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CASE STUDY

Effects of outdoor shared spaces on social interaction in a housing estate in Algeria



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Shared outdoor space;
Social interaction;
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Abstract

This study aims to identify how the characteristics of shared outdoor spaces in housing estates influence residents to interact with one another. The study specifically focuses on a housing project called la cité des 1000 logts, which is situated in a zone d'habitat urbaine nouvelle in Biskra, a city in South Algeria. The investigation draws on two sources of information, observations of the ways in which the residents use their neighborhood spaces and a questionnaire survey with residents about the perceived adequacy of these spaces for social interaction.

Data for the survey was collected from the owners of flats in the apartment blocks surrounding the open spaces. Housing samples were taken from a total of 1000 housing units identified within the study area. Twenty five percent (25%) of the total housing units were selected. Out of the 250 questionnaires administered to household-heads who were the respondents, only 230 were subsequently retrieved for data analysis. Results showed that the high degree of "openness" of la cité des 1000 logts and the poor quality of communal outdoor spaces in the area discourage all forms of spatial use and reduce these outdoor spaces to transit areas. Furthermore, findings indicated that the layout of buildings and the quality of common outdoor spaces in residential neighborhoods substantially affect the use of these spaces and the social interaction among residents.

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1. Introduction

In the past 50 years, rapid urbanization in Algeria has resulted in the fast growth of its population. Algerian cities experience continuous population growth because of migration from rural to urban areas. This increase in urban population has in turn increased housing production.

However, no government housing policy addresses the growing needs of the housing sector. In fact, government involvement in public housing was not visible until 1974. To deal with housing shortage, the Algerian government funded and

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launched public housing projects throughout the country. Zone d'habitat urbaine nouvelle (ZHUN) is an international housing model that is based on the concepts of prefabrication and standardization. ZHUN was intended to provide the Algerian urban population with modern, decent, and affordable housing.

Most ZHUN housing models were built on peripheral extensions and were conceived in apartment blocks that were freely arranged in vast open spaces. Initially, ZHUN was planned to include all necessary facilities to meet residents' needs. However, ZHUN housing models remained incomplete or poorly finished and deprived of their required facilities for many years. Whether this housing model enhances anonymity among neighbors has been a key concern of social psychologists and environmental designers. Various studies have even shown the negative effects of such a poor living environment on social relationships (Lobout, 1968; Kaminski, 1978; Keane, 1991; Coleman, 1999).

The common areas between houses are important features that facilitate social activities in neighborhoods. Urban research indicates that the decline of social life in housing estates is closely related to the design of communal outdoor spaces. The spatial arrangement of apartment blocks has been found to reduce social interaction among residents and influence their activity patterns (Chombart de lawe, 1952; Abu-Ghazze, 1999).

Similar to those in other countries, many ZHUN housing models in Algeria confront an increasing number of problems. A study in Batna, a city in East Algeria, showed that the ZHUN in the area became an anonymous space where residents endured difficult conditions, such as deteriorated social cohesiveness, damaged neighborhood relations, and flared tensions among residents (Naceur and Farhi, 2003). Another study in Annaba (Mebirouk, 2005) showed that outdoor spaces that were supposed to enhance social interaction among occupants were abandoned, deserted, and diverted from their use. Common spaces visibly undergo accelerated deterioration right after the occupation by residents of apartments. Vandalism and lack of maintenance have also become real and pervasive problems.

These findings collectively show that the degree of alienation among Algerian ZHUN residents in ZHUN housing models has become a serious concern. Against this backdrop, this study aims to examine the problems related to the social interaction of ZHUN residents by determining the influence of outdoor communal spaces on social interaction.

2. How can space facilitate social interaction?

Studies suggest that outdoor spaces can enhance social interaction. People go to outdoor spaces because of their need for social interaction (Cooper Marcus and Francis, 1998). Outdoor spaces are places for chance encounters and potential interactions with other people (Drucker and Gumpert, 1998). These spaces provide opportunities for individuals to engage in high-level social interaction. In large apartment buildings, individuals socialize in common outdoor spaces to increase recreation opportunities outside the home (Glaeser and Sacerdote, 2000).

