

Nodes-Connectors Network of Public Spaces as a Manifestation of Power in Cairo's Heterotopias

Ahmed Abdel-Rasoul, Ass. Prof. Eslam Nazmy S.

Abstract—Heterotopia is where every community lives, works, and socializes, within which there is a network of public spaces supporting its social life, as well as connecting it -the heterotopia- to other heterotopias within a metropolitan. Cairo, as well, is a metropolitan with distinct heterotopias, that, in turn, representing the manifestation of power shaped their public spaces' network. Nodes and connectors are a new typology, introduced by this paper, constituting the network of public open spaces within each heterotopia to understand the manifestation of power over their articulation. Two distinct heterotopias are investigated: Madinet Nasr which represents public-sector-power over its public spaces' production; and New Cairo which represents the empowerment of private-sector over the same. Through this investigation, it is concluded that in Cairo context since 1952, public sector is more concerned about the resilience of movement for individuals by providing accessible public spaces (connectors) to ensure the proclaimed equality and global connectivity, however, it's not concerned about the social nature of the public spaces (nodes typology). While private sector, on contrary, gives more concern about the social nature of nodes typology regardless giving equal opportunities among the whole society to access these nodes through their connectors network.

Index Terms—Connectors, Heterotopia, Madinet Nasr, New Cairo, Nodes, Power, Private sector, Public Sector, Public Space.

1 INTRODUCTION

Cairo public spaces have witnessed a huge mutation in its network production, that is changed due to the transformation happened in the sociopolitical conditions of Cairo context, since the power gained by public-sector over public spaces' production during Nasser reign till the empowerment of private-sector over its' production started with Sadat reign until the contemporary metropolitan.

Thus, this paper aims to understand how different powers over public spaces production control the mutation of public spaces' network in Cairo metropolitan since 1952. So, it develops a conceptual framework to understand this mutation by providing a node-connector typology of public spaces governing this network articulation, besides understanding the constituted power over their production. Afterward, two distinct heterotopias are investigated (Madinet Nasr and New Cairo) by this deduced framework, with which the final conclusion about the mutation of public spaces' network are comprehended.

2 METHODOLOGY

This paper, firstly, develops a conceptual theoretical framework for understanding the mutation nature of public open spaces' network regarding the power controlling this mutation, through discussing the literature reviews from different disciplines of this research areas of interest, especially sociopolitical ones, regardless addressing the notion of the quality of the built environment which is considered as a must for conduct-

ing any investigated public space.

Then, two selected heterotopias, Madinet Nasr and New Cairo, from Cairo governorate are investigated using the developed utopian network to understand the mutation of public spaces' network under two different types of powers, from public-sector to private-sector development.

Different tools are used in conducting the applied cases studies; among them interviews, questionnaire survey processed by Google Form and Excel software.

3 PUBLIC SPACES' NETWORK

3.1 Public space Concepts and Definitions

Public sphere Vs Private sphere

People, in normal life, transmit from private to public spheres while at the same time feeling and behaving accordingly, they move from the most private sphere of their home to the most public sphere of their city [1], within this transition, a space of 'local publicness' is located. Public spaces shape a big part of this outside arena of everyday life, where individuals interact freely to express themselves with others. At this very beginning, the distinction between public and private spheres are in need to be discussed as they constitute the social life of the whole society, where a clear distinction between the two terms public and private spheres should be clarified to show how the access to them is structured.

The term 'public' has a large range of meanings, it is originally derived from the Latin word 'populus' which means 'people' [2]. As a noun, the meanings of the word refer to a place open to or accessed by general individuals, a society, a state, or what associated with them [3]. On contrary, the term 'private' as an adjective means a specific group of people; "not sharing thoughts and feelings with other people", or where anyone could be secluded [3], while, also, it could refer to a service provided by persons rather than a state [3]. On the other hand, Bell et al. [5] elaborate the spatial manifestation related to

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- Author: Ahmed Sayed Abdel-Rasoul is currently pursuing a PhD degree in Urban Design Studies in Faculty of Engineering (at Shoubra), Banha University, Cairo, Egypt.
Mob. +2 01004661961.
E-mail: ahmed.rasol@feng.bu.edu.eg, ahmed.a.rasol@gmail.com
 - Co-Author: Eslam Nazmy Soliman is currently an associate professor in Faculty of Engineering (at Shoubra), Banha University, Cairo, Egypt.
E-mail: Islam.alsayed@feng.bu.edu.eg, amreslam@yahoo.com

private sphere as "a set of behaviors and cognitions a person or a group exhibits, based on perceived ownership of physical space." So, ownership could be entitled to a legal power over a property, however, this power could exist without legal ownership too[1].

Thus, public and private spheres do exist in reality in forms of oppositions, as Foucault[6] argues that the life is powered by a certain number of contradictions that cannot be reached, contradiction that could be between "private space and public space, ..., between the space of leisure and that of work." Hall [7], as well, observed that people use interpersonal spatial relationships 'proxemic patterns' in four major categories, ranging from the interpersonal spaces of sociability among strangers, then the communal spaces of the neighborhood, which he described as the spaces of familiarity, followed by the impersonal public sphere and modes of social encounter associated with spaces' categories (personal, interpersonal and impersonal). In the same notion of Hall, Olsson et al.[8] provide four major categories: the private sphere which represents the individuals who live together; the neighbors' sphere in which people share the same entrance, staircase, courtyard or street (i.e. primarily residents); the local publicness that represents the interpersonal relation happened at a neighborhood level, where all individuals aren't recognized as residents; and the cosmopolitan publicness that is featured by a wide diversity of individuals, guests, passers-by or strangers. However, it should be recognized that these four scales of public life might differ from one context to another upon the core culture of a given society.

As a result, at the cosmopolitan publicness level, all people can access that sphere, where it acts as the common ground for all of them.

Tracing the definition of Public Space

The concern that is given by UN-Habitat since 2011 as well as what have been discussed conceptualize public spaces' principles while grounding the discussion of tracing the definition of the public space. In the 2013 Biennial, UN-Habitat and partners drafted the Charter of Public Space, which this paper adopts its definition of public spaces as "all places publicly owned or of public use, accessible and enjoyable by all for free and without a profit motive", while every public space "has its own spatial, historic, environmental, social and economic features"[9]. The charter argues that public space "must be the place where citizenship rights are guaranteed and differences are respected and appreciated". This definition strongly points out the importance of not considering a profit motive in public space's articulation, as a lot of contemporary public spaces are privately owned or managed, attracting consumers instead of the whole society[10]. The notion of diversity is a severe nature of public spaces, where the social diversity should be tolerated, and their social well-being are represented[9].

