Running (R), and Fixing (F), the latter includes different activities such as fixing a car, gardening, or cleaning. Four categories of age include children (roughly up to 9 years old), teenagers (roughly 10–17), adults (18 and over), and elderly people (those over 70). Thus, a sitting elderly male was coded as SEM and a cycling teenage girl as YFT.

The observer followed a predefined path, which covered all the major routes and outdoor spaces of the area under investigation. A complete round of observation took place in each time-slot of 8–10 a.m., 10 a.m.–12 p.m., 12–2 p.m., 2–4 p.m., and 4–6 p.m. Data collection was conducted on a weekday—Tuesday, Wednesday, or Thursday—and a Saturday. Empirical studies suggest that Mondays and Fridays show a different pattern of activities than other weekdays and should be excluded [75]. Outdoor social activities have seasonal specifications; climate and weather conditions can negatively affect the intensity and diversity of outdoor activities. To avoid this, fieldwork was conducted during the non-winter period with a comfortable temperature that allowed all types of outdoor activities such as playing and sitting. Collected data were transferred to ArcMap software ver. 10.5 (Esri, Redlands, CA, USA), and were added to existing GIS maps for data processing and analysis. This enabled running numerous and complex inquiries based on activity type, gender, and age on both weekdays and weekends.

For this research, the concept of “neighbouring” was used to analyse the social life in study neighbourhoods. It explores non-physical qualities of the neighbourhood and involves the relationship between neighbours on the one hand, and the perception of neighbours from their social environment on the other. In this sense, it includes a variety of social qualities such as social ties and relations, public engagement, sense of attachment, and feeling of security, to name but a few [89,90]. Based on an analysis of 33 studies that investigate different modes of neighbouring, seven indicators were suggested for measurement purposes: access to facilities, social networking and interaction, safety and security, sense of attachment, participation, neighbourhood quality perception, and home quality perception.

Access to facilities studies the availability and physical accessibility of urban services for the neighbourhood residents. Social interaction and networking are about verbal or non-verbal interrelationships between neighbourhood residents, level of friendship, and exchange of knowledge and help. Safety and security refer to feeling of safety in the neighbourhood space with regard to external threats such as violence, crime, or traffic, both in daytime and night. Sense of attachment investigates personal associations with physical elements of the built environment as well as a connectedness to the community members because of the shared interests and inter-human linkages and bonds. Neighbourhood participation shows to what extent residents take part in neighbourhood-related activities and get involved in solving problems and deciding about future plans. The degree of satisfaction of the residents with their immediate environment, such as maintenance, landscaping, cleanness, traffic, and quietness, is studied under the quality of neighbourhood perception. Quality of home perception is about the degree of satisfaction of residents with physical and non-physical characteristics of home, such as size and number of rooms, noise, and sense of privacy.

To measure neighbouring, a questionnaire survey was designed. For each indicator, a set of questions were developed that enabled gaining detailed information about the inhabitant's neighbouring habits and behaviour. A household survey was conducted using the drop and collect method as it results in a higher response rate [91,92]. To have participants from different areas of neighbourhoods, a spatially stratified random sampling was applied based on urban blocks. This enabled having representatives from all the neighbourhood areas, different building typologies, and building floors. Overall, 414 questionnaires were distributed in Klausenerplatz (178 returned), and 355 questionnaires in Samariterkiez (148 returned). This provided us with sufficient critical mass in order to undertake relevant statistical analyses for our purpose. SPSS software ver. 25 (IBM, Armonk, NY, USA) was used for data processing and data analysis. Results were scored between 0 and 200 so that each indicator got a score between 0 (lowest) and 200 (highest), showing the value of the indicators.

4. Social Activity and Neighbouring: Analysis and Discussion

The distributional pattern of activities (Table 1) shows that in Klausenerplatz, neighbourhood space is more evenly used during the weekend and weekday. This implies that Klausenerplatz offers more opportunities for residents to use the neighbourhood space on the weekend than Samariterkiez.

