



The Faculty of engineering, Alexandria University
Architecture department

**Gated Communities: A Socio-Spatial perspective,
The case study of Alexandria City**

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By
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**Gated Communities: A Socio-Spatial perspective,
The case study of Alexandria City**

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For the degree of

M.Sc.

In

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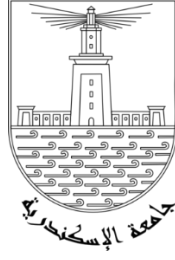
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المجتمعات العمرانية المسورة: منظور اجتماعي-مكاني،
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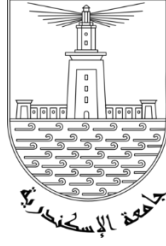
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I declare that no part of the work referred to in this thesis has been submitted in support of an application for another degree or qualification from this or any other University or Institution.

ABSTRACT

Gated communities have been the prevailing housing trend and the typical pattern of development in the last quarter of twentieth century across the globe as well as in Egypt. To date, there are hundreds of gated residential communities developed across Egyptian cities, which make them one of the common trends that has the ability to make deeper changes in the built environment of the contemporary Egyptian cities. As the trend of gated communities continues to sweep across the globe, it has brought with it a considerable number of debates regarding its implications, including: the increased fear of crime, social exclusion, urban fragmentation and separation, problems in terms of urban management and financial benefit. The most argumentative of them is the socio-psychological impact of its physical structure on the micro and macro scale.

While several scholars are concerned about the importance of sense of community and the strong community ties, believing in the role of neighborhood's physical structure in contributing towards the establishment and maintenance of local social cohesion. Besides believing that a physical element such as gating element has an influence on community cohesion and relationships. Another several international scholars clearly show that the social impact of the gated communities isn't a subject on which there is a general agreement at on the present, and it is unlikely that there will be in the foreseeable future. In order to contribute to these debates, this research aims at: (i) estimating the range of gated communities' spread inside metropolitan areas, especially Alexandria, offering a new typology to differentiate between gated communities' prototypes based on its unique physical structure. (ii) exploring the validity of the social impact of gated communities on the micro scale.

This study begins with a review of literature about gated communities globally. After that a systematic survey to document and classify gated communities in Egypt especially Alexandria. Then, relying on a qualitative research that ends with a comparative analysis between gated and non-gated neighborhoods to validate its social impact. Social cohesion between neighborhood's residents was measured using Buckner's method 'Neighborhood Cohesion Instrument'. Data for this method was collected by applying online questionnaire and direct interviews in four selected neighborhoods; two are gated and other two are non-gated. Data were analyzed using SPSS 'Statistical Package for the Social Sciences' software. After comparing data from gated and non-gated neighborhood, this research argues that in Alexandria, there is no significant social impact for the physical structure of gates communities on the neighborhood level. It is however concluded that residents' sense of neighborhood cohesion increases due to physical factors such as mixed uses and open spaces. These factors provide a life style that encourage residents to communicate. This research does not claim to settle the dispute, but to shed light on the phenomenon and its impact in the case of Alexandria.

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CHAPTER ONE INTRODUCTION

1.1. GATED COMMUNITIES: THE TREND

“The good life” [1].

“Experience the mixed use”, “experience the security”, “experience the quality of the architecture, royal gardens that designed on the French style and cafes” [2].

“Time to change your lifestyle” [3].

“The life of the resorts became residential, the best investment” [4].

“Dream of a better greener tomorrow, life style of effortless comfort, sense of luxury, heaven of privacy and purity, green landscape, exclusive happier life for you, perfect environment for perfect community, a home that extends beyond your home” [5].

The previous quotations exhibit five advertising scripts of gated communities in Egypt. Obviously gated communities have been the typical pattern of development in the last quarter of twentieth century across the globe as well as in Egypt. It has increasingly become a trend for development in the real estate, housing, industrial, and retail markets. As represented by Almatarneh [6]: “gated communities’ developments have emerged as a new trend in the housing market with varying characteristics that reflect a new set of socio-cultural features which have become more prominent and stricter than in the past...”, in which defining the space becomes more than just creating a safe place from natural threat, but human threats. It becomes a mechanism to protect property values and a way to market it as. And that’s the same reason why gated communities are recently the most profitable prototype in the real estate market [7].

Those advertisements shed the light on the distinguished characteristics of gated neighborhood over the non-gated neighborhood, which are: Safety, exclusivity, promoting sense of community, and preservation of property values. Developers of gated communities form their marketing strategies focusing on those characteristics, they understand the importance of offering these characteristics to customers who are seeking new options for standards and styles of living.

In other words, the concept of gated communities refers to a physical area that is fenced or walled off from its surroundings [8], with different levels of security, special life style, and residents of the same socio-economic class. However, the most prominent feature of gated communities is that not any one can enter freely without having to be a member or at least getting access permission. This feature could affect the surrounding areas socially and spatially as well as inside the gated community.

According to many scholars, there has been an explosion of gated communities all over the world since the end of WWII. Shetawy [9] stated examples from different countries to show the magnitude of such explosion. For example, United States of America involved a number of 3,000,000 residential units of gated communities in 1997 and more than 7,000,000 households living in walled communities by 2001. While in England, 100,000 inhabitants of gated communities are reported in 2003. In Argentina, there are more than 11 million gated communities' inhabitants. Furthermore, since the mid-1990s, 360 road in South Africa have been closed related to gated communities' activities. Moreover, Saudi Arabia has the largest number of gated communities' inhabitants in the Middle East region with over one third of its population (more than 20 million inhabitants) living in gated communities.

Cairo, which also witnessing a boom in the construction of gated communities. Which make this comparatively new phenomenon in Egypt and its impact on social structure and urban fabric is a controversial topic that many researchers explored and analyzed (e.g. Almatarneh, Ghonimi, Shetawy, ...) [6] [10]. However, this important focus has been lacking regarding Alexandria.

From this concept, this thesis contributes to the field of urban sociology, by producing more knowledge and understanding of socio-spatial quality of gated communities. It is hoped that - by better understanding to the social and spatial impact of gated communities on the micro and macro scale- thesis's results could be a guide for urban planners who design residential areas, especially in the city of Alexandria.

1.2. RESEARCH PROBLEM

A new pattern of residential areas' development has been observed in Egypt in last decades. Urban patterns are changing dramatically, faced with huge socio-economic and special challenges. Within this context, gated communities spread in different parts in Egypt with a fast acceleration, in which scholars identified more than 466 gated community in 2010 and by 2013 they reached 500 inside Grated Cairo Region new towns only, in which their residents reached 1,455,597 by 2012 [11] Figure 1. That's besides the huge number of gated communities scattered across Egyptian cities (e.g. across the north coast, and the red sea shore, ...) which is increasing every year [12] [13].

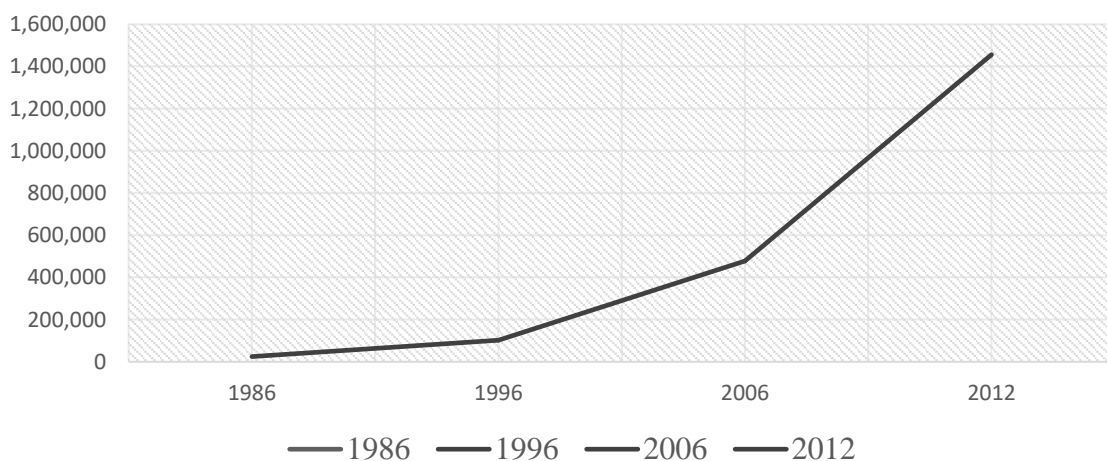


Figure 1: Population of Grate Cairo Region new urban communities (in thousands) [11].

In this thesis, two main perspectives of the problem are discussed:

I. Residential segregation (macro perspective):

Egypt recognized social segregation from a long time ago; private schools, private social and sports clubs which are allowed only for selected memberships, and the most observed is the residential segregation between the various components of the Egyptian society [14]. On one hand, informal poor and lower-middle classes settlements spread around cities with high densities, while on the other hand, planned suburban new towns for upper middle class and higher-class residents are developed next to it. An increasing number of gated community's developments are attracting the most financially able, searching for a better quality of life and security, leading them to segregate themselves from the "other" into homogeneous, secluded environments [12].

Some argued that defined boundaries of gated communities for unified social class could enable interaction and community networking. Nevertheless, researchers agreed to the importance of diversity in public life, as it is the place for socializing generations and for exchange of knowledge, experiences, and information with various social classes.

Summarizing this argument, Ghonimi, El Zamly, Khairy, & Soliman [15] found that as gated communities lack the inclusionary process of diverse housing type, lack the required diversity, remove public life from public domain, and cut the connection between different parts of the city; then gated communities build weak social fabric. Ghonimi, El Zamly, Khairy, & Soliman [16] in another research mentioned that authorities ignore the proposed old urban planes to allow investors to build gated communities or even gating the ungated old neighborhoods.

Besides, as this gated communities are not originally planned for the city, the left public areas between them are not usable and no one pay it attention. Moreover, as it physically isolates a specific area from its surroundings and creates zones of restricted access within the urban existence, scholars observed a low political participation for the residents of gated communities, due to their detachment from the city [17].

II. Neighborhood cohesion (micro perspective):

All human beings hope to live in secured place with homogeneous group, where people have same habits, social and financial standards, and seek that values of neighborhood cohesion. There is no doubt that sense of community is an indicator of quality of life, and general well-being of the individual, the family and the society as a whole [14]. High sense of community and homogeneity is believed to reduce stress, permits clearer and more effective communication and promotes social interaction. It reduces perceived density, conflict, fear of crime, and crime itself. That's why gated communities have been chosen by many residents, it has the concept of 'community'. Gated communities involve a community with defined boundaries, shared values, common ground for interaction, and shared support structure. These can be seen as a response to the desires for community and intimacy. But on the other side, the loss of social diversity and low density in gated communities leads to the tendency to segregation [15].

Gated communities are a major urban change in Egypt, they have become the home choice for many as they promise prestige for their residents, life style that values cohesion, and security. Nevertheless, it can be argued that gated communities can hardly participate on solving our problems [12]. In this context, it is important to investigate the capability of gated communities to give that cohesion between its residents, or even that claimed security. Besides, gated communities are not always a choice for their residents who choose to close themselves off from the outside.

By contrast, the poorest of the poor may find themselves set apart from the society in mean of gated public housing projects, or refugee detention centers, or foreign worker compounds [18].

To summarize, according to the research problem, and based on the literature review of the gated communities, a disregard to the social state inside the gated community (micro scale) was detected. As well as, gated communities in Alexandria city haven't been studied fully. Considering the mentioned importance of the strong community ties, this gap needs to be filled. So, this research attempts to address those issues and gaps.

1.3. RESEARCH QUESTIONS

Regarding the former discussion on gated communities' trend, issues and gapes, this thesis addresses the following questions: Is the trend of transforming the residential built form to gated residential area in Alexandria affects social cohesion on the micro scale? How appropriate is this trend to the social and spatial fabric of Alexandria? And finally, what is the physical features of the neighborhood that play an important role in creating strong cohesion between its residents?

1.4. AIMS AND OBJECTIVES

This research aims at analyzing the impact of gated communities on neighborhood cohesion between its residents in Alexandria city.

More specifically, this research attempts to achieve the following detailed objectives:

- Evaluating the phenomenon of gated communities in the case of Alexandria, and understanding its characteristics,
- exploring the reasons behind this phenomenon,
- examining whether this increas in privatization of collective residential spaces (Gated communities) in Alexandria, has an impact on the level of cohesion between its residents or social segregation between neighborhoods.

1.5. METHODOLOGY

This thesis is based on a qualitative approach, in order to explore the roots and fruits of gated communities, and promote a better understanding of the potential role of urban design of residential neighborhoods in contributing to the social cohesion among the different components of the society in Alexandria.

Starting with illustrating the phenomenon of the gated community as a global trend, it's journey through history, typology, it's unique social spatial features, and define the way it impacts social and spatial form of the cities. As well as analyzing the existing types of gated communities in Alexandria and documenting its characteristics. A systematic survey for gated communities in Alexandria is done from different sources like: newspapers, real state agencies, statistical data from local authorities, aerial photographs, and mainly field visits to collect data. All information is gathered and organized in the maps of Alexandria city.

After that, through assembling and adapting methods of measuring neighborhood cohesion, and a structured face to face and online questionnaires, the impact of gated communities on the neighborhood cohesion in the micro scale is measured and analyzed. It ends with a comparative analysis to come up with the conclusion of the research Figure 2.

A seven months explorative field research on locations in Alexandria city is done for this research with visits to most of the gated communities in Alexandria.

1.6. CONTRIBUTIONS AND LIMITATIONS

At the theoretical level, this thesis attempts to fill the mentioned gap in the literature on gated communities in Alexandria, as most of the researches about gated communities in Egypt examine and document the phenomenon mainly in Cairo. While, at the empirical level, this thesis documents and records the numbers and types of gated communities in Alexandria, as well as evaluates the impact of gated communities on neighborhood cohesion on the micro scale.

There were several limitations for the results of this research: This research focuses on gated communities in Alexandria, and the investigation faced some obstacles regarding the contact with the residents of gated communities, that is due to the security issue and the enclosure of each gated community. This issue was a hindrance to the targeted number of collected sample. Moreover, the feeling and life style of residents of gated communities wasn't experienced by the researcher, but on the other side it was useful for the research experiencing the feeling of being an outsider from the gated communities.

1.7. ORGANIZATION OF THE THESIS

According to the methodology this research is organized as the following:

- Chapter two (Gated Communities: A literature review): which consists of three main sections: starts with the definition of gated communities; giving an overview of the phenomenon, its definitions, history, types, its impact, reasons behind its spread, and the arguments around that phenomenon, and then shed the light on that phenomenon in Arab world and Egypt. Then introduction to gated communities in Egypt, its history and types. The last section is the social space and physical space; this section contains important definitions of sense of community, social cohesion, neighborhood and neighborhood cohesions, its importance and tools to measure them.
- Followed by chapter three which is extension to the literature review (The impact of gated communities on social cohesion): this chapter define the impact of urban design on social cohesion which supports the conceptual and theoretical framework of the research. In addition to presentation to the used methodologies of analyzing and measuring the social impact of gated communities.
- Chapter Four (Analytical framework and applied methodologies): in this chapter the previous applied methodologies of researching gated communities is stated and evaluated so that a proper methodology for this thesis been chosen, and contains the methodology of choosing the case studies, sampling and analyses.
- Chapter Five (Gated communities in Alexandria): this chapter starts with the research application case study Alexandria: in the beginning, defining the studding area and data, tracing and documenting gated communities in Alexandria. Followed by the evaluation of gated communities in Alexandria by using measuring methodology and from residents' opinion,
- and the final chapter (conclusion and recommendation): which involves summery of key findings, in addition to the answers to the research questions, and ends with recommendations.

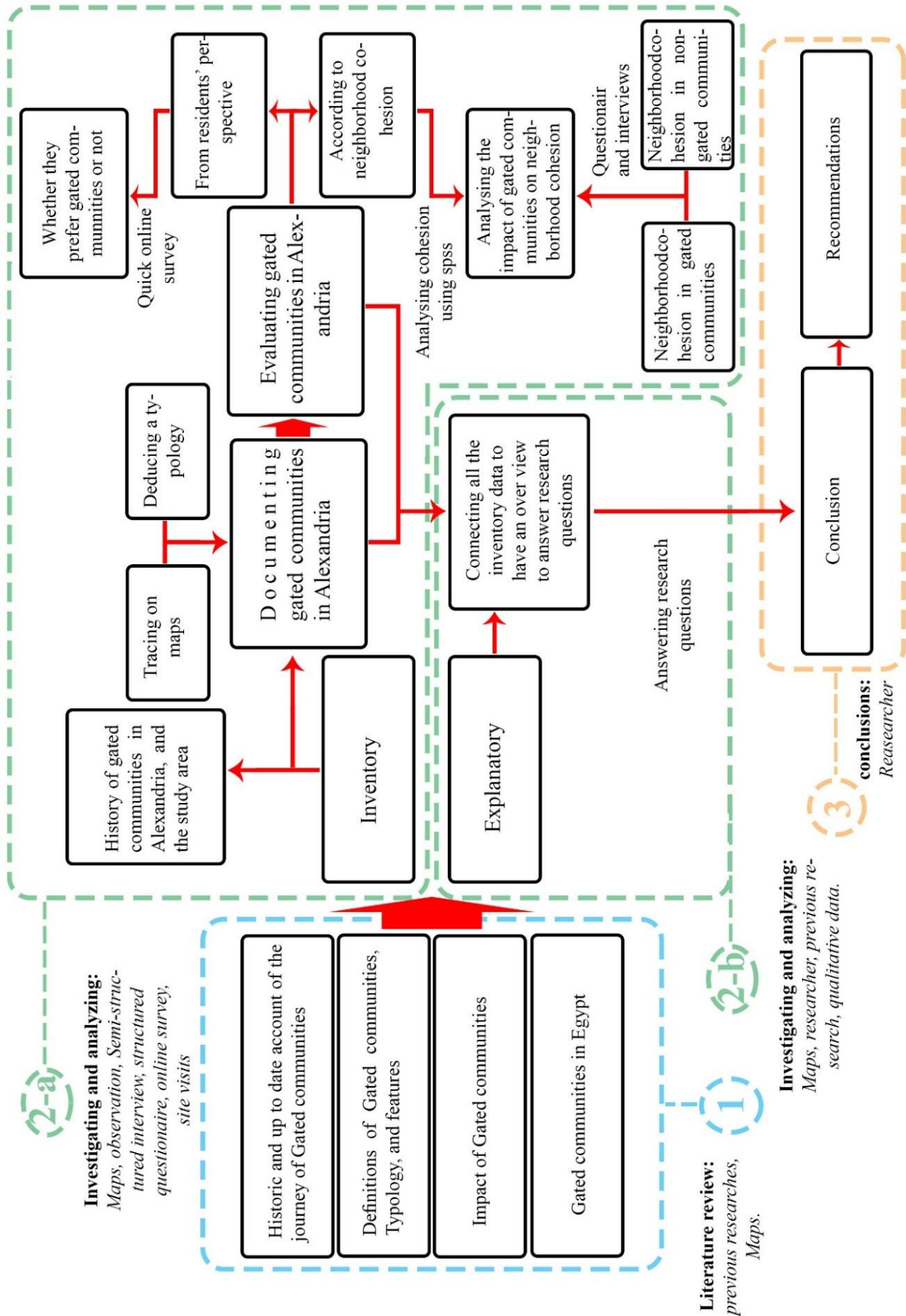


Figure 2: Research methodology, source: author.

CHAPTER TWO

GATED COMMUNITIES: A LITERATURE REVIEW

2.1. INTRODUCTION

Many scholars agreed that neighborhood's physical characteristics is one of the factors that affect neighborhood cohesion, and as result the local community ties [19] [20]. Current trend such as gated communities that is spreading around the world must have an impact on social cohesion. This chapter is classified in to three main sections; first: introduction to gated communities, its definitions, history, types, impact, and arguments about it around the world. Second: focusing on gated communities' phenomenon in Egypt. And the final section illustrates social cohesion and its definitions, factors affecting it, the neighborhood, what is meant by neighborhood cohesion and how to measure it.

2.2. IDENTIFICATION OF GATED COMMUNITIES

2.2.1. Definitions:

Gated communities' trend is based on the creation of self-contained, separate communities with carefully constructed identities. It has increasingly become a major trend in the housing market in both developed and developing countries because of its diversity and multiplicity.

Despite their popularity and because of their spread, there is no exact definition or consensus regarding 'Gated Communities'. Grant [18] Used a certain definition for the gated community, which is: "gated community is a housing development on private roads closed to general traffic by a gate across the primary access. The developments may be surrounded by fences, walls, or other natural barriers that further limit public access". Researcher Landman added to this definition that in her words "Gated communities contribute to spatial patterns reflective of micro- and anti-urbanism, and the segregated approach to urban design through a focus on the privatization of urban space through fortified boundaries and physical borders" [21]. By 2000 she generated another definition, that gated community is a physical area that is fenced or walled physically or non-physically. Entrances into it is prohibited or controlled by means of gates or booms. It includes residential areas with restricted access, controlled access villages for work, recreational, and/or commercial purposes [8]. May be the definition of scholars Ghonimi, Elzammly, khairy, & Soliman [13] gave the most comprehensive description for gated communities. Which is: gated communities are socio-spatially restricted areas. A micro community that breaks large residential developments into small inward-looking units with certain features that create new conditions; plan of a single facility and use, with single housing type, and inward orientation. Depending mainly on its own resources which may be limited, and finally being incompatible with the character of urban life, mobility, diversity, choices and larger areas for social interaction.

As gated communities don't have an exact definition, subsequently they do not even have a unified term. Gated communities have been referred to using many terms, for example, "*gated communities*" [22] [8] [23], "*gated enclaves*" [18], "*enclosed neighbourhoods*" [8], and also, "*Private cities*", "*Edge cities*", "*City of walls*" [24] [6].

Ghonimi, Elzammly, khairy, & Soliman [15] mentioned the socio-spatial characteristics of gated communities; first: boundaries, physical barriers around communities serve several

functions, they create visual screening, permit privacy, define property, and limit access. Second: street network patterns, they are most commonly inward oriented especially cul-de-sac. Third: Land-use pattern, mixed uses are rarely occurring in gated communities they rely on single land use type mostly residential. Fourth: housing type pattern, developers always seek to separate different housing types apart from each other so as to control services, amenities, and maintenance of who have the same social and financial standard.

The word 'gated' means different things to different people, some people think of gated as exclusive, some think of it as security, but most think of privacy. From Denis [25] opinion buyers of gated communities purchase a protected residence with plan to create a sense of distance, filtering, but with the desire to be seen. Anthropologist Setha Low calls it "the search for niceness". She spent eight years interviewing residents of six gated communities, ranging from a working-class community to a wealthy development. In her book "Behind the Gates: The New American Dream". She found a common desire among residents to provide a safe environment for children and to live among people who share their values. They are searching sense of community which is not different than other suburban residents, "It's a sense of community, which is like American pie. It has a lot to do with nostalgia, the '50s suburbs, the image of the small town." [23]. For property owners, it also has a lot to do with protecting the value of homes.

2.2.2. History of gated communities:

"Since the early 1990's a discourse has been steadily growing about a pattern of urban living that many thought to have consigned to history: called gated communities"

"Gated cities have a long history. Socially and physically defined urban enclaves are as old as cities themselves" [26].

Gated communities are not a new phenomenon, but why now, why gated communities are once again the focus of research? Van Strien [27] has answered this question, by that, it is because of their global presence, in addition to what they suggest about perceptions of security, community, citizenship, the privatization of public space, property and the role of the state in contemporary urban societies. And he added that their arrival brings into sharp relief fundamental social questions about the right to a secure environment versus the right to access, communal versus individual consumption, inclusion versus exclusion, heterogeneity versus homogeneity and efficiency versus equity. While the shift from 'spread' to 'emergence' as an underlying explanation naturally leads to the study of locally specific antecedents to the modern gated communities.

Evidences suggest that the trend of gated communities can be linked to global historic patterns of enclosure, Ilesanmi [28] brings to the sight, the historic 'fortress' settlements in diverse traditional setting; archaeological evidence from the Nile River valleys, Mesopotamian kingdoms, and Greek and Roman territories. And adds that the Roman system of fortifying landed estates - abbeys, manor houses, and castles - of the royal and wealthy, subsequently became the pattern of settlement development in England and the rest of Europe. Likewise, protective walls were a common part of town building in many sections of China [29].

In the case of the United States, gated communities go back to the late 19th century era of the wealthy who built private streets to insulate themselves from the masses, but they remained a relative rarity until large master planned communities emerged in the 1960s [28] [6].

These gated areas are very different from gated subdivisions we see today, the early gated communities were special places for "uncommon" people unlike what we see now. Csizmady

[30] mentioned that, they first were built for wealthy foreigners who travelled to distant countries on duty, the design of the buildings provided them with their environment and affording them safety in foreign countries. In this function, gated developments were so efficient and became so popular that they gradually appeared in almost every country in the world. It can currently be seen in the Gulf region countries which gated communities are constructed to foreigner with their life style. In addition, he formulated that those gated communities appeared in tandem with the growth of slums. Even those who belong to lower income started to separate themselves from the very poorest.

In the annual “the Association of American Geographers” an article dated back to 1961 for N. Howard where gated areas that we see today wasn’t current, he stated that American cities are considered uniformly free from the effect of restricting walls, unlike the current condition. However, European settlers arriving in a land where danger existed from native population and from rival colonists, and with a background of familiarity with walled cities in their homelands, so naturally they built walls around a number of their new settlements, and it was the beginning of the ethnic enclaves in United States cities. That was a time where city walls are defined as man-made barriers defending an essentially civilian settlement [29].

During the journey through the three successive human civilizations (the First Wave of change is the agricultural revolution, the Second Wave is the rise of industrial civilization, the Third Wave is the Information and technology civilization), land has lost its importance to capital, and capital to intellectual properties. Consequently, the cultural values are getting transformed, and the emphasis on physical space has been shifting to cyber space [31]. Some have traced the evolution of gates and walls through this three human-civilization. Ur-Rahmaan, Anis [31] represent them as: at the primary civilization gates appeared as gated cities which first developed in medieval Europe as a mean of security for the city, it was a defensive structure Figure 3, Figure 4. We also can’t neglect the existence of Muslim walled cities, which characterized by its homogenous organic fabric, relatively high residential densities, narrow streets, and socially integrated, inward looking houses with uniform heights and parapet walls on the roof for privacy. During the Secondary Civilization, the gated communities started to immerge as islands of gated neighborhoods on the vast metropolitan urban fabric, which have been the fastest growing form of housing in the United States. While the third civilization with the high technology, the gating has not only been getting transformed at a geometric pace but in people’s demography, culture, social organization, psychology, and environment.

Meanwhile Grant & Mittelsteadt [18], Le Goix & Webster [26] concluded that postmodern cities are more defended, and more defensible than the industrial cities, where fortified development has become an increasingly common feature of contemporary suburban building patters; that’s because increasing importance of the individual life after the post-industrial communal developments [32]. Showing a fast development since the 1970s, even older neighborhoods in some cities are closing off streets for local security and traffic. Through the time the gated cities of the primary civilization become part of the history and replaced by the gated communities we observe currently.