Therefore, public spaces have distinct features that can't be found in any other spaces dedicated to personal or local publicness use, they are accessible, socially diverse and mediating spaces between exclusive spatial-territories of the distinct communities, hence, they do exist at the cosmopolitan publicness level. Normatively, they are spaces provided and ma-

naged by public-sector, however, they might be managed or owned by private-sector too, which should give a huge concern to maximize the affordability issues of the whole society. As a result, the role of public spaces became, jointly, a place for sociability, a network emphasizing different identities, a medium for making the connection among the society, a focal point for the developer, and a tool for urban governance[1].

3.2 Typology of Public Spaces...a literature review

There are many approaches classifying public spaces all over the metropolitan, from which four typologies are discussed.

Carmona [11] identifies three categories of internal/external public spaces: external public spaces, the first category, are the places existing in between private territories while obviously accessible by all people such as public squares and parks, streets and highways, parking lots, etc.; internal public spaces, the second category, are represented in the public institutions such as expo centers, public libraries, mass-transit stations, etc.; and the last category, external and internal spaces' quasi-public space' which might be managed or owned by private sectors such as sportive arena, university campuses, and shopping centers, however, this type could control access and behavior there, making Sorkin[12] also refers to them as 'pseudo public' spaces.

On the other hand, Stanley et al. [13] and al-Hagla[14] represent public spaces as a gray/green typology. For Stanley et al., three main categories are provided: gray, green, or grey-green space. In the grey category, it includes the spaces of transportation facilities, streets, and plazas; while the green category includes the incidental spaces, parks and food-production areas; and lastly, the grey-green category refers to the recreational spaces lying between the two precedent categories such as sport facilities, plazas, squares, etc. dedicated to local publicness level.

UN-Habitat and INU [10], in a different way, trace the publicly/privately managed/owned typology consisting of four main categories of public spaces all over the metropolitan encompassing indoors and outdoors ones. The first category is considered as spaces, publicly owned and managed, of daily life available at all times, multi-uses, of free of charge access, of accommodating socio-cultural and political events such as streets, squares, plazas, etc. The second category is open spaces publicly owned and managed, available to all without charge during only daylight time, such as parks, gardens, playgrounds, and waterfronts. The third category includes urban public facilities publicly owned and managed, accessible to users on certain conditions, such as sport facilities, civic centers and municipal markets. Lastly, the fourth category is the physical/nonphysical spaces supporting the public power over their city management, such as cyberspace and sociopolitical forums.

The fourth typology is the transformative typology 'heterotopia', which is, according to Foucault [6], a "single real place [created of] several spaces, different sites that are in themselves incompatible". Foucault[6] introduced the term 'heterotopia' to architecture community in the beginning of 1960s, the term follows the concepts constituting the two terms of utopia and dystopia. Mead [16] and Dehaene et al. [17] argue that the term consists of two words 'hetero-topia' derived from Ancient

Greek, that literally meaning 'other place'. As utopia is an ideal image that is not real 'doesn't exist' but depicting a perfect society or state[6], while dystopia is where everything is bad[16], heterotopia, as well, is where things are different, lying between those two terms, it is the 'other place' that really we live in[6].

Shane [18] and Cenzatti[19], in other words, argue that the origin of the term concept, according to Foucault's vision, is derived from biology, where one cell might host to another from different culture, that both of them could strangely live together considering their capacity to house contradiction elements within a single perimeter, these conditions give heterotopia a larger resilience of change enabling its dwellers to expedite and tolerate new changes within its perimeter. Foucault [6] emphasizes that heterotopias are often miniature prototypes of an urban environment, a small town within a metropolis, that apparently taking different forms, within which its actors often inverted substantial codes inside it. If the metropolis, for example, is disordered, then the actors invert the code by constructing order, control and quiet within the perimeter of their heterotopia[20].

Six different principles of heterotopias are represented by Foucault[6] that summarized by Shane[21] into three categories: heterotopia of crisis, deviance, and illusion, where the latter is this paper main concern. In the heterotopia of illusion, the rule is to represent a space of illusion expressing real life, where spatial-fragmentation prevailed, as still more illusory, such as shopping malls in the universal capitalism or else, where people are separated despite being gathered in the same space. The concept also, as the opposite, is to create a space in which a different real space is perfectly arranged whilst ours is chaotic, deteriorated and disorganized, that would be a type of compensation, such as gated communities bringing the dreams of its inhabitants.

In a word, all introduced typologies are different based upon its terms of power holders (publicly/privately managed), manners (gray/green), or ages of transitions (heterotopia). However, these typologies of public spaces are in need to be more consistent and related to each other not just categorized without a framework connecting them altogether, so this paper coincided each typology of public spaces with its relevant spatial structure, for ensuring community building in their sociopolitical life, considering that these typology categories must be in an order, a topology.

3.3 Topology of Public Spaces...a literature review

The Urban Task Force report[22], related to British cities, recommends the creation of a hierarchy of public spaces regarding the building locations and their access points, to create a sense of safety and community building. Hereafter, different approaches defining public spaces' network all over the city are discussed, ending by the proposed utopian network.

Transect Topology

The Congress of New Urbanism developed a theoretical framework (a smart-code) to understand the origin of urban development called the 'Transect' Model[23], which identifies a range of habitats from the most natural environment, urban periphery, to the urban Core[23]. In this model, six transect

zones are provided with their associated public open spaces, provided by identifying building setbacks and associated public spaces such as greenways, parks, playgrounds, median landscaping, squares and plazas according to their existence within each transect type [23].

Neighborhood Topology

More than half a century ago, Mumford [25] wrote about neighborhood that are a social fact existing whenever human beings consolidate, that should be advanced by conscious design and provision to become "an essential organ of an integrated city." Farr [26], also, argues that the neighborhood unit should be defined by a ten minutes walking distance, associated with a civic nucleus to gather people as well as an outer boundary to give the sense of belonging [25]. Within this nucleus, a square or a park with playgrounds identify the urban core of the neighborhood while constituting the focal point for social interaction among its community. Then, it comes the districts level, in which a group of neighborhoods comes into being with its services center associated with a park and square[27]. Ultimately, a city is constituted from different districts to have a focal point, a city center and a market square [28].

In the report of "Standards and Criteria of Urban Harmony for Open Green Spaces"¹, seven hierarchical open spaces are provided, which are devoted to the green category only (parks, gardens, playgrounds and green areas), started by national level at the top descending to regional, city, district, neighborhood, cluster, and ended at street level. This report, as well, recommends that 30% of open spaces should be allocated to neighborhoods level, while 30% to the district level, and the rest 40% to the city level[30].