Table 1. Distributional and typological pattern of activities.

		Samariterkiez			Klausenerplatz		
		All (%)	Weekday (%)	Weekend (%)	All (%)	Weekday (%)	Weekend (%)
Number of activities		9711	5359	4352	7498	3973	3525
%		100	55	45	100	52	48
Type of Activity	Walking	59	52	48	53	56	44
	Sitting	12	63	37	15.9	46	54
	Standing	8.11	52	48	16.1	45	55
	Playing	3.10	66	34	4.44	43	57
	Group Playing	0.10	90	10	0.02	100	0
	Conversation	1.89	54	46	1.85	46	54
	Cycling	13.68	60	60	14.7	56	44
	Fixing	1.05	45	55	1.17	59	41

The typological pattern of activities demonstrating the distribution and intensity of activities by type (Table 1) shows that walking is by far the dominant activity in both neighbourhoods. However, the slightly higher percentage of walking in Samariterkiez indicates that Klausenerplatz provides more opportunities for non-walking activities. Standing, sitting, and cycling in Klausenerplatz, and cycling, sitting, and standing in Samariterkiez, are respectively the second, third, and fourth intensive activities after walking. This implies that, on the one hand, a large number of people use cycling as a means of transportation, and on the other hand, both neighbourhoods offer safe and comfortable spaces

for people to sit. However, both cycling and sitting are higher in Klausenerplatz than Samariterkiez. Analysis of the spatial pattern of activities later in this paper will provide us with some explanations for these differences.

As Table 2 depicts, there is no significant gender difference in using neighbourhood space. Although overall male activities are higher than female, the difference is only 4% in Samariterkiez and less than 1% in Klausenerplatz. This clearly indicates that the neighbourhood space is appropriate for both genders, and females feel safe and comfortable using the space. The gender pattern of activities from the point of view of activity type (Table 3) shows similar results. In both neighbourhoods, from the point of view of different activity types, female and male activities are equal or quite similar.

Table 2. Gender pattern of activities during weekdays and weekends.

Neighbourhood	Gender	Total Number of Activities	Number of Activities Weekday	Number of Activities Weekend
Samariterkiez	Female	4607 (48%)	2635 (57%)	1972 (43%)
	Male	5000 (52%)	2677 (54%)	2323 (46%)
Klausenerplatz	Female	3701 (49.73%)	1984 (53%)	1717 (47%)
	Male	3740 (50.26%)	1967 (47%)	1773 (53%)

Table 3. Gender pattern of activity types (note: mixed-gender group playing is not included in the table).

Neighbourhood	Gender	Type of Activity (Percentage of All Activities)					
		Walking	Sitting	Standing	Playing	Cycling	Fixing
Samariterkiez	Female	51	44	42	50	45	20
	Male	49	56	58	50	55	80
Klausenerplatz	Female	52	48	47	51	47	28
	Male	48	52	53	49	53	72

Table 4 suggests that adults are by far the most present age group in both neighbourhoods. Children have the second place, which implies that both neighbourhoods are quite children-friendly. As will be elaborated later, a large number of playgrounds available for residents invites families to accompany kids to play outside. Moreover, as other studies suggest, traffic-calming measures and special design of the streets make the urban space safer places for children [93–95]. In Klausenerplatz, there are more elderly people present, and this is because of a number of senior housing complexes that exist in the area.

Table 4. Age pattern of activities.