The factors that influence social interaction in housing estates are classified into two general types: social variables and physical elements of communal outdoor spaces. These are described in detail in the following:

2.1. Social variables

The socio-demographic characteristics of a neighborhood affect how neighbors interact with others, and how they use shared outdoor spaces. Factors such as respondents' stage in the life cycle (including age, marital status, and presence of children at home), owner-renter status, length of residence, educational attainment and annual income are relevant socio-demographic characteristics presumably associated with social interaction (Haggerty, 1982).

2.2. Physical and spatial elements

The physical elements that may affect the patterns of social contact among neighbors include layout pattern, site plan, scale and proportion, land use mix, and physical features.

2.2.1. Layout pattern

This refers to the spatial arrangement of a neighborhood. The layout plan of housing estates can contribute to the interaction among residents and eventually to the formation of social relationships. Jacobs (1961) reported that the arrangement of traditional neighborhoods can enhance social life, with physical features, such as sidewalks, facilitating social activities. Gehl (1986) found that "long-duration activities" in residential streets occur in semiprivate zones that he also called soft edges (e.g., front gardens). This point of view is supported by Newman's "defensible theory" (Newman, 1972), which states that territoriality is a critical mechanism to create a cohesive residential environment and thus make it well contained and easy to monitor and control. An intimate spatial scale motivates people to engage in spontaneous activities. Neighboring can be engendered by a small-scale and well-defined neighborhood with clear boundaries.

Newman (1972) proposed two components to avoid "confused spaces" around blocs, in which land purpose and regulation are unclear.

- A territorial definition of the physical environment is achieved by subdivision of residential environments into zones where adjacent residents can easily adopt proprietary attitude.
- Territorial markings and signage zones of control are created with physical or symbolic barriers that disrupt movement between public and private spaces.

Newman (1996) proposed numerous design guidelines that have been incorporated to residential environments to enhance social interaction while providing security.

2.2.2. Mixed land uses

Jacobs (year) was the first to clarify the relationship among mixed land use, social interaction, and sense of community. Choay (1965) reported that public housing complexes destroyed traditional mixed-use communities that produce a

vibrant street life. When place of residence is juxtaposed with shopping and recreational places, social interaction is facilitated because people are encouraged to roam around and move. The mixture of residential and commercial land uses increases opportunities for “chance encounters.” Spaces will be empty and unused if activities are not organized in these spaces.

2.2.3. Physical features

A high-quality outdoor space can enhance social interaction by attracting people to come and stay for some time. The more time people spend outdoors, the more likely are they to engage in activities (Knack, 2000). The visual appearance of common outdoor spaces is important to develop neighborhood relations (Skjaeveland and Garling, 1997).

Physical features are identified as efficient design elements in outdoor spaces to encourage social interaction. Physical features can attract people to stay outdoors and engage in conversations. The existence of interesting objects or features, such as artificial water scenery and properly arranged seats, also encourages the use of public space. The provision of greenery in residential communities increases opportunities for social activity and enhances social bonding among residents (Shu-Chun, 2006). Playgrounds with recreational facilities that are attractive to children are likely to make people on this site interact.

3. Study site

The study focuses on a housing project situated in a Z.H.U.N of Biskra, a middle city in the South eastern Algeria, located around 430 Km south of Algiers. Like most Algerian cities, Biskra experienced rapid rate of urbanization following the independence of the country. To satisfy the increasing demand in housing, two Z.H.U.N were created on the western and eastern peripheries of the city. “West Z.H.U.N” was the first Z.H.U.N initiated in Biskra in 1975 on a surface of 98 hectares of land. It was definitely completed in 1987. Initially, the Z.H.U.N was designed to feature a mix

of residential and commercial development, however because of its long length of realization; the Z.H.U.N remained destitute of the necessary facilities and distant of the down town during numerous years. The estate selected for the survey ‘la cité des 1000 logts’ is one of the most important housing project located in west Z.H.U.N. It has been intake in 1980 and stated to be occupied in 1984. The total area of estate is about 24,663 hectares; it comprises 123 domestic blocks with total number of flat units of 1000. Like other residential areas from that period, the estate had a specific physical character of 4-5 storey housing and large communal outdoor spaces. It includes 2 different types of blocks which are rectangular blocks and blocks in “H” form. The estate is surrounded by numerous residential areas and public facilities: A museum, and a handicraft center in the west and residential areas in the south and East. However, in spite of its residential character, the northern and western borders are delimited by two mechanical rail networks with heavy traffic, in addition to the railroad track in the East. Building coverage ratio is 40,55 unit per hectare, which is very weak compared to the coverage ratio required for housing estates which must be over than 70 unit per hectares. There is an unreasonable land use because with a far of 0,1223 only 12,75% of the land are built (Figure 1).