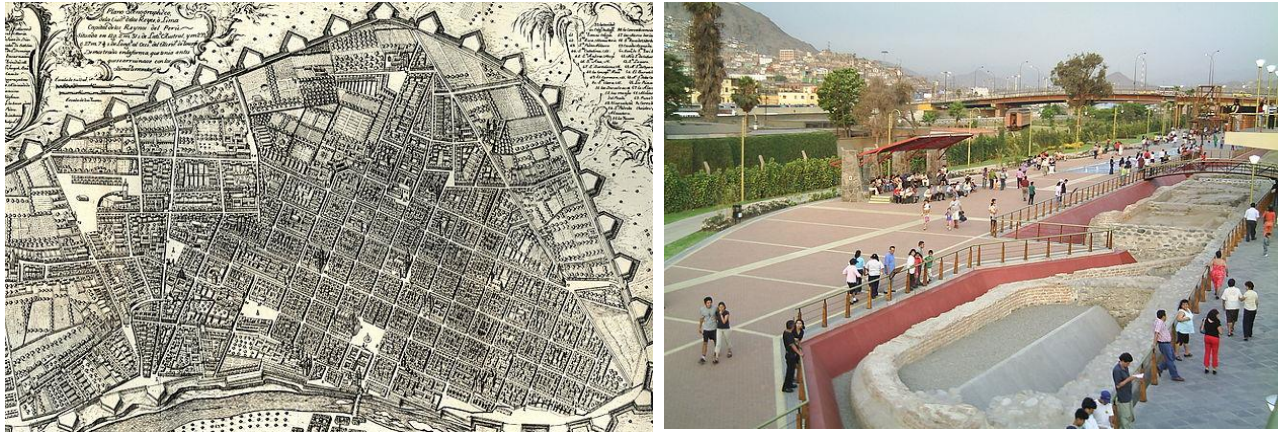


Figure 3; The Walls of Lima were a fortification whose purpose was to defend the city of Lima from exterior attacks. Built between 1684 and 1687, located in Lima the capital of Peru [33].

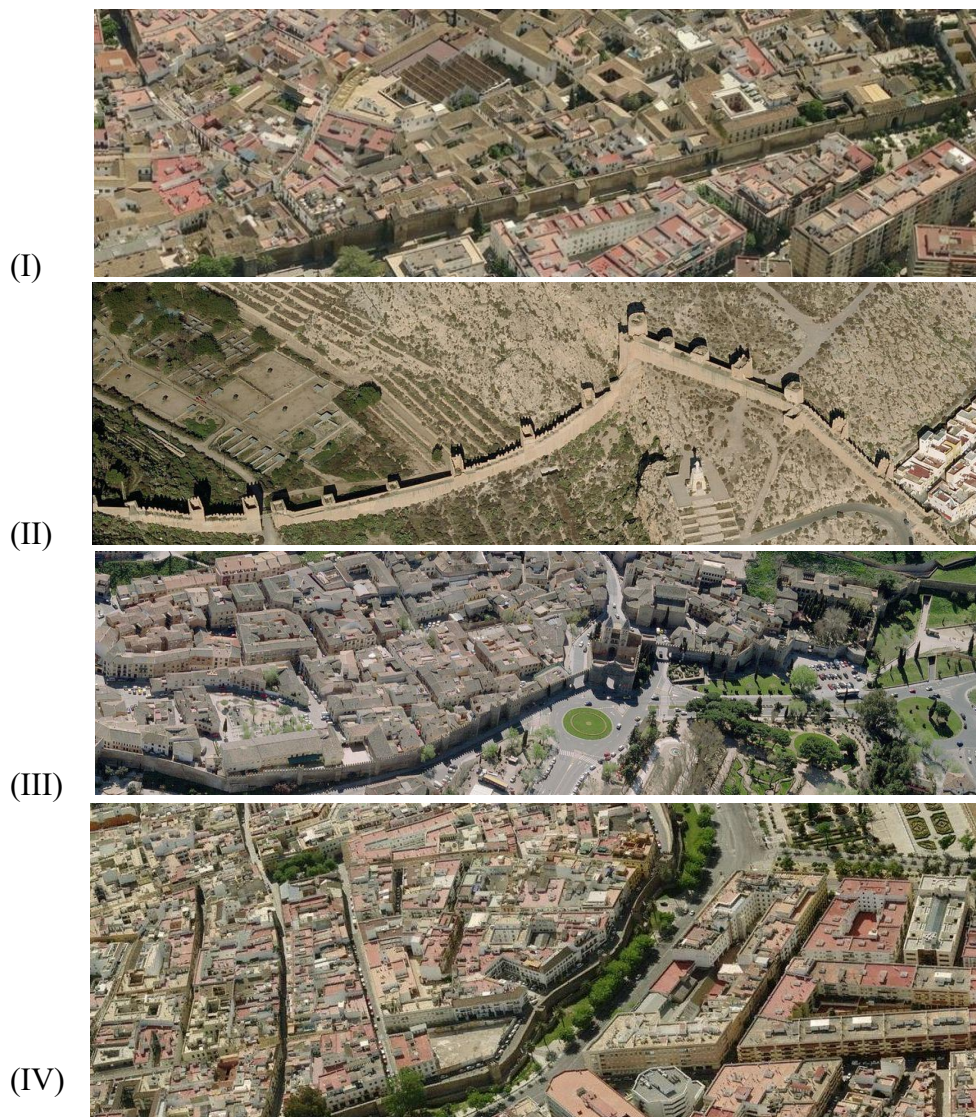


Figure 4; remaining walls in big Spanish towns, from the top: (I) Cordoba, (II) Almería, (III) Toledo, (IV) Seville, they were mostly built during Muslim domination [34].

On the other side, according to Smets [35], with the rising of the gated communities as good neighborhood, there were the 'Ghettos'. The residents of gated communities as well as the ghettos are walled out. A ghetto is a part of a city where members of a minority group live, generally surrounded by a wall shutting it off from the rest of the city or signs. It first appeared as Jewish ghettos in Europe, Morocco, and Asia. And in USA as neighborhoods for immigrants. The Nazis set up Jewish ghettos across the occupied countries, this allowed them to isolate the Jews from the general population, they were located in one of the poorest neighborhoods of a city that had previously housed a crowded Jewish population. Ghetto life was one of squalor, hunger, disease, and despair life, where rooms and apartments were overcrowded.

The development of ghettos in the United States is closely associated with different waves of immigration and internal urban migration. The Irish and German immigrants of the mid-19th century were the first ethnic groups to form ethnic enclaves in United States cities. So 'Ghettos' is one of the aspects of gated communities that is considered forced by the society not chosen by its residents which contradict the concept of gated communities that we are talking about nowadays.

As the early beginning of the 1990s gated communities to higher-status people appeared with the current concept, where self-isolation is not forced from the outside but is voluntary. And then with the boom in new housing projects, marketing specialists rode that wave with offering the lifestyle and comfort for the upper-middle class. In the literature about the history of gated communities, according to Le Goix & Webster [26], Haskell's Llewellyn Park was probably the first built modern gated community, it has been built in the USA in 1854. In 2003 more than 32 million residents were living in gated communities in USA and by 2008 this number doubled to reach almost 60 million [35]. In the beginning those gated communities weren't that successful. In Europe, the first gated communities designed for rich in Central and Eastern Europe at the end of the 1990s haven't been able to gain a bigger share of housing market either in Budapest or Prague or East Berlin, that because there weren't enough people that can afford it. For example, the first investment of this kind on Berlin "Arkadien" development, which was built in Potsdam in 1998. Arkadien turned out to be far less successful than had been expected; by the end of 1999 only less than half of the flats had been sold, as Csizmady [30] justifies, this failure was because of the high square-meter price, high communal charges and far too long commuting time, all made the work of the marketing team rather difficult.

Likewise, the first generation of gated communities that appeared in Egypt was not that successful, as it was built for the middle class and less, its goal was to offer good residence for the youth and people who cannot afford healthy comfortable residents in the capital city and to attract business men to new industrial zones. But it struggled to attract residents. Because of the lack of transportation and utilities. By replacing them by higher suburban settlements with better services to be developed by the private sector they started attracting residents of higher class [25].

Gated communities scattered all around the world, differ from country to country; in china, south east Asia and Australia, Europe, eastern Europe, south Africa, and the Arab world, with respect to their characteristics, and in particular, with respect to different reasons for development in relation to security, ethnicity, and prestige. Several studies agreed that global spread of gated communities has been triggered by the experience of the U.S., but every country has its reasons, and its gated communities developed according to local political, legal, and architectural traditions [26] [18] [27]. This idea was challenged by the idea of local emergency. For instance, Mahgoub & Khalfani [36] after many studies mentioned that, gated communities emerged in the USA were mainly for urban elites. In contrast, in Latin American countries, the phenomenon first emerged as summer resorts then become a solution for ethnicity. Likewise,

in Europe the primary reason for gated communities is the seasonal use of houses in coastal zones, and a fashion trend. While in Central Eastern Europe, they first appeared after the collapse of state socialist systems. By contrast, in East Asia and in South Africa, these communities emerged as solutions for daily problems of high crime rate and ethnic conflicts. Smets [35] was more specific in reasons behind appearance of gated communities that varies from racism in South Africa, to property vandalism in Accra, kidnapping and robbery in Mexico City, and carjacking and homicide in Nairobi.

Le Goix & Webster [26] explore the reasons behind gated communities in Lebanon that was because of the civil war, it was necessary in the face of public government unable to provide personal security and security of the services and goods that make up modern urban life. While Csizmady [30] explores the reasons behind gated communities in Russia, that at the end of the 1990s, members of society who had suddenly become wished for an orderly secure environment, and residence that reflects their desired or real social prestige. The first gated communities were still isolated, secure islands designed for foreigners. These, however, were soon followed by developments that were designed to meet the needs of the Russian upper middle class. Finally, for Bulgaria, after the regime change, isolation became the privilege of the rich. So even at first sight examples of gated communities appear similar, their history and reasons varying enormously between the countries and regions, which provide the necessity of gated communities, whether through direct implant of foreign ideas, or local experimentation and invention [26].

2.2.3. Typologies of gated communities:

Besides working to elucidate reasons that make gated enclaves a global phenomenon, researchers offer a systematic overview of the physical features of gated communities. This reveals that gated communities show so much diversity in social and physical features, so that it may be misleading to consider them as a unified set of urban forms.

As mentioned previously that reasons behind the appearance of gated communities differs from country to another, city to another, and from the gated community itself to another as well, therefore there are many types of gated communities with different degree of amenities, exclusivity, and security. On this basis, many typologies were developed to classify gated communities. Each researcher has developed his own typology considering causes, consequences and significant implications of gated communities. Each of these methods are based on the research's topic and are relevant to the case study that the authors have used in their studies [18] [8] [24]. Aalbers [37] reveals that every typology is based on analytically ideal-typically classification ground of the author's impression and not on analytically value-free classification.

With this background, the aim of this section is to highlight several methods used to classify gated communities all over the world, illustrating its basis and reasons. As well as mentioning the major general typologies of classifying gated communities and several cases in different countries based on these main typologies. Based on these methods and after comparing them a proper typology for gated communities in Alexandria is developed for this paper.

First, Summarizing the major four main typologies according to their developers who classify gated communities, even though alone they offer a limited picture of the varieties of gated communities:

I. Typology of Blakely and Snyder:

Based on many scholars [24] [18] [35] [32] [36] [38] the most frequently discussed typology of gated communities is defined by Blakely and Snyder in their book “Fortress America: Gated Communities in the United States” . They developed a relatively straightforward typology based principally on *function* by studding gated communities of USA from coast to coast, at all income levels. During their research, they identified several distinct development types serving very different housing markets with security guards. Each type of gated community has some system of access control, but differs substantially in how they address the development of a sense of community within their walls. In this typology three types of gated communities are identified: Life style, Prestige, and security zone communities, and developed 9 categories out of these types Table 1:

Lifestyle communities; which focus on leisure activities with recreational facilities, common amenities, and shared services at their core, it includes retirement villages, golf communities, or suburban new towns.

Prestige communities; serve as symbols of wealth and status for image conscious residents, focus on exclusivity over community it includes the rich and famous communities, top fifth communities, and executive communities for the middle class.

Security zone communities; reflect a fear of outsiders, it formed not by developers but by their inhabitants, because of the fear of crime and outsiders. This category includes the city perch, the suburban perch, and the barricade perch. These are called ‘perch’ because the gates are built by residents rather than by developers.

Table 1: Blakely and Snyder’s general typology of Gated communities [18].

Type	Features	Subtypes	Characteristics
Lifestyle	Emphasize common amenities and cater to a leisure class with shared interests; may reflect small-town nostalgia; may be urban villages, luxury villages or resort villages.	Retirement:	Age-related complexes with suite of amenities and activities.
		Golf and Leisure:	Shared access to amenities for an active life style.
		Suburban new town:	Master-planned project with suite of amenities and facilities; often in the sunbelt.

Type	Features	Subtypes	Characteristics
Prestige	Reflect desire for image, privacy, and control; they focus on exclusivity over community; few shared facilities and amenities.	Enclaves of rich and famous:	Secured and guarded privacy to restrict access for celebrities and very wealthy; attractive locations.
		Top-fifth development:	Secured access for the nouveau riche; often have guards.
		Executive middle class:	Restricted access; usually without guards.
Security zone	Reflect fear; involve retrofitting fences and gates on public streets; controlling access.	City perch:	Restricted public access in inner city area to limit crime or traffic.
		Suburban perch:	Restricted public access in inner city area to limit crime or traffic.
		Barricade perch:	Closed access to some streets to limit through traffic.

II. Typology of Burke

Based on many literatures [24] [32], Burke in “The Pedestrian Behavior of Residents in Gated Communities” developed a typology of five types based principally on the physical, social characters and geographic location of gated communities, according to the observation of the development in America, England and Australia. The first type is the *urban security zone*, which is gated to reduce social problems, unwanted pedestrian or traffic. The second type is the *secure apartment complexes*, which are gated to prevent the non-resident entry, but don’t have private open spaces, outdoor areas, or facilities to the use of the residents. The third type is the *secure suburban estates*, are the most common to be gated also lifestyle features are absent, but a small pool or gymnasium will exist. Then come the *secure resort communities*, they contain more lifestyle features such as a lake, or lagoon, and they also contain resort style elements such as gardens, pathways and elaborate lighting. The last type is the *secure rural-residential estates*, they located most often at the edge of the rural area of major centers, they include lifestyle features and resort-styled living.

III. Typology of Luymes

Luymes [39] also developed a typology of three types that based on their distributive, socio-economic and designed characteristics. In which gated communities are categorized according to access control and perimeter control, based on field surveys and a review of marketing

information. Luymes argued that the physical ‘typology of control’ in contemporary enclave communities is often established along socio-economic lines, and according to that he classified gated communities. The first type is *the most affluent enclaves*, include an elaborate security system along with a 24-h guarded gatehouse, or are enclosed as a secondary enclave within a larger gated community. Then comes another group, the *retirement and resort communities*, which favors walls and guarded gated access. After that the *Upper-middle class enclaves*, that advertise gated access without the guard. Further down the typology of control, are symbolic and/or incomplete efforts to control access [39].

IV. Typology of Grant and Mittelsteadt:

Grant and Mittelsteadt [18] in “Types of gated communities” challenged the four main features of the previous model defined by Blakely and Snyder. They justify their view by that the features of the model proposed by Blakely and Snyder reflect an American focus and does not offer a better understanding on the diversity in other countries and the historical experiences of fortifications and gating. They augment this position by stating that a useful framework should recognize the degree in variability around the world. They achieved that by suggesting several variables and functions that differentiate kinds of gating, from the literature on gated communities and their experience with gated communities in Canada they added Four variables to the previous features of gated communities that was defined by Blakely and Snyder in “fortress America” so it can fit gated communities around the world. The Four features from Blakely and Snyder model are: functions of enclosure, security features and barriers, amenities and facilities included, and type of residents. Features added by Grant and Mittelsteadt [18] to elaborate the factors that differentiate gated communities are: tenure, location, size, and policy context.

They added that, these eight characteristics may be expanded into a checklist [18]. Which will be useful in providing a theoretical understanding on the formation and functioning of gating that is different within and across different geographical regions.

Table 2: Areas of interest of the main typologies of gated communities [24].

Method of typology	Security reason	Security level	Security type	Location	Social characteristics (sense of community)	Physical characteristics	Main area of interest
Blakely and Snyder	✓	✓	✓	✓	✓	✓	Community
Burke	✓	✓		✓		✓	Function
Luymes	✓	✓	✓				Security level
Grant and Mittelsteadt	✓	✓	✓	✓	✓	✓	All components mainly physical components

From the table above Table 2, it’s concluded that among the four main typologies of gated communities the focus is upon the security aspects of the community, with neglecting the aspect of location, social and physical characters.

For Example, only Blakely and Snyder take in the consideration the aspect of social characteristics of gated communities in term of sense of community. Consequently, Grant and Mitellsteadt considered the social character aspect as they built their typology on Blakely and Snyder's typology, but they focused on the physical features of gated communities. In contrast Luymes was concerned only about the security features.

Second, based on these main typologies of gated communities every researcher developed his own typology that matches their interests, approaches, and of course the city itself:

- Typologies of gated communities in Istanbul:

Number of researchers [24] [38] [32] developed typologies for gated communities in Istanbul based on the physical characteristics, most of them reached to the same classification of Baycan-Levent, Ahu Gulumser [24]. Their study based on 161 newly built gated communities including any housing complexes with restricted entrances and security features. They collect the data for classification from advertisements, and interviews for developers and sellers. They used nine physical characteristics to classify gated communities which are: location, land size, construction area size, number of inhabitants, number of units, unit size, unite type, target profile, and location.

According to this, gated communities in Istanbul are four types:

Vertical gated communities, they have developed in Istanbul since the 1990s for professional urban elites from the media and finance sectors, they are developed as mixed-use zones integrated with a shopping mall or office blocks. They are found in form of a high-rise building of more than 10 storeys either within a complex or as a single building that can house between 250 and 1000people, with unit size ranges between 71 and 530 square meters. Hotel services provided in these developments with all facilities within the building including health, gardening, security, collection of dustbins, etc. Figure 5.



Figure 5: Kavakli Residences, a vertical gated community in Istanbul [40].

Gated villa towns, they are detached or attached single unit dwellings with a private garden built for upper or upper-middle class families with children, their horizontality set up a more “people-friendly” settlement. Their characteristics depend mainly on their location, they could provide some public facilities like gardening, security, but the other facilities like education and health is not always highly developed or present, mainly have specialized sports like golf or riding etc.

Gated apartment blocks, they are an alternative to gated villa towns but for middle income families, in which services can vary quite considerably according to their customer profile. They do not offer specialized services; apart from a common space, the health service and other amusement services do not exist in these developments.

Finally, *Mixed type gated communities* 'Gated towns', they are a mixture of two or three of the other gated development types, with all services including hotels for visitors, meeting rooms etc. [24].

While Kan Ulku, Erten [38] classified gated communities in Istanbul to only three types of the previous typology: *Vertical gated communities*, *Exclusive villa*, and *Gated towns*.

- In China:

Li, Zhu, & Li [41] developed a typology to classify gated neighborhoods in China based on their socio-occupational mixes and built environment features, according to survey conducted in Guangzhou three types of neighborhoods are observed: *Commodity housing states*, found in the newly developed suburban districts and redeveloped inner-city, residents are nouveau riches and new middle class of professional and managerial workers. This type of gated neighborhood is provided with various kinds of amenities and recreational facilities and it's heavily guarded. *Danwei (work-unit) neighborhoods*, are communities for workers and their families they include social amenities as schools, markets, clinics. *Juwei (resident's committee) neighborhoods*, they are similar to Danwei but for all types of residents, these two last types are treated as one type called *Conventional neighborhoods*.

- In Malaysia:

Gated communities are divided based on socio-economic differences amongst the inhabitants, based on this Longuet [42] divided gated communities in Terengganu in Malaysia into four categories considering the background literature on Terengganu in to, "rakyat", "aristocrat", "clan heritage" and "farmer".

- In South Africa:

Many researchers agreed that gated communities grew in south Africa as a mean of security [43] [44] [45]. Specially Landman K. she has done many studies about gated communities in South Africa, she clasefied them in to two types; *Security states*, which are developed by private developers, and *Enclosed neighborhoods*, are existing neighborhoods that have controlled access, road whithin these neighborhood are public property, both of two types are walled to provide security. He also added that issue of race plays a role in gated communities in south Africa so we can find gated enclaves for the middle and higher income groups side by side with poorer ghettos.

- In the Middle East:

Especially Gulf region countries another type of gated communities could be found in which neither security nor life style and prestige are the reasons behind them, these gated communities constructed to proved forign inhabetants with the same life style of their homeland as it's very difficult for most of them to follow country laws and traditions [36] [46] [47].

Glasze, Alkhayyal [46]classified gated communities in Riyadh based on physical characteristics and residential structure to three main types; *Extended-family compounds*, consestes of a group of villas which are built to accommodate extended families with providing privacy for each family, supported by recreational facilities. *Cultural enclaves*, are compounds for foregn professional workers, these compounds are well maintained and supported with recreational facilities, it also enjoy a western open environment wich allow them to practice their daily activirties freely Figure 6. And finally *Governmental staff housing*.

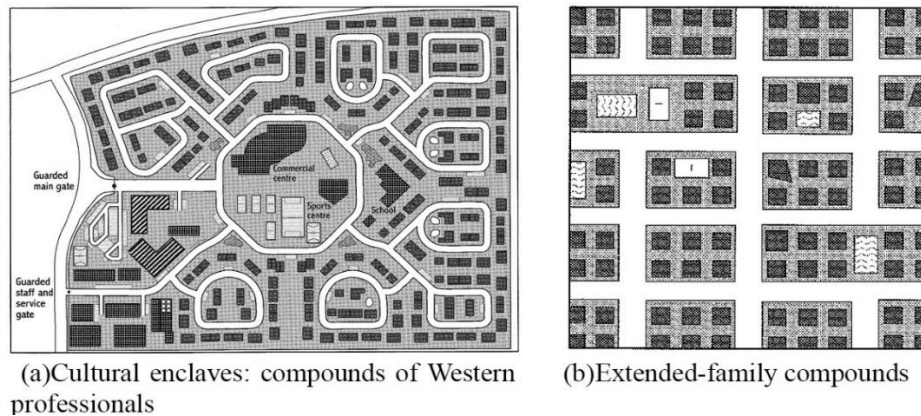


Figure 6: Gated communities pattern in Riyadh [46].

From the previous figure we can observe the difference in design patterns between Extended-family gated compounds and cultural enclaves in Riyadh, that difference is due to disparity in traditions of residents, so every compound is design according to residents' life style.

2.2.4. General impact of gated communities:

Given the magnitude of growth and differences of gated communities around the globe that are presented in the last sections, many scholars have studied the impact of gating on all dimensions of the city, although it is limited by the lack of empirical data. Some focus on the impact of gated communities on property value and city economy, while others focus on governance and city management, another group focuses on the security and life style dimension, others on the built environment and city infrastructure and finally those who focus on the *social aspect of city development*. According to Ghonimi, El zamly, Khairy, Soilman [16] and many other researches in different areas in the world, the impact of gated communities can be summarized as the following:

- from the urban aspect;

On micro community, lack of efficient vitality, and walkability as well.

On Adjacent community, less promoting movement behavior, as the community incorporates no uses just walls, and removing commercial, institutional and entertainment. But it is concluded that not all adjacent communities are similarly negatively impacted, rather communities adjacent to gated communities having uses on boundary, especially located within open areas are less impacted. Le Goix [48] Added that gated communities increase the urban segregation between urban areas as he observed that differentiations occurring between gated areas and their vicinities are higher than the differentiations usually observed in the urban area between two adjacent neighborhoods. And finally, urban inequality as it creates urban tissues which is different from other housing areas.

- From the functional aspect;

On micro community and adjacent community, lack of sufficient size to promote efficient functional development criteria, and it is concluded that micro community residents are highly depending on private car. Also, Privatization of public spaces, streets, beaches...etc., as it is Considered an obstacle in front of the continuity of the urban fabric that in some cases as Saudi Arabia it's more like modern form of colonization.

But we can't neglect that gated communities from the functional aspect is successful, as most of them are full and even over populated.

- From the economic aspect;

On micro community, lack of economy in the size, and due to landscape elements, the housing unit are overloaded by high cost. But we can't neglect that gates could lock the economic position, which mean greater stability in property values for homeowner.

On adjacent community, Increase the property values in adjacent communities.

- From the political aspect;

Residents of gated communities are becoming politically detached. Marafi [17] in her thesis examined the relation between residents of one of gated communities in Cairo and the political events occurring in Egypt, she found that residents are politically detached except for some of the youth who want to be part of the 'world outside'.

- From the social aspect;

On micro community, due to their homogeneity and low size with low exchange with adjacent areas, make their residents not only have contact with a minimum number of residents but also lack of the contact with other social groups. On the other side, this could create a sense of belonging of the residents toward their gated community and social coherence.

On adjacent community, lack of contact with others. And due to the difference in social groups a social tension is promoted.

2.3. GATED COMMUNITIES IN EGYPT

2.3.1. Introduction:

Most literature that have arisen about gated communities stem from a western perspective, while the Arabian situation is different in that experiences, even if appearances may be similar.

“In the cities of the Arab world the spatial seclusion of social groups is not a new phenomenon. Urban research on premodern towns depicted the socio-spatial and material fragmentation of urban patterns in small and distinct quarters as one of the most typical characteristics of Arab cities” [46].

According to Almatarneh [15] [49], the phenomenon of gated communities appeared in Egypt in 1980s as secondary houses in the coastal zones along the beaches of the Northwest coast, and Gated tourist villages spread along the coast of the Red Sea and the beaches of Sinai. It has become a mass trend in the new town urban development on the outskirts of the Greater Cairo Region since the mid-1990s, as a consequence of socio-cultural and economic changes related to globalization and economic restriction. At first it was for low income groups and struggled to attract residents, but after that it is replaced by higher suburban settlements with better services to be developed by the private sector to cope with the going trend and attract another category of residents. So, within a few decades, the Greater Cairo Region satellite cities: the 6th of October, Sheikh Zayed and the new eastern settlements comprising the New Cairo, have transformed the region from a remote enclave of scattered villages to a hub of residential and commercial land uses.

2.3.2. History of gated communities in Egypt

Starting with the idea of segregation, urban segregation has been a continual feature of Cairo's history. The Fatimid Cairo (969) was a walled-city exclusively established for the ruling elite Figure 7.

In the Ottoman period (1517-1798), a “Hara” which is more like slums but there were poor and wealthy slums, those “Hara” were mainly a gated residential quarter in which no outsider could enter, was the basic urban unit of the city. These dynamics persisted into the Mamluk period, during which elites segregated their houses from citizens by surrounded gardens and would found on the outskirts of the city. More recently, during the Khedivial period (1869), segregation was intended mainly for foreigners and wealthy Egyptians, on vacant land west of the old city, although it eventually came to house the working class. So, by studying the city’s long history it becomes clear that the capital of the city “Cairo” is like a cracked vase, which have formed over the time. which has its impact on the modern Cairo [6].