Neighbourhood	Percentage of Activities by Age-Groups			
	Adults	Children	Teenager	Elderly
Samariterkiez	86	10	2	2
Klausenerplatz	80	13	3	4

Analysing the spatial pattern of outdoor activities provides us with some insights into our findings of the distributional pattern of activities, as summarised above. The spatial pattern of outdoor activity maps shows density, intensity, and configuration of different activities in terms of types, gender, age, and time. In these maps (Figure 2), each point represents an incident: a person of any gender and age who performs an activity. Comparing the two neighbourhoods in terms of the spatial pattern of walking (Figure 2a,b) suggests that in Klausenerplatz, walking is distributed more or less evenly across the neighbourhood space, while in Samariterkiez, we observe a moderate concentration along with the main artery of Frankfurter Allee in the south, but an even intensity across the street network. This is

because of the significance of Frankfurter Allee in serving as the main axis connecting central Berlin to the east, and the concentration of services and shops alongside this main street.

We have already learned from Table 1 that sitting with 12% in Samariterkiez and 15.9% in Klausenerplatz is one of the highest outdoor activities. The spatial pattern of sitting (Figure 2c,d) shows that the inner spaces of both neighbourhoods provide comfortable areas for sitting. Site observation suggests that sitting takes place in front of restaurants and cafés, playgrounds, and green spaces. Transforming the ground floor of some inner streets to commercial land use, many of the restaurants and cafés, and the generous sidewalks that offer enough space for sitting outside, turn inner streets into nodes of social activities.

Cycling is one of the main outdoor activities (13.68% Samariterkiez, 14.7% Klausenerplatz). The spatial pattern of cycling (Figure 2e,f) shows that in both neighbourhoods, all the streets are used for cycling, although in Klausenerplatz, cycling is more evenly distributed across the streets. This makes Klausenerplatz a more cycling-friendly neighbourhood, probably because there are more designated cycling paths and traffic-calming measures in Klausenerplatz than Samariterkiez. Studies suggest that cycling paths and traffic-calming measures play a significant role in encouraging residents to cycle [96–98]. Overall, cycling has been a favourable transportation means for Germans [99,100], and cycling in Berlin is 3% higher than average in Germany (in Germany it is 10.0%) [101]. Our household survey shows that bicycle ownership in Klausenerplatz (89%) and Samariterkiez (82%) is even higher than in Germany, which is 80.9% [102].

In terms of the spatial pattern of age, adults occupy most of the neighbourhood space. The spatial pattern of children's activities (Figure 2g,h) shows that the inner neighbourhood space and streets are quite safe for them. We also see a higher concentration of children in green spaces, particularly playgrounds that are used for children playing and accompanying parents socializing.

Overlapping outdoor social activities with the land use plan can help us to investigate possible correlations between them. Figure 2i,j demonstrates that, in both neighbourhoods, there is a clear and significant correspondence between the intensity and density of outdoor social activities and mixed land use. This correspondence differs in the two neighbourhoods based on the different patterns of mixed land use. In Klausenerplatz, mixed land use is scattered and more concentrated on inner areas, while in Samariterkiez, mixed land use is more concentrated on the southern border and decreases as we move towards the north. Mixed land use also intensifies social activities because it provides opportunities for socializing, such as sitting and chatting in outdoor spaces of cafes and restaurants. This confirms studies that suggest mixed land use promotes social life and enhances the viability of urban spaces [103–106].

Now we turn to analyse and discuss the results of the household survey and neighbouring. As noted before, to obtain a comparable overview from neighbouring, indicators were scored between 0 and 200 (Table 5). The result is interesting: in both neighbourhoods, the value and ranking of indicators are, to a great extent, similar. "Access to facilities" and "safety and security" have the highest, and "neighbourhood participation" and "interaction and networking" have the lowest value between the neighbouring indicators. Similarity of ranking and value of indicators suggests that, in both neighbourhoods, residents have a more or less similar neighbouring experience.

In the remainder of the paper, I will provide a more detailed analysis of some of the indicators, back up findings of the household survey with findings of the social activity mapping, and show how these findings correspond with, or challenge, dominant assumptions about the social life in compact neighbourhoods.

Table 5. Value and ranking of indicators in study neighbourhoods.