4. Methodology

This study aims to examine the relationship between the outdoor space design of housing estates and residents’ social interaction. Three sources of information were used, namely, observations of residents’ activities in and use of common outdoor spaces, design characteristics of the neighborhood, and a questionnaire survey that involved a sample of residents living in la cité des 1000 logts.

The context of observations included the number of users, users’ gender, users’ age range (elderly, middle-age, young adult, and children), movement flow, and information on outdoor space uses and sociability: are the residents using the space or is it empty? Are the residents of mixed age and gender? Do people cluster in groups? Sites were repeatedly visited at different hours during weekdays and weekends. Field studies were conducted in February 2011 and March 2011, with the assumption that outdoor spaces were used intensively during this period.

Observations were supplemented by questionnaire survey forms that were administered to the residents. Survey was used to collect information on the profile of the population and the attitude of residents toward neighbors and their uses of common outdoor spaces.

Questionnaires were designed to gather information on the respondents’ perceptions on the adequacy of outdoor spaces for social interaction. Housing samples were taken from a total of 1000 identified housing units within the study area. Twenty-five percent (25%) of the total housing units were selected. Data were collected from flat owners in the apartment blocks that were surrounded by open spaces. A total of 250 housing units were drawn from a random sampling of the neighborhood. Out of the 250 questionnaires administered to household heads, only 230 were retrieved for data analysis.



Figure 1 Location of the west ZHUN in Biskra.

Table 1 Household characteristics.

Socio-economic characteristics	Number	Valid percent (%)	Cumulative percent (%)
Person per household			
1-2	2	0.90	0.90
3-4	25	10.90	11.80
5-6	82	35.6	47.40
7-8	72	31.30	78.70
9 and more	49	21.30	100
Number of household per house			
1	193	83.90	83.90
2	37	16.10	100
Marital status of the household head			
Married	223	96.90	96.90
Divorced	5	2.20	99.10
Widowed	2	0.90	100
Number of children			
1-2	32	13.9	13.90
3-4	115	50	63.90
5 and more	83	36.10	100
Employment of the household head			
Retired	73	31.70	31.70
Government employee	45	19.60	51.30
Unskilled worker	14	6.10	57.40
Skilled worker	42	18.30	75.70
Manages a business	37	16.10	91.80
Unemployed	19	8.20	100
Education of the household head			
Primary school	22	9.60	9.60
High school or secondary level	141	61.30	70.90
University degree and above	67	29.10	100
Employment of the household head's spouse			
Housewife	209	90.90	90.90
Employee	21	9.10	100
Income			
High income	9	3.90	3.90
Average income	118	51.30	55.20
Low income	80	34.80	90
No response	23	10	100
Status of dwelling ownership			
Rented	92	40	40
Owned	138	60	100

5. Research results

5.1. Community profile of la cité des 1000 logts

Table 1 shows that most households in la cité des 1000 logts are large-sized nuclear families with an average of five-six children. Out of the 230 respondents in the study, only 7 have a female household head. Household heads are predominantly full-time employees.

The residents are averagely educated and belong to the middle-class socio-economic level. Housewives account for 90.9% of the respondents, but only 9.1% of these housewives actively engage in social interactions. The majority of the household heads completed high school or attained a college-level education, and only 8.2% of all household heads are unemployed. Nearly 29.1% of the residents obtained a university degree. The occupations of the

residents are as follows: 51.3% are government employees, 31.7% are retired, 18.3% are skilled workers, and 16.1% are managing their own business, small enterprise, or small trade. Only 6.1% of the residents are involved in small jobs. The results also showed a high proportion of ownership among the dwellers at 60%. Only 40% of the dwellings remain rented.