However, the notion of planning by neighborhood unit came under sharp criticism for its assurance on the physical rather than social fact within a city, where it might create the physical proximity between its inhabitants, but it couldn't make the desired social cohesion among them at the same time[1], which is the ad hoc for constituting a community. In the same way, Keller[29] argues that the relationship between the neighborhood and the metropolis isn't clear, whose inhabitants need to travel across the metropolis to work and to build their social ties too.

Heterotopia Topology

Based on the heterotopia as a transformative typology, Foucault [6] argues that the metropolis is made up of different heterotopias connected altogether by a system of arrangement. Although his vision isn't complete [31], [19] but it inspires some authors to use this vision for further researches. One of those researchers is Shane [18] who developed Foucault's concept of heterotopia by providing some explanations and interpretations to the concept, considering heterotopias as multiple networks that the modern city consists of while encompassing two distinct elements: "enclave and armature". Accordingly, cities are shaped by the relationships between these two elements, whereas the enclave dominates in the old and hierarchic spatial order of locality (e.g. Islamic, medieval European), and the armature dominates in the spatial order of the modern

¹prepared by National Organization for Urban Harmony, Egypt

industrial city, while the heterotopia dominates in the 'space of flows'² of the post-industrial city. To him, enclaves are areas of control and order defined by a perimeter with one or more access points and a clearly defined center in relation to the rest of the city, their orderly nature reverses the normal, messy urban life of the abandoned outside urban life, that, in turn, reflect their communities' lifestyle [18]. So, gated communities are these forms of enclaves, having gates to control access, excluding some while including others in an effort to establish a particular community with boundaries. The armature, in contrary, according to Shane [33], is a linear space motivating, inhabiting flows as well as connecting two nodes, it might be also hierarchical, central, or tree-like structures leading to a highway access point. Also, a kind of large armatures can be found in a transportation system, rivers and highways lying across the city territory. Heterotopias, on the other hand, are spatial forms used to combine enclaves and armatures, making new hybrids which have spatial distinctions while accommodating differences in the city [33]. Therefore, the heterotopia, as argued by Shane, is disciplined and ordered by global, national or local inhabitants with purposes whether commercial, cultural, political or sometimes medical [18].

3.4 Utopian Network of Public Spaces

Based upon these discussed diverse approaches (typology and topology), this paper adopts a network of public open spaces differed in its typology and topology, which should be applied to the whole metropolitan. This network should have specific range of uses and sizes according to its location within the metropolitan, it acts as a physical manifestation of the desired utopian social network of the whole metropolitan, considering that the social metropolitan is a reflection of the physical connectivity between the different heterotopias within it, as Hiller and Vaughan [34] imagine. This approach addresses the 'Utopian Network' as a network of public open spaces, dedicated to the cosmopolitan publicness level within each heterotopia, that acts as its interface to the other heterotopias to be connected through, a network used for supporting the sociopolitical life for its heterotopia and, when connected to other heterotopias, for the whole metropolitan. Since the contemporary metropolitan of Cairo is considered as archipelagos that are socio-spatially segregated 'heterotopias' at that level, these heterotopias are in need to such utopian networks of public spaces (a common ground) that could bring diversity and guarantee access for the whole society in order to connect these segregated places at that level. In this utopian network, each heterotopia acts as a single network consisted of a series of nodes and connectors, claiming spaces of otherness inside the privatized public spaces of the contemporary metropolitan [17], these nodes and connectors tend to be a utopia within a heterotopia rather than a heterotopia in itself. Finally, all networks are connected together physically to constitute the whole cosmopolitan publicness of the metropolitan.

As nodes, a public space becomes a medium with which one could consolidate, blend, socialize and meet others in his/others heterotopia. They act as interfaces gathering people for sociopolitical life, providing opportunities for interaction

and exchange, while in contrast, movement spaces 'the connectors' have few opportunities for social interactions. This kind of nodes should be allocated at cosmopolitan level with their distinct feature (public, sociable, safe and secure) that when achieved, these nodes transformed to centers, nodes with a high degree of centrality. The concern in defining the nodes typology is, therefore, to represent a 'social space' (i.e. spaces that support, enable or facilitate social and cultural interaction for public life) regardless of whether it is publicly or privately owned/managed, the core idea here that it is publicly accessible, socially diverse and open to air as a must. While public life can be broadly grouped into two interrelated types of activities 'formal' and 'informal' [11], the most important activities are informal ones, which occur beyond the realm of formal ones and its entailed choices. So, after home and work spaces, nodes are the third spaces that are inclusive, hosting the ordinary, voluntary, informal and somewhat formal activities [35]. These nodes, on the other hand, are categorized into two categories green and gray categories, whereas green category ranging from the most natural places such as natural reserves, greenways and scenic road including cornice of riverbanks and the beaches of waterfronts; to the most artificial ones such as parks, gardens, and playgrounds. The gray category, in turn, mainly refers to artificial ones that obviously dedicated for people use, not for vehicles, like squares and plazas, including all public buildings' frontage, buildings such as Public libraries, Civic centers, Municipal markets, and Parliaments. It is also might be linear or nonlinear spaces such as a part of avenues, boulevards, Sidewalks and Passages.

As connectors, a network of public spaces become the physical or nonphysical medium defining the linkages of the node's network. They are all public spaces and spheres playing a vital role in gathering people to the nodes, or in navigating through the outdoor social world of a city [36]. So, connectors constitute many parts of the public spaces, by which people choose whether to use it or not, there are often alternative routes for getting from one pole to another, with the choice made on interrelated grounds of convenience, concern, joy, safety etc. They might be physical aquatic or overland, or nonphysical 'space of flows' via social networks.

Therefore, each heterotopia in the metropolitan should have a network of 'nodes and connectors' at cosmopolitan publicness level, with its sociopolitical rights of sociability, freedom, safety and security and publicness, whereas the latter is the main concern upon this paper.