Neighbourhoods	Rank (Highest = 1)	1	2	3	4	5	6	7
Klausenerplatz	Indicator	Access to facilities	Safety and Security	Sense of Attachment	Quality of Home Perception	Quality of Neighbourhood Perception	Interaction and Networking	Participation in Neighbourhood
	Value	174.89	149.09	143.53	137.22	133.84	105.16	55.08
Samariterkiez	Indicator	Access to facilities	Safety and Security	Quality of Home Perception	Sense of Attachment	Quality of Neighbourhood Perception	Interaction and Networking	Participation in Neighbourhood
	Value	184.19	143.78	137.87	131.81	113.32	95.11	44.69

As Table 6 suggests, in both neighbourhoods, most of the urban facilities are located within a walking distance, and residents prefer to reach them by walking. The land use plan (see Figure 2i,j) shows that mixed land use pattern provides opportunities to use the inner neighbourhood space for accommodating basic urban services, and this offers residents accessible services within walking distance. As noted above, 73% of plots in Samariterkiez and 60% of plots in Klausenerplatz are mixed-use. The second most used means of transportation for reaching urban facilities is cycling. Our household survey shows that 89% of households in Klausenerplatz and 82% in Samariterkiez have at least one bicycle. Our social activity maps (see Figure 2e,f) also clearly demonstrate that the neighbourhood space is quite evenly used by male and female cyclists. We also noted that traffic-calming measures make the streets safer for children and the elderly. Although in Samariterkiez 37%, and, in Klausenerplatz 51.7%, of households own a car, they are reluctant to use private cars for reaching urban services. Overall, the findings of this study support the dominant belief that compact urban form makes urban facilities accessible and within walking distance for residents.

Table 6. Modes of transportation for accessing urban services.

Access to Facilities	Neighbourhood	Walking (%)	Biking (%)	Public Transport (%)	Private Car (%)
Accessibility of urban services	Klausenerplatz	61.0	19.6	13.1	6.1
	Samariterkiez	63.1	22.8	10.6	3.3

Table 5 also suggests that the feeling of safety and security is quite high. Feeling of safety reflects different aspects such as daytime safety, dark-time safety, the safety of parks, the safety of children on the street regarding traffic, and the safety of sidewalks. Overall, 76% of participants in Samariterkiez and 82% in Klausenerplatz feel safe in their neighbourhoods. As discussed above, the gridiron urban layout of the studied neighbourhoods permits generous sidewalks and enhances urban visibility. Higher mixed land use rate also implies the active presence of people in most parts of the neighbourhood, which enhances the feeling of safety [107,108]. The household survey also shows that in most of the participant households (Klausenerplatz: 80.3%; Samariterkiez: 76.2%), family members have not been victims of any crime during the previous three years. Overall, a high rate of feeling of safety perception by the inhabitants challenges dominant wisdom in compact neighbourhood debates, which relate higher density to higher crime rates and lack of security [16,109,110].

In contrast to the dominant argument that high-density environments and overcrowding may negatively affect home satisfaction [16,111,112], residents in our study areas benefit from a relatively acceptable level of home and neighbourhood quality (see Table 7). Overall, 87.6% of participants in Klausenerplatz and 82% in Samariterkiez are satisfied or very satisfied with their homes. The household survey shows that the mean household-size (Klausenerplatz: 2.20; Samariterkiez: 2.28) is close to the mean bedroom number (Klausenerplatz: 1.82; Samariterkiez: 1.59), and this could explain overall satisfaction with the living space. Table 5 also illustrates that 91.6% of participants in Klausenerplatz and 74.7% in Samariterkiez are satisfied or very satisfied with the quality of the neighbourhood. This satisfaction is about different dimensions of the neighbourhood, such as neighbours, lighting of the streets, maintenance of public spaces, neighbourhood reputation, and green space.

Table 7. Overall home and neighbourhood satisfaction.