To obtain information on approximate household incomes, we used three sources of information: (a) occupation of the household head, (b) occupation of the spouse of the household head, and (c) wealth sources, such as possession of cars, engagement in trade, and ownership of real estates.

Households were grouped into three categories, namely, low, middle, and high incomes. **Table 1** shows that 51.3% of the households have average income, whereas, 34.8% have low income. The residents of the study area belong to the middle class socio-economic level.

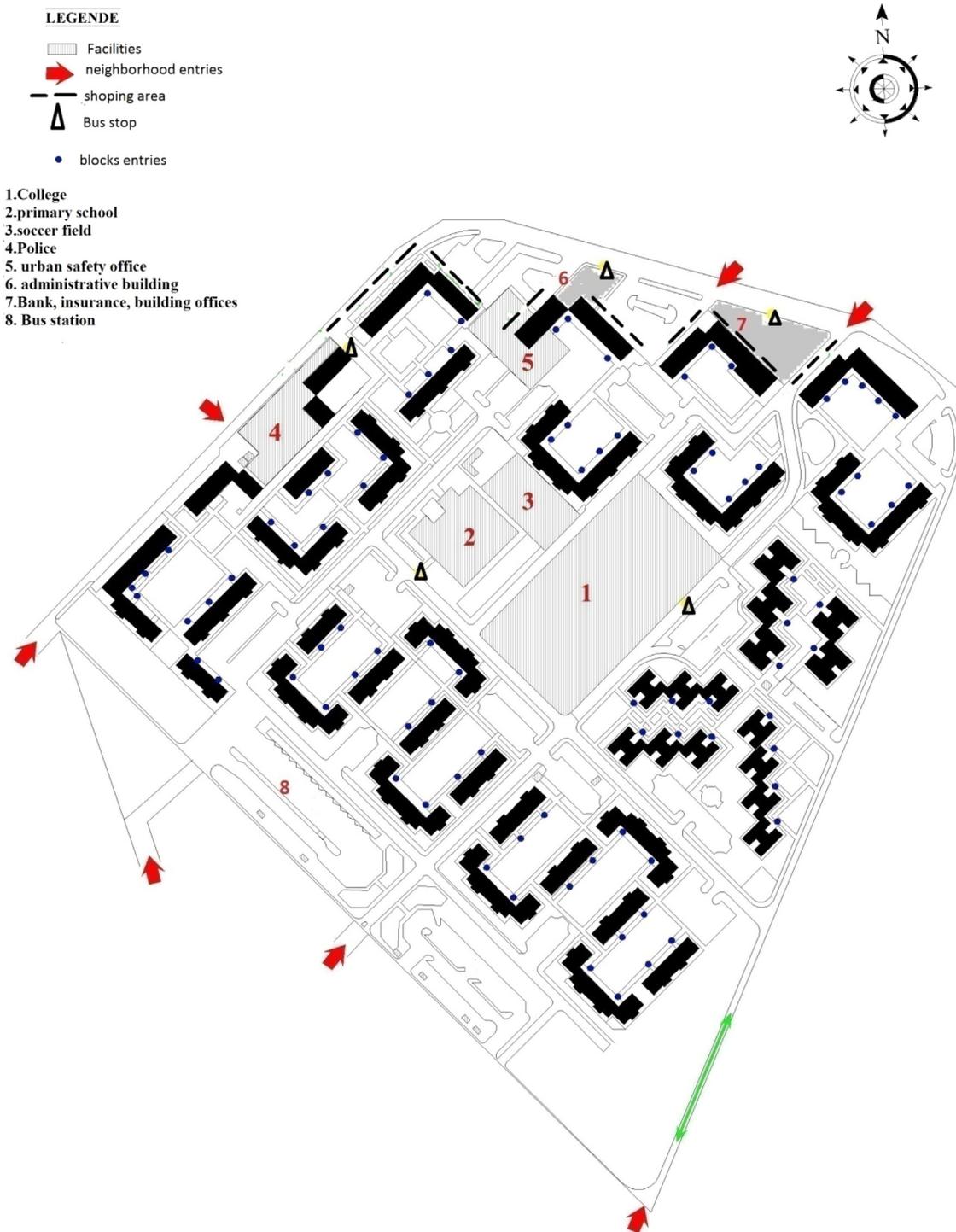


Figure 2 Spatial organization of la cité des 1000 logts.