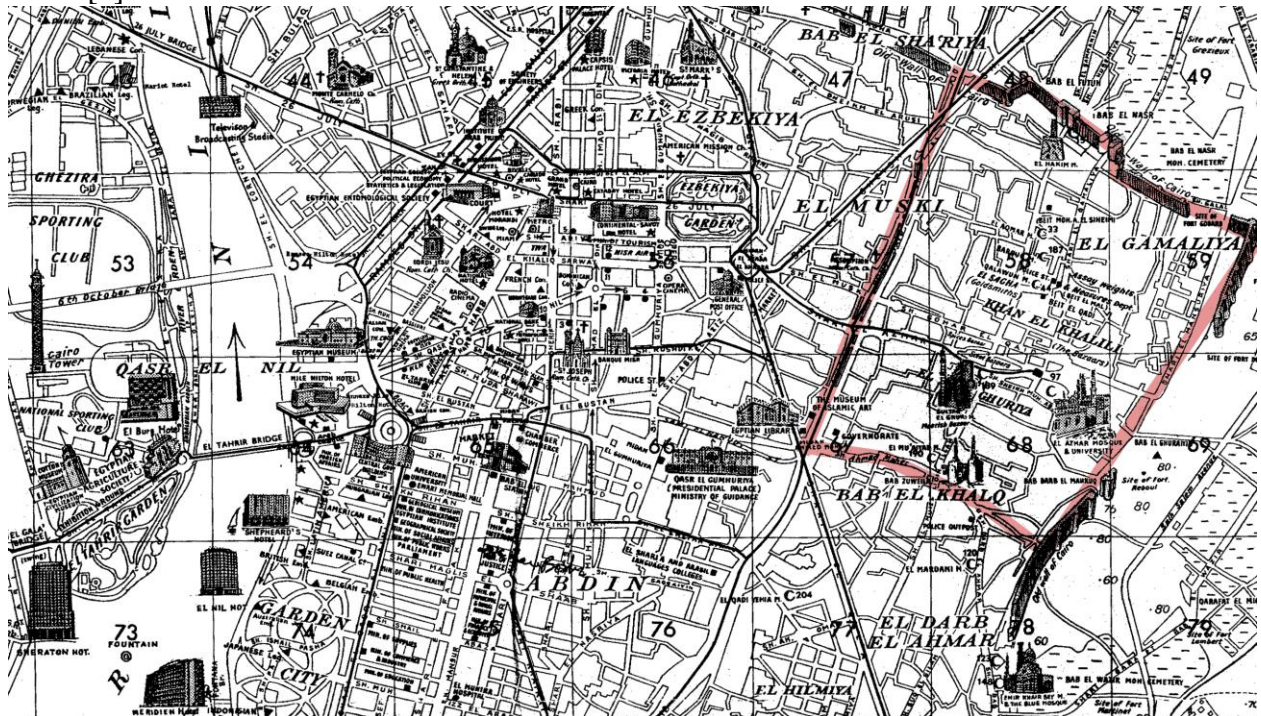


Figure 7: Fatimid Cairo [50].

For the concept of gated communities in Egypt, it started during the late seventies by the tendency to direct the expansion to word the desert land preserving the agricultural land by establishing new communities around Cairo city, Although those new cities surrounding Cairo city were planned to accommodate the middle class and less, and it’s goal was to offer good residence for the youth and people who cannot afford healthy comfortable residents in the capital city and to attract business men to new industrial zones. But the first generation of those new towns struggled to attract residents. By replacing the settlements for low income groups to higher suburban settlements with better services to be developed by the private sector they started attracting residents of higher class. Those new cities emerged as a perfect location for luxury communities, situated at a special and social distance to the city. Then the permission was received to build Gated residential communities inside the New Towns with different sizes, since then gated communities as a new pattern of development observed and spread in many of these cities, and became a mass trend that contributes in reshaping the New Cities [12] [51] [52] [9]. What was noticeable in that time the immigration of young men to Arab countries such as Libya, Iraq, and Saudi Arabia and became the source of financial prosperity for many Egyptian workers and sending their money back home searching for a new standard of living [25].

In the nineties, gated communities as we know today and distinguish by its large-area villas and mansions, huge green open spaces, and exclusive recreational and social amenities including all types of luxuries, were being constructed in 6th of October City, El-Sheikh Zayed, New Cairo, El-Obour and El-Shourouk cities. As well as expanding offering luxury housing, clean environment, and good infrastructure for those eager to escape the polluted, crowded, and noisy of the capital city. Almatarneh [6] agreed to that, and added explaining the reason behind the expansion of gated communities; that in the mid-1990s, the Egyptian government embarked on selling large portions of public land to private-sector real estate developers, a major policy shift toward privatization of urban development. So, developers begun to build gated communities where large parcels of affordable land are available.

A number of articles in the Egyptian newspapers agreed that In 1992, the first golf city in Egypt was implemented by an Egyptian investor, design of a golf course, villas areas and a package of advertising promises that deals with the community for the first time “Come live in the city of dreams, where golf, nightclubs, restaurants and cinemas”, at the same time several projects were started and by the increase of privatization of lands and selling large portions of land with knock-down prices by ensure affording infra structure projects. During the next years, and in the light of degrading of the existing cities to the point cannot be improved, new cities around Cairo became the Egyptian form of the American Dream Figure 8.



Figure 8: figures from al-Ahram newspaper, 1996, picture on the left is the advertisement for "Belle Ville" a Gated Community near the Giza Pyramids “To the beauty of the future”, and the picture on the right is the advertisement of Gated Community "Beverly Hills" “we are back to the paradise” [25].

In the 2000s the phenomenon of gated communities took a new extreme, Osman T. mentioned in his book that even that Egypt has always been a country of severe inequality, the phenomenon took a new extreme in the 2000s, due to the demographic boom in the country in which the wealthy neighborhood are minutes away from alleys of crashed poverty they rubbed against each other. Increasingly, the rich are abandoning the center of the city for gated communities in distant new leafy suburbs [53].

To date, the development of more than a hundred privately planned gated residential communities indicates a mass trend in new-town urban development on the outskirts of the Greater Cairo Region Figure 9. Ghonimi, Elzammly, khairy & Soliman [13] proposed a GIS data base for gated communities that are located inside Grated Cairo Region new towns, that have identified more than 466 gated community in Greater Cairo Region until 2010.

By 2013 they reached 500 which is a huge number and acceleration which makes us feel the expansion of gated communities. Metwally, Abdalla [12] in their survey in 2013 for Zayed City, stated that the percentage of gated communities from Total Area of Zayed city is 43% which is not a small percentage.

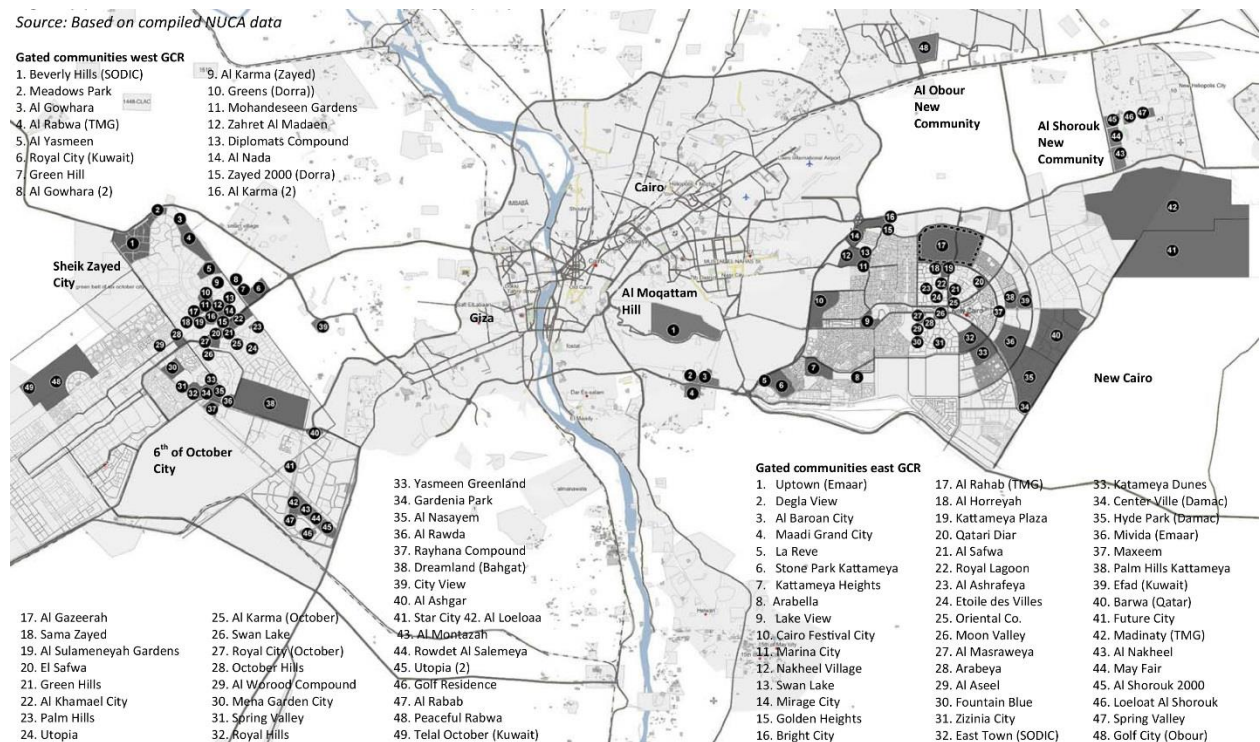


Figure 9: Gated Communities in Greater Cairo Region [54].

Not only in Cairo but across Egypt, Alexandria where large number of gated communities situated across the north coast and in different parts on Alexandria, and also a number of gated communities spread along the coast of the Red Sea and the beaches of Sinai, and we have to mention gated community of El-Gouna. Those gated communities imported foreign names such as, Beverly Hills, Palm Hills, Marasi, Merossa, etc. These private gated residential communities offer a wide range of housing schemes, ranging from middle-class to high-end distinctive, luxurious villas and apartments.

Gated housing communities have increasingly become a profitable segment in the real estate market, and provide a new marketing angle for developers as offering security, status/prestige, and lifestyle. But from the economic perspective, gated communities for holidays use along Mediterranean and Red Sea Coast have a negative impact on the national economy, because Egyptians use them no more than 20% of the year [12].

2.3.3. Typologies of gated communities in Egypt:

Touman [47] has developed two different criteria to classify gated communities in Egypt:

- I. Geographic classification, he classified them to *Gated communities that situated in the town*, that are mostly gated for security reasons, and *Gated communities that situated out of the town*, that established as a refuge from the polluted environment of the big town, for example Gated communities on the north coast of Egypt.
- II. Chronological classification, based on occupation chronology; he classified them to gated communities with *permanent residences*, usually located in the town or near country side

they represent luxury residences where elites of the society will live, for example: gated communities all around the greater Cairo. At the beginning the number of these luxurious residences was a problem as it exceeds the need, which leads to dropping its prices that causes problems for both the investor who has no more desire to continue such projects. Also, the original owner of residents, in which due to this price drop, middle class are also able to afford residence their, which destroys the homogeneous social tissue boasted by the owner. Gated communities with *secondary residences*, with two sub-categories: Weekly occupied, that is a destination every week-end, for example: Al-Montazah, and Al-Mamoura at Alexandria, and the *long vacation season residence*, in Egypt is represented by gated communities along the Mediterranean Sea.

2.3.4. Impact of gated communities in Egypt:

The impact of gated communities is the same in most of the countries except the researchers mention different case. In case of Egypt it's the same as mentioned previously, gated communities have an argumentative impact on micro and macro scale. Despite of the lack of empirical data many scholars argues that gated communities lead to urban segregation on the macro scale, that affects the social fabric [47]. Touman [47] added that gated communities in Egypt create Jealousy that could increase the criminality in society, because of its walls which supposed to protect people from crime. He also assumes that gated communities could destroy social fabric and generate social conflicts, and maybe a civil war. In addition to the increase of property values in adjacent communities [10]. Likewise, on the micro scale, as residents are from the same social class, that lead to contact with fewer number of residents and lack contact with other social groups. On the other side gated communities could create a sense of belonging and social coherence [16].

2.4. SOCIAL SPACE AND PHYSICAL SPACE

2.4.1. Introduction:

Scholars have become increasingly concerned with the declination of community connections. Due to the increased emphasis on the individualism, proliferation of personal electronic technology, and the ease of mobility. Evidence was provided for that U.S. citizens are increasingly disconnected from family, friends, neighbors, and democratic structures. Smith's [55] data show that since 1950, people socialize with their families, friends, neighbors and meet less frequently, belong to fewer organizations, vote less, and sign fewer petitions. A recent survey indicates that almost one-third of U.S. citizens do not know any of their neighbors by name [55].

Because of this lack of social interaction and familiarity, people no longer have the (social capital) or social networks that they had in the past. Furthermore, scholars argue that this lack of social links and social capital undermine the active civil engagement required for a strong democracy. Many searched for the reason behinds that lack;

- Some scholars argue that the primary reason for the lack of meaningful ties in modernity is the proliferation of *electronic technologies*.
- Other scholars argue that the *continual procession of media scare stories* creates a breakdown of trust and social interaction within neighborhoods.
- And others argue that the *poor design of cities and neighborhoods* prevents residents from making meaningful connections [56].

What is lacking is the analyses of the micro-level factors and contexts that form active streets and neighborhood blocks. With this dissertation, it is important to understand community life as it exists on the front porches, sidewalks, and streets of neighborhoods. Few scholars have attempted to understand why particular types of residential areas are community-oriented while others are not. To this end, it is essential to examine *the demographic, physio-spatial, and interaccional factors* that affect relation between neighbors. These relationships are important not only for personal well-being, but also for the social fabric of local neighborhoods and larger society [14].

2.4.2. Definitions:

I. Social cohesion and sense of community

Wanas, Moustafa & Murshed [14] Clarified that social cohesion is a difficult concept to define, it could refer -in its most general meaning- to a kind of glue holding society together. It is typically considered to involve social solidarity and some sense of unity despite recognized differences between the different components of society. In current theoretical and policy debates concerning social cohesion, the neighborhood has re-emerged as an important setting for many of the processes which supposedly shape social identity and life-chances [57]. So as mentioned by Smith [58] that the concept of social cohesion has been recognized as a complex multidimensional one within the general sociological literature, but when applied to the neighborhood level many of the possible dimensions of this concept have been neglected. Forrest & Kearns [57] suggested that the nature of every neighborhood form the routines of everyday life, these routines are the basic building blocks of social cohesion, through them we learn tolerance, co-operation and acquire a sense of social order and belonging.

“Neighborhood social cohesion is often equated with the construct of neighborhood sense of community” [14].

McMillan & Chavis [59] and Talen [19] Concluded from the literature of number of studies that it is important to work on a certain definition and theory for sense of community, as all of studies lack a coherently articulated conceptual perspective focused on sense of community. And none of the measures used in the studies to measure sense of community were developed directly from a definition of sense of community. So, what is needed now is a full detailed description of the nature of sense of community.

Consequently McMillan & Chavis [59] Proposed a definition for sense of community of four elements: The first element is *membership*, is the feeling of belonging. It has five attributes to define who is a part of the community and who is not, they are: boundaries, emotional safety, sense of belonging and identification, personal investment, and a common symbol system. The second element is *influence*, a sense of mattering and making a difference to a group. The third element is *integration and fulfillment of needs*, this is the feeling that members' needs will be met through their membership. It is a primary function of a strong community. The last element is *shared emotional connection*, the commitment and belief that members have shared and will share history, common places, time, and similar experiences. There are some important features to the principle of shared emotional connection: Contact hypothesis, quality of interaction, closure to events, shared valent event hypothesis, investment, effect of honor and humiliation on community members, and spiritual bond.

To summarize, communities with strong sense of community are those which offers members a positive way to interact, important events to share and ways to resolve them positively, opportunities to honor members, opportunities to invest in the community, and opportunities

to experience a spiritual bond among members. According to this McMillan and Chavis [59] formulated a definition as the following: “*Sense of community is a feeling that members have of belonging, a feeling that members matter to one another and to the group, and a shared faith that members’ needs will be met through their commitment to be together*” [59].

II. The Neighborhood

Higgitt & Memken [60] gave an Over view of the various aspect of neighborhoods and their importance to people. Neighborhoods was defined as an area in which people share certain common facilities necessary to domestic life, or as local unit within which people are personally acquainted with each other because of residential proximity, and many other similar definitions. For the Canadian researchers, neighborhoods can be defined geographically or socially, in which social definition expresses residents’ perceptions of their neighborhood but these definitions make it difficult to define and measure the neighborhood. It is recommended by Forrest & Kearns [57] not to see the neighborhood as just a territorially bounded entity, but as a series of overlapping social networks. In addition, they have illustrated the idea of ‘neighborhood’ from different perspective. First, neighborhood as ‘*community*’; the local domain of friendships and casual acquaintance, which is important dimension of our everyday lives. And neighborhood as ‘*context*’. At the other end of the social spectrum, there is the neighborhood as ‘*commodity*’; a domain of safety and security, with a compatible lifestyle packaged and sold as a walled enclave. And this links to the idea of the neighborhood as ‘*consumption*’; what we consume and who we consume it with are increasingly important parts of the social cement of contemporary urban life. Consequently, Neighborhoods vary along four general dimensions: physical infrastructure, socio demographic characteristics, institutional resources, and patterns of social organization.

Many scholars agreed that neighborhood can influence behavior, attitudes, values, and opportunities. They affect individuals differently depending on the age, personal characteristics, and their life style. We should not underestimate the importance of physical change, physical boundaries and local landmarks in creating a sense of belonging and identity. As we can’t neglect that how satisfied people are with their neighborhood is an important aspect of well-being, neighborhood satisfaction is influenced by personal, social, physical, and safety factors.

After World War II, neighborhoods began to change, developers created towns with curving streets and cul-de-sacs. These new neighborhoods were some distance from places where people work, shop, and play, residents became dependent on automobiles. These suburban neighborhoods became the predominant form of neighborhood in the latter half of the 20th century. So, neighborhood change over time, one of the new approaches to neighborhoods is *Gated communities* [60].

III. Neighborhood cohesion

“A neighborhood high in cohesion refers to a neighborhood where residents, on average, report feeling a strong sense of community, report engaging in frequent acts of neighboring, and are highly attracted to live in and remain residents of the neighborhood” [61].

First the difference between neighborhood and the community must be stated, Higgitt & Memken [60] distinguished between the two terms by linking neighborhood with geographic location and community with social interaction. Neighborhood is defined as an area in which

people share certain common facilities necessary to domestic life, while community is the network of social interaction and bonding based on mutual interest.

The term of community was illustrated by McMillan & Chavis [59] to two major uses. The first is the *territorial* and geographical notion of community neighborhood, town, and city. The second is *relational* concerned with quality of character of human relationship, without reference to location.

Neighborhood literature has focused on a variety of neighborhood studies including the nature of social life within residential areas, patterns and frequencies of interaction between neighbors, the effects of designed environments on selected aspects of social behavior and friendship formation, perceptions of neighborhood boundaries and local space, and the use of local institutions and participation in them by neighborhood residents [56]. From this wide variety of interests, cohesion appeared to be the predominant property of the neighborhood as a social unit.

Neighborhood cohesion has been studied in literature as both an independent and a dependent variable. As independent, some studies are concerned with the effects of cohesion on the social control of neighborhood residents. Taken as a dependent variable, numerous other studies have inquired into the physical conditions of the neighborhood which affect levels of cohesion. In a third and related set of studies, cohesion has been viewed as both an independent and a dependent variable with important implications for public policy.

Neighborhood cohesion as an independent variable has its impact on the micro and macro scale. As many scholars based their hypothesis on that cohesive neighborhoods are viable units for the implementation of social and economic development programs, and that the strong sense of community among residents are important for the general well-being of the individual, the family and the society as a whole [14]. And they make it clearer by elucidating that cohesion reduces stress, it permits clearer and more effective communication and promotes social interaction, it reduces perceived density, conflict, fear of crime, and crime itself. Besides making self-governance easier, it makes working together, cooperation, involvement, and participation much easier and more likely. Cohesion permits an easier and clearer communication of personal and group identity, and it is a better context for mutual support at times of need.

2.4.3. Factor affecting Neighborhood cohesion:

Buckner [61] Stated that cohesion among people of the same neighborhood can be created by some variables that could include neighborhood population size, whether an external threat is present, neighborhood homogeneity or heterogeneity, environmental design features, citizen governance, the presence of superordinate neighborhood goals, the distinctiveness and permeability of neighborhood boundaries, and others. Not only those variables, but Forrest & Kearns [57] added some demographic variables; people's position in the social structure, their educational and financial resources, status in the labor force, ethnic membership, family commitments, and residential locations, which expose them to varying opportunities for forming personal relations and provide them with varying means for taking advantage of those opportunities. For example: The woman who works outside the home, meets an entire set of people, some of whom may become her friends, that is unavailable to the woman who does not work.

Talen [19] has more detailed illustration for that elements, she concluded that neighboring cohesion is affected by the feelings of safety, utilization of public space, and local facilities, each of these factors can be promoted by physical factors of urban area. She also mentioned that architecture design plays a role in inhibiting resident interaction, more over there is another factor that is not directly tied to physical factors like social control of neighborhood, and public ownership of neighborhood facilities. So, she argued that the role of physical space in the creation of community is largely overplayed, and that residents seek affiliation with a homogeneous, likeminded social group and avoid heterogeneous social interaction. That's why some scholars have claimed that suburban life fosters a strong sense of community because of the class and life-cycles similarities among its residents. She also added that some scholars found that socio-economic status, age, and gender were most important factors in determining interaction, while others view that size, density and heterogeneity of urban areas are the most influencing. She also added some factors like length of residents, children, work status, home ownership.

While Wanas, Moustafa & Murshed [14] tends to emphasize the importance of some form of homogeneity among residents as a necessary prerequisite for neighbor social interaction to occur. This homogeneity could be, cultural homogeneity: shared beliefs, values, needs, norms, institutions, or lifestyle. Or socio-economic homogeneity: similarity of economic or social status, similarity of stage in the life cycle, or shared economic and functional interests. After extensive review, they agreed to that this homogeneity can help increase perceived similarity among residents, leading to increased social interaction among neighbors, increased identification with the neighborhood, and increased neighborhood sense of community and cohesiveness.

Touman [47] Added a live example for that homogeneity case, the "nouveau riches" in Egypt that mean people who become rich recently, they avoid living in classy areas as they don't adapt with the new classy life style, they prefer staying in their neighborhood where they can adapt. Even if some of them try to integrate to high class and live in high class neighborhood with keeping their habits they feel rejected. And vice versa if high class people try to live in low class neighborhood they will not be welcomed. That's all because people seek homogeneity in places they live. Likewise, parents prefer that their children's friends belong to the same social standard, same education level, so they search for gated communities of people with same social class or the same profession.

Rather for the demographic variables, when Buckner [61] applied his instrument in measuring neighborhood social cohesion, he collected demographic data (sex, age, annual household income, education level, marital status, race, employment statues, residence, years lived in neighborhood, children at home or not, and living arrangement) of the respondents to determine predictors of neighborhood cohesion. The findings suggest that differences between neighborhood in cohesion are not merely affected by that demographic variables, only years lived in neighborhood, and level of education, were a significant predictors of neighborhood cohesion.

To sum up, there are Physical factors and demographic variables that are believed to strengthen neighborhood cohesion. Even it's demonstrated that physical form of the neighborhood can increase neighborhood cohesion and the frequency of resident interaction, resident interaction is only one factor in the building of a sense of community. Based on this conclusion it is important in this thesis to consider all the factors that could affect neighborhood cohesion besides the physical form which is the main factor in the research.

As this research is concerned with studying gated communities and its social impact so it's important to focus on the social impact of urban design.

2.5. CONCLUSION

Gated communities are not a new phenomenon, it's linked to the global historic pattern of enclosure back to the fortresses era. Since that the phenomenon of gated communities has developed a lot until it reached the current form. Gated communities are built for different reason differs from city to another and from gated community to another ranging from high crime rate and ethnic conflicts, racism, property vandalism, kidnapping and robbery, to being built for a seasonal use in coastal zones. Which lead to have different physical characteristics. Because of this diversity gated communities have several different definitions, the most comprehensive definition is Ghonimi, Elzammly, khairy, & Soliman's [13] definition, in which they described gated communities as a socio-spatially restricted area, that breaks large residential developments into small inward looking units with certain features that create that new conditions; focusing the plan on a single facility and use, with single housing type, and inward orientation depending mainly on its own resources which may be limited, and finally being incompatible with the character of urban life, mobility, diversity, choices and larger areas for social interaction. In order to differentiate gated communities, every researcher developed his own typology depending on the city and also his researcher's interests and approaches. The most common typology classifies gated communities to three types depending on the most targeted value from each gated community: 'Security', 'Prestige', and 'Life style'.

In Egypt the phenomenon of gated communities goes back to the Fatimid Cairo 969, in which it was a walled-city for rolling elites. Gated communities appeared again in Egypt as a secondary housing in coastal zone in 1980, and keep spreading until it reached more than 500 gated community only in Greater Cairo Region by 2013.

Due to this spread, many scholars have studied the impact of gating on all dimensions of city: on property value and city economy, on governance and city management, on the security and life style dimension, the built environment and city infrastructure, and finally its impact on the social aspect of city on the micro and macro scale. Although it is limited by the lack of empirical data. Gated communities could lead to the lack of contact of it residents with other social groups because of its low density and low social diversity inside the gated community and low exchange with adjacent neighborhoods. This could create Jealousy and increase the criminality in society [47]. On the other hand, it could create sense of belonging and social cohesion.

Scholars have become increasingly concerned about the decline of the local community in recent years. And it's discussed that neighborhood can influence behavior, attitudes, values, and opportunities. They affect individuals differently depending on the age, personal characteristics, and their life style. We should not underestimate the importance of physical change, physical boundaries and local landmarks in creating a sense of belonging and identity. This sense of community is the sense of belongingness, fellowship, we-ness, identity, experienced in the context of a functional group or geographically based collection [61]. So, communities with strong sense of community are those which offers members a positive way to interact, important events to share and ways to resolve them positively, opportunities to honor members, opportunities to invest in the community, and opportunities to experience a spiritual bond among members. This leads to the importance of examining the demographic, physio-spatial, and interactional factors that affect relation between neighbors.

CHAPTER THREE

THE IMPACT OF GATED COMMUNITIES ON SOCIAL COHESION

3.1. INTRODUCTION

In this section, theoretical conceptions and positions of scholars that links gated communities and social cohesion will be analyzed to detect the gaps, in addition to illustrating how it was used to establish the conceptual framework for this research, at the end it will lead to describing the research methodology.