	Neighbourhood	Very Dissatisfied	Dissatisfied	Neither Dissatisfied nor Satisfied	Satisfied	Very Satisfied
Overall home satisfaction (%)	Klausenerplatz	1.7	2.8	7.3	52.2	35.4
	Samariterkiez	0	4.2	13.9	56.3	25.7
Overall neighbourhood satisfaction (%)	Klausenerplatz	0.6	1.1	6.2	62.9	28.7
	Samariterkiez	0.7	6.2	18.5	61.0	13.7

Due to overall home satisfaction, a high percentage of participant inhabitants have no plan to change their home (Klausenerplatz: 84.0%; Samariterkiez: 91.0%). Having sufficient space at home, good quality of home, and being satisfied with the neighbourhood have been the main reasons not to change the home. A long residency in the current flat (Klausenerplatz: 13.89 years, Samariterkiez: 8.84 years) and in the neighbourhood (Klausenerplatz: 16.69 years, Samariterkiez: 11.33 years), extracted from the household survey, are indications for the home and neighbourhood satisfaction.

Household surveys and existing national and local statistics show that both neighbourhoods are quite diverse in terms of ethnicity and social profile. In Klausenerplatz, around 72% of the people living in the participant households hold German nationality with different backgrounds; 85% of them have been born in Germany. House ownership is only 7%. Accommodations are all flats, rented either from the private sector (55%) or public sector (32%). Although Samariterkiez, as part of East Berlin, has experienced a remarkable social change because of the recent immigration of non-Germans and foreigners, it is still slightly less diverse than Klausenerplatz. Overall, 80% of the participants hold German nationality; 84% of them have been born in Germany. Due to recent developments in the area, home ownership is 13.9%. Additionally, 70.1% of the tenancies is provided by the private sector and 12.5% by the public sector. Both study neighbourhoods, following Galster's formula [113], could be considered as mixed neighbourhoods as no single group makes up more than 75% of the population.

Despite social diversity in the neighbourhoods, interestingly, “interaction and networking” is the second lowest “neighbouring” indicator (see Table 5). Table 8 summarises some aspects of this indicator. It suggests that measures indicative of social interaction, such as everyday meeting and chatting with neighbours, visiting neighbours at home or other places, and exchanging help with neighbours is quite low. Although our social activity mapping demonstrated possible arenas of socializing within the neighbourhood space, where they can sit, play, and hence socialize, the interaction between neighbours remains limited. Here we should note two points. First, scholars have suggested that a decrease in social interaction in cities has been an inevitable consequence of modernisation, globalisation, and communication technology [114–117]. Secondly, social diversity may also lead to the phenomenon of “parallel lives”; inhabitants delimit their interaction and social networks to the people of the same ethnicity, race, religion, social class [118–120], and thus minimise social interaction and create a society of separated community groups. Overall, our study challenges the dominant argument that higher density environments enjoy a high volume of social interaction [1].

Table 8. Aspects of social interaction and networking.

Neighbourhood	Klausenerplatz	Samariterkiez
Number of neighbours known by name	11.61	7.68
Average number of friends in the neighbourhood	4.31	4.24
1–5 friends in the neighbourhood (%)	57.1	54.1
No friend in the neighbourhood (%)	21.5	21.5
Everyday meeting and chatting with neighbours (%)	14.6	12.7
No visiting neighbours at home or other places (%)	35.8	41.7
Very often help exchange with neighbours (%)	25.4	15.3

Neighbourhood participation is the lowest “neighbouring” indicator in both neighbourhoods (Table 5). As Table 9 suggests, people overall are reluctant to get involved in neighbourhood-related activities. Although many of the inhabitants are aware that community-based activities do exist, they do not get involved. Table 9 also shows that participants are aware of their low level of public engagement, as they rate their involvement as low. Studies show that low level of public engagement is a world-wide challenge that is rooted in different factors such as lack of trust, social inequality, absence of motivation, non-democratic decision-making tradition, poorly designed participatory processes [121–124].

Table 9. Neighbourhood participation.

