**NEW CAPITAL CAIRO PROPOSAL**

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        In the wake of the 2013 military coup, the newly ascendant president of Egypt Abdel Fattah El-Sisi was determined to show the world that his country’s period of instability was over. The Egypt of the future, according to the new president, would be characterized by economic acceleration and take a leading role in regional politics. In order to instil confidence in the new administration and attract investment from abroad, the housing minister Mostafa Madbouly unveiled an ambitious project—the construction of a new capital city from scratch.

        In principle, this new city would serve as a model for the country, setting the tone for the future. Today’s Cairo is the largest city in the Arab world and among the densest cities in the world. As Cairo’s population skyrocketed over the course of the twentieth century, its inhabitants have been subject to extreme overcrowding, air pollution, noise pollution, and resource scarcity. The new capital’s masterplan aims to expand the city in order to ease congestion and provide an ordered, sustainable foundation for the city’s expansion into the desert. Furthermore, this new city which is planned as a “smart city”, intended to launch new Cairo into a leadership position on environmental issues.

**Vision**

This is an urban model that was created in Cairo in the medieval era. However, Islam remains an important factor in the construction of the modern Egyptian nation. According to a thesis on Middle Eastern democracy that El-Sisi wrote while at the US Army War College in 2006, (Nytimes.com, 2016) democracy is a popular concept in Egypt, but in order to work it must “sustain the religious base” and “have its own [non-Western] shape and form, coupled with stronger religious ties.” Now as president, the overarching religious vision of a new society would be evident in the city that El-Sisi aims to build. El-Sisi is drawing upon a long tradition of establishing new capitals to signify new political eras—this period of democracy likewise needs a symbolic heart to bring about the society that it idealizes.

To embody the birth of a sustainable Egypt, **we have designed what we believe to be a city that synthesizes this Islamic vision of social organization with the ideals behind the smart city movement.** In order to do this, we investigated possible ways in which Quranic doctrine and the contemporary environmentalist movement intersect.

Similarly, there is no hard and fast “Islamic” model of urbanism, but drawing from Cairo’s history we can see how religious values are manifested in the urban layout. One important way in which Islam was present revolves around the idea of “Gendered Space,” wherein masculine and feminine spaces are considered distinct (AlSayyad, 1995). Although there is considerable debate over the Quran’s position on sexual segregation, the medieval Cairo layout was dominated by a flow from the privacy of the home, through semi-private communities demarcated by gates, and into the public space of the city centre. Residential neighbourhoods were oriented around the construction of “fictive kinship,” or semi-private communities where men and women shared space.

The core of medieval Cairo was built to function as a new capital for a new dynasty, and as such Islam was represented in the city centre to perpetuate the image of the state’s political-religious authority. This was done with monumental mosques and religious educational buildings constructed in close proximity to the citadel (Raymond, 2002). As opposed to the localized, inwardly-oriented neighbourhoods, the central core was designed to project outwards and connect to commercial flows outside of the city. It was meant to be a spectacle, always visible to visitors and residents alike.

To see how a conservationist impulse has been present in Islamic consciousness, look no further than the prophet Muhammad himself. In an early *hadith*, the prophet approaches a worshipper performing the ablution and admonished him for using excess water, and counselling him to “conserve water, even if on the banks of a flowing river”. From the onset of Islam, a degree of environmentalist sympathy has been embedded in the religion as a moral and spiritual issue.

Additionally, a “Hima” is an early concept that comes up in the Quran that lends itself to modern environmentalism and the smart city movement. Dating back to the earliest records of Arabic town planning, a Hima is a special preserved natural area. In Islam, a community’s respect for conservation zones is a religious responsibility, considered an obligation stemming from mankind’s God-given stewardship of nature. We have implemented this concept in our city by installing frequent areas of green space under and devoting large sections of the city to renewable energy sources and resource treatment.

Furthermore, gardens have always had special symbolic meaning for Muslim citizens. To early seventh century Arabs, a garden was “an earthly replica of sacred cosmological constructions.” (Foltz, Denny, and Azizan Haji Baharuddin., 2003) This is to say, a metaphor for heavenly paradise where gardens represent the perfect harmony between humanity and nature.

**The Smart City Concept**

There is no universally accepted definition of a smart city. It is a theoretical ideal that does not exist in a pure form anywhere. In contemporary rhetoric, it is a term used to describe any highly technology-dependent urban planning. Typically, though, they are characterized by an integrated network system, business-led development, widespread rights to the city, and most importantly the promotion of high tech development, and social and environmental sustainability.