The findings also indicated that the majority of the people living in la cité des 1000 logts share many socio-economic features. Therefore, the residents belong to a relatively homogeneous population.

5.2. Facilities

Numerous infrastructures were established to improve the project area. For instance, a primary school and a college

were set up in the central area. Administrative buildings were established along the northern urban artery to set the project boundary and develop an urban façade. Figures 2 shows the location of the established facilities, such as a bank, insurance company, police station, and several other administrative buildings. Bus stations became a vital link that joined the project to the inner city.

However, a real mixture of residential and commercial land uses to facilitate social interaction is lacking in la cité des 1000 logts. A limited number of shops are found along

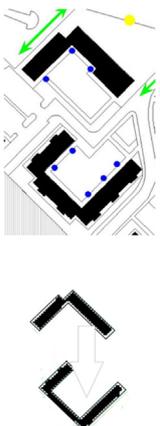
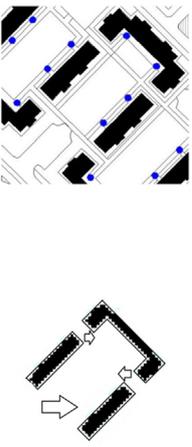
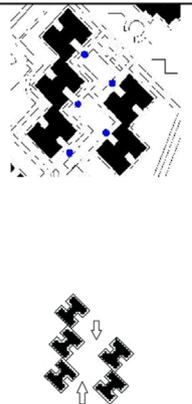
<p>Blocks in U shape facing blocks in L shape</p> 	 <p>Because of the absence of any physical or symbolic barriers to demarcate the arrangement of blocks in L and U shapes, common spaces lose their sense of enclosure. The absence of greenery and furniture increases the sense of “openness.”</p>
<p>Block in I shape with two linear blocks</p> 	 <p>There is no connection between the block in I with the two linear blocks. The space between blocks that results lack the necessary degree of closing to insinuate to the intruders that it is reserved to a residential use. In addition spatial proportion of the space formed between blocs is not convenient, the space seems too large and empty.</p>
<p>Blocks in H linear gradations</p>	
	 <p>The space between the blocks tends to form an internal street, however, the space behind blocs that result of such arrangement is ambiguous and not clearly identified.</p>

Figure 3 Comparison of the three configurations of common outdoor spaces within the study area.

the northern urban artery, and these include a café, two fast food restaurants, a convenience store, a pharmacy, an internet shop, and a videogame store. Except for the café,

the other shops cater to the daily needs of local residents. However, these shops lack a good visual appearance that can stimulate urban life in the neighborhood and encourage

social interaction. The internet and videogame stores attract youngsters. However, these stores are unable to add vitality to the neighborhood.

Shared outdoor spaces are in extremely poor conditions. Little attention has been paid to the provision of outdoor spaces with greenery and well-designed furniture. No parklands can be found, as included in the initial plan. External spaces are marked by predominantly paved areas with little greenery (see [Photo 1](#)).



Photo 1 Poor quality of outdoor communal spaces.

The only recreational facility in the area is a soccer field. Children's playgrounds were initially planned to be built between residential blocks. However, no playing equipment and setting areas are provided in the spaces. Safety mats that can help ensure a safe playing environment for children are non-existent.

5.2.1. Accessibility

[Figure 2](#) shows several types of access to the site. Buses are the main mode of public transportation in the area. Public transport interchange facilities are provided at convenient locations.

All entries to the blocks are oriented toward the inside part of the neighborhood to preserve the privacy of the residential area. Blocks therefore open up to the common outdoor spaces that are situated between blocks rather than outside public arteries ([Figure 2](#)). Nevertheless, the tentative closing of the la cité des 1000 logts does not affect accessibility to and the risks of intrusion in the neighborhood. A large percentage of the residents interviewed reported increasing incidents of theft and aggression, in which most offenders were foreigners ([Table 4](#)).

5.3. Social interaction

In the questionnaire survey, we determined the extent of social interaction of the residents by asking them how well

Table 2 Social interaction.