Neighbourhood	Klausenerplatz	Samariterkiez
Number of community-based organisation known to participants	2.00	3.12
Participants do not know any community-based organisation (%)	51.7	33.7
Not member of any community-based organisation (%)	86.3	83.8
Never active in religious activities (%)	65.7	81
Rating involvement in neighbourhood activities as very low (%)	31.5	38
Rating respond to invitations for involvement in neighbourhood-related issues as very low (%)	45.5	43.7

Overall, our study found a positive association between length of home and neighbourhood residency, home ownership, and different indicators of neighbouring. Participants with home and neighbourhood residency longer than 5 years know a larger number of their neighbours, have more friends in the neighbourhood, do more frequent meetings and chatting with their neighbours, and are more likely to ask their neighbours for help. This implies that residents with longer home and neighbourhood residency have stronger social exchange and interaction with other neighbours. Residents with longer neighbourhood residency know a larger number of community-based organisations, but neighbourhood participation is only slightly higher for residents with higher neighbourhood residency length. It is also less likely for residents with longer than five years neighbourhood residency to move out of their neighbourhoods or change their homes. Home ownership also matters. Overall, participants who own their homes outright or with mortgages are more satisfied with their homes and neighbourhoods compared to those who rent from public or private sectors.

5. Conclusion: Compact Urban Form; Neither Orthodoxy nor Fallacy

The aim of the paper is bringing some insights into the social dimension of compact neighbourhoods from two neighbourhoods in Berlin. This was a response to the call for more place-specific evidence from different cities with regard to the social life in compact neighbourhoods. Our study found a clear correspondence between land use and outdoor social activities: activities are denser and more intensive at areas with higher mixed land use patterns. This is because of the opportunities mixed land use offers: neighbourhood space with mixed land use accommodates urban facilities such as cafes, restaurants, and small shops that provide space for activities such as sitting, standing, and conversation that enhances socializing. Obviously, higher mixed land use has been possible due to the compact form of both neighbourhoods: 4- to 5-storey buildings erected next to each other, which make up the majority of the neighbourhood space, can easily accommodate different non-residential land uses on the ground floor, with proper access for residents. In fact, most of the commercial spaces that serve as cafes, restaurants, small shops, and other urban services are located on the ground floor of the buildings that are mainly residential on upper floors. The use of neighbourhood space for social activities is also related to the feeling of safety, which can be enhanced by appropriate urban design and street layout. As noted, outdoor activity mapping proved that generous sidewalks and traffic-calming measures make the neighbourhood space more friendly for cycling and safer for children’s activities.

The household surveys that investigated the neighbouring pattern in both neighbourhoods shed light on some orthodoxies with regard to compact neighbourhoods. Our research shows that the results derived from two neighbourhoods in Berlin depict a mixed picture from the social advantages of compact neighbourhoods: they may provide opportunities for some aspects of social life in order to make the environment socially liveable, but this does not mean that, in reality, all social qualities, what we studied under the concept of “neighbouring”, do exist at an acceptable level. In this sense, our study confirms some orthodoxies that have been attributed to compact neighbourhoods, but challenges some others.

The household surveys explicitly confirm that, in both studied neighbourhoods, urban facilities are within walking distance and this encourages residents to use walking and cycling as the most utilised means of transportation to reach them. Compact urban form that decreases the physical distance between homes and places of urban services, coupled with the mixed land use pattern than provides space for accommodating small businesses and services, is the main reason behind the accessibility of urban facilities in the studied neighbourhoods. This is in line with other studies that argue that compact neighbourhoods enhance the accessibility of urban facilities [5,11,25,26].