4 POWER THEORY

4.1 Power Concept

Power is the central concept in political sociology, Both Mann [37] and Lukes [38] argue that it is the ability to make others doing things against their desire and will in a process of both cooperation and conflict which, as a result, generate communities. Weber [39] defines power as the chance of one actor, in a social relation with others, could hold a position to fulfill his will despite disobedience and regardless this chance rests. In the same notion, Castells [40] defines Power as the relational

² The term coined by Manuel Castells [32]

ability of a social actor to 'asymmetrically' affect the decisions of others in ways favored by his will, interests, and values despite resistance that could exist. So, power to both Castells [40] and Weber [39] do exist among actors in a social relationship, as well as a form of resistance is probably happened by who subjected to power, as Foucault [42] contends in a form of social movements. Hence, Weber, Foucault, and Castells assure the probability of a form of resistance by who subjected to a power influence. So, there is never an ultimate power or a zero degree of resistance in any power relationship, however, when resistance become stronger than compliance, the power relationships are changed, the powerful lose its power partially or completely, and absolutely there is a process of structural change [40].

On a different approach, Foucault [42] obviously refuses constructing a theory of power, arguing that rather than defining the empowered actor and who subjected to this power, given away or taken from others, it must be conceived as a product of social relations that do exist within a society while having close links to knowledge. Foucault argues that power was not concentrated in an institution nor a social group, in turn, it operates at all levels of social interaction involving the whole society. To him, power does exist within a society in a form of 'micro-physics' which is needed to be touched at that level, whereas our knowledge of this level constituted this power relationship.

Consequently, power is a highly paradoxical concept, but broadly it must be analyzed according to our scientific knowledge of every aspect of our life micro-level, not just defining the empowered actor and who subjected to this power, but also the incentives beyond this power relationship.

4.2 Power Sources

Every empowered actor is always looking for a source of power to exercise his power, so different sources of power exist while they might be interacted or overlapped altogether by the empowered actor. Mulgan [43] has theorized the capability of the state to exercise power through three sources of power: violence, money, and trust. Violence can only be used negatively by ways of coercion or the chance of it [37]. Weber also focuses this type on the state which has an authority of exercising power over a territory [44], in a relation supported by ways of violence legitimation. However, trust, on the other hand, depends upon the knowledge and thoughts that could make difference as well as make fragile power being permanent [43]. In line, Castells [40] notes that trust is very substantial for the state supremacy, where it should dominate the thoughts and construct values through discourses, in which the state guides these actions.

Weber [45] provides three forms that give rise to legitimate the authority of an empowered actor to exercise his power: rational, traditional and charismatic grounds. Habermas [46] conceptualizes that the state legitimates its power through the construction of shared meaning in a society via the public sphere, that in turn stabilizing its domination. On the other hand, Castells [40] argues that since society is understood via knowing its values –shared meanings– and institutions, where what valued and institutionalized define the power relationships, so

values are very substantial to understand the sources of power within a given society.

Then, values are the fundamental source of power that can be touched within any network of power in the contemporary city, that could be used negatively or positively either by trust, money, or even violence means.

4.3 Power Forms over public spaces' production

Castells [40] sees politics as an arena to participate power or to influence power distribution, either among state or among groups within it. So, Power can't be reduced to the state but an understanding of its historical and cultural specificity is what really matter in any power relationship. In the 21st century, there are three forms of power, in the Egyptian context, governing public spaces' articulation, which are the public sector, the private sector and the public-private partnership [47].

In the public sector, the production of public spaces and maintaining its quality, in Egypt, are limited due to the limited resources of the state while the existing also suffer from underuse, deterioration, and lack of important activities. Castells [48] assures that cities became places of collective consumption rather than places of production, so the state has an inherent role in providing services for the reproduce of labor power supporting the notion of collective consumption in the contemporary capitalism. Therefore, Castells [48] argues that the spaces for low-class groups depended upon the state intervention, since providing the welfare services necessary for them isn't considered as a feasible for the private-sector investment. On the other hand, Saunders [49] insists that there is no inevitability in terms of the state provision of all services, where private sector provision of them became more significant. He shows how in today's city two groups of people do exist, where one of them could rely on purchasing their own services themselves while the other is forced to rely on state welfare.

On this new division or 'cleavage', Savage and Warde [50] argue that it might lead to the decline of social class and its displacement by means of consumption based on divisions rather than equality, which might be the reason for political struggle. Via this division, there is a small group governing the production of public space, called elite who is a small group of powerful people belonging to the powerful high-status classes. Castells [51] argues that the elite develops the set of rules by which they can communicate each other and dominate the others, thus establishing the in/out constraints of their political community. These sets of rules are embedded in the social structure of societies in ways opening up an interface only to those who could share elite's power, without any need from the elite to conspire excluding any [51].

In a different approach, Public spaces' network might be produced by the synergy between the two distinct means of space production; the public-private partnership. Nowadays, different countries adopt this discipline due to the benefits getting from both of them while overwhelming their disadvantages. In BOT concept (build, operate, transfer), for instance, the development of public spaces are operated by a private sector while it still owned by the public one [52].

Therefore, understanding the power holder over public spaces' articulation isn't really the major issue, where what really matter is what values and set of rules embedded within this network of apower relationship, which could be the same with different empowered actors in a utopian society.

5 INVESTIGATING NODES-CONNECTORS' NETWORK: TWO POWERS, TWO HETEROTOPIAS IN CAIRO

Two distinct heterotopias (Madinet-Nasr and New Cairo) are selected according to a specific period of time, since the dawn of the 23rd revolution of the twentieth century till the dawn of 25th revolution of the 21st century and beyond, representing the substantial mutation of power over the production of public spaces in the Egyptian context. Madinet Nasr's heterotopia represents the public-sector power over public spaces' production, while New Cairo's heterotopia represents the private-sector empowerment over the same in the contemporary metropolitan.

5.1 Madinet-Nasr Heterotopia

A desert plateau between Heliopolis and Abbassia with an initial area equivalent to 6,539 acres[53], this where a new called heterotopia of Madinet Nasr (the city of victory) was started. Initially, the site was empty except for a mental hospital and the old British camps inherited by the Egyptian army[54]. Madinet Nasr was initially well connected to the precedent Cairo's CBD while poorly connected to the adjacent Heliopolis heterotopia, as they are separated by a large strip of military land during that time[55], where only a single road linked Heliopolis to the rest of Cairo[56]. Then, in 1971, a presidential decree issued to expand the urban space of Madinet Nasr eastward whose area to be almost 15162 acres [57],[53].

5.1.1 Power Over Madinet-Nasr Heterotopia

Madinet Nasr is a vital heterotopia representing the mutant political ideology resulting from Nasser and after him Sadat; from proclaimed socialism to *Infitah* Policy (open-door policy). This paper discusses this heterotopia from a perspective showing how public sector, as an empowered actor, articulated its public spaces' network at the cosmopolitan publicness level, whereas it still in charge of them until today.