**Our New City**

In our city we have maintained the flow from private to semi-private to public. In the open core of the city, we have grand, public space serving as the economic and administrative centre of the city. In keeping with Arabic practice, it is characterized by government palaces and monuments, including a principal mosque and a series of gardens. Moving radially away from the centre, we have a chain of self-contained, self-sufficient and partitioned local zones. Each of these clusters is aligned around apartment complexes that overlook a collective green space. These are inwardly-oriented neighborhoods, keeping alive the institution of kinship. Around each apartment complex is a circuit of amenities such as a local school, mall, mosque, and community centre, in effect creating a private replica of the core. This neighbourhood surrounds each apartment unit, which is a space of complete privacy.

**Islamic Values**

In addition to the Islamic values, we have included a monumental core for the new capital (AlSayyad, 1995). Similar to other old Arabic cities, gardens and green space are especially important. Moreover, the green space ensures the sustainability and the conservation of natural capital, respecting the Islamic doctrine of Hima. The Egyptian government emphasized the importance of religion in the development of the new capital, making mosques and religious monuments especially important in the planning of cities. With around 1250 religious buildings included in the plan, access to mosques are widely available to the general public; where each urban cluster and community contains a number of convenient and accessible mosques (Thecapitalcairo.com). The urban centre of the new capital will resemble the layout of the “traditional” Arab city, which includes bazaars and commercial districts.

With a modern approach to the layout, the city centre will include a large shopping mall with an extensive commercial district, as bazaars often acts as the social, religious and commercial centre of the city. The centralized commercial district provides dynamic interaction between new and old, as the bazaars retain the traditional values and local identity. Education plays an important role in the city’s goal of being a world class city, as well as highlighting the traditional Arab customs. Similar to many major Middle Eastern cities, madrasas and universities will be included in the core, providing more educational opportunities for citizens and future generations (Thecapitalcairo.com, 2016). With the establishment of a world class institution, residents will enjoy many opportunities and potential international collaborations in this innovation hub (Masdar City Master Plan, 2016).

**“Smart City” Adjustments**

Tailoring our design for an Egyptian setting, we have chosen specific smart city elements that are compatible with these Islamic ideals. As a significant Islamic concept in city planning, privacy is one of the priorities in developing communities and residential areas. Trees will ringing each community and neighbourhood, providing privacy and mental barriers, while maintaining the green concept of smart cities. Respecting the significance of privacy in Islamic urban planning while connecting with the publicly oriented smart city concept, we plan to create a number of small communities surrounding the urban centre. Connected by pedestrian friendly walkways and sustainable transportations, each community will enjoy a convenient and efficient transition from the private neighbourhood space to the public city core. The organization of the city establishes a distinct private to public flow within the capital, maintaining the secluded aspect of citizens’ private lives, and creating networks between the public city core and private neighbourhoods at the same time. With the aid of sustainable technologies, the city will have renewable energy sources, low-emission transportation and environmental conservation zones to provide a smart and sustainable lifestyle (Etezadzadeh, 2016). For each small community around the city, we have adopted the smart city concept of segmentation and replication of neighbourhoods (Etezadzadeh, 2016). Surrounding the city centre, each small neighbourhood consists of residential, social, commercial, and education amenities, ensuring the self-sufficiency and convenience of each neighbourhood cluster.

The primary goal for this city it to eliminate congestion in Cairo by creating a sustainable and sophisticated smart capital city. To satisfy the goals and optimize the lifestyle in the harsh desert climate, we emphasized the development of a strong public transportation network, renewable energy systems, and a habitable environment. To solve congestion, we have included a refined, automated, and centralized transportation system, where each neighbourhood and housing complex are in close vicinity of a metro station. This removes cars in and around residential districts, which will create a greener environment. Removing cars and enforcing walking and public transportation compels people to engage with the city and its structures, creating an atmosphere of walkability (Etezadzadeh, 2016). Located in an arid desert environment, it is a regional concern for people to opt for walking instead of driving, therefore, we have designed shaded walkways, wind tunnels. Furthermore, the height and structure of buildings will be strategically planned, providing comfort and efficiency for the pedestrians in the city. Also, as a consequence of building a city in the desert, fresh water supply is one of the biggest concerns in the urban development in the region. To combat the challenge, we will be taking advantage of the pre-existing water treatment plant within the city limits, while developing a system that reuses and conserves water within the new capital (Thecapitalcairo.com, 2016). We will be taking advantage of the harsh sunlight to contribute to the clean renewable energy system, by installing a number of solar panels in all neighbourhoods, creating self-sufficient urban clusters within the city. Other renewable energy structures in this city are geothermal and wind energy, which have proved to be efficient and sustainable in the desert climate.

**Main Obstacle: Network**

The collaboration of old and new concepts is bound to cause a number of conflicts of interests. The old city designs contain a number of features (irregular roads, dead ends, walls, and lack of connectivity) that hinder the citywide networks that smart city construct heavily relies on. De-formalizing the private and public flow through eliminating physical walls and replacing it with mental barriers such as trees, we are able to preserve a certain level of privacy for individual communities, while keeping the city integrated.

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