Social interaction	Number	Valid percent (%)	Cumulative percent (%)
Number of persons you know by name in your building			
All	10	4.30	4.30
Almost all	112	48.70	53.00
Half	60	26.10	79.10
Very few	25	10.90	90.00
None	23	10.00	100
Number of persons you know by name in a different building within the same neighborhood			
All	5	2.20	2.20
Almost all	75	32.60	34.80
Half	85	37.00	71.80
Very few	35	15.20	87
None	30	13.00	100
Do you have friends in the neighborhood?			
Yes	72	31.30	31.30
No	158	68.70	100
If you have a personal problem, do you have a neighbor you can talk to?			
Yes	63	27.40	27.40
No	167	72.6	100
Frequency of visits to people living in your neighborhood			
Often	45	19.60	19.60
Sometimes	95	41.30	60.9
Seldom	55	23.90	84.80
Never	35	15.20	100
Nature of exchanges and favors asked/received			
Loan of items	35	15.20	15.20
Taking care of children	42	18.26	33.50
Financial help	23	10	43.50
Ceremonies (marriage, death) and illness	105	45.60	89.10
None	25	10.90	100

they knew other residents within their own building and within the neighborhood. Table 2 shows that the respondents have extensive networks of interactions. Many residents stated that they know people from other buildings.

To examine the extent of social interaction, we designed four indicators in the questionnaire survey:

- friends in the neighborhood,
- frequency of visits between neighbors,
- nature of exchanges between neighbors,
- conversation with neighbors on personal problems as the most in-depth form of social contact.

Out of the 230 respondents, 72 said that they have friends in the neighborhood. The respondents were also asked how often they visit their neighbors: 60.9% said they often or sometimes visit their neighbors, 23.9% said they seldom visit their neighbors and 15.2% said they never visit their neighbors.

Among the respondents, 45.6% said that death, marriage ceremonies, or illnesses are the only opportunities for social contact with neighbors. Meanwhile, 43.5% of the respondents reported frequent, personal exchanges with neighbors. The nature of contact varies from taking care of children and loans of items to financial aid in cases of crisis. Most of the respondents also said that they would not talk to neighbors about personal problems.

Despite the limited number of residents who have friends in the neighborhood, the results showed that the respondents have extensive networks of interactions. Visits and interactions were frequent, and many favors were exchanged between neighbors. Accordingly, we can affirm that contrary to our predictions, anonymity is non-existent in la cité des 1000 logts. The degree of social interaction among residents in the area was higher than predicted.

5.4. Use of outdoor common spaces

Our observations show that outdoor shared spaces are mostly utilized as transit areas rather than as recreational spaces. Therefore, public facilities, such as the bus station of la cité des 1000 logts, are subjected to heavy use. Intense pedestrian activities are observed in the neighborhood during weekdays.

Site observations of the neighborhood during different hours on weekdays and weekends also indicate that

passersby are the frequent users of open spaces. Most passersby come from adjacent neighborhoods and traverse the study area to reach their various destinations. Expectedly, the extent of social interaction during weekdays is low. The regular users of open spaces are children who play because playgrounds lack the needed equipment for their games. Interviews with the residents confirmed these observations: a high percentage of the respondents (69.1%) said that common outdoor spaces are used only for transit; 23.5% said that outdoor spaces are used for socialization or for looking after children who are playing on the playground; and less than 8% said that they use outdoor spaces to rest, go for a walk, or practice sports.

A dramatic increase in the use of outdoor spaces is observed during weekends. The rate of social interaction slightly increases, and outdoor spaces serve as areas for neighbors to mingle. Our observations indicate that during weekends, some groups conduct their favorite activities in common outdoor spaces. Men choose to meet with others mostly in public spaces or in the café and boutiques built in

Table 4 Frequency of conflicts, theft incidents, and aggression in the neighborhood. Conflicts, thefts and aggression.

	Number	Valid percent (%)	Cumulative percent (%)
Frequency of conflicts			
Always	40	17.40	17.40
Often	105	45.60	63
Seldom	54	23.50	86.50
Never	31	13.50	100
Cause of conflicts			
Children	124	62.30	62.30
Other causes	75	37.70	100
Frequency of theft incidents or aggression in the neighborhood			
High	40	17.40	17.40
Average	95	41.30	58.70
Low	50	21.70	80.4
Very low	45	19.60	100
Do you think that the offenders are from the neighborhood?			
Yes	71	38.40	38.40
No	114	61.60	100

Table 3 Uses of common outdoor spaces.