Equity as a Value-Making

In 1952, the Egyptian Revolution, led by the free officers, demarcated the collapse of royalism in Egypt through the disqualification of the reign of Muhammad Ali's dynasty (eviction of King Farouk I from Egypt). After a while, Egypt entered an era of proclaimed socialism led by Nasser's vision. "Social freedom is the only way to political freedom," this is what Nasser [58] claims. At first, his charisma grounded his legitimacy, while actually his power was based on the large acceptance among large numbers of Egyptians [59] upon their belief in this important event 'the July 23 revolution', that came to achieve their current demands (their right to the city), which they have been prevented from, as well as drawing their desired future. In a bold move of its kind with the help of military force, Nasser's policy was oriented toward the redistribu-

tion of wealth, especially agricultural lands, among all citizens ensuring the proclaimed equality, which, in turn, led intensively to break down the social class system of the whole society during his reign[60].

Within the vision of proclaimed equality (as a value-making) at that time, the initial plan of Madinet-Nasr heterotopia has been introduced to the public, which was in tune with this superior value[54], [56],[61]. Frochoux & Martin [61] and Eid et al. [57] argue that the whole masterplan was designed on a very intensive orthogonal system, that might ensure the socialist vision of the state. In addition, there were no privately-owned public open spaces, which are still publicly owned and maintained by the state till now.

On Contrary, Cairo observer [56] argues that the project's brochure was presented in English rather than Arabic language, oriented toward attracting educated upper and middle classes as the potential residents, for whom it was introduced as the best contemporary planned-heterotopia at that time.

Empowering Public-Sector

Meanwhile, lands development process during this era was under the control of three distinct types[62]: large developments were in the hands of public authorities, such as economic housing constructed in 1975 by the governorates with a rather large subsidy; developments for middle income and upper-middle income groups were in the hands of nationalized contractors, including housing constructed by housing cooperatives; and informal developments for low/middle-income groups constructed either by the individuals themselves or by small contractors.

One of these public authorities is Madinet-Nasr Society, established by a declaration no. 815/1959, renamed to Madinet Nasr for Housing and Development (MNHD), to execute this heterotopia. It had an independent budget whose resources would come from the construction investment in the area and from governmental contributions, aids, grants and loans[63]. Nasser policy abandoned intensively private investments by nationalization procedures, that consequently grew fear among private investors while public sector enjoying the full control over every piece of land for any further development[64].

While this new heterotopia was envisioned as a physical manifestation of political power, the city was introduced to propaganda using the slogan 'we are building a capital within a capital'[61],[56]. By the late of the 1950s, Karim presented the masterplan as a new capital with government offices, a stadium, and a convention center[56]. Originally, Madinet Nasr was designed to serve as a government center away from Cairo's CBD[53]. Frochoux and Martin [61] contend that Madinet Nasr was created to host the new governmental institutions, but only a few institutions of the fifties representing the new state moved their seat there, such as the ministries related to the new economy and to the defense. MHR & AID³ notice that formal land development is under this newly established authority responsibility which either develops the land itself or sells it to housing cooperatives or private companies for de-

³Ministry of Housing and Reconstruction, Egypt and Agency for International Development, USA

velopment[62].The policy of selling publicly-developed land at cost price encouraged speculators purchasing,resulting in almost 50%of Madinet Nasr were behind schedule. Accordingly, alargepart of this heterotopia's price has speculatively risen, leading to more difficulties for thelow-incomegroup to move there,or middle-income group to purchase a parcel on which to build their own house[62].

5.1.2 Nodes-Connectors Network and Socio-Spatial Relation

As Nasser regime dramatically changed the social structure of the society, this era, as well, witnessed the fast development of the syndicate which its members will be appointed some political positions[65]. In this era,social classes was mainly homogenized by their professional status, that, in turn, are reflected in the different heterotopias of Cairo metropolitan such as al-Mohandessin (engineers), Sahfein (journalists), al-A'mlin (workers), and al-Dobat (the officers)[60] whose free officers-the revolution makers- are one of them, wherethey are specifically represented in Madinet-Nasr heterotopia.So, this heterotopia through its spatialmanifestationtraces a particular history of Cairo's social, economic and political movements[53]. The original master planmainly consisted of residential areas for different social groups, commercial areas, some major regional services located in its frontier and along the main arterial roads, as well as some industrial and educationalzones[62].

Nasser's vision was more concerned with introducing the independence of Egyptian resources that only dedicated to its citizens [53]for ensuring Egyptian etatism[59]. As a result, Frochouxand Martin [61]argue that the state gave more concern about establishing the huge cosmopolitan public spaces - stadium, expo, and conventioncenters as well as a military plaza- to ensure Egyptian political power toward its independence while ensuring its abilities to house international conferences and large events such as the Cairo international Fair, Book Fair commenced in 1969, and the dream of organizing Olympic events. Although Abu-Lughod[54]argues that the 1965-70 plan provides up to 56,000 additional dwelling units, from which about 50,000 was allocated for low-income families whereas Madinet Nasr having the lowest cost price compared to other heterotopias in 1975[62], MHR & AID [62]and Cairobsrever[56]note that inhabitants are the newly rich and upper-middle classes resulting from changes done by Nasser in the social structure of Egypt, with little government servants who reservedpublic housing properties.

Currently, MadinetNasr,had been transformed its mono-land use pattern, where in the early 1980s, some mixed-uses have been emerged due to shifts in the sociopolitical and economic conditions[57]. These transformations are especially along the arterial roads, that resulting from the transformation from pure residential uses to mixed-uses (mainly residential/commercial). In turn, some residential land uses transformed to be shopping malls, that acting as commercial anchors connecting these commercial connectors, as well. However, the socio-spatialconfiguration of the heterotopia is still the same until now.