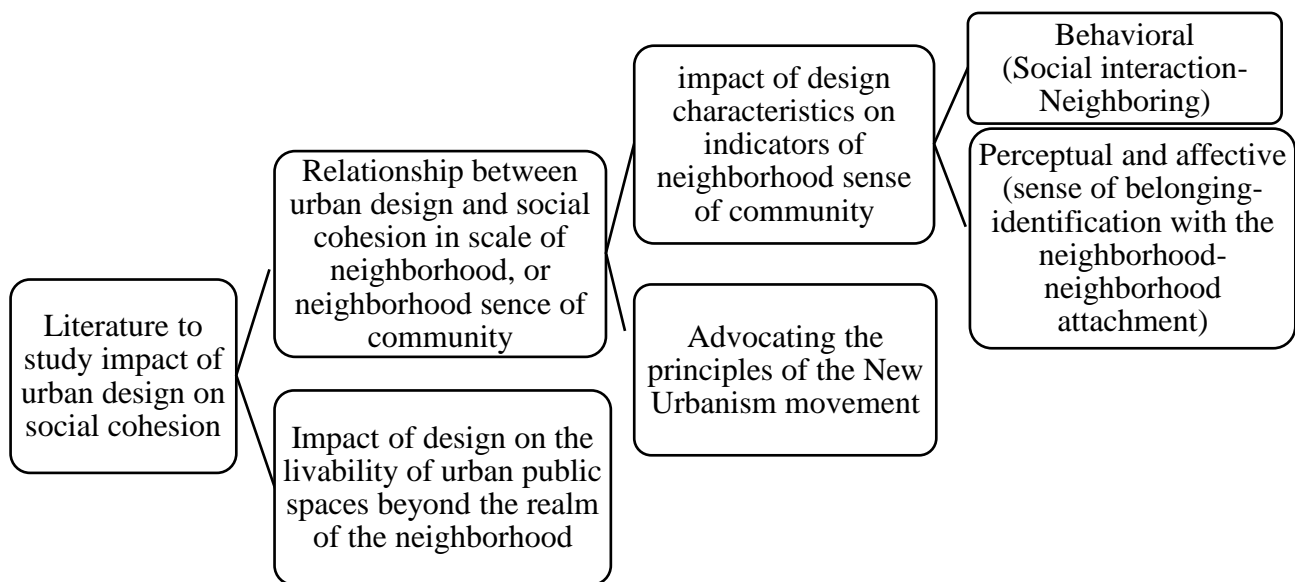


Figure 10: illustration to the Literature of the impact of urban design on social cohesion, source: author.

Wanas, Moustafa & Murshed [14] have summarized the literature of the impact of urban design as a start on social cohesion to two main orientation that are clearly identifiable in the international literature Figure 10.

The first orientation has focused on the relationship between urban design neighborhood and sense of community. This focus on the neighborhood on the assumption that: cohesive neighborhoods could enhance social and economic development programs, or that they are important for the general well-being of the individual and the good of the family and the society as a whole. This first orientation was found in literature either associated with advocating the principles of the New Urbanism movement, or investigate the impact of design characteristics on indicators or of neighborhood sense of community, whether behavioral such as social interaction and neighboring, or perceptual and affective such as sense of belonging, identification with the neighborhood, and neighborhood attachment.

The second orientation involves a literature that has focused on the impact of design on the livability of urban public spaces beyond the realm of the neighborhood, this literature has investigated the impact of design characteristics on the increased presence of people in such public spaces as plazas, squares, streets, and parks. This orientation is relevant to the study of social cohesion between the different components of society because it can be assumed that social diversity and the co-presence of diverse groups in these urban public spaces can lead to social interaction among them or a better acceptance of the other.

From the first orientation of the literatures, Wanas, Moustafa & Murshed [14] added one of the design characteristics of residential areas affecting neighborhood sense of community, which is the physical clarity of the boundaries of the neighborhood. Considering them with other factors affecting cohesion, that will take us to the gated communities with its special characteristics and its social impact.

3.2. GATED COMMUNITIES' SOCIAL IMPACT AND USED METHODOLOGIES

This part is a review and analysis of the international and local literature about the social impact of gated communities and the used methodologies, to explore the current knowledge about it and identify the existing gaps.

First, some have studied the social impact of gated communities as general and on the social capital, one of them is Moobela [62] who evaluate the impact of gated communities in the UK on the social capital. He assumed that Social Network Analysis depends on the idea of uncovering the patterning of interaction among the various agents of a social system, and that It's one of the most popular tools of analysis. So, he used the graph theory that constructed within the social network analysis. Graph theory made up of two main elements, the nodes and the lines, the nodes are various agents while a line connecting any two agents depicts existence of a relationship between the nodes. Density describes the general level of linkage among the nodes in the graph. His application relay on density measurements in order to deduce the civic virtue of the case between 1990 and 2000. He finally concluded that gated communities do have negative social impact that appropriate balance between its extent on one hand and the retention of the open space mixed use must be existing.

Likewise, Li, Zhu & Li [41] who aimed to analyze the relationship between residents' relation and community attachment, and the neighborhood satisfaction on the other hand. They examined how such relations (dependent variables) are conditioned by the different types of gated communities (independent variables) in China. In order to do that, they first examined the relation between the three dependent variables (community attachment- neighborhood relations- neighborhood satisfaction), and then construct an appropriate structural equation model to analyze the relation between them and the type of neighborhood which is independent variable. They compared the results by the degree of gated-ness of each of the surveyed neighborhood. Finally, they concluded according to their structural equation model estimation results that gating appears to have minimal effect on community attachment, but it has a large significant negative effect on neighborly relations.

In case of Egypt, gated communities as a trend have been studied with different aspects and methodologies:

Touman [47] Who explored in his research the impact of gated communities on society of Europe in three main aspects: social life, national planning, national economy and the econ-spatial distribution. He wanted to explore the phenomenon of gated communities in foreign territories, and his case study was Egypt. His methodology was just observation and his analysis was descriptive. Metwally & Abdalla [49] Studied gated communities and its impact on the city planning and spatial discontinuity between them and adjacent areas in the new cities around Cairo. Nassar, Fathy & Saleh [52] used a different method in studying gated communities in Egypt, they have descriptively analyzed gated communities in Cairo region and compared it with sustainable urban principles of good community (environmental, economic, and social criteria) and then examined its connection with Egyptian urban fabric.

Ghonimi, El Zamly, Khairy & Soliman [15] have several studies on gated communities in Cairo, one of their studies aimed to examine the contribution of gated communities to urban development with reference to Greater Cairo Region's new towns, by criticizing and evaluating the impact of gated communities on social fabric, spatial fabric, and urban life of the city. The criticism rested on two evaluating reference: theories of successful spatial fabric, social fabric and public life of the city. And evaluation with reference to local context environmental, social, and economic unique characteristics of Cairo.

First, they defined gated communities' unique socio-spatial features, and defined the way they impact social and spatial form of the city. In this stage, the impact was defined on micro level, adjacent public communities and city structure. The definition of the impact was a description for the current situation and observations. Second, they discussed the socio-spatial features with reference to theories of successful social, spatial and public life. In this stage, they relayed on the literature review of the successful concepts in social, spatial and public life dimensions. Finally, they discussed the socio-spatial features with reference to Cairo's unique circumstances. In this stage, they discussed the unique circumstances from the environmental, social, economic perspective, and compared it to the features of gated communities. The methodology as overall is descriptive. At the end, they concluded that gated communities are not suitable for development in a unique context like Egypt.

While the data collected by Shetawy [9] from the study of gated communities in New Cairo Settlement is divided into two groups: the sense of community within gated communities and those with adjacent areas. What was different about his field work is that most of the interviewees confirmed an active comprehensive sense of community, but residents are stressing that their status is formed by the lifestyle and luxury, not the same kind of relationship that used to exist between neighbors.

On the other hand, he couldn't document any sense of community between gated communities and adjacent residential areas, almost all of interviewees from all residents' groups stress the complete blockage around the residents of gated communities.

As well as Marafi [17] based on her research on gated communities in Cairo and according to semi structures interviews, she explored the desire of residents of el Rehab gated community for a complete separation from surrounding neighborhood.

Furthermore, Ghonimi, Elzammly, khairy & Soliman [63] in a different research, they developed a survey for social development through ten gated communities in Cairo, they concluded that social discontinuity exists between gated communities' residents and adjacent areas' residents and the lack of contact with other groups, as none of the residents have time to waste building the community relationships. Also for the safety aspect, they concluded that gated communities rarely provide safety or sense of security, rather they create social tension between the rich and the poor. In addition, they added a very important point, that micro community's social development does not only depend on its socio-spatial structure, but a part of their success depends on their relationship with adjacent community, where they can reveal some kind of contraction, involvement and participation in micro community, beside encouraging and promoting the same for macro community.

So, to summarize, several researches that have been done on case of Egypt agreed to that gated communities don't meet the social requirements of Egyptian people. It is justified by that successful social design in Egyptian towns accomplished by: first, to ensure the relation between neighborhoods, especially between the rich and the poor, as our religions endeavor to not to discriminate between social classes bringing the poor near the rich. Second, compact mixed urban form, compact short distance buildings, services, in walking distance, public domain with commercial axis and public spaces. As the Egyptian people often prefer streets, buildings, neighborhood, and even the city, is filled of life and activities, stressing concepts of "Ulfa, Lama, Wanass" these concepts mean making social contract, and sense of community and safety [17] [6]. On the contrary, gated communities' socio-spatial characteristics block the channels could lead to class hatred. In micro level, it depends on homogeneous community that lack diversity, and exclusion of the poor. This segregating widens the gap between the poor and the rich making rich people not feeling the poor. Gated communities in macro scale tend to diminish public realm, and isolate public streets from its life, leading to dividing urban form and massive trend to enclosing large areas of land inside the city, with no public urban spaces, which weaken the concepts of "Ulfa, Lama, Wanass", which are socially rooted in social fabric of Egyptian people, creating city of walls. As a result, this negatively impact on the livability of the city [17].

According to the previous literature, more researches should be done to study the relation between the residents of the gated communities itself. As, the relations between residents of the same neighborhood is the start of the community, has undeniable impact on the community as whole, and also an essential requirement for the Egyptian people. As well as from the literature for the researches on Egypt, there is also an obvious gap in case of Alexandria. Consequently, this research will try to fill this gaps by investigating and measuring neighborhood cohesion inside gated communities in Alexandria.

3.3. MEASURING NEIGHBORHOOD COHESION INSIDE GATED COMMUNITIES

There are many arguing about the relation between gated communities' characteristics and its residents' cohesion. Several scholars studied and measured those relations, and every researcher has his own conclusion which varies from one case to another. For some, it is believed that gated communities with its inward-looking residents with similar perspective, and its formal rules and regulation that guarantee stable neighborhood. Results you buy social cohesion rather than make it, fabricating a guaranteed neighborhood context [57]. Wanas, Moustafa & Murshed [14] Justifies this result by that, the physical clarity of gated communities' boundaries reinforces the identification to the neighborhood, feelings of

attachment, and a sense of belonging. As well as a perception of homogeneity among residents and a uniting feeling of “us versus the outside world”. Moreover, according to Wanas, Moustafa & Murshed [14] some studies linked the diversity with lower measures of neighborhood cohesion as residents with different characteristics do not really interact and are not likely to develop social relationships, so that they assumed gated communities to be a successful trend for neighborhood cohesion. Nonetheless, other scholars have proved the reverse.

Meanwhile, to come with proper methodology to study this relation for this research, the used methodologies to measure neighborhood cohesion will be discussed and analyzed. It is concluded that most of the researches are based on a qualitative analysis for the data gathered using questionnaire for a specific tool that measure neighborhood cohesion, and then come with conclusions through comparing the data. Meanwhile, every scholar has his own criteria to measure neighborhood cohesion and defining its dimensions;

Talen [19] divided the social aspects of neighborhood into two categories: level of neighboring, and the psychological sense of community. Likewise, scholars set dimensions to judge attachment to the local neighborhood: neighboring activity, use of local shopping facilities, and existence of a personal identification with the area. While others’ study was more comprehensive, they create a composite index of cohesion based on several different behavioral and perceptual variables which are: neighboring, use of local facilities, participation, identification, commitment, and finally evaluation which is the extent to what residents evaluate their neighborhood [58].

Scholars developed instruments to measure neighborhood cohesion according to their dimensions. The most popular instrument is Buckner’s [61], who has set his three-dimensional indicators for producing a valid instrument [61]:

- Residents’ sense of community felt within the context of neighborhood,
- residents’ degree of attraction to live and remain in the neighborhood,
- and residents’ degree of interaction with the neighborhood.

His analysis is started with individual variables to measure individual-level attribute, and then aggregate these individual scores to form a measure of the cohesiveness of neighborhood residents. His instrument initially started with 40 items distributed on the 3 indicators; attraction to neighborhood, neighboring, and psychological sense of community. He has chosen 3 neighborhoods with 3 different level of cohesion (according to the reputation) to apply the 40 items, then he selected the items with the highest correlation to remain and eliminated the others. The final version contains 18 items presented in Table 3.

Buckner’s instrument is called ‘Neighborhood cohesion instrument’, and is only meant to be used in assessment of neighborhood cohesion. By this instrument we can conceive of a collection of residents living within a neighborhood as having a certain degree of cohesion so that level of cohesiveness can be inferred through quantitative measurement.

Each item is given key of 5 levels (strong agree, agree, neither agree nor disagree, disagree, strongly agree), and each level is given a grade to be quantitative.

Table 3: Buckner’s ‘Neighborhood cohesion instrument [61].

Attraction to neighborhood	Over all, I am very attracted to living in this neighborhood.
	Given the opportunity, I would like to move out of this neighborhood.
	I plan to remain a resident of this neighborhood for a number of years.
Neighboring	I visit my neighbors in their homes.
	If I needed advice about something I could go to someone in my neighborhood.
	I borrow things and exchange favors with my neighbors.
	I rarely have neighbors over to my house to visit
	I regularly stop and talk with people in my neighborhood.
	I believe my neighbors would help me in an emergency
Psychological sense of community	I feel like I belong to this neighborhood.
	The friendship and associations I have with my neighbors means a lot to me.
	If the people in my neighborhood were planning something, I’d think of it as something “we” were doing rather than “they” were doing.
	I think I agree with most people in my neighborhood about what is important in life.
	I feel loyal to the people in my neighborhood.
	I would be willing to work together with others on something to improve my neighborhood.
	I like to think of myself as similar to the people who live in this neighborhood.
	A feeling of fellowship runs deep between me and other people in this neighborhood.
Living in this neighborhood gives me a sense of community.	

Many studies have used Buckner’s method to measure neighborhood cohesion for different purposes by different combination of question items. For example: Fone, Farewell & Dunstan [64] who used only 15 question items by removing three questions: (If the people in my neighborhood were planning something, I’d think of it as something we were doing rather than they were doing, I think I agree with most people in my neighborhood about what is important in life, and I feel loyal to the people in my neighborhood) and add the item (Overall, I think this is a good place to bring up children). They also mentioned that there are some researchers that used only 8 item questions and found it satisfying depending on the label chosen.

While Youssef [65] used Buckner’s Neighborhood cohesion instrument method by applying 23 question items. He added 4 items to Buckner’s method, which are: (People in my neighborhood work together to keep children safe Informing, I consider my neighborhood to be unique Informing, there are certain dress codes, social practices, or events that characterize my neighborhood, and It is easy to distinguish residents from non-residents who are walking in the neighborhood). As Youssef was concerned with measuring the effect of Gated-ness of neighborhoods on neighborhood cohesion. The added 4 items are two items pertain to the informing dimension of enveloping space and two other items pertain to the ex-forming dimension of enveloping space.

Another method was used to measure neighborhood cohesion: Md Sakip, Johari & Salleh [20] studied sense of community in gated communities as the identification of the community members' feelings about each other and the community's successful functioning as it leads to the satisfaction with and commitment to the community. In order to measure sense of community they used four dimensions; membership, influence, integration and fulfillment of needs and, shared emotional connections refer to interaction. These four dimensions are measured by three indicators using a questionnaire, and then rate each one using a Likert scale ranging from 1-10 Table 4. They used the confirmatory factor analysis using AMOS and SPSS software to confirm the validation of their model, which indicates that their model is acceptable as indicator for sense of community.

Table 4: Method to measure neighborhood cohesion [20].

Membership	I can identify most of the residents here.
	Most of the community knows me.
	I always participate in community activities organized by the community association.
Influence	I look after my neighbors' children/plants/pets when they go on vacations.
	I value my neighbor's/community's views or comments.
	Whenever there are problems in this residential area, they are solved by the community.
Integration and fulfillment of needs	I feel that I am one of the community members in this residential area.
	I can trust the community here.
	I feel this residential area is good to live in.
Shared emotional connection	I am happy living among the community in this residential area.
	The community here always share important events such as birthday parties, weddings, and festivals.
	The community here care about each other.

3.4. CONCLUSION

It's concluded that social cohesion which is the glue holding society together and sense of community is indicator of quality of life, and general well-being of the individual, the family and the society as a whole. High sense of community and homogeneity is believed to reduce stress, it permits clearer and more effective communication and promotes social interaction, it reduces perceived density, conflict, fear of crime, and crime itself [14]. The lack of that cohesion and sense of community, could affect the civil engagement that is required for a strong democracy.

Neighborhood which is the place where people live is one of the most effective factors that affect cohesion between residents. Those neighborhoods vary along four general dimensions: physical infrastructure, socio-demographic characteristics, institutional resources, and patterns of social organization.

From those dimension Buckner believed that cohesion among residents of the same neighborhood can be created by some variables, which can be summarized in:

- Population size,
- Safety,
- homogeneity,
- Design features, that include according to Talen: Architecture and site design, densities, streets, public spaces, and mixed uses,
- governance,
- goals of the neighborhood,
- boundaries,
- In addition to demographic variables which according to his studies only years of residence and level of education that affect cohesion between neighborhood residents.

Consequently, other than the demographic variables of the residents, the special characteristics of gated communities from the regular neighborhood, could be retained under those factors that affect cohesion between residents, as the following:

Table 5: Gated communities' characteristics according to factors affecting social cohesion, source: author.

Factors affecting cohesion	Gated community characteristics
Population size	Host a large population size with low density.
Safety	Provides an intensive security with gates at the entrances and at every building.
Homogeneity	Residents of gated communities must be the same socio-economic class, there is no social diversity between its residents.
Design features	Could have special architecture style, with well-designed landscape, closed streets and cul-de-sac, low densities, open spaces.
Governance	Most of cases have a separate management.
Goals of the neighborhood	Each gated community could have a goal and aims to achieve over time that would assemble its residents to seek for.
Boundaries	Every gated community has a defined boundary with gates that form a clear separation between outside and inside, the form of the boundaries varies from gated community to another.

Several measuring criteria for neighborhood cohesion was developed by scholars according to their dimensions. According to Buckner [61] the advantage of measuring cohesion is that we will be able to focus attention on the systematic variables that may play an important role in creating sense of community among people. Consequently, there will be a better understanding of what it takes for the sense of community to be fulfilled in the range of the neighborhood, whether casual neighboring is sufficient or whether deep social bonding, membership, influence, integration and attachment to place are required [19].

However strong neighborhood cohesion not necessarily an indicator of a cohesive community, as city could consist of socially cohesive neighborhoods but increasingly segregated. Especially in case of gated neighborhoods as gates could help to increase cohesion among its residents it segregates them from the surrounding community.

Forrest & Kearns [57] Shed the light on this point and raised a question in their article about social cohesion and neighboring, “how we might recognize a socially cohesive neighborhood, and would it be such a good thing anyway?” Eventually, they have suggested that strongly cohesive neighborhoods could contribute to create a divided and fragmented city, and a society in which citizens had a strong sense of place attachment could conflict with any sense of common national purpose, or macro-cohesion.

So as the literature showed an existing gap in studying neighborhood cohesion within gated communities on the micro scale. Trying to fill that gap this research will focus on measuring cohesion within gated communities in Alexandria. It will combine between the two methods used to evaluate the impact of gated communities on the neighborhood cohesion, in the following way: first, by following the same criteria of Md Sakip, Johari & Salleh [20] in evaluating sense of community in gated communities by measuring neighborhood cohesion in gated community and comparing it with that of a non-gated community to analyze how special characteristics of gated communities could affect neighborhood cohesion, and focus attention on the variables that play an important role in creating sense of community among people of the same neighborhood, consequently there will be a better understanding if the trend of gated communities is suitable in Alexandria or not. Second: by applying the measuring method of Buckner [61] to measure neighborhood cohesion, as it's the most applicable in case of gated communities.

CHAPTER FOUR ANALYTICAL FRAMEWORK AND METHODOLOGY

4.1. INTRODUCTION

Based on the literature review, it is obvious that researches about the social impact of gated communities has mainly focused on social consequences of gating without a clear conceptualization of social state produced inside such residential development leaving a gap open on the link between gated communities and neighborhood cohesion. Consequently, a methodology is conducted in order to answer this research question and achieve its aims, which both intent to fill this gap.

4.2. RESEARCH METHODOLOGY

In this section, study's investigative procedures will be described. This study relies on qualitative research. It aims at understanding the impact of gated communities on the neighborhood cohesion on the micro scale, showing the validity of such impact in case of Alexandria, and finally to conclude what is the physical features that play an important role in creating strong neighborhood cohesion. Based on the type of data and the purpose of the research, the research is divided into two main parts Figure 11:

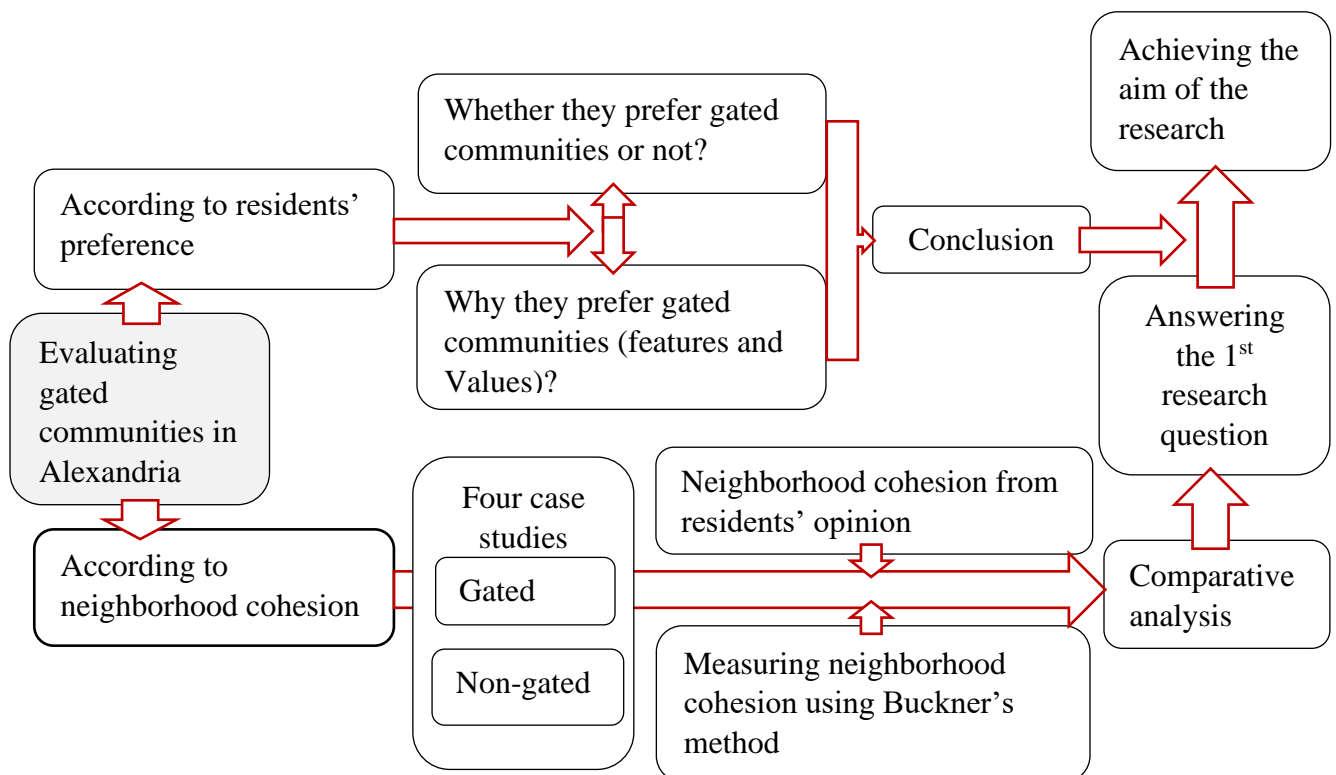


Figure 11: Methodology to evaluate gated communities in Alexandria

- First, exploring whether people in Alexandria prefer to live in gated or non-gated residential area. knowing the factors that affect residents' preference to gated communities in Alexandria, and linking this factors by the special features of gated residential communities of Alexandria.

- Second, evaluating social impact of gated communities on the micro scale, which evaluated by two ways: first, from residents' perspective. Second, by using an analytical method to measuring neighborhood cohesion. Both two ways are applied on four selected case studies in order to reach the final conclusion through a comparative analysis between the four cases, including the documentation and measurements of the variables, and Statistical analyses of the data.
- But before these two parts, to be fully aware of the phenomenon in Alexandria. It's important to start with data grouping and tracing of gated communities in Alexandria, and documenting its characteristics and types.

4.2.1. Tracing and documenting gated communities in Alexandria

Documenting gated communities in Alexandria city is considered an important part in this research, in order to have an empirical data about the phenomenon that can rely on. It involves a systematic survey for gated communities from different sources like, newspapers, real estate agencies (either through a direct contact or through the internet), statistical data from local authorities, aerial photographs, and mainly field visits to collect data. All information is gathered and organized to state the number of gated communities in Alexandria, its positions, physical characteristics, and finally that leads to conducting the proper typology. All this data is organized in the maps of Alexandria city. With illustrating existing types of gated communities in Alexandria and documenting its characteristics.

4.2.2. Evaluating gated communities in Alexandria

First, residents' preferences. Based on a theoretical study for the previous related researches to document the factors affecting residents' preference. Then by using online survey, those factors are evaluated with reference to Alexandria's residents, in order to know the reasons that some of them prefer gated residential communities over the non-gated in Alexandria. The results of this survey are analyzed using Jansen, Coolen, & Goetgeluk's [66] methodology 'Meaning Structure Method'. This method is adopted from their book under the name "The Measurement and Analysis of Housing Preference and Choice", in which they present an overview of methods and analytical techniques that can be used to describe, predict, and explain housing preference and housing choice. The used method in this research is a simplified version of 'Meaning Structure Method', because out of the mentioned methods in the book, it's the method which focuses on what the people want. This methodology helps to answer two main questions; what people's housing preferences are, and why they have these preferences 'the gained value'. And at the end the concluded factors combined with the results of the next step both together are tested on gated residential communities of Alexandria. this methodology is based on observation and qualitative exploration through a questionnaire.

Second, Measuring the neighborhood cohesion. From the literature Buckner's method [61] has been chosen to measure neighborhood cohesion within residents of gated communities. As it is the most popular method that have been used in many researches to measure neighborhood cohesion and also it is tested and valid in case of gated communities. Moreover, before using this method its validity was tested in case of Alexandria.

Buckner's method 'Neighborhood cohesion instrument' measures neighborhood cohesion through three main dimensions: attraction to the neighborhood, neighboring, and psychological sense of community. It is consisting of a structured questionnaire of 18-items, each item is given key of 5 levels, and each level is given a grade to be quantitative, so that level of cohesiveness can be inferred through quantitative measurement.