The results of the household survey contradict three orthodoxies with regard to higher densities: that higher densities are less safe and secure [16,109,110], and that higher densities are less likely make residents satisfied with home quality, as well as neighbourhood quality [16,111,112,125]. As noted, feeling of safety is relatively high in both neighbourhoods (76% of participants in Samariterkiez and 82% in Klausenerplatz feel safe in their neighbourhoods), and in most of the participant households (Klausenerplatz: 80.3%; Samariterkiez: 76.2%), family members have not been victims of any crime during the previous three years. Outdoor activity mapping confirms that, due to high-quality urban design and street layout—wide sidewalks and traffic-calming measures, the neighbourhood space is widely used for cycling and other social activities, with activities such as walking, sitting, and playing taking place within the neighbourhood. Moreover, residents express a general satisfaction with their homes (87.6% of participants in Klausenerplatz and 82% in Samariterkiez are satisfied or very satisfied with their homes) and with their neighbourhood quality (91.6% of participants in Klausenerplatz and 74.7% in Samariterkiez are satisfied or very satisfied with the quality of the neighbourhood). Despite compact arrangement of building plots with a majority of 4- to 6-storey buildings, residents show a general sense of satisfaction with their neighbours, street lighting, public space maintenance, neighbourhood reputation, and green space. This is why the majority of them (Klausenerplatz: 84.0%; Samariterkiez: 91.0%) want to stay in their homes and neighbourhoods.

But these two compact neighbourhoods also have some pitfalls: the household survey shows that despite social diversity, the level of “interaction and networking” and “neighbourhood participation” is low. Although, as noted above, we can argue that decrease in social interaction and networking has been a dominant trend in modern era, our cases suggest that higher densities may provide some opportunities at the neighbourhood space for residents to enhance social interaction and networking, but in reality, they experience a relatively low level of socializing compared to other indicators of “neighbouring”. In this sense, this study does not challenge the argument that residents of compact neighbourhoods are more satisfied with their personal relationships and social life compared with residents of low-density neighbourhoods, or the argument that social life and personal relationships could be facilitated by compactness [1]. However, it indicates that even if compact neighbourhoods provide spatial and physical opportunities for socializing, as two study neighbourhoods in Berlin do, the level of actual interaction and networking with neighbours could be low and limited. The same argument applies to the concept of neighbourhood participation: there seems to be no significant correlation between compact urban form and the willingness of residents of such neighbourhoods to actively engage in their neighbourhood issues.

This research has some methodological limitations. The survey conducted in two neighbourhoods explored “how much” and “to what extent” questions, with regard to different social aspects of compact neighbourhoods. For example, the questionnaire explored the level of different indicators

but failed to explore “why” they are at such a level. To answer “how” and “why” questions, we need more comprehensive, in-depth investigations, and a “case study research” approach [126] that utilises mixed methodology based on multiple sources of evidence (such as in-depth interviews, focus groups discussions) will be able to understand rationale behind the figures and levels. As a result of this methodological limitation, the role that socio-economic and socio-ethnic factors may play in social activities and neighbouring were not comprehensively explored. A more detailed questionnaire, complemented with more qualitative methods such as in-depth interviews and focus group discussions, will be helpful to explore the role of these important factors. Moreover, due to limited resources, fieldwork was limited to two neighbourhoods in Berlin. Obviously, studying a larger number of neighbourhoods from Berlin, or from other cities, could potentially lead to more reliable results and comparative analysis.

This research sends a mixed message: the most explicit advantage of living in compact neighbourhoods is the higher accessibility of urban facilities within walking distance. Other indicators of “neighbouring”, such as safety, home and neighbourhood satisfaction, social networking, and public engagement, are not consistent with the dominant wisdom of compact urban form debate. This mixed message suggests that there is no “compact urban form” orthodoxy: appropriateness of compact urban form for a specific place has to be investigated for that specific place. Compact urban form is neither orthodoxy nor fallacy. There is no either–or solution for the appropriate urban form: every urban form has its advantages and pitfalls. The main determinant is the “context”, and this determinant covers a wide range of social, economic, cultural, physical, and ethnical characteristics of a given urban area. In fact, findings of this research confirm or challenge some presumptions of the compact urban form debate, but these findings are relevant for Berlin cases and should not be generalised.

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