Based upon different surveys, interviews,and analysis of the land-use map, a socio-spatial diagram in accordance with a cosmopolitan network of public spaces was generated (Fig.1). Three distinct centers of public spaces have been observed in the original master plan which still existill-now as well as being always under the power of public-sector development. The large triangular node of public spaces, that was the base of Madiet-Nasr master-plan, located to the north-west and dedicated for seasonal exhibitions,sportive and political events (Expo Land, Convention Center, Sport Stadium, and a military plaza), while the other two nodes are located insofar to the middle of the heterotopia, DawlyaPark and Children Garden, along sub-roads of Abbas al-Aqqad and MakramEbayed respectively. Moreover, the whole connectors' network at cosmopolitan publicness level is positively covered by transit routes, according to transit map of Quiros& Canales [66]. Undoubtedly, the social class system, reconstructed by Nasser Policy, affects today's Madinet Nasr intensively, whereas general areas of officers housing are diffusing through different parts of the heterotopia specifically across different places at the edges of the heterotopia due to their intervention with the zones of military and governmental institutions, while ranging from lower middle-class to upper middle-class. These types of housing are located to the north along Salah Salem, al-Fangry and AutostradeConnectors, as well as circumscribing the triangular centers of public spaces; to the west, they lie along Mostafa al-NahasConnector; and to the southeast, they lie along ZakerHussinConnector. This heterotopia, moreover, witnesses the diffusion of upper-middle-class all over the heterotopia's territory along the main connectors and around the centers of public spaces located in the middle of the heterotopia, while other classes cut off some of its parts to allocate themselves accordingly. As a resultof the huge development of housing experienced after the establishment of Madinet Nasr during the neoliberal era, elite and high-class enclaves (e.g. Taj City project developed by MNHD which is still under construction) are located on the east edge of the heterotopia, in between al-TharwaConnector and the Ring Road. Spots of formal/informal communities of the Low class, that

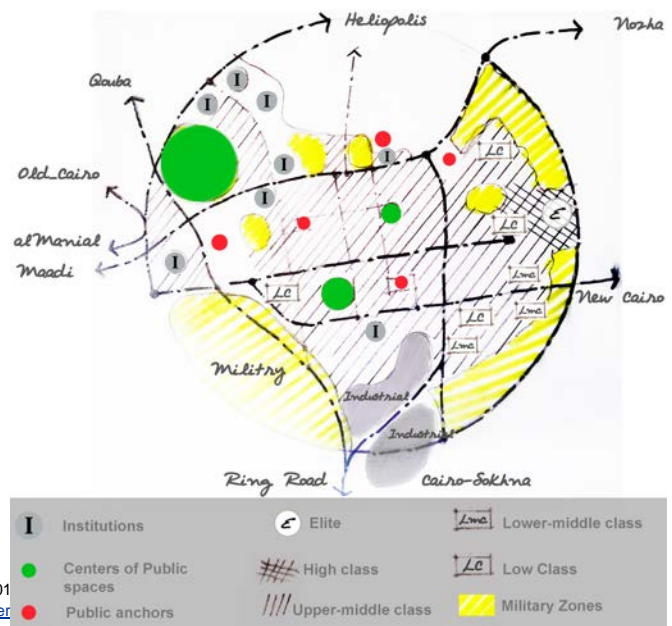


Fig. 1. Socio-spatial diagram in accordance with nodes-connectors network, Madinet-Nasr heterotopia (Courtesy: Abdel-Rasoul)

somehow interweaves with the cosmopolitan public life, are dispersed through the edge of the heterotopia. The formal ones are located on the west, adjacent to the industrial zone and to the north/south edges of the heterotopia. The informal housing of Ezbet al-Haganah, in turn, is located to the east, separating the elite zone from being internally connected with the entire heterotopia of Madinet Nasr, that explains why this elite project is announcing himself as a part of New-Cairo heterotopia.

In addition to the network of public spaces discussed, there are different spots of conditional public spaces (commercial, educational, and leisure activities), which are overwhelming the inner images and destinations of the heterotopia, such as the commercial indoors nodes: City Stars; Teeba Mall; Geneena Mall; El Akad Mall; El Serag Mall; and Wonderland Mall. Moreover, the categorical nodes: 'al-Ahly Club' located to north-east; and al-Azhar University located to the west side, see the red dots in Fig.1. These public anchors (red dots), as well as the mixed-use activities, provide this heterotopia connectors its vitality of public life. Consequently, Nodes of open public spaces are less fortunate compared to these connectors vitality in daily life unless in special seasons and events such as feasts, holidays, exhibitions, conferences, and sport events.

5.2 New-Cairo Heterotopia

New-Cairo heterotopia (or el-Qahera el-Gedida) is one of the new suburban heterotopias, which has been built, in and around Cairo (Cairo's periphery) to alleviate the congestion in its downtown (urban core). This heterotopia is located on the east side of Greater Cairo's Major Connector (Ring Road), where to the south, the district of Maadi is located, while Heliopolis, Madinet Nasr and Mukattam are located to the west. It was established by presidential decree No. 191/2000, planned to ultimately inhabit around 4 million souls [67], one of the 3rd generation of new settlements in Cairo metropolitan, covering an area about 70,000 acres, planned to accommodate residential, services, recreational and industrial uses [67].

5.2.1 Power Over New-Cairo Heterotopia

New-Cairo is a vital heterotopia representing the neoliberal era grounded since Sadat's *Infitah*-Policy. This heterotopia is discussed from a perspective showing how private-sector, as an empowered actor, articulated its public spaces' network at the cosmopolitan publicness level.

Consumerism as a Value-Making

The culture of a society is defined in terms of beliefs and traditions constituting society behavior. El-Messiri [68] notes that mass culture is the main feature of today's Egyptian society controlled through the public sphere via social and visual media, encouraging the disjunction between the general culture and Society's authentic values. Izetbegović [69] claims that culture is an expression of fulfilling needs, while its activities and events became organized and institutionalized rather than being spontaneous and decentralized, whereas well-being became the apparent formal image within which individuals define themselves by expressing their abilities to consume commodities.

During Sadat's *Infitah* era whose effects lasted for almost two decades, rich groups positioned themselves in the society through the occupancy of new high-rise towers in Cairo metropolitan, along with wealthy Arabs and foreigners. However, since ERSAP⁴, gated communities became a further mean of privatized public spaces, to express their social identity instead [60], [70], as it acts as an interface to display the luxurious lifestyles, providing genuine convenience, spectacle, a total living experience, besides offering what Cairo no longer had: clean, organized, and green environments that isn't easily resisted, such as residential areas with large golf courses or theme-parks [70].

Amin [71] argues that this kind of lifestyle must be controlled by a strong economic country to lead this type of lifestyle to get more beneficial to the whole country economy, not only for the welfare of some groups instead of others. Harvey [72], as well, have attributed this phenomenon to the changing function of cities from being places of social reproduction to places of consumerism. Moreover, Zukin [73] has associated the rise of such privatized public spaces with abstract financial speculation, as well as with a boom in the recreational services. More interestingly, Dovey [74] has linked it to the spread of the mall archetypes, another form of privatized semi-public space.