This step was carried out using a structured questionnaire, this questionnaire has been applied in the four selected case studies in Alexandria through two dimension the first is on site face to face with the residents, complemented with interviews with residents in order to get a more in-depth understanding of their responses. And the second direction is through online questionnaire. This questionnaire was applied on the two selected study areas for each type: gated residential area, and non-gated residential area. Finally, depending mainly of comparative analyses between the variables, after measuring neighborhood cohesion in both gated and non-gated residential area, the average is calculated, and the results are compared to come up with the conclusion of the research, in order to testing validity of the impact of gated communities on neighborhood cohesion in the case of Alexandria.

By analyzing the results of the first and second part of the analysis, and by using a comparative analysis between the four case studies. One of the case studies was selected based on the evaluation to be farther investigated through site survey and observation to determine the physical features that affect neighborhood cohesion and to fully achieve the research aim.

A seven months explorative field research on locations in Alexandria city was done for this research with visits to most of the gated communities in Alexandria. The empirical data has been collected in the form of visual data and maps, and questionnaire complemented with interviews with the residents.

4.3. SELECTION OF THE CASE STUDIES

As this research concerned with comparing between gated residential areas and non-gated residential areas, which differs at most of the physical elements, as well as from social perspective, and homogeneity between residents. The selection of case studies is based on certain criteria. these criteria are adapted from the last studies, considering the general dimensions that neighborhoods vary among them and could affects cohesion between residents. Based on several specifications adapted from Md Sakip, Johari & Salleh [20] in order to unify the factors between case studies, which are:

- Its residents are living there for minimum 5 years,
- scale, and for the non-gated neighborhood must be uniform, indicating that it's located within a neighborhood.
- same socio-economic level,
- constructed at the same period of time.

First, the type of gated neighborhood that the case studies will be chosen from is determined first. So that 'gated town' type was chosen as it's the prevailing type in Alexandria.

The two chosen gated case studies are chosen with different gating levels so that the average of the results will be taken. 'ACID' and 'Hai Moharam Basha' are the choosen gated case studies with different security levels.

Then the non-gated neighborhood has been chosen according to the previous criteria. Two non-gated neighborhoods have been chosen each is compatible with a selected gated community according to the criteria. 'Tawaniat Smouha' and 'Moharam Beh' are selected as a case studies for non-gated neighborhoods. In which 'ACID' and 'Tawaniat Smoha' were constructed in approximate intervals of time before 1985, they both situated in the same urban region 'Smouha'. 'Tawaniat Smoha' is a defined neighborhood and area of same scale of 'ACID'. 'Moharam Basha' and 'Hai Moharam Beh' both have residents from more than 5 years constructed before 2008, both in same urban region and same social economic level. 'Moharam Beh' is a defined neighborhood and area of same scale of 'Hai Moharam Basha'.

Table 6: Case study selecting criteria, source: author.

	Having residence in the area for minimum 5 years	Scale, and uniformity	same socio-economic level	constructed at the same period of time or close
ACID	✓	✓	✓	✓
Tawaniat Smoha				
Moharam Basha	✓	✓	✓	✓
Moharam Beh				

4.4. SAMPLING METHOD

The survey questionnaire was conducted randomly by including all accessible residents of selected cases both on site and online, in order to achieve required sample size. Using sample size online calculator (<http://www.raosoft.com/samplesize.html>) with confidence level 90% and alpha error = 5%. The required sample size was found to be total 225 sample from the study areas.

4.5. CONCLUSION

Data analysis starts by calculation neighborhood cohesion for each one of the four selected case studies, which are two gated neighborhoods: ‘ACID’, and ‘Hai Moharam Beh’. And two non-gated neighborhoods: ‘Moharam Basha’, and ‘Tawaniat Smouha’. By calculating the mean value of total 225 responses to the 18-item questionnaire that constructed by Buckner [61] and the average of the results of the two gated case studies is calculated to represent neighborhood cohesion level in gated communities, as well as for the non-gated case studies. In addition to, referring to Buckner’s grouping for the items to three component of neighborhood cohesion (attraction to the neighborhood, neighboring, psychological sense of community), those three dimensioned is calculated in each case.

A comparison between the results of two types (gated and non-gated) is constructed, as well as the bonds between the three components of the instrument and neighborhood cohesion in each case. From this comparison certain type of the selected neighborhoods is defined to represent the highest social cohesion between its residents, as well as the most affecting dimension to the neighborhood cohesion is defined. This research is not depending only on the results of the instrument, but residents’ opinion is taken in the consideration. At the same questionnaire, there is another part that residents of the four selected case studies should fill. This second part questions their estimation to the social cohesion at their neighborhood, and factors affecting this cohesion. From these two parts the neighborhood with the highest social cohesion value between its residents is defined based on the evaluation of its residents and the comparison of the resulted values of ‘Neighborhood cohesion instrument’. This nominated neighborhood is investigated through a site survey and observation to determine its physical features that affect its residents’ cohesion.

To fully achieve the research aim, the previous analyses is preceded by another online questionnaire to Alexandria residents. 200 responses are analyzed to investigate residents’ preference to a type from the two selected types of the neighborhoods (gated, non-gated), and the factors affecting this preference. The used method in this questionnaire is a simplified version of ‘Meaning Structure Method’. From these two parts supported by site surveys and observations this research question is answered, and the research aim is achieved.

CHAPTER FIVE

GATED COMMUNITIES IN ALEXANDRIA

5.1. INTRODUCTION

This research concerns about the patterns of gated communities that are situated inside metropolitan areas, especially Alexandria as it is the second largest city and a major economic center in Egypt after the capital Cairo. Gated communities in Cairo especially new towns around Cairo has been studied and evaluated [15] [49] [52] [9] [47], while the phenomenon of gated communities in other cities hasn't given a proper attention, even it is spreading vastly in other cities as Alexandria. So, To fill the gap, this chapter proposes a data base for gated communities that are located inside Alexandria, the aim of the survey is to quantify the scale and type of gated communities and to develop a physical typology for gated communities in Alexandria.

It has to be taken in the consideration the great difference between the phenomenon of gated communities in Alexandria and Cairo, deference in scale, number, types, physical characteristics, accordingly the impact and the perception of the phenomenon itself. Gated communities in Cairo is much more prevailing and some of them became cities inside the city. But for gated communities in Alexandria it is at the beginning with less spread and impact, which make it advantageous to study them to know if it suits Alexandria or not before spreading.

This section is divided into four main parts. First, introduction to Alexandria city and its history. Second, documenting the phenomenon of gated communities in Alexandria, gated communities in Alexandria have been traced on maps of Alexandria city, meanwhile the nature, main features, patterns and characteristics of that gated communities are analyzed. So that the typology of gated communities in Alexandria is deducted and presented. Third, evaluating the phenomenon of gated communities in Alexandria following two steps, first: from Alexandria's residents' perspective, and second: according to the statistics by applying the research method to evaluate the social impact of gated communities on neighborhood cohesion. And finally, is the conclusion.

5.2. STUDY AREA

Alexandria is the chief port of Egypt and is in the north and occupies a T-shaped peninsula and strip of land separating the Mediterranean from Lake Maryout. The city was founded in 331 BC by Alexander the Great and was the capital of Egypt for over 1000 years. Alexandria witnessed a continuous urban growth from the beginning of the Mohammed Ali era (1805) up to the present time. In 1905, 370 thousand inhabitants of Alexandria lived in an area of about 4 km² between the two harbors. Since that time the city has expanded rapidly, eastwards and westwards, beyond its medieval walls. It presently occupies an area of about 300 km² with population more than four and half million (4,799,740 in March 2015) and population density of 1700 square kilometers according to the Central Agency for Public Mobilization and Statistics [67]. Alexandria is the second largest urban governorate in Egypt. As a result, this enormous urban growth requires precise detection with good management, prediction and planning.

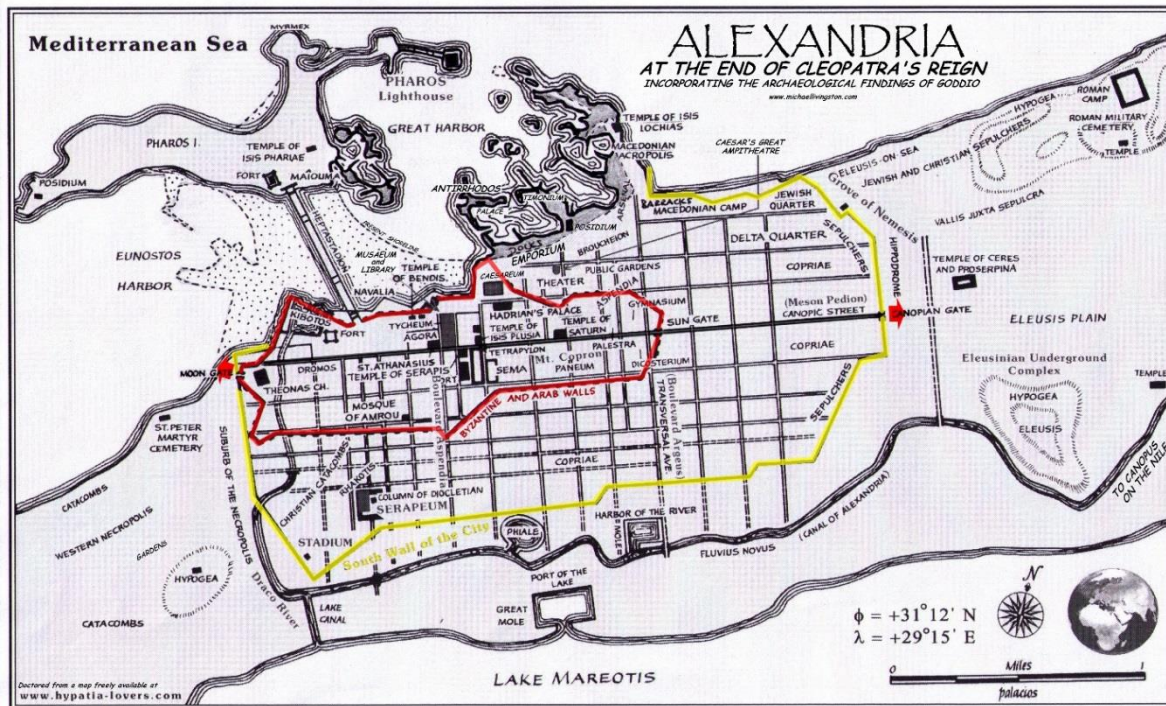


Figure 12: Cleopatra's Alexandria, Source: michaellivingston website, edited by author.

According to Bibliotheca Alexandrina Cataloging, Alexandria itself was founded as a gated city with two gates, at the east end of it was the Gate of the Sun, and to the west, the Gate of the Moon Figure 12. The access to the Mediterranean countries through its two sea harbors as well as access to the rest of Egypt via the inland harbor on Lake Mariout. There were two long, very wide avenues lined with marble columns. One stretched from north to south, whilst the other, called the Canopic Way, crossed Alexandria from east to west. Dinocrates who was a Greek architect and technical adviser for Alexander the Great, designed a separate royal quarter called the Brucheion, which was reserved for the royal palaces [68].

5.3. DOCUMENTING GATED COMMUNITIES IN ALEXANDRIA

Based on the definition of gated communities, our study detects any housing complex that have restricted entrance and security features where there is a clear distinction between outsiders and insiders. Detection of gated communities involves a systematic survey from different sources like, newspapers, real estate agencies (either through a direct contact or through the internet), statistical data from local authorities, mainly field visits to collect data, and aerial photographs. All information is gathered and organized to have an over view of gated communities in Alexandria.

First, it's noticeable that gated communities in Alexandria are spreading around new developing areas as in Cairo. Gated communities in its form that known around the world can be found at the road to Borg Al-Arab new city and around the city itself, king Mariout, 6-October, Al-Agamy, along the road to Marsa Matroh on both sides of the road, as (Alex west, Al-Oroba, Mina green house, Shate Al-nakhel, Venecia king Mariout, Jewar Compound, Enhineers city at Borg Al-Arab, endless number of resorts on the road to Marsa Matroh, etc.).

Second, for the gated communities in side Alexandria city itself has some different physical characteristics than that known around the world, it is more combatable to the city with less exclusivity. As we can't neglect the spread of the concept of residential compounds in Alexandria, that most of the resent residence are residential compounds, its definition as it known to Egyptian: number of residential towers has one or two access pointes with separate entrance to every tower. Those residential compounds have no gates, so it's not considered as gated communities as it defined globally, but it somehow gives its residents the sense of inclusion, also gates could be applied easily on access points in case it is needed or in case of danger as it happened in many compounds in Alexandria during January 25 Revolution. Those residential compounds could be found profusely in newly build areas; Smouha hosts a large number of this residential compounds, along El-Nasr St., Fouzy Moaz St., along El-Mahmodia canal. El-Ras El-Soda, Gardenia residential compound, Royal Green towers, and a number of under construction compounds.

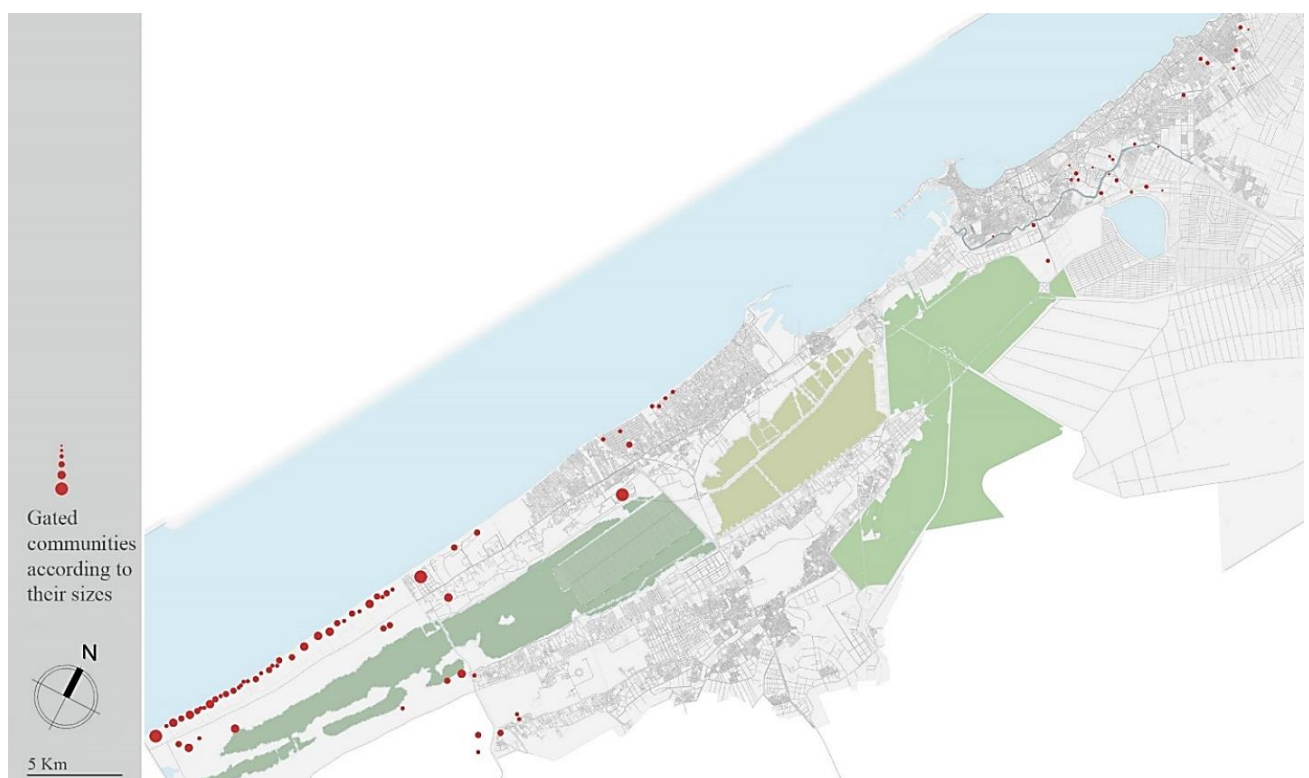


Figure 13: Gated communities in Alexandria governorate. Source: author.

About 280 gated community have been traced in Alexandria governorate, 200 of them is costal resorts the rest is gated residential areas distributed inside and outside Alexandria city, a number of about 25 gated residential area situated inside the Alexandria city Figure 13. So gated communities in Alexandria is in increase, and may be in short time the number of gated communities in Alexandria will be as that in Cairo then we should notice its impact socially and spatially, maybe its impact is not noticeable now as it is used as a secondary housing or in certain seasons or still don't have the full known characteristics of gated communities, but as it is the current trend and spread on the developing areas so it's impacts will be noticed in the future.

Consequently, this research is concerned with the gated residential areas that traced inside Alexandria city Figure 14, as they are a permanent housing which could have much more influence than that on the border of the city as secondary housing. As well as they have different physical characteristics that will be noticed next.



Figure 14: Gated communities inside Alexandria. Source: author.

5.3.1. Development and characteristics of gated communities in Alexandria:

After tracing gated communities within the borders of Alexandria through observation during site visits and analyses of advertisements, this part intends to document their characteristics. According to Ghonimi, Elzammly, khairy & Soliman, [13] criteria. To document gated communities, we need to detect their main characteristics and where they are being proposed and built, with deducing the most common individual, location and grouping characteristics;

- **Location:**

Location of gated communities in Alexandria is noticed to be spread with a huge number on the borders of the city and at the developing and high socio-economic areas, especially at the coast as a secondary housing. In side Alexandria, the number is less but in an increase and concentrated in medium socio economic and unplanned areas Figure 15.

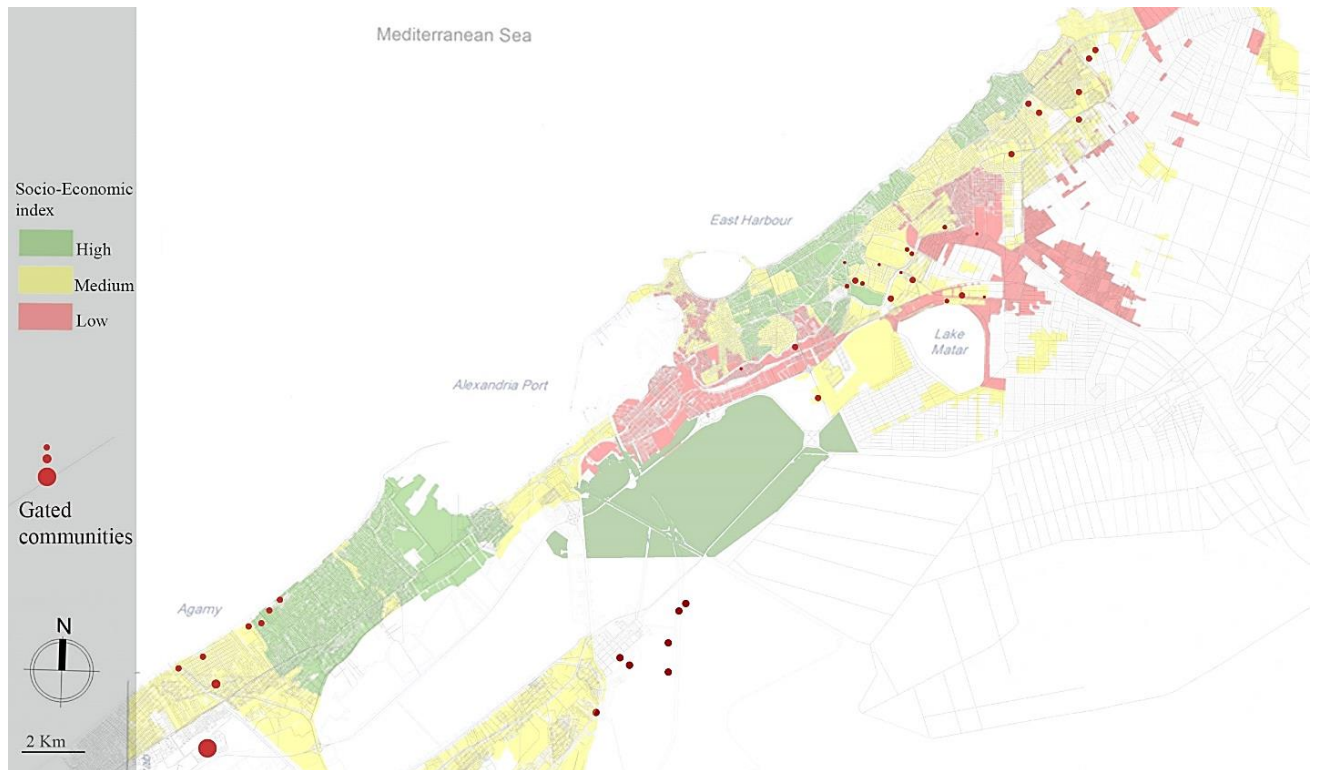


Figure 15: Gated communities with reference to socio- economic index, Edited by author.

- Structural organization and Pattern:

Structural organization of gated communities in Alexandria could be classified mainly into 3 main structures. The first pattern is common in the gated communities at the city border and the coastal zone at the high socio-economic areas, characterized by the huge green areas, scattered residential building with high privacy, and could involve a central open space and services Figure 16.

The second and the third pattern are common in gated communities inside the fabric of the city which is condensed residential building, with less privacy than the first pattern, less green areas could be considered not exist, lack of open spaces, and the difference between two patterns that one involves car roads that could be Cal-de-sac and the other don't because of the small area Figure 17.



Figure 16: First pattern of gated communities; huge green areas, scattered residential building. Alex west, edited by the author.

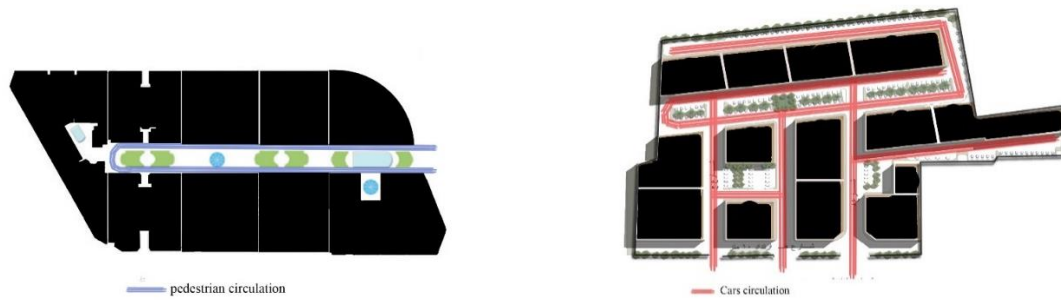


Figure 17: Second and third patterns of gated communities, less green areas, the first "Hai Moharam Basha" includes cars roads (gated town), the second "City light" only pedestrian (gated towers). Edited by author.

- Facilities:

Gated communities in Alexandria could contain some main facilities; small clinic, fire station, pharmacies, cafes, social clubs, gym, recreational areas, school, play grounds, and commercial areas. That for the Gated Communities located on the border of the city, but for that inside the fabric of the city because of the small areas won't involve all of that but mainly commercial areas or mini markets and one or two of the other facilities according to the needs, as they are at the center of the city.

- Services:

For the services, they all provide additional security services on every residential building besides the main security on the gates and the security shifts for the community, also most of them provide car services, may be some office agents, and mainly porter for every building. And number of them provides hotel services for their residents.

- Architecture style:

Gated communities in Alexandria don't have a particular architecture style, while different architecture style in the same gated community to differentiate between zones Figure 18.



Figure 18: Architecture style of gated communities in Alexandria. (I) City light, (II) Antoniades, (III) Saraia gardens. Source: websites of the projects, accessed January 21, 2017.

- Housing types:

Gated communities inside the city is mainly residential apartments at high-rise buildings, but for that on the borders of the city, housing type varies between villas and single apartments.

- Gating and security:

Gating and security for gated communities in Alexandria could be classified to two types, the first is a high-technology gates with high security level that mainly for the gated communities on the boarder of the city and a number of gated communities inside the city, and the second type provides gates but with low security level and sometimes not exist depending on the security on every building Figure 19.



Figure 19: Gates and security of gated communities in Alexandria, (a) Hai Moharam Pasha (medium security level), (b) City light (high security level). Source: author.

5.3.2. Classification of gated communities in Alexandria according to their Physical characteristics

Although classification alone does not constitute theory, it provides an important foundation for those seeking to generate premises and principles for further theoretical development. It also facilitates choosing of the case studies [18].

According to the previous chapter of using typologies for gated communities, gated communities in Alexandria can be classified within the categories of lifestyle, prestige and security communities from the typology of Blakely and Snyder. Although they have similarities with Blakely and Snyder's typology, all categories are not matched. And the typology of Luymes is based on the security level of gated developments that is not a very distinctive aspect for classification since all gated communities have walls, especially in the case of Alexandria it doesn't have that much deference.

Therefore, researchers came up with a different classification for example; [47] whose typology mentioned previously, he classified gated communities in Alexandria in his research of gated communities in Egypt, he used two classifications: *Geographically*; he stated Gated communities in the Mediterranean coast as Gated Communities that situated out the town to escape polluted environment. And in his *Chronological* classification according to occupation chronology; he related Gated Communities in Alexandria with the Gated Communities where houses are considered as Secondary residents whether weekly occupied Gated Communities, as Al-Montazah and Al-Mamoura, everyone can buy a ticket and enter this Communities, but Al-Montazah include small sub-Gated communities –private beaches reserved to the owners of the with limited number of visitors- where people go there to be isolated from “ the lower class”. The other type is gated communities that occupied during long vacation seasons; related to a long chain on the Mediterranean Sea.

Considering the socio-spatial character of gated communities inside Alexandria, the last classifications won't be helpful in case of Alexandria. Because the pattern of gated communities in Alexandria have met some types but not for all their categories, so we need

classification that fits gated communities in Alexandria. By investigating the characteristics and development process of gated communities it was found that the characteristics of gated communities in Alexandria could be similar to that in Istanbul, so with taking the classification of Baycan-Levent & Ahu Gulumser [24] and Kan Ulku & Erten [38] for the gated communities in Istanbul in the consideration, we can classify gated communities in Alexandria based on location, unite type, and target profile in to:

Table 7: Types of gated communities in Alexandria [24] [38], edited by: author.

	Gated towers (vertical Gated community)	Gated villa towns	Gated towns (horizontal Gated Community)
Location	mostly located in the city center, particularly in prestigious areas	mostly located on the borders of the city or shore side	mostly located at the fringes of the city
Unit type	Apartments of high rise building residence	Single unit dwelling	large in size with a variety of housing types
Services	consumption and service facilities	sport and service facilities, limited social services	infrastructure and sport facilities, large variety of social services
Security	high-technology security that could be partial and the security is only for the residential area	high-technology security coupled with small number of private security personnel	high-technology security
Management	private management	private management	private management
examples	City light, , ...etc.	Merosa compound.	ACID, Sraia gardens, Moharam Pasha, Antoniades, Fairozet smoha, Pharma city II, etc.

- Gated towers (vertical Gated community):

As mentioned by Baycan-Levent & Ahu Gulumser [24] Gated towers appeared as a solution for uncontrolled urban growth since they can host at least 40 families, lake of available land as they mostly located in the city center, usually integrated with shopping mall or office blocks particularly in prestigious areas, High-technology security that could be partial and the security is only for the residential area, private management, smart building, and consumption and service facilities. That could be found in many new developments in Alexandria.