Use of outdoor spaces	Number	Valid percent (%)	Cumulative percent (%)
Activities in common outdoor spaces			
Transit	159	69.10	69.10
Socializing with others or accompanying children	54	23.50	92.60
Resting	4	1.70	94.30
Going for a walk	5	2.20	96.50
Practicing a sport	8	3.50	100
If the quality of outdoor spaces is good, will you use them?			
Yes	202	87.80	87.80
No	28	12.20	100

peripheral areas. They deliberately move away from the spaces near blocks to preserve privacy in the neighborhood. Women quickly traverse the neighborhood. They also never stay late in common outdoor spaces near blocks for chatting or gathering. Women are rarely seen accompanying children in outdoor spaces because such an activity is strictly restricted to males, such as fathers, grandfathers, and brothers only.

Children are the frequent users of communal outdoor spaces. Large open spaces provide opportunities for different children games, such as football, biking, running, and playing with toy vehicles. However, the presence of children in communal outdoor spaces is often a source of problems and neighborhood conflicts: 63% of the respondents mentioned the frequency of neighborhood conflicts and 62.3% said that children are the main cause of neighborhood conflicts (Table 3). Because of the lack of adequate playing areas, most children games turn into acts of vandalism, such as throwing stones, breaking windows, and graffiti, which result in the deterioration of the blocks. Meanwhile, male teenagers meet after school in outdoor spaces to hang out with friends or play ball games before they go home. Older men are often observed gathering, sharing stories, and playing traditional games. The absence of appropriately arranged seats makes the elderly carry a chair, an old carpet, or a cardboard to sit on. Besides being unattractive, common outdoor spaces become especially intolerable and uncomfortable during the summer season. The spaces are not appropriately designed for the hot and dry climate of the region. Common outdoor spaces are too open and not properly covered. No shelters are also provided. Consequently, shared outdoor spaces are completely deserted during summer. The respondents were also asked whether they will use outdoor spaces if the quality of these spaces is good. Out of the 230 respondents, 202 answered in the affirmative.

5.4.1. Form of appropriations of shared outdoor spaces

Residents in first floors are more likely to engage in gardening and yard work because they are close to the spaces for these activities. In such a case, outdoor space is regarded as a natural extension of one's interior residential space. Often, gardens are considered as exclusive properties because of the iron wire fencing around them to prevent any form of intrusion and to prohibit the use of the gardens by other residents.

Nevertheless, gardening remains an isolated activity in the neighborhood because it is limited to nearby outdoor spaces. Furthermore, not all residents who live on the first floor



Photo 2 Gardens organized poorly and improperly kept.

engage in such an activity. Despite the opportunity for gardening, many yards are poorly organized, improperly kept, and dirty. Some gardens also end up as garbage areas Photo 2.

5.5. Comparison of the use of and interactions in three types of arrangements of shared outdoor spaces in la cité des 1000 logts

Three types of configurations of common spaces were differentiated and examined to understand the influence (Figure 3) of different types of layouts and arrangements on the social interaction of residents who gather and interact around blocks. The three types of arrangements were used to compare the residents' extent of use of social space and social interaction.

La cité des 1000 logts comprises various types of configuration of its member blocks, namely, blocks in I, L, U, and H shape arrangements. All blocks are organized around a big central space designed to serve as parklands or playgrounds, but currently, these spaces are empty. The spaces between blocks are categorized into three groups according to the degree to which they are enclosed:

- High degree of enclosure: resulting from the arrangement of blocks in U shape facing blocks arranged in L shape.
- Average degree of enclosure: resulting from the arrangement of blocks in I shape with two linear blocks.
- Low degree of enclosure: resulting from the arrangement of blocks in H shape organized in linear gradations.