Empowering Private-Sector

In the 1980 report of NDP⁵, it states that the open-door policy is neither a return to capitalism and economic freedom held before the July 23 revolution nor a shift from the socialism of Nasser (public sector's control over the basic services). The committee assured a further synergy between the public sector and the private sector toward the enhancement of national development [75]. Since Sadat's political agenda, the grass-rooting of the neoliberal era, provided a new environment for the empowerment of the private sector in the state development, that enacted by issuing 'Law 59/1979 on New Urban Communities', which opened up the arena for the national and foreign investments toward achieving the major aim of the state 'invasion the desert', while establishing new urban communities acting as new frontier for socio-economic development in the Egyptian context [64]. Lately, this methodology, claimed by NDP, had been adopted by Mubarak who continued pursuing mainly the same policies -Sadat's *Infitah* and peace process- until the next shift in economic ideologies, which started in 1991 with the implementation of the economic reform and structural adjustment program (ERSAP). Meanwhile, three forms of power are governing the production of public spaces all over Cairo metropolitan: private sector; public sector; and laterally private-public partnership (PPP).

In New-Cairo Heterotopia, public spaces' network is mainly articulated by the private-sector development to attract the wealthy people from the deteriorated urban core, whereas NUCA [76] assures that the total number of service buildings is 549 buildings implemented by the private sector, in turn only 99 buildings were implemented by NUCA. So, the private sector provides about 5 times what is provided by the

⁴Economic Reform and Structural Adjustment Program signed with the IMF and World Bank in 1991

⁵by the economic committee of the National Democratic Party

public sector, as well as being oriented toward middle and high classes although the lower classes constituted about 30% of the currently total housing units in this heterotopia [77].

5.2.2 Nodes-Connectors Network and Socio-Spatial Relation

Sadat's *infitalh* vibrated the social structure as harsh as Nasser's socialism did, leading to an increase in social mobility and a widening gap between the haves and have-nots (Mitchell 1999: 31). A middle-class had re-emerged from the pre-revolution businessmen who resumed their business activities [78], called 'parasite class', as Haykal [79] argues, with a high pattern of vulgar consumption, who with their alliance played an influential role in the decision pursuing the open-door policy. Chua [80], as well, argues that in an open-door ideology, wealth has not been shared by all individuals, however, it has been only concentrated in the hands of the elite, the new parasite class in the Egyptian context. According to Korayem [81], in 1991 the wealthiest 10% in Egypt controlled around one-third of the GDP (gross domestic product), almost 7% more than a decade earlier. Consequently, a large extent of Society is structured around a network of financial flows, so different classes represent themselves in the urban structure through their ability to allocate themselves in the most prestigious places in the metropolitan. Obviously, Egyptian society, in this neoliberal era, is grouped by their socio-economic status, that differs from what has been constituted during Nasser's reign regarding the professional status.

Based on the conducted survey and the land-use map of New Cairo's heterotopia, a socio-spatial diagram in accordance with the cosmopolitan network of public spaces was generated (Fig. 2), finding that this heterotopia is composed of five distinct socio-economic communities: elite, high, upper-middle, lower-middle, and low-income classes (youth economic housing), that reflected the socio-spatial synthesis of this heterotopia structured around different articulation of public spaces. In this diagram, this heterotopia witnesses the diffusion of upper-middle class all over its territory, while other classes cut off some parts within it to allocate themselves accordingly. Most of the centers of public spaces are located to the west, west-north, and the north sides of this heterotopia to be adjacent to the most integrated connector in Cairo metropolitan 'Ring Road'. To the west, there are the two major centers of public spaces (Festival Square-Cairo Festival City Mall, Downtown Plaza) circumscribed by enclaves of high and elite classes. At the heterotopia edges, especially on major highways (Ring, Cairo-Suez, and Cairo-Sokhna connectors), there are other centers of public spaces (Porto Cairo plaza, Twin plaza and Family Park), which are located on the northwest and north edge respectively, where elite enclaves, as well, allocate themselves adjacent to these important edges. A spot of communities of the lower-middle class is located on the southwest edge adjacent to the industrial district, that is dedicated only to assemblies and syndicates (e.g. Association of Egyptian Shield, of Administrative Prosecution, of al-Ahram Workers, of State Adviser Club, Engineering Syndicate, etc). On the other hand, Low class has fewer opportunities to allocate themselves in this heterotopia, their loca-

tions determined by the provision of public sector -without any choice for them to relocate themselves otherwise- on low accessible connectors, two of them at the northern and southern boundaries of 'Katameya Heights', and another one located further to the north of this heterotopia. Unfortunately, according to the transit routes map [66], these low-class zones aren't, as well, covered by efficient transit routes connecting these zones to the cosmopolitan public life of this heterotopia.

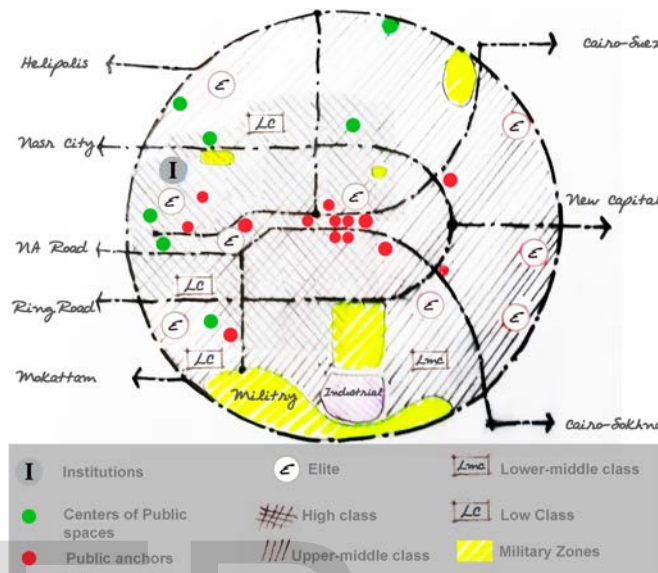


Fig. 2. Socio-spatial diagram in accordance with nodes-connectors network, New-Cairo heterotopia (Courtesy: Abdel-Rasoul)

6 DISCUSSION AND RESULTS

Based on the analysis introduced by the two diagrams of Madinet-Nasr and New-Cairo heterotopias, it has been noticed that although the nodes of public spaces in Madinet-Nasr heterotopia surrounded by upper-middle class, they allocated to highly integrated connectors accessed directly by all the districts of diverse socio-economic classes within the same heterotopia at equal opportunities among them. In contrary, nodes in New-Cairo Heterotopia are surrounded by high and elite enclaves with limiting access for other vulnerable groups (lower-middle and low classes) as they are located on low accessible connectors or even moderately accessible ones which not covered with efficient transit routes, that enable them to connect to the cosmopolitan public life of their heterotopias as well as navigating in their heterotopia freely.