For example: ‘City Light’ residential compound, that located in the heart of the city involves nine residential towers on the area of 23 thousand square meters overlooking the internal plaza with different areas of the residential units start from 90 m² to 205 m². Located in top of a mall on 75 000 Square meters. The security is partial only for the residential area and the mall is open serve more than 2 million visitors. Similar to it: ‘Smouha green’, ‘Sumid towers’, ‘Shabab Elraml city’, ‘Pharmacy I’.

- Gated villa towns:




As described by Baycan-Levent & Ahu Gulumser [24], it is characterized by that they mostly located on the borders of the city or shore side, small in size and highly exclusive in price, Unites type are detached or attached single unit dwellings with a private gardens, it build for upper class families with children, services like shopping center or cinemas or restaurant is not essential in that development except for suburban gated villa towns since they are fare away from the city, similar to facilities like education and health not always highly developed, services provided in these settlements is sports and are rarely to be open to non-residents, and finally the most important characteristic that they assumed that it's horizontality sets up a more 'people-friendly' settlement. As they usually located on the borders of the city, so we have one example that located inside the boarders of Alexandria: 'Merosa compound'.

- Gated towns (horizontal Gated Community):

As described by Baycan-Levent & Ahu Gulumser [24] that it is the oldest example of fully gated communities that characterized by that they mostly located at the fringes of the city, large in size with a variety of housing types, mostly have Social center with common sports area, all public services are given, security is provided 24/7. For example: 'Moharam Basha', and 'Alex west' which is located at the fringes of Alexandria.

Illustration of the three types applied on cases in Alexandria Table 8:

Table 8: Example to each type of gated communities in Alexandria, source: author.

	<u>Gated towers</u> City light	<u>Gated villa towns;</u> Merosa compound	<u>Gated town</u> Moharam Basha
Lay out			
Year	2011-till now	2008	2008
Location	Sidi-beshr	Hai wasat	Moharam-Beh
Area	23,000 m ²	53,000 m ²	24,000 m ²
Unit types and size	Apartments	Villas	Apartments
Services	Located on a top of a mall, cafes, swimming pools, Bank, and others.	Club house, mini mall, offices, and cafes.	Fire station, Mini mall, pharmacies, car service, and others.
Population	About 5600	About 404	About 4000
Building coverage	9 towers, 1400 apartment	101 villas	14 tower
Walls (isolation level)	Gates, with partial security only for the residential towers.	High opaque walls, with high security level.	High transparent walls, with high security level.

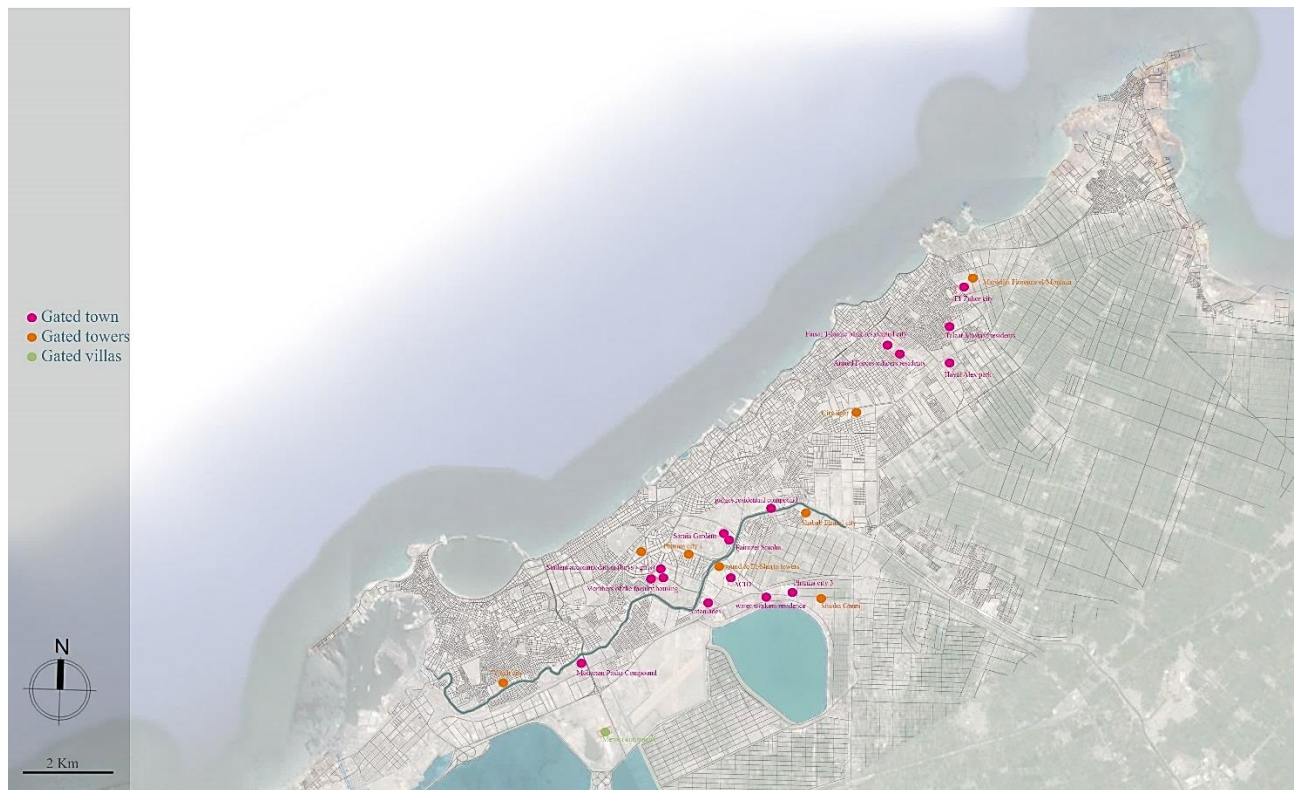


Figure 20: Types of gated communities in Alexandria. Source: author.

It can be observed that the 3 types of Gated Communities that exist in Alexandria shows similar characteristics, as they all surrounded by walls with different types of walls and gates, attractive landscape, security with different levels, and social services, and socially they all host residents with the same social level. Besides similarities they have many differences they are different in unite types, location, and level of isolation Figure 20.

This research has traced a number of about 280 gated community Alexandria governorate, a number of about 25 gated residential area situated inside the Alexandria city. By classifying those communities that traced inside Alexandria to the three types, the chart shows that gated town is the largest percentage of total number of gated communities in Alexandria by 61%, after comes the gated towers by 36% and gated villas is the least by 3% because it requires large areas that not obtainable inside Alexandria Figure 21. Accordingly, the selected gated case study from will be the “gated town”.

Gated Communitie in Alexandria

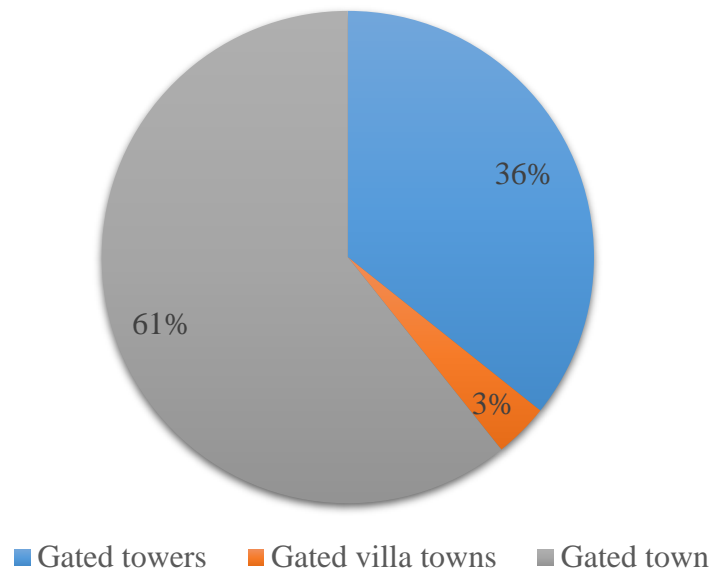


Figure 21: The percentage of each type of gated communities in Alexandria, source: author.

5.3.3. Observations from site survey:

From the survey that has been done in number of Gated Communities in Alexandria, it is noticed that people living in gated communities specially that with high security are excluding themselves from others even their neighbors, they actually seeking that segregation. They are afraid of any intruder, asking security man not to let anyone reach their homes; not a conductor of electricity, water or any stranger even their visitors can't go up without them giving a permission, and that Communities providing them this kind of segregation as a kind of security and exclusivity.

Words of Security men was:

“Residents demanding not to make any one reaches them, they came to their home to rest and don't need any disturbance”.

“You can hardly find any one at home except they are sleeping, their life is very expansive they have to work day and night to get money, or they are at a sort of club enjoying their time”.

“People her won't help anyone they are different!”.

Words of the agencies:

“Living her has a different nature, that we provide residents security, privacy, and exclusivity, we don't let anyone reach them, that is the idea of living in communities like that”

For the landscape and design, gated communities in Alexandria have very poor landscape almost not exist, limited open spaces with no gathering areas, and people don't make a use of them. Unlike gated communities in Cairo or that on the borders of the city that offers large open spaces and reasonable landscape, but it can be said that people there don't use that areas either. And this is due to the limited land areas inside Alexandria and its high cost.

For services, except for security and car services some, mini markets were found, pharmacies, and services for daily needs. But some don't have any.

One of the most obvious observations is the phenomenon of bubbling, which is accompaniment for the phenomenon of gated communities, bubbling phenomenon is mentioned by many researchers as Blakely & Snyder [22], and from the survey it has been noticed obviously. Most of gated communities in Alexandria can't be reached without a private car, residents must cover all their daily activities that is outside the community by private cars, public transportation is not provided neither the walking is attainable. That's make bubbling very common, in which residents moves in and out the community using their private cars making that small private bubble around them without dealing with the surrounding community. This phenomenon can be noticed even more obvious in case of gated communities in Cairo because of the large distances.

5.4. EVALUATING THE PHENOMENON OF GATED COMMUNITIES IN ALEXANDRIA

To answer the research questions and achieve the aims of the research, this section is divided into three parts. The first part is to investigate the impression of Alexandria's residents toward gated communities and how they see it, using a quick online survey. In addition to exploring why some of them would prefer to live in gated communities. Second part is applying the research method to measure neighborhood cohesion inside gated communities and compare it by the non-gated community. In order to examine whether this increasing privatization of collective residential spaces in Alexandria, does enhance neighborhood cohesion at the micro scale or encourage social segregation at the macro scale. And finally, from the two parts a conclusion will be driven that will answer the research question.

5.4.1. Residents' estimation for the gated communities

First, it's important to investigate the impression of Alexandria's residents toward gated communities in Alexandria, why some of them would choose to live in one of them? What they are searching in these neighborhoods? In order to answer that, an online survey of 200 sample was done between residents of Alexandria.

- Survey questionnaire:

A number of 200 respondents for the survey are collected from different parts in Alexandria city. The questionnaire based on two main question: Do they prefer to live in one of the gated communities or their current neighborhood? And the reason behind their choice. In addition to some demographic data about their age and what is their current neighborhood.

The first part of the questionnaire: people choice between gated communities and their current neighborhood.

The second part: which investigates why they prefer gated communities or their current neighborhood. It distributed to two sections which are:

- I. Features that they are seeking in the chosen neighborhood type. Choices of this section are: the gates and security, mixed uses, the urban design and landscape, density, same socio-economic class, open spaces, and friendship. Factors of this section are adopted from Hapsariniaty, Sidi & Nurdini [69] who mentioned the factors that affect neighborhood's choice.

- II. The targeted values from their choice. Choices of this section are taken from the study of Grant & Mittelsteadt [18], who stated that costumers of gated communities are searching for: sense of community, identity, and security that will lead to increase property values. Consequently, values could be: security, prestige, life style, sense of community.

The last part of the survey, is investigating the negative features of each choice, by asking them why they didn't choose the other type.

- Analyses of survey data:

For the first part of the questionnaire, the selection was between gated or non-gated communities. A number of 82 from the 200 respondents preferred to live in gated communities over the non-gated neighborhood. The people who prefer non-gated communities exceeds that who prefer gated communities by percentage of 58% to 42% Figure 22.

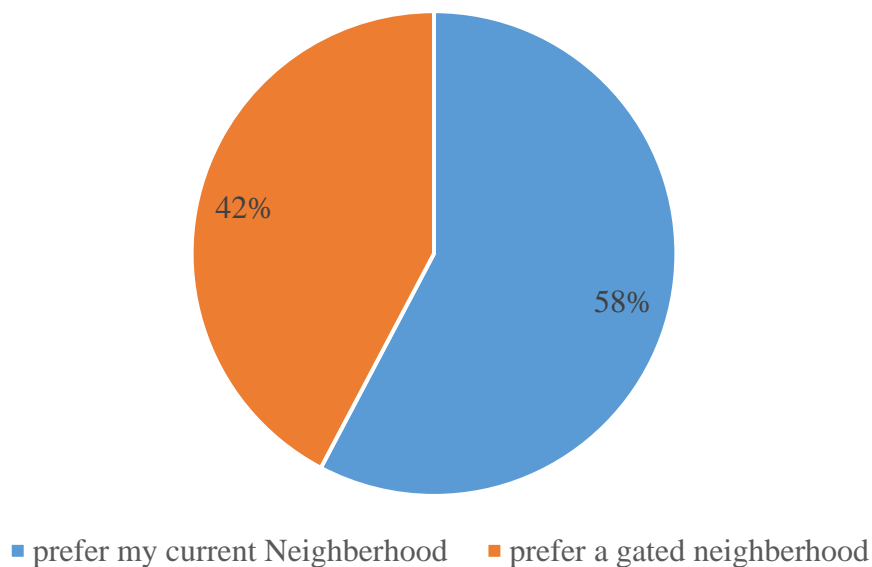


Figure 22: the percentage of people prefer their current neighborhood to that who prefer gated communities. Source: author.

For the two sections of the second part of the questionnaire the inputs of respondents who prefer gated neighborhood or non-gated neighborhood were analyzed separately. Accordingly, be capable of analyzing and concluding the factors that affect the preference of gated communities and also the values that are targeted by the residents when they choose to live in a gated community. The answers were distributed to the preferred features, and the targeted values Figure 23, Figure 24.

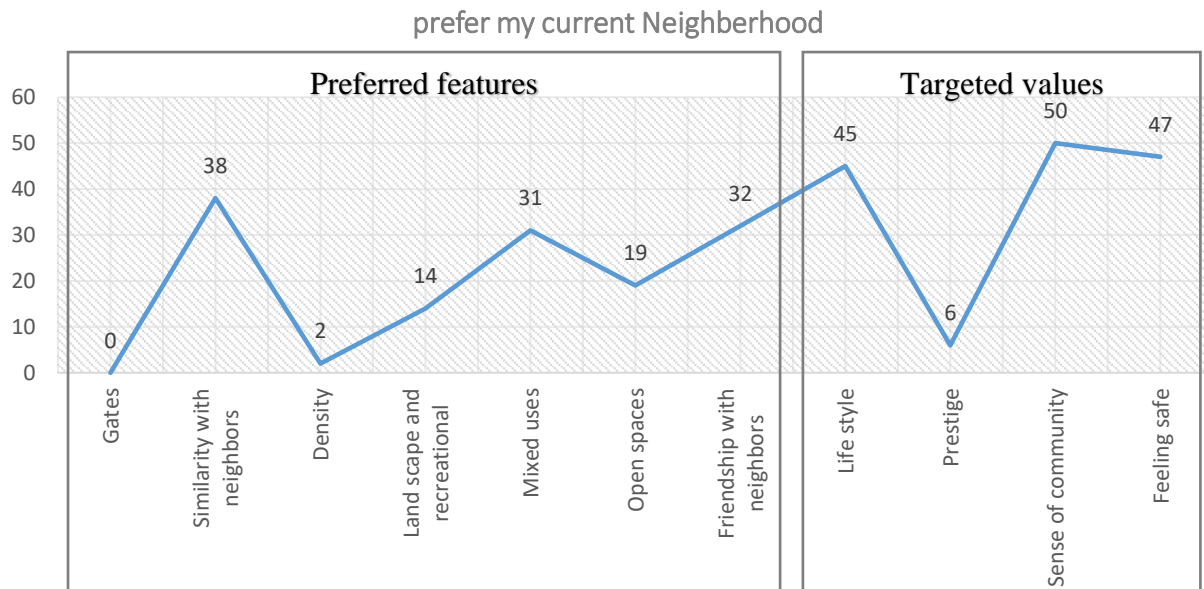


Figure 23: Reasons residents prefer their current neighborhood. Source: author.

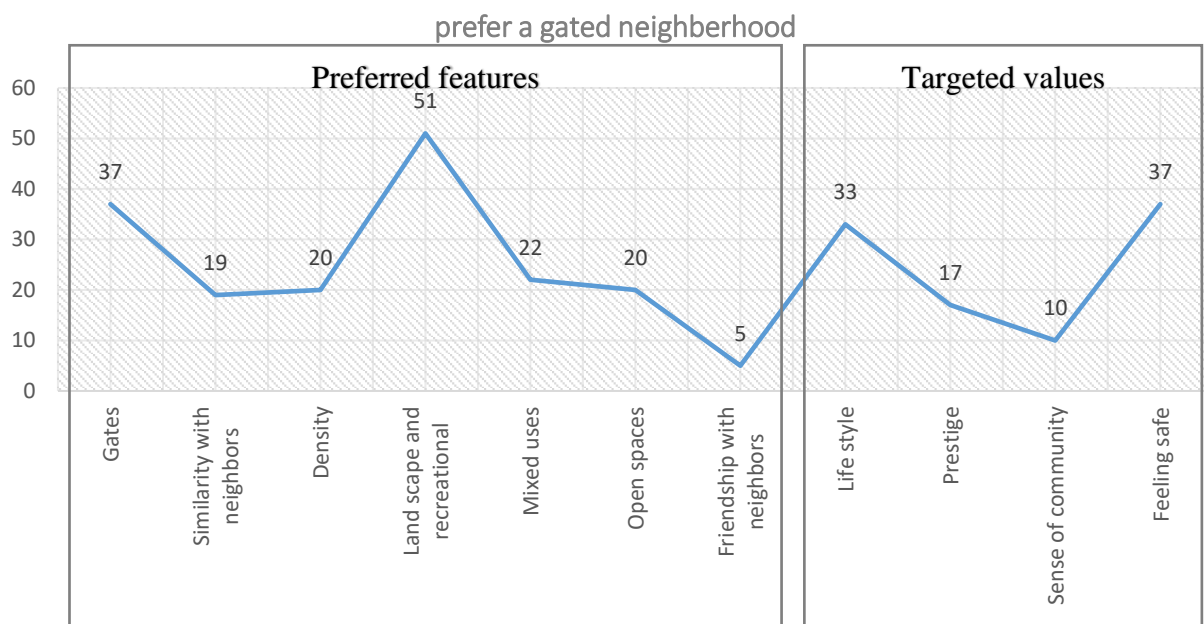


Figure 24: Reasons residents prefer a gated neighborhood. Source: author.

From the analyses of the above data of the responses for the survey, there are seven features of neighborhoods affecting residents' preference rather than its value and other special reasons for each resident: the gates and security, activities and facilities, landscape and recreational, density, same socio-economic class, open spaces, and friendship. In order to achieve four values: security, prestige, life style, and sense of community. Hence according to the above chart, in case of gated neighborhoods the most attracting features for residents are: landscape and recreational, and the gates and the security. In order to achieve: safety, and lifestyle. While in case of non-gated neighborhoods, the most attracting features are similarity and friendship with the neighbors, and mixed uses. In order to achieve: sense of community, safety, and lifestyle.

The most interesting conclusion from those charts that the less demanded feature in choosing to live in gated community is friendship with the neighbors, consequently the value of 'sense of community'. While it's the highest in case of non-gated community.

For the last part of the questionnaire, people who have chosen their current neighborhood, was asked why they don't prefer the gated communities, some mentioned that they feel gated communities forms a separation between social classes which could lead to hatred between them which brings bigger problems, others mentioned the distance and the isolation from the city, some saw gated communities as unreal neighborhood that it's a set of elements (security, landscape, open spaces,...) if one is messing it won't be used which make it not suitable in case of Alexandria, and finally group of them refuse it because they just used to life in the center of the city where they feel intimacy. For the people who prefer gated communities, their disapproval to the regular neighborhood is the lake of open areas and privacy, some mentioned the noise and densities, and finally quite number of people prefer gated communities over the regular neighborhood because of the insiders to their neighborhood.

To summarize, by taking the common targeted values from the survey, people want to achieve safety and lifestyle through their neighborhood whether it is gated or non-gated through different features that specialize each neighborhood.

5.4.2. Social impact of gated communities on neighborhood cohesion:

As mentioned in the previous chapter of methodology, in order to assess the impact of physical gating of a neighborhood on the social cohesion between its residents Buckner's method 'Neighborhood cohesion instrument' has been chosen to measure neighborhood cohesion within residents of the neighborhoods. So, this step was carried out using a structured questionnaire of 18 question divided in to three main dimensions to be measured: attraction to the neighborhood, neighboring, and psychological sense of community. This questionnaire was applied on the selected study areas: gated residential area, and non-gated residential area. The selected case studies which are: two case studies from each type, two with different gating levels to represent gated communities in Alexandria "ACID" and "Hai Moharam Basha", and two non-gated residential areas which are compatible with the selected gated communities "Tawaniat Smoha" and "Moharam Beh" Figure 25.

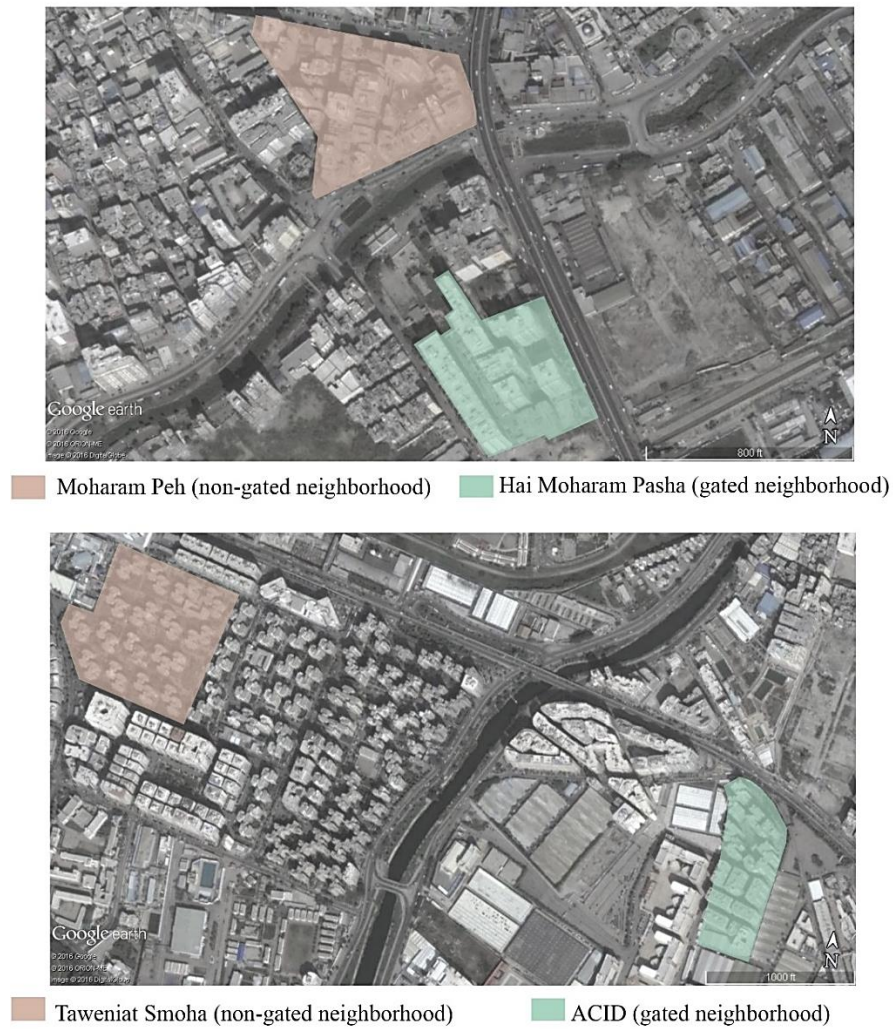






Figure 25: case study areas, source: author.

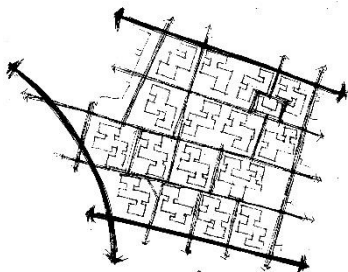
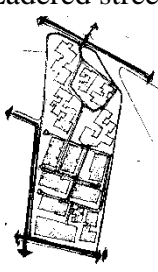
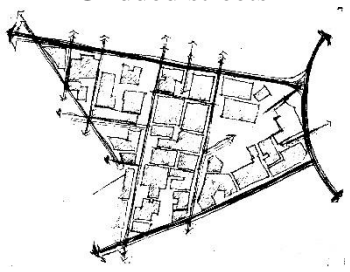
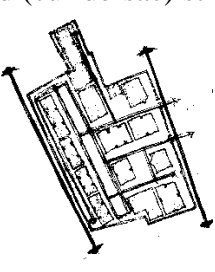
5.4.2.1. The micro-urban fabric of each neighborhood

First The micro-urban fabric of each neighborhood must be described before the analyses:

By adapting the previously mentioned variables that affect social cohesion, the physical characteristics and considering the micro-urban concepts mentioned by [10] in their paper to explain the impact of gated features characteristics on micro urban pattern, a comparison between the micro urban fabric of the four neighborhoods is done considering: the street network pattern, land use Pattern, housing type pattern, density, size, x-y ratio, boundaries, and adding to them services and facilities, and the landscape pattern Table 9.

Table 9: Comparison between the micro urban fabric of the four study areas, source: author.

		Non-gated	Gated	Non-gated	Gated
		Tawaniat Smouha	ACID	Moharam Beh	Moharam Basha
Main characteristics					
Land use	Type	Single land use type, mostly residential	Mixed land use Residential	Mixed land use	Single land use type mostly residential
	Built up area	17,432 m2 of total area 77,001	18,808 m2 of total area 42,000	18,355 m2 of total area 30,000	11,740 m2 of total area 24,000
	Floor ratio areas	2	6.7	4.2	7.3
	heights	7 residential stories high and a mezzanine	13 residential stories high and a mezzanine	Ranging from 4 to 17 stories high	13 residential stories high and a mezzanine for business firms
	Mix	Low mixing Residential (95 % of built up area) Other (4%)	medium mixing Residential (75 % of built up area) Other (25%)	Low mixing Residential (89 % of built up area) Other (11%)	Low mixing Residential (94 % of built up area) Other (6%)

		Non-gated	Gated	Non-gated	Gated
Housing pattern	Type	Single housing pattern	Single housing pattern	Single housing pattern	Single housing pattern
	Density	Low density (22%)	Medium density (34%)	Medium density (54%)	Medium density (46%)
Street pattern	Type	Gridded streets 	Ladered streets 	Gridded streets 	Treed (cul-de-sac) streets 
	orientation	outward oriented	Inward oriented	outward oriented	Inward oriented
	Urban spaces		No public spaces	No public spaces	
Size	Area	77,001m ²	42,000m ²	30,000m ²	24,000m ²
	X-y ratio	Approximately 1:1	Approximately 1:2.5	Approximately 1:1.2	Approximately 1:1.2
Density		av. 1000 family *4 /77001=0.05	av. 2000 family *4 /42000=0.19	av. 2000 family *4/ 30,000=0.26	av. 1000 family*4/2400=0.17
Boundaries		No boundaries	Surrounded fence, without security	No boundaries	Surrounded fence, with security

5.4.2.2. measuring neighborhood cohesion for each study area:

A total of 275 survey responses are collected from the four neighborhoods: 160 surveys from residents of the two non-gated neighborhoods (Tawaniat Smouha- Moharam Beh) and 115 surveys from residents of the two gated neighborhoods (ACID- Moharam Basha). The 275 participants respond to all the survey questions except for 25 responses aren't completed, so the final total responses are 250: 143 for the non-gated neighborhoods and 107 from the gated neighborhoods.