U shape layout is supposed to increase the interaction because it provides a common entry point for everyone. However the excessive dimensions of the space between the blocs made it too open and uncontrolled leading to a total confusion of use this is noticeable through the external and anarchical uses such an area of parking for buses. In the last case, the space between the blocks tends to form an internal street, the space seems to be more maintained this is noticeable through the enterprise which the residents have displayed in the planting and maintenance of their entries blocks. At the opposite the space behind the blocks that result from this type of configuration is ambiguous, not appropriated, it is a no man's land. The spatial organization scheme (Figure 2) shows that, in spite of the variety of arrangements of blocs a sense of closeness is lacking in the whole project because of the absence of barriers to demarcate the units, and to limit the number of residents around the blocks. Most of the blocks were not arranged appropriately to form small neighborhood grouping. As a consequence a high degree of opening is predominating in the study area. This could explain the low rate of social interaction and use of shared outdoor spaces in the "cité des 1000 logts".

6. Conclusion

The sense of anonymity, the alarming degree of alienation among Algerian Z.H.U.N was disconfirmed in this study.

Measure of social interactions shows a high degree of acquaintance in the study area although social relations were moderate in the neighborhood. Degree of social interaction was rather higher than predicted. However results of observation and questionnaire survey showed a very low rate of use of the outdoor spaces which demonstrate that outdoor space in "Cité des 1000 logts" is not the catalyst of neighborly interaction. Findings revealed that a majority of people living in "cite des 1000 logts" share a great number of socio-economic conditions. They were average educated and represent middle-class socioeconomic levels. They are relatively a homogeneous population. This could explain the extensive networks of interactions in the neighborhood. According to Haggerty, socio-demographic characteristics naturally influence residents' living style and their ways of using open spaces and the patterns of social interactions (Haggerty, 1982) However in this study, children who were expected to reinforce the ties between residents, were a source of disturbance and conflicts in the neighborhood. Because of the lack of adequate playground areas, many parents were not encouraged to accompany the children outdoors and supervise them at play and in turn socialize with others. Although, the comparison between the three variety of configurations of outdoor communal spaces distinguished in the study area showed no sensitive difference in their degree of social interaction. It has been noted that the labour for the appropriation of shared space, is different in each type of configuration. U shape layout which was supposed to increase the interaction proved to be an area of confusion of use due to the excessive dimensions of the space between the blocs and the unlimited number of users around. The internal street formed by blocs in H form, suggests a strong sense of ownership this is noticeable through the enterprise which the residents have displayed in the planting and maintenance of their entries blocks. In spite of the variety of arrangements of blocs a sense of closeness is lacking in the whole project because of the absence of barriers to demarcate the units, and to limit the number of residents around the blocks. Most of the blocks were not arranged appropriately to form small neighborhood grouping. As a consequence a high degree of opening is predominating in the study area. This could explain the low rate of social interaction and use of shared outdoor spaces in the "cité". The multiple access to the "cité des 1000 logts" reinforce its degree of openness and the ambiguity around its status. Residential outdoor spaces supposed to be an extension of living space and part of the home turned into public areas for transit. In addition to its influence on the daily life of the inhabitants, lack of planning and furniture made the large spaces between blocks seem larger and more open. The main hypothesis of the present study that layout of "cité des 1000 logts" doesn't support lively interaction among the inhabitants is clearly confirmed. The results were in accordance with finding of previous researches that bad qualities and attributes of the communal space may not attract residents to spend some time, to stay, or even to interact with neighbors. (Abu-Ghazze, 1996; Abu-Ghazze, 1999). It was noticed that outdoor spaces were usually unused because they are unpleasant and there was nothing to do there. This became more serious during the summery season because of the lack

of shaded places to seat. Results confirmed the relationship between mixed land uses and social interaction. Inadequate facilities inserted into the neighborhood did not succeed to make it livable. Administrative amenities set in the neighborhood transformed it into a space opened to all and browsed by various flux of users, which in turn discouraged any kind of use by the occupants. Shopping facilities were insufficient and not appropriately designated to provide residents a shopping experience while enjoying space, gathering with otherstheir impact on urban life and social interaction was reduced. Because of its layout, the bad quality of its outdoor spaces "cité des 1000 logts" could not afford to its residents a living residential environment which can be employed by its inhabitants for the enhancement of social interaction. These results are in accordance with the hypothesis that the layout of buildings in residential neighborhoods, the arrangement and the quality of common outdoor space have profound effects upon the use of the area and social interaction.

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