According to the questionnaire survey conducted on 30 users for each space, the nature typology (seasonal use) of the nodes in Madinet-Nasr Heterotopia causes low frequency of users (Fig. 3), however they have been compensated by vital mixed use along the major connectors, provided by private sector since *infitalh* policy started in the beginning of 1980s. While the same have been happened but in a different way, whereas these seasonal and military nodes have been replaced by vital nodes of short-term uses such as plazas and squares, developed and managed by the private sector too, bringing higher frequent users to occupy them (Fig. 4).

Consequently, the connectors of Madinet Nasr are more vital (full of people) compared to the nodes of the same heterotopia while the nodes in New-Cairo are vital than its connectors which act only as a movement public spaces that gathered people to these nodes. Therefore, in Cairene context since 1952, public sector is more concerned about the resilience of providing accessible connectors to connect the old capital with the newly proclaimed capital of Madinet Nasr to exercise Egyptian statism over its resources and its connection to the world (Fig.5), however it wasn't concerned about the social nature of the public spaces (nodes typology), that are of seasonal uses and low frequent users (i.e. square of Expo land, a Military Plaza, as well as a garden and a park). While private sector, on the other hand, gives more concern about the social

nized and dominated by public sector, whereas the professional status 'officers' are well represented in, while under the private sector development, the land became a commodity, as argued by Harvey [83], representing the socio-economic status of the society and its classes abilities to relocate themselves in accordance to the most prestigious nodes and connectors of public spaces.

7 CONCLUSION

This paper has developed a conceptual theoretical framework about the nature of public spaces' network and the power governing this network articulation to find how this power are manifested in the socio-spatial relation to this articulation. So, a network of public spaces has been introduced with nodes/connectors typology all over each heterotopia to understand the power over their articulation, whereas these nodes-connectors networks are showing how public/private sectors exercise their power over their articulations by providing all classes a free of choice to access their public spaces or delimiting some of them.

Consequently, two different heterotopias since 1952, Madinet-Nasr and New-Cairo heterotopias, have been investigated to represent two distinct public/private power respectively. Madinet-Nasr heterotopia proves how public-sector is concerned about its physical access through its connectors to ensure local and global connectivity, however, whose nodes, in the same time, witness low frequency compared to its connectors due to their typology nature. While that one under the power of private-sector development in New Cairo proves how it is more concerned about providing nodes typology of short-term use (squares and plazas) while minimizing public access to public except for high and elite classes who could afford being on these places, due to profit-making plans of the private sector. In another word, the public sector is more concerned about connectors than nodes while the private one is its reverse.

On the other hand, this paper recommends a further quantitative research in terms of measuring the publicness degree of the nodes and connectors to trace precisely how each power control their availability to the general public.

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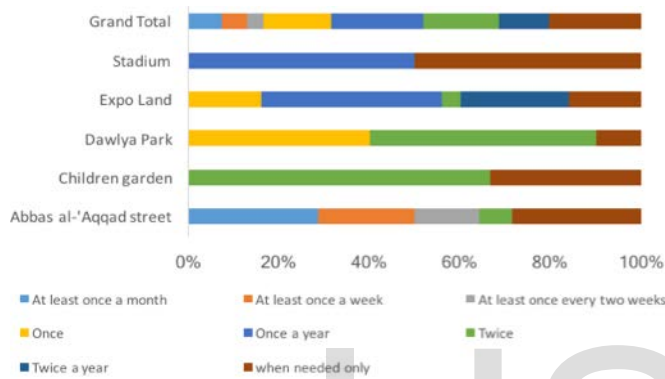


Fig. 3. Users frequency of nodes and a major connector, Madinet-Nasr heterotopia

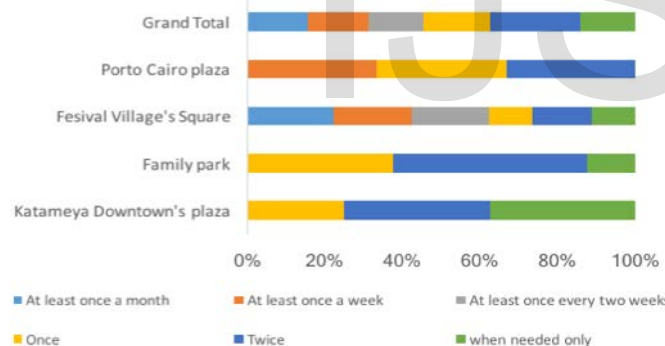


Fig. 4. Users frequency of nodes, New-Cairo heterotopia

nature of public spaces regarding the nodes typology, by providing daily use spaces: squares and plazas as well as a park, regardless giving equal opportunities among the whole society to access these nodes through this heterotopia connectors which witness mono use and low rate of transit routes, as it aims to attract who can afford their services more than being accessed from everybody. According to the master plan provided by OkO Plan [82] and NUCA [76], the CBD of New-Cairo heterotopia witnessed the power of private sector over changing its land use. the node of Festival Square has been relocated from its initial location within this CBD to be in the middle of its developer site, while the enclaves of Lake View, an elite residential compound, occupy an area that completely cut from this CBD as well (Fig. 6).

Moreover, it could be apparently concluded that the socio-spatial manifestation of Madinet-Nasr Heterotopia are orga-

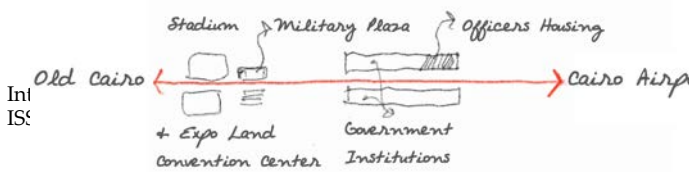


Fig. 5. Political Power over public spaces' network, Madinet-Nasr heterotopia (Courtesy: Abdel-Rasoul)

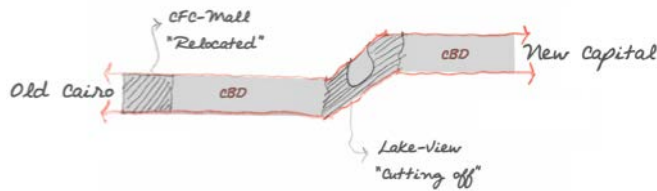


Fig. 6. Private sector Power over changing public spaces of the CBD, New-Cairo heterotopia (Courtesy: Abdel-Rasoul)

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