The survey questionnaire consists of 18 questions related to measuring the neighborhood cohesion. Residents of each neighborhood respond to questions of a 5-point Likert scale from strongly disagree to strongly agree. Responses are coded on SPSS using an ordinal scale from 1 to 5 where 1 = strongly disagree and 5 = strongly agree, except for two questions which are reversely coded. The high mean value of the responses will indicate a high neighborhood cohesion and vice versa, and that for each of the three dimensions of the neighborhood cohesion as well. The questionnaire is applied on residents of two gated communities (Moharam Basha, ACID) by total responses number (n= 107) (Moharam Basha N= 50, ACID n= 57). In addition to their equivalent non-gated areas (Moharam Beh, Tawaniat Smoha) as illustrated previously in the methodology by total responses number (n = 143) (Moharam Beh n= 77, Tawaniat Smouha n=66).

In the beginning, a pilot survey is done over 40 responses, 10 from each study area to investigate:

- The reliability of the used instrument, to test if the questions are hanging together as they should for the collected responses. In order to do that Cronbach's Alpha was calculated using SPSS for the 18 questions. Cronbach's Alpha result is ($\alpha = 0.881$) which is higher than 0.7, that indicates a high reliability Appendix A-1.
- The validation of the used instrument, so Pearson coefficient is calculated for each question to measure its significance ($p \leq 0.05$). The result shows that each of the 18 question is statistically significant Appendix A-2.

Then, the second step is investigating neighborhood cohesion and its three subscales: attraction to the neighborhood, neighboring, and psychological sense of community for each case study. The mean value of the 18 question responses and the subscales are calculated according to Buckner's categorization of the questions to subscales. The following table shows the results for descriptive statistics over pooled data of all cases Table 10.

Table 10: Descriptive Statistics for neighborhood Cohesion and the three Subscales to each neighborhood, source: author.

% score		Non-gated (n = 143)			Gated (n = 107)		
		Tawaniat Smoha (n = 66)	Moharam Beh (n = 77)	Total	ACID (n = 57)	Moharam Basha (n = 50)	Total
Attraction to neighborhood	Min	16.7	25.0	16.7	0.0	16.7	0.0
	Max	100.0	100.0	100.0	100.0	100.0	100.0
	Mean	68.3	65.7	66.9	62.3	68.7	65.3
	Std. Deviation	±18.7	±20.9	±19.9	±24.1	±17.3	±21.3
Neighboring	Min	20.8	4.2	4.2	29.2	16.7	16.7
	Max	95.8	91.7	95.8	100.0	95.8	100.0
	Mean	60.4	51.9	55.9	59.9	57.7	58.9
	Std. Deviation	±17.0	±17.3	±17.6	±16.6	±15.4	±16.0
Psychological sense of community	Min	8.3	33.3	8.3	11.1	36.1	11.1
	Max	100.0	100.0	100.0	100.0	91.7	100.0
	Mean	67.3	63.9	65.4	68.0	64.4	66.3
	Std. Deviation	±18.2	±14.0	±16.1	±15.1	±14.6	±14.9
Overall	Min	16.7	36.1	16.7	16.7	34.7	16.7
	Max	97.2	91.7	97.2	93.1	83.3	93.1
	Mean	65.2	60.2	62.5	64.4	62.9	63.7
	Std. Deviation	±15.5	±13.3	±14.6	±14.4	±12.6	±13.5

By analyzing Table 10:

First, as an overview of the data, the average of neighborhood cohesion at gated communities ‘ACID and Moharam Basha’ is found to be slightly higher than that of non-gated communities ‘Tawaniat Smouha and Moharam Beh’ with value of 63.7 and 62.5 respectively. This result contradicts the findings of [20] in Malaysia who found that residents of non-gated residential areas demonstrated higher sense of community than of gated communities. While agrees with [65] in Canada, who found that the more the degree of implicit gating, the more residents enjoyed and exhibited a higher sense of neighborhood cohesion.

It remains to determine whether such differences in mean values between the two types of neighborhoods could be considered, and are statistically significant or not. A t-test is conducted to examine the effect of neighborhood’s type (gated or non-gated) on cohesion and the three subscales of cohesion. Results of the test show that there is no a significant effect of neighborhood on overall cohesion at the $p < 0.005$ level for the two types. As well as the three subscales, there is no significant effect between them Table 11.

Table 11: T-test values comparing gated and non-gated communities, source: author.

% score	t	p
Attraction to neighborhood	0.624	0.533
Neighboring	1.395	0.164
Psychological sense of community	0.431	0.667
Overall	0.645	0.520

t, p: t and p values for t-test

Comparing survey findings with the results of Youssef [65] who used the same tool to measure neighborhood cohesion in four different neighborhoods in Canada which are different in their level of gated-ness. His results for the overall cohesion in each neighborhood is as the following: Valley Ridge (mean=74.8), Discovery Ridge (mean =78.8), East Clayton (mean =71.8), Rosemary Heights (mean =74.6). It's noticeable that the results are close, only two neighborhoods are significantly different, which are: Discovery Ridge and East Clayton with close results similar to this thesis case, while there are no significant differences in overall cohesion between any of the other neighborhoods. And he justifies the close results by that the degree of gated-ness between neighborhoods must be high in order to see an effect on overall cohesion level. Accordingly, it is allowed to consider the small difference in results of this thesis's survey between gated communities and non-gated communities, as a considerable result. Which mean that according to this thesis, neighborhood cohesion among residents of gated communities is higher than that of non-gated communities in case of Alexandria.

Second that leads to, observing each neighborhood separately. Among the four neighborhoods Tawaniat Smouha has the highest neighborhood cohesion with value 65.2 while Moharam Beh has the lowest with value 60.2. It is observed that both are non-gated neighborhood. Besides among the two gated neighborhoods 'ACID and Hai Moharam Basha', ACID which has less gated-ness level, have a higher neighborhood cohesion mean value than Hai Moharam Basha which has a higher gated-ness level. Moreover, both neighborhood with the higher neighborhood cohesion value are at the same district while the lowest are from the other district which will shed the light on the state of each district not the gated-ness of the neighborhood itself. This observation elucidates that the mentioned justification of Youssef [65] is not valid in the case of Alexandria, as the analyses shows that the level of gated-ness doesn't have a significant impact on neighborhood cohesion value in case of Alexandria.

To determine whether such differences in mean values across neighborhoods could be considered and statistically significant or not, a one-way ANOVA test is conducted to examine the effect of each of the four neighborhoods on the neighborhood cohesion and the three subscales of cohesion. Results of the test show that there are no significant differences in overall cohesion between any of the neighborhoods at the $p < 0.005$. While in case of each subscale, neighborhoods show a significant effect on the 'Neighboring' subscale effect at ($F=3.881, P=0.01$) while the there is no significant effect on the other two subscales Table 12.

Table 12: ANOVA test values comparing between the four neighborhoods, source: author.

% score	F	p
Attraction to neighborhood	1.190	0.314
Neighboring	3.881*	0.010*
Psychological sense of community	1.115	0.344
Overall	1.728	0.162

F,p: F and p values for ANOVA test
*: Statistically significant at $p \leq 0.05$

Finally, among the three subscales of Buckner’s instrument and according to the above table ‘Neighboring’ seems to be the better indicator of neighborhood cohesion between the other two subscales with values 55.9 for no-gated communities and 58.9 for gated communities. But this result is not confirmed for the four neighborhoods where the low value of Neighboring of non-gated communities is contradicted by the high mean value of Neighboring for ‘Tawaniat Smouha’. While the subscale ‘Psychological sense of community’ even the slight difference between the two values; 66.3 for gated communities and 65.4 for non-gated communities, it could be a better indicator for the cohesion as this difference is confirmed for the four neighborhoods. Conversely the subscale ‘Attraction to neighborhood’ shows opposite values than the overall value of cohesion.

5.4.2.3. Factors affecting neighborhood cohesion:

From the previous analyses of the tables, it’s required to consider more factors that affect neighborhood cohesion beyond the neighborhood’s gated-ness. Scholars as mentioned in the literature chapters argues that, community ties may be affected by environmental factors and physical layout of residential neighborhood, those factors which motivate residents to communicate [19]. Consequently, there are different physical characteristics that affects cohesion between residents other than the gated-ness which could form a significant difference in neighborhood cohesion. This leads to the second part of the questionnaire, which is from resident’s opinion which factor affects their community ties the most, classified to 3 dimensions; safety, physical characteristics, homogeneity (social characteristics).

The first question in that part investigates the percentage of residents who feel cohesive to their community, residents were asked directly if their neighborhood encourage them to be socially cohesive or not, the answers are as the following donut chart Figure 26, in which the outer ring represent the percentage of responses for non-gated neighborhoods residents’, while the inner ring represents the responses of gated neighborhoods residents’. From this chart, it’s obvious that the percentage of non-gated neighborhoods residents’ who feel socially cohesive 83% is larger than those of gated neighborhoods 78%. This chart shows that people’s opinion contradicts the results of the calculated neighborhood cohesion.

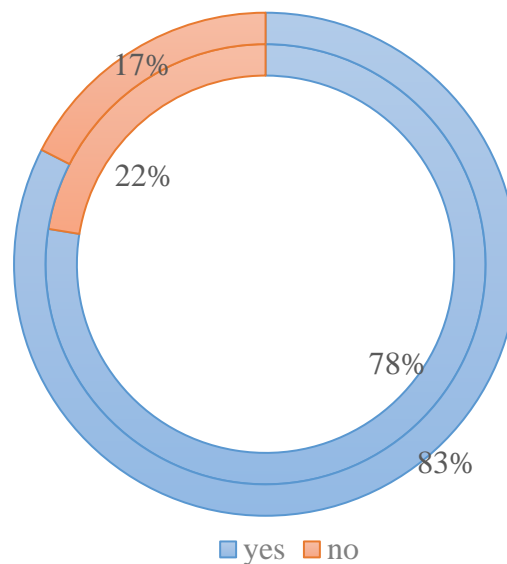


Figure 26: the percentage of residents who feel cohesive to their community: outer ring represents non-gated neighborhoods residents’, while the inner ring represents gated neighborhoods residents’, source: author.

Table 13: Percentage of residents’ responses to if their neighborhood makes them feel cohesive to community or not, source: author.

Neighborhood		Yes %	No %	Total %
	Tawaniat Smoha	86%*	14%	100%
Non-gated	Moharam Beh	79%	21%	100%
	Total	83%	17%	100%
Gated	Hai Moharam Basha	70%	30%	100%
	ACID	84%	16%	100%
	Total	78%	22%	100%

*: the highest percentage.

The second question was to evaluate each factor of their neighborhood’s characteristics by its impact on their feeling of cohesion classified to 3 dimensions; safety, physical characteristics, homogeneity (social characteristics). The results are as the following chart Figure 27.

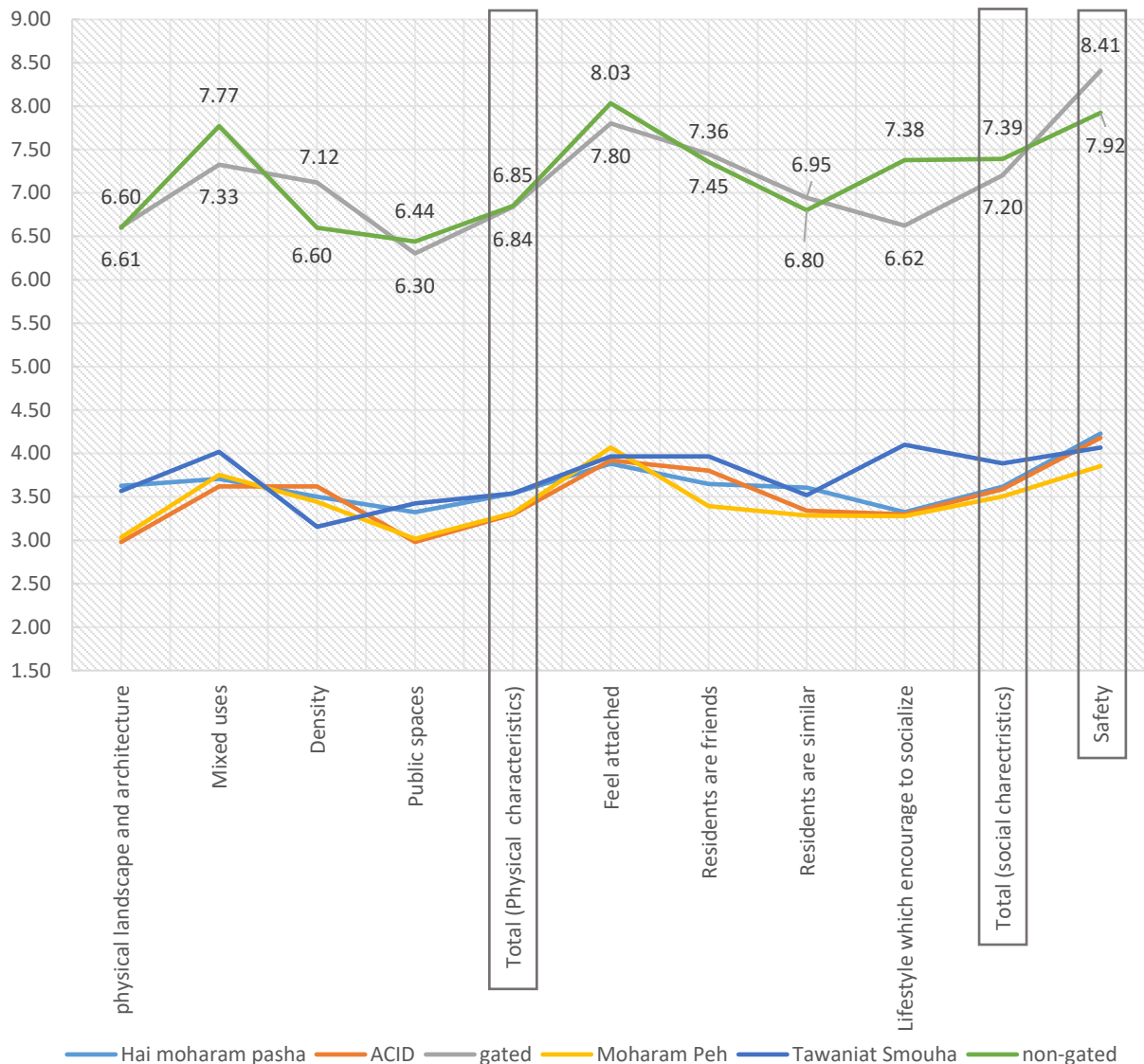


Figure 27: chart of the residents' evaluation to the characteristics of their neighborhood that affect their cohesion, the two upper lines represents the average residents' responses of each factor for gated communities and non-gated communities, while the lower lines represent each neighborhood separately. Source: author.

By analyzing this line chart:

First as an overview, it's obvious that the feature which affects neighborhood cohesion the most from residents' perspective is the 'safety' followed by 'feeling attached' to the neighborhood and then the 'mixed uses'.

Then, considering the upper two lines that represent the total responses of gated neighborhoods and non-gated neighborhoods, it reveals that residents' cohesion is affected by the 'mixed uses', the 'feeling of attachment', and the 'lifestyle' of non-gated neighborhoods, while residents of gated neighborhood are affected by its 'density', 'safety'. Furthermore, residents' responses show that the 'physical characteristics' of both gated and non-gated neighborhoods are affecting its residents' cohesion by the same magnitude, while the 'social characteristics'

of non-gated neighborhoods have a higher effect on its residents' cohesion than that of gated neighborhoods, but for the 'safety' features the gated communities have the highest impact.

Likewise, by considering the lower lines representing each neighborhood separately. Residents' evaluation was approximately close except for some features. In which 'Tawaniat Smouha' (representing non-gated neighborhood) and 'Hai Moharam Basha' (representing gated neighborhood) were different. Their residents' evaluation to 'physical landscape and architecture' and 'public spaces', shows a higher evaluation. Besides by comparing their residents' evaluation for the physical characteristics, it is approximately the same. While 'Tawaniat Smouha' evaluation exceeds 'Hai Moharam Basha' by a significant value in the social characteristics, for the safety factor the evaluation of 'Hai Moharam Basha' exceed that of 'Tawaniat Smouha'. However, residents of 'Tawaniat Smouha' shows a higher evaluation for most of the factors specially 'lifestyle' and 'mixed uses' features.

Consequently, by considering all the previous evaluations and analyses. It's concluded that 'Tawaniat Smouha' out of the four study areas which is a non-gated neighborhood have the highest neighborhood cohesion according to the two used evaluation methods: Buckner's method, and by its residents' approval.

5.4.2.4. Discussions and observations:

Starting from the online survey which concluded that people are searching safety and lifestyle in their neighborhoods, and the preference of the residents to a certain type of neighborhoods was for the non-gated neighborhoods because it gives them values of sense of community, safety, and lifestyle. On the other hand, in case of preference for gated neighborhoods was to achieve safety and life style, but when it comes to sense of community which is the main target of this thesis, it was the less demanded value in choosing to live in gated neighborhood. Consequently, it wasn't surprising that in the second part of evaluating the neighborhood cohesion between residents of gated neighborhood from its residents' opinion was less than that of non-gated neighborhood residents. the resulted percentage of residents that feel cohesive to their gated neighborhood was less than that of non-gated neighborhood residents. However, in the first part of the evaluation using Buckner's method, gated study areas scored a slightly not significant higher cohesion between its residents than non-gated study areas. Eventually, through the two parts of the evaluation, comparing the four neighborhoods qualitatively and quantitatively, it can be clear that 'Tawaniat Smouha' out of the four study areas which is a non-gated neighborhood have the highest neighborhood cohesion.

Accordingly, to answer the last part of the research question. To know what it takes for the cohesion between residents of a neighborhood to be fulfilled, and to be able to highlight the features which play an important role in creating this cohesion, it is required to study features of 'Tawaniat Smouha' neighborhood that qualify it to have the highest cohesion between its residents.

5.4.2.5. 'Tawaniat Smouha' neighborhood:

First, by analyzing Buckner's method evaluation to 'Tawaniat Smouha' neighborhood Table 14 it's obvious that the highest subscale value is the attraction to the neighborhood. Which raise a question about what make them so attracted to their neighborhood and feeling cohesive?

Table 14: Descriptive Statistics for neighborhood Cohesion and the three Subscales to Tawaniat Smouha neighborhood, source: Author.

% score	'Tawaniat Smoha' neighborhood			
	Attraction to neighborhood	Neighboring	Psychological sense of community	Overall
Min. - Max.	16.7 - 100.0	20.8 - 95.8	8.3 - 100.0	16.7 - 97.2
Mean, ± SD	68.3*, ±18.7	60.4, ±17.0	67.3, ±18.2	65.2, ±15.5

*: the highest value.

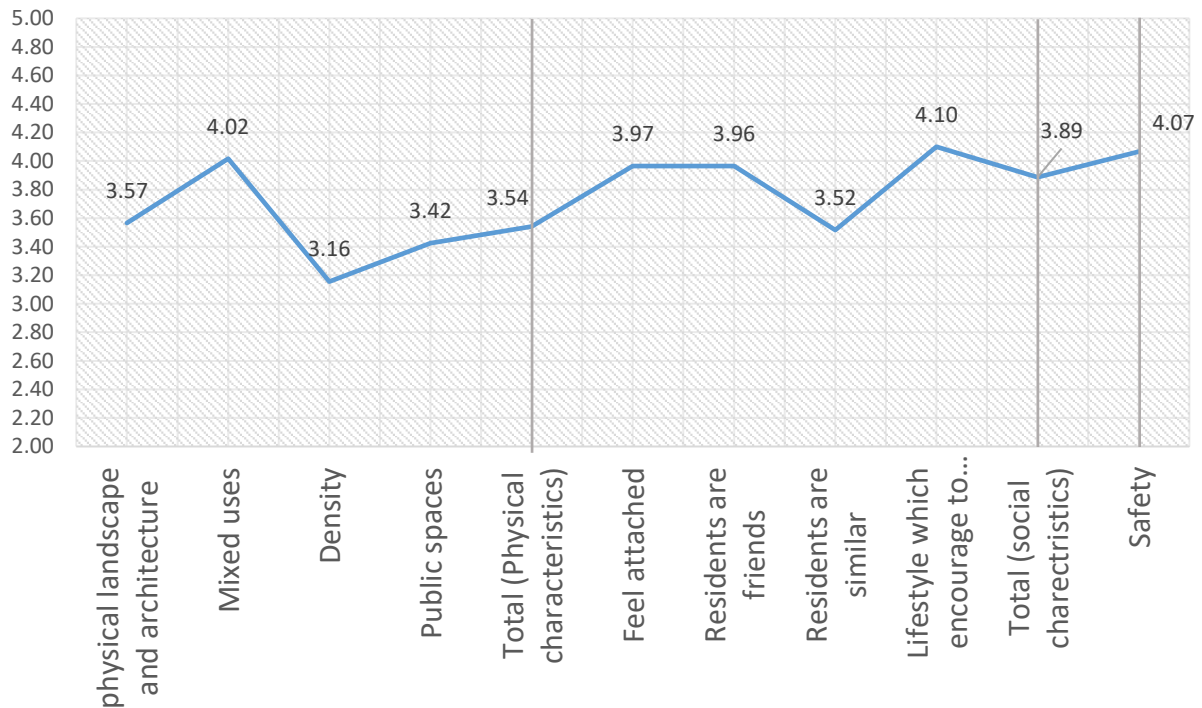


Figure 28: residents' of Tawaniat Smouha evaluation to the characteristics of their neighborhood that affect their cohesion. Source: author.

Second, by separating the responses of 'Tawaniat Smoha' residents to the features that affect their cohesion. It shows that residents are affected by the social characteristics of the neighborhood more than the physical characteristics and the feeling of safety is the most affecting feature Figure 28. By taking a closer look at Figure 28, from residents' opinion the features that affect their cohesion can be arranged as: first 'safety', then the 'life style that encourage them to socialize', which are according to this thesis the most targeted values for the residents in choosing to live in certain neighborhood, and finally 'mixed uses' at the neighborhood, then come the other features.

While interviewing some residents of 'Tawaniat Smouha' about the reasons they feel safe at their neighborhood even it has no security or fences and gates, they answered that their feeling of safety is generated by the good neighboring and low density of the place which enable them to know if there are any strangers, and besides the small open areas so that their children can play freely. So 'Tawaniat Smouha' providing those values, enabling its residents to feel cohesive to their neighborhood and communicate with each other.

For further analyses, by going back to the mentioned variables that Buckner believed they could affect cohesion among residents of the same neighborhood that are summarized in: Population size, Safety, homogeneity, Design features (include according to Talen: Architecture and site design, densities, streets, public spaces, and mixed uses), governance, goals of the neighborhood, boundaries, In addition to demographic variables (according to his studies they are only years of residence and level of education that affect cohesion between neighborhood residents). It's advantageous to investigate them in 'Tawaniat Smoha' neighborhood, to set a frame for the characteristics of the neighborhood which raise its residents' cohesion Table 15:

Table 15: 'Tawaniat Smouha' neighborhood's characteristics according to factors affecting social cohesion, source: author.

Factors affecting cohesion	'Tawaniat Smouha' neighborhood
Population size	Host a large population size with low density. Only 0.05 person/m ² .
Safety	No security is provided for the neighborhood but there is a doorman at each residential building. According to its residents, sense of safety is generated from the good neighboring, low density, and good urban design.
Homogeneity	There is a narrow range of the social diversity between residents. According to the survey, 88% of the sample have a sufficient income.
Design features	Open spaces,



Figure 29: Open spaces at 'Tawaniat Smouha' neighborhood. Source: author.

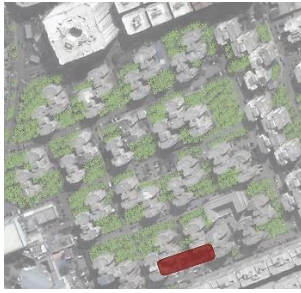


Figure 30: Open parking area for the neighborhood. Source: author.



Figure 31: open green areas but misused. Source: author.

gridded streets,

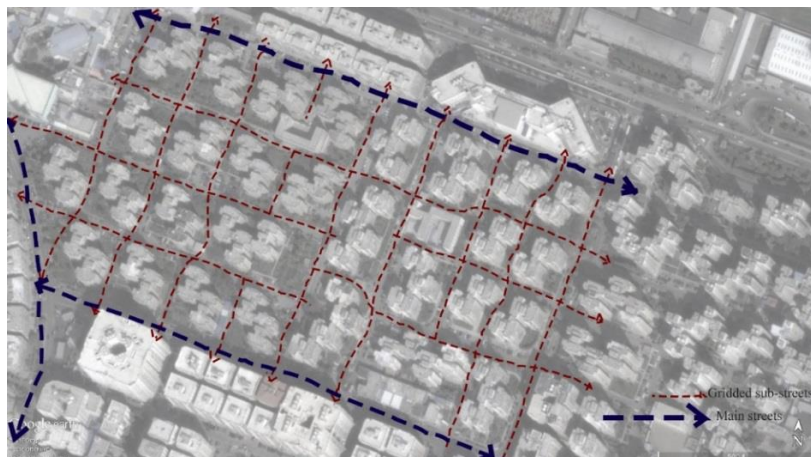


Figure 32: Gridded streets pattern of 'Tawaniat Smoha' neighborhood. Source: author.

mixed uses,



Figure 33: mixed uses in the neighborhood. Source: author.



Figure 34: mixed uses in the neighborhood. Source: author.

low density,
and unified architecture style.

Governance

Don't have separate management.

Goals of the
neighborhood

No defined goals.

Boundaries

No physical boundaries for the neighborhood, but it's well defined by the urban design.

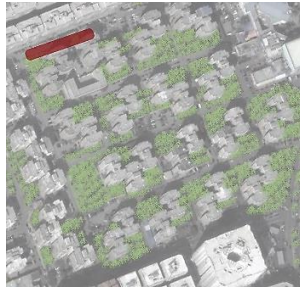


Figure 35: No boundaries but defined neighborhood. Source: author.

Demographic variables of the residents

According to the questionnaire:

74% of the sample are college graduates, 16% out of them have a master's or PHD degree.

88% of the sample have a sufficient income, 30% out of them can save from their income.

85% of the sample owned their homes.

93% of the sample are living there from more than three years,

80% of them more than five years.

Some site's observed physical features of 'Tawaniat Smouha' neighborhood:

- Residents can pass through the commercial zone's tunnels to go from their residential area of 'Tawaniat Smouha' to the main street Figure 36.



Figure 36: passages through the commercial zone to the main street, Source: author.

- Common entrances to a number of residential buildings from the parking area, passing through a small common garden Figure 37.



Figure 37: Entrance to residential buildings. Source: author.

- In some parts of 'Tawaniat Smouha' neighborhood streets are considered a wide streets Figure 38.



Figure 38: wide streets of 'Tawaniat Smouha'. Source: author.

- ‘Tawaniat Smouha’ neighborhood includes a number of parking areas connected with passages to the residential buildings Figure 39.



Figure 39: Entrance to the residential building from the parking area. Source: author.

5.5. CONCLUSION

Starting from the history of gated communities in Alexandria, gated-ness is not a new phenomenon in Alexandria as its originally constructed as a gated city with separate quarte for the royal palaces. Moving to the gated communities in the present, the are scattering in different parts in Alexandria, concentrating around the developing areas. This thesis documented around 280 gated communities in Alexandria, only 25 of them inside Alexandria as residential gated areas, while rest of them ranging from resorts to residential gated communities, inside Alexandria city and across the coast. This makes gated communities in Alexandria different from any other city in Egypt with different typology to classify them. Concentrating on the gated communities situated inside Alexandria city, they represent three types which are: gated towers 36%, gated villa towns 3%, and gated towns 61%. From the site survey, it is noticed that residents of these gated communities are excluding themselves specially in that with high security. Which make the phenomenon of bubbling more obvious even in Alexandria.

According to survey, people how prefer to live in gated residential areas are less than that how prefer to live in normal neighborhood by percentage 42% to 58%. By evaluating gated communities in Alexandria socially and spatially, Buckner’s method which measure neighborhood cohesion between residents shows a slight non-significant higher cohesion at gated communities than non-gated communities at the selected study areas by mean 62.5 to 63.7.

While residents of the selected study areas have different opinion, in which the resulted percentage of residents that feel cohesive at gated neighborhood was less than that of non-gated neighborhood residents. However, there is one neighborhood of the four study areas that its residents have the highest neighborhood cohesion through both its residents’ opinion and Buckner’s method, which is ‘Tawaniat Smouha’ which is a non-gated neighborhood.

By analyzing its physical characteristics to highlight the features which play an important role in creating this cohesion. Three main features have the most influence on its residents: low density, mixed uses, and open spaces.

To sum up, in case of Alexandria, neighborhood characteristics are important factors for residents to choose a certain neighborhood and feeling of cohesion. This preference and neighborhood cohesion aren't affected by the gated-ness of the neighborhood. But they are affected -as shown in the unique features of the non-gated neighborhood 'Tawaniat Smoha'- by: its low density, mixed uses, and open spaces which encourage people to socialize and communicate.

CHAPTER SIX

CONCLUSIONS AND RECOMMENDATIONS

No doubt that future of urban life is changing through some strong concepts. Gated communities are one of these concepts that have the ability to make deeper changes in the built environments of contemporary Egyptian city, not only on macro level for the city but also on micro level inside these communities themselves. So, here is some concluded points from this research about gated communities:

- Gated communities are not a new phenomenon, they can be linked to the global historic pattern of enclosure where protective walls and fortresses were a part of the town structures. It started as a mean of security from enemies and for uncommon people and it developed and took many phases until it reached the current known state with new concept and functions.
- The reasons behind spreading gated communities again and become a global phenomenon differs from city to another, county to another and from gated community itself to another they developed according to local political, legal, and architecture traditions. Ranging from ethnic conflicts, crime, racism, prosperity vandalism, kidnapping, carjacking, homicides, and civil war, to appearing as a fashion trend and summer resorts. That leads to its spread with different types.
- This drives many scholars to set a special typology, each scholar had his own typology considering causes, consequences, and significant implications. One of the most popular and frequently discussed typologies is Blakely and Snyder's typology [22], who classified gated communities based on their functions to: Lifestyle, Prestige, and security.
- Gated communities' wide spread has a significant impact socially and spatially, also on economic and politics. From the micro and macro perspective.
- It's found that there are six main concerns related to gated communities that are discussed by scholars, which are: sense of community on the macro and micro scale, safety and security, social exclusion, urban segregation and fragmentation, urban planning and management, financial benefit, and the finally political aspect.

Between this new urban approach of gated neighborhoods and the approach of typical designed neighborhoods, the world's mindset is entrenched in ideal urban planning principles of increased connectivity, resilience, and sustainability. Taking in the consideration the importance of connectivity and cohesion between community members and the increased emphasis on individualism, people no longer have the "social capital" or social networks that they had in the past. Social cohesion which is the glue holding society together is considered an indicator of quality of life, and general well-being of the individual, the family and the society. High sense of community and homogeneity is believed to reduce stress, it permits clearer and more effective communication and promotes social interaction, it reduces perceived density, conflict, fear of crime, and crime itself. Also lack of that cohesion and sense of community, could affect the civil engagement that is required for a strong democracy.

Searching the role of physical characteristics of the neighborhood in enhancing this connectivity, in which these neighborhoods could shape its residents' relations. Such relation needed to be clarified specially in the case of the new trend of gated neighborhoods. So, a clear conceptualization of social state produced inside such gated residential development must be studied, investigating what it takes for sense of community to be fulfilled in the range of gated

and non-gated neighborhoods, in order to do so, measuring neighborhood cohesion will allow to focus attention on the systematic variables that may play an important role in creating sense of community among people.

Consequently, several measuring criteria for neighborhood cohesion was developed by scholars according to their dimensions. One of them is Buckner's method [61] which is adapted to measure neighborhood cohesion in this thesis's study area to compare between neighborhood cohesion between residents of gated communities and that of non-gated communities in Alexandria. In order to answer this research questions, which concerned with evaluating the impact of gated residential area in Alexandria on social cohesion on the micro scale. And how appropriate is this trend to the social and spatial fabric of Alexandria. And finally, knowing what is the physical features of the neighborhood that play an important role in creating strong cohesion between its residents. And it was as the following:

6.1. KEY FINDINGS AND ANSWERS TO THE RESERCH QUESTION

- I. gated communities spread all over Egypt with a fast acceleration, in which scholars identified more than 500 gated community in Greater Cairo Region by 2013, that besides the huge number of gated communities scattered across Egypt's cities, in which This research only has traced a number of about 280 gated community in Alexandria governorate, 200 of them are costal resorts the rest are gated residential areas distributed inside and outside Alexandria city, a number of about 25 gated residential area are situated inside the Alexandria city. It's noticeable that gated communities of Alexandria spread with a huge number on the borders of the city and at the developing areas, especially at the coastal zone as a secondary housing. In side Alexandria, the number is less but in an increase.
- II. To document gated communities; their main characteristics, the most common individual, location and grouping characteristics were detected. And they are found to be different but similar to that in Istanbul. So, the used typology in Istanbul was adapted to document types of gated communities in Alexandria, hence, gated communities in Alexandria is classified to: Gated towers, Gated villas, and Gated towns. With percentage: 61% of gated communities traced in Alexandria are 'gated town', after comes the 'gated towers' by 36% and gated villas is the least by 3% because it requires large areas that not obtainable inside Alexandria. The three types show similar characteristics represented in: they all surrounded by walls with different types of walls and gates, attractive landscape, security with different levels, and social services, and socially they all host residents with the same social level. Besides similarities they have many differences they are different in unite types, location, and level of isolation.
- III. By visiting those gated communities of Alexandria, there were some observations. First, it was hard in some cases to enter the neighborhood residents are excluding themselves strongly specially those of high security gated communities. Second, from safety aspect also the presence of gates and preventing outsider to enter the neighborhood some residents installs special gates and fences to their property. Third: some gated communities have a poor landscape, hardly open spaces which in most cases not properly used. Finally, the obvious phenomenon of bubbling.
- IV. This research exposes that most of Alexandria's residents prefer to live in non-gated neighborhoods and prefer their neighborhood than another gated one, because they feel gated communities forms a separation between social classes which could lead to hatred between them which brings bigger problems, while their neighborhood gives them intimacy. Some refuses it because of the distance. While those who would prefer gated

communities, because it gives them feeling of safety and lifestyle and the most attracting features for them are: landscape and recreational, and the security. The most interesting conclusion for this part of research was that people how prefer their own neighborhood was searching and demanding sense of community while those who prefer gated neighborhoods the less demanding value for them was sense of community.

- V. While investigating the impact of physical gating of gated neighborhoods on social cohesion in the micro scale by measuring neighborhood cohesion in four study areas: two of them are gated ‘ACID and Hai Moharam Basha’ and the other two are not ‘Tawaniat Smoha and Moharam Beh’. The findings of this section disagree with the study of [20] in Malaysia who found that residents of non-gated residential areas demonstrated higher sense of community than of gated communities. However, in this study the resulted average of neighborhood cohesion at gated communities found to be slightly higher than that of non-gated communities with value of 63.7 and 62.5 respectively, but with no significant impact. Which also disagrees with the findings of Youssef [65] who confirmed that implicit gating in Western Canadian metropolitan areas contributed to a higher sense of neighborhood cohesion among residents.
- VI. This research has proven that also the level of gated-ness seams to affect the neighborhood positively the degree of the impact remains small and the difference in neighborhood cohesion between the four study areas is still small which lead to the importance of considering the other variables that contribute in this deference. Which support Youssef’s [65] findings, who also detected a small impact for the level of gated-ness on the neighborhood cohesion he mentioned that Some of the variables that contribute in the deference could be attributed to hours actually spent in the neighborhood, other factors could be the extent of family ties and friendships within the neighborhood, the layout and frequency of nodes for social interaction and leisure activities, the services provided within the neighborhood, the rate of crime, the level of environmental pollution, and finally, physical characteristics of the neighborhood such as overall area and population size, as well as overall integrity of the design of the built environment.
- VII. Thus, it should be acknowledged that also the physical gating of the residential neighborhoods shown in this research to be increasing cohesion between residents, it has nevertheless a partial slight relationship to Cohesion, in such a way that the highest neighborhood cohesion detected in this research between the four study areas was ‘Tawaniat Smouha’ which is not a gated neighborhood, consequently it’s needed to consider other social, environmental, and physical factors that could bear upon the sense of cohesion of residents.
- VIII. By the analyses of peoples’ responses to the questionnaires it’s confirmed that residents are attracted to their neighborhood and their cohesion is affected by safety, feeling attached, and mixed uses at the neighborhood. Besides residents of ‘Tawaniat Smouha’ were also the most cohesive.
- IX. Thus, by investigating ‘Tawaniat Smouha’ through site visits it’s listed that it excelled the other neighborhoods by the presence of open areas for barking and others are green open areas for residents, low density, good urban fabric with gridded streets, and mixed uses. Which lead its residents to state lifestyle that encourage them to communicate as the most factor that affect their cohesion, followed by the mixed uses and safety.

Finally, the answer to the main question of whether the trend of transformation of the residential built form to gated residential area in Alexandria affect social cohesion on the micro scale: is confirmed by the research results and the analyses of the four study areas that it has a slight positive impact on the cohesion on the micro scale. Likewise, for the other question of whether the trend of physical gating is appropriate to the social and spatial fabric of Alexandria: is denied by the research results, as the analyses shows that residents of Alexandria would prefer non-gated neighborhoods to the gated neighborhoods. Because gated communities in Alexandria don't provide what people are searching for from landscape, and open spaces that leads to lifestyle that encourage them to communicate. Which will lead to the special nature of Alexandria that make it doesn't fit a huge gated neighborhood except at the boarder of the city.

So, the findings of this thesis agree with the study of Metwally & Abdalla [12] who investigate gated communities in new cities of Egypt where gated communities are a distinctive feature, which also found that gated communities can hardly participate on solving contemporary problems, like safety, sense of community and other, as well as the case in Alexandria.

It must be stated that the researcher expected to conclude a more significant difference in neighborhood cohesion between the case studies of gated and non-gated neighborhood, but no significant difference was found, only slight differentiations. Many factors could be the reason of that, may be because: the selection of case studies, or because the trend is still new for Alexandria, or because of the lack of large areas in Alexandria that lead to constructing a proper gated community, or may be others.

6.2. RECOMMENDATIONS

In the light of the conclusions and key findings, there are several recommendations is made:

- For local decision makers:
Form more regulations and rules that guarantee controlling of the spread of gated communities without a prior planning to merge with the surrounding urban fabric, avoiding its spatial negative impact.
- For Urban planners and developers:
Focus on the local community ties and cohesion between residents, by taking in the account in the planning process the systematic variables concluded by this research that may play an important role in creating sense of community among people. In which when designing residential neighborhoods in Alexandria to include proper open spaces and design a mixed uses neighborhoods to encourage people to communicate and for more successful local relationships.
- And for the researchers:
More quantitative studies are needed to be done in the future investigating the impact of such trend on the adjacent areas social and spatially.

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Appendix A: Reliability and validity statistics of the measuring tool for the pilot sample

A.1. Reliability Statistics for the tool

	No of items	Cronbach's Alpha
Attraction to neighborhood	3	0.697
Neighboring	6	0.741
Psychological sense of community	9	0.865
Overall	18	0.880

A.2. Validity Statistics for the tool

		r	p
Over all, I am very attracted to living in this neighborhood	attraction to neighborhood	0.716*	<0.001*
Given the opportunity, I would like to move out of this neighborhood		0.860*	<0.001*
I plan to remain a resident of this neighborhood for a number of years		0.794*	<0.001*
I visit my neighbors in their homes	neighboring	0.719*	<0.001*
If I needed advice about something I could go to someone in my neighborhood		0.730*	<0.001*
I borrow things and exchange favors with my neighbors		0.639*	<0.001*
I rarely have neighbors over to my house to visit		0.466	<0.001*
I regularly stop and talk with people in my neighborhood		0.827	<0.001*
I believe my neighbors would help me in an emergency		0.574	<0.001*

I feel like I belong to this neighborhood	psychological sense of community	0.711*	<0.001*
The friendship and associations I have with my neighbors means a lot to me		0.779*	<0.001*
If the people in my neighborhood were planning something I'd think of it as something "we" were doing rather than "they" were doing		0.780*	<0.001*
I think I agree with most people in my neighborhood about what is important in life		0.682*	<0.001*
I feel loyal to the people in my neighborhood		0.632*	<0.001*
I would be willing to work together with others on something to improve my neighborhood		0.699*	<0.001*
I like to think of myself as similar to the people who live in this neighborhood.		0.310*	<0.001*
A feeling of fellowship runs deep between me and other people in this neighborhood.		0.801*	<0.001*
Living in this neighborhood gives me a sense of community		0.838*	<0.001*

r: Pearson coefficient

*: Statistically significant at $p \leq 0.05$

Appendix B: Statistics of measuring neighborhood cohesion

B. 1. Comparison between gated and non-gated according to tool

% score	Non-gated (n = 143)	Gated (n = 107)	t	p
Attraction to neighborhood				
Min. – Max.	16.7-100.0	0.0 - 100.0	0.624	0.533
Mean ± SD	66.9 ±19.9	65.3±21.3		
Neighboring				
Min. – Max.	4.2-95.8	16.7-100.0	1.395	0.164
Mean ± SD	55.9±17.6	58.9±16.0		
Psychological sense of community				
Min. – Max.	8.3-100.0	11.1-100.0	0.431	0.667
Mean ± SD	65.4±16.1	66.3±14.9		
Overall				
Min. – Max.	16.7-97.2	16.7-93.1	0.645	0.520
Mean ± SD	62.5±14.6	63.7±13.5		

t, p: t and p values for **Student t-test** for comparing between the two groups

B.2. Comparison between the four neighborhoods according to tool

% score	Non-gated (n = 143)		Gated (n = 107)		F	p
	Tawaniat Smoha (n = 66)	Moharam Peh (n = 77)	ACID (n = 57)	Moharam Pasha (n = 50)		
Attraction to neighborhood						
Min. – Max.	16.7-100.0	25.0-100.0	0.0-100.0	16.7-100.0	1.190	0.314
Mean ± SD	68.3±18.7	65.7±20.9	62.3±24.1	68.7±17.3		
Neighboring						
Min. – Max.	20.8-95.8	4.2-91.7	29.2-100.0	16.7-95.8	3.881*	0.010*
Mean ± SD	60.4±17.0	51.9±17.3	59.9±16.6	57.7±15.4		

Psychological sense of community						
Min. – Max.	8.3-100.0	33.3-100.0	11.1-100.0	36.1-91.7	1.115	0.344
Mean ± SD	67.3±18.2	63.9±14.0	68.0±15.1	64.4±14.6		
Overall						
Min. – Max.	16.7-97.2	36.1-91.7	16.7-93.1	34.7-83.3	1.728	0.162
Mean ± SD	65.2±15.5	60.2±13.3	64.4±14.4	62.9±12.6		

F,p: F and p values for ANOVA test

*: Statistically significant at $p \leq 0.05$

Appendix C: Survey questionnaire

➤ Participant information:

- Name:

.....
.....

- Age:

- 1) 20-29 2) 30-44 3) 45- 59 4) 60 & up

- Sex:

- 1) Male. 2) Female.

- Education:

- 1) Elementary. 2) High school. 3) Collage. 4) Masters/ Doctoral degree.

- Income:

- 1) Sufficient. 2) sufficient+ Safe. 3) Insufficient.

- House hold:

- 1) Rent. 2) Owned.

- Length of residence:

- 1) Less than 1 year. 2) 1-3 years. 3) 3-5 years 4) more than 5 years.

➤ Neighborhood cohesion instrument:

	Question	Strong agree	Agree	Neither agree/nor	Disagree	Strongly disagree
<u>1</u>	Over all, I am very attracted to living in this neighborhood.					
<u>2</u>	Given the opportunity, I would like to move out of this neighborhood.					
<u>3</u>	I plan to remain a resident of this neighborhood for a number of years.					
<u>4</u>	I visit my neighbors in their homes.					
<u>5</u>	If I needed advice about something I could go to someone in my neighborhood.					
<u>6</u>	I borrow things and exchange favors with my neighbors.					

		Strong agree	Agree	Neither agree/no	Disagree	Strongly disagree
<u>7</u>	I rarely have neighbors over to my house to visit					
<u>8</u>	I regularly stop and talk with people in my neighborhood.					
<u>9</u>	I believe my neighbors would help me in an emergency					
<u>10</u>	I feel like I belong to this neighborhood.					
<u>11</u>	The friendship and associations I have with my neighbors means a lot to me.					
<u>12</u>	If the people in my neighborhood were planning something, I'd think of it as something "we" were doing rather than "they" were doing.					
<u>13</u>	I think I agree with most people in my neighborhood about what is important in life.					
<u>14</u>	I feel loyal to the people in my neighborhood.					
<u>15</u>	I would be willing to work together with others on something to improve my neighborhood					
<u>16</u>	I like to think of myself as similar to the people who live in this neighborhood.					
<u>17</u>	A feeling of fellowship runs deep between me and other people in this neighborhood.					
<u>18</u>	Living in this neighborhood gives me a sense of community.					

➤ Would you say that your neighborhood gives you a sense of community? If so, in which of the following ways:

- 1) Yes.
- 2) No.

		Strong agree	Agree	Neither agree/no	Disagree	Strongly disagree
<u>1</u>	Physical landscape and architecture					
<u>2</u>	Mixed uses					
<u>3</u>	Density					
<u>4</u>	Public spaces					
<u>5</u>	Feel attached					
<u>6</u>	Residents are friends					
<u>7</u>	Residents are similar to you					
<u>8</u>	Life style which encourage you to socialize					
<u>9</u>	Safety					
<u>10</u>	Others					

➤ Where did you live before?

.....

• Why did you move here?

- Security.
- Prestige.
- Spatial condition and architecture.
- Land scape and recreational.
- Investment purpose.
- Same social groups.
- Construction quality.
- Accessibility.
- Neighborhood.
- Others.

.....

➤ How do you feel about the gates and access points to your neighborhood?

.....

• Does it affect your sense of safety?

.....

• Does it affect your relationship with residents of the adjacent residential areas?

.....

• Does it concern you? Why?

.....

ملخص البحث

إن الاتجاه السائد للتنمية العمرانية السكنية هو المجتمعات المسورة، هذه المجتمعات السكنية هي الاتجاه النمطي للتنمية في الربع الأخير من القرن العشرين في جميع أنحاء العالم، وكذلك في مصر. يوجد في مصر المئات من المجتمعات السكنية المسورة، مما يجعلها واحدة من الاتجاهات التي لديها القدرة على إجراء تغييرات أعمق في البيئات المبنية من المدن المصرية المعاصرة. وبما أن اتجاه المجتمعات المسورة ما يزال ينتشر في جميع أنحاء العالم، فقد جلب معه عددا كبيرا من المناقشات بشأن آثارها؛ بما في ذلك زيادة الخوف من الجريمة، والاستبعاد الاجتماعي، والتجزئة الحضرية والانفصال، والمشاكل المتعلقة بالإدارة الحضرية والمنفعة المالية. والأكثر إثارة للجدل هو التأثير الاجتماعي والنفسي على المستوى الجزئي والكلبي، حيث أصبح العلماء يشعرون بقلق متزايد إزاء تراجع روابط المجتمع المحلي في السنوات الأخيرة. إيماننا بأهمية الإحساس بالمجتمع والروابط المجتمعية القوية، إلى جانب النظر في دور تصميم الحي في الإسهام في إقامة علاقات مجتمعية قوية والحفاظ عليها. تبين الأبحاث العالمية أنه لا يوجد اتفاق عام في الوضع الراهن على الأثر الاجتماعي للمجتمعات المسورة. من أجل المساهمة في هذه المناقشات، يهدف هذا البحث إلى: أولاً، تقدير مدى انتشار المجتمعات المسورة داخل المناطق الحضرية في مصر، وخاصة الإسكندرية، التي تحتوي تصنيفاً مميزاً بين المجتمعات المسورة. ثانياً، استكشاف صحة تأثيرها الاجتماعي على نطاق المجتمع السكني المسور. وتعتمد هذه الدراسة على البحث النوعي، بدءاً من توثيق وتصنيف المجتمعات المسورة في الإسكندرية. بعد ذلك، يتم إجراء تحليل مقارنة بين الأحياء المسورة وغير المسورة للتحقق من أثرها الاجتماعي.

يجادل هذا البحث بأنه لا يوجد أي تأثير ملموس للأحياء السكنية المسورة على التماسك المجتمعي بين سكان الحي في حالة الإسكندرية. والنتائج الرئيسية التي توصل إليها البحث هي أن شعور السكان بالتماسك في الأحياء يزيد بعوامل مثل الاستخدامات المتنوعة في الحي والمساحات المفتوحة التي توفر نمط حياة تشجع السكان على التواصل، وهذا لا يقتصر على بنية الأحياء السكنية المسورة. هذا البحث لا يدعي تسوية التعارضات ولكن يسلط الضوء على هذه الظاهرة وتأثيرها في حالة الإسكندرية.

هدف البحث

يهدف هذا البحث إلى استكشاف أسباب هذه الظاهرة و تأثيرها، والتوصل لفهم أفضل للدور المحتمل للتصميم الحضري للأحياء السكنية في المساهمة في التماسك الاجتماعي بين مختلف مكونات المجتمع. فضلاً عن سد الثغرات الموجودة من خلال تقديم أدلة تجريبية، واختبار صحة تأثير المجتمعات المسورة على التماسك المجتمعي داخل الحي السكني بمدينة الإسكندرية.

منهجية البحث

يتبع هذا البحث منهجية نوعية، حيث تم قياس الترابط المجتمعي بين السكان باستخدام طريقة باكنر "أداة التماسك الجوار". تم جمع بيانات هذه الطريقة من خلال تطبيق الاستبيان في أربعة أحياء مختارة: اثنين منهم أحياء سكنية مسورة واثنين آخرين غير مسورة. تم تحليل البيانات باستخدام برنامج الحزمة الإحصائية للعلوم الاجتماعية SPSS. وعمل مقارنة بين نتائج هذا التحليل.

يسبق هذا التحليل: توضيح لظاهرة المجتمع المسور، بدايتها، تصنيفها، مميزاتها المكانية الاجتماعية الفريدة، وتحديد الطريقة التي تؤثر بها على الشكل الاجتماعي والمكاني للمدن. فضلاً عن تحليل الأنواع الموجودة من المجتمعات المسورة في الإسكندرية وتوثيق خصائصها. تم رصد المجتمعات المسورة في الإسكندرية من مصادر مختلفة مثل: الصحف، وكالات الدولة الحقيقية، البيانات الإحصائية من السلطات المحلية، الصور الجوية، والزيارات الميدانية لجمع البيانات. تم جمع المعلومات وتنظيمها في خرائط مدينة الإسكندرية.

تم تنظيم هذه الرسالة كالآتي

- الباب الأول (تعريف) و يحتوي علي تعريف بالرسالة بشكل عام و الهدف منها و منهجية البحث ثم تلخيص لتنظيم الرسالة.
- الباب الثاني (المراجع الادبية السابقة) الذي يتكون من ثلاثة أقسام رئيسية: يبدأ بتعريف المجتمعات المسورة. مع إعطاء لمحة عامة عن هذه الظاهرة وتعريفاتها وتاريخها وأنواعها وأثرها وأسباب انتشارها والحجج حول هذه الظاهرة ثم تسليط الضوء على تلك الظاهرة في العالم العربي ومصر. يليه مقدمة للمجتمعات المسورة في مصر وتاريخها وأنواعها. القسم الأخير يحتوي على تعريفات مهمة عن الحس المجتمعي، والتماسك الاجتماعي، والتماسك في الأحياء والجوار، أهميته وأدوات قياسه.
- الفصل الثالث وهو امتداد للمراجع الادبية السابقة (تأثير المجتمعات المسورة على التماسك المجتمعي) ويحدد هذا الفصل أثر التصميم الحضري على التماسك الاجتماعي الذي يدعم الإطار النظري للبحث. بالإضافة إلى العرض المنهجيات المستخدمة في تحليل وقياس الأثر الاجتماعي للمجتمعات المسورة.
- الفصل الرابع (تصميم البحث والمنهجيات المطبقة) في هذا الفصل تم وضع المنهجيات التطبيقية السابقة للبحث في المجتمعات المسورة وتقييمها بحيث تم اختيار منهجية مناسبة لهذه الرسالة، وتتضمن منهجية اختيار المناطق التي سيتم التطبيق عليها وأخذ العينات والتحليلات.
- الفصل الخامس (المجتمعات المسورة في الإسكندرية) يبدأ هذا الفصل بدراسة الحالة بالإسكندرية: في البداية، تحديد منطقة البحث والبيانات، تعقب وتوثيق المجتمعات المسورة في الإسكندرية. يليه تقييم المجتمعات المسورة في الإسكندرية باستخدام منهجية القياس ومن وجهة نظر السكان.
- الفصل الأخير (الاستنتاجات والتوصيات) الذي يتضمن ملخص النتائج الرئيسية، بالإضافة إلى إجابات على أسئلة البحث، وينتهي بالتوصيات.