

# Planners Becoming Visualizers in the Mediatized World: Actor-Network Analysis of Cairo's Street Billboards

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## Abstract

While visual communication is crucial in urban planning, there is a gap in understanding how dominant narratives and visuals affect professional planning practice and planners’ roles, particularly in mediatized urban environments. This study addresses this gap by examining street billboards in Cairo to understand how planning visualizations contribute to the restructuring of the planning profession. It explores how these visual tools shape the practice and roles of urban planners, who are increasingly becoming visualizers. Employing actor-network theory, the study traces the relationships between billboards, planners, and other network actors. The primary research question is: How and why does the use of planning visualizations (billboards) restructure the profession of planning, including planning practice and the roles of planners? Utilizing a qualitative exploratory methodology, the study focuses on billboards along Cairo’s 6th of October Bridge. Data were analyzed through visual and content analysis of 209 billboards to understand their language, content, patterns, and geo-positioning. The analysis revealed that billboards in Cairo significantly impact urban landscapes and the visual culture of urbanization, often promoting exclusive real estate projects to a socio-economic elite. The research highlights the dilemmas in the changing professional roles of planners within a mediatized world and underscores the need for more inclusive planning practices. By employing actor-network theory, the study provides a nuanced understanding of the complex relationships that shape and are shaped by the visual culture of urban planning, offering insights into how planners can navigate and influence these dynamics for more equitable urban development.

## Keywords

actor-network theory; billboards; Cairo; mediatized world; urban planning; visual culture

## 1. Introduction

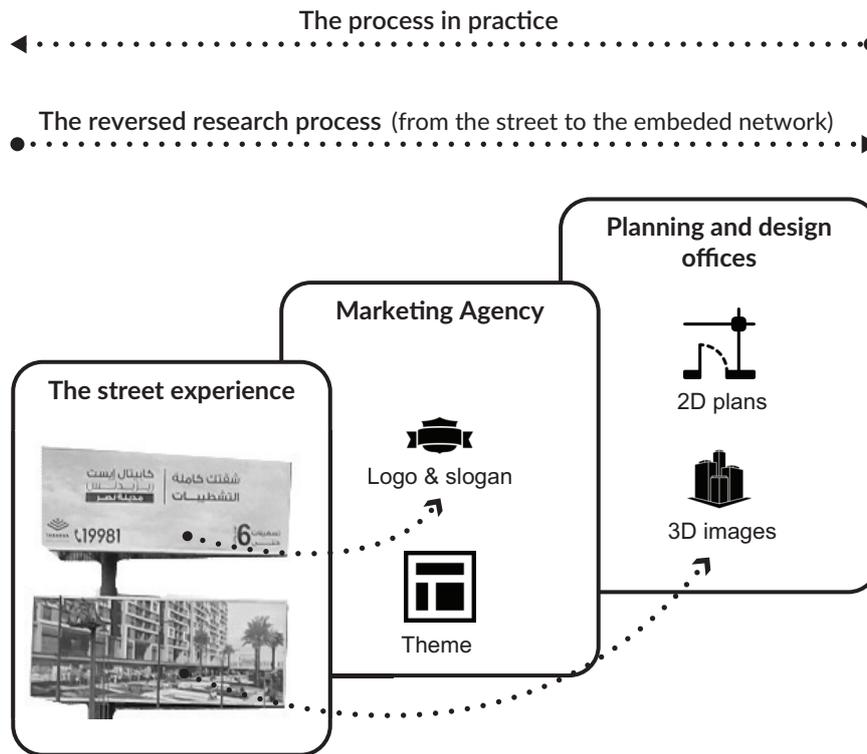
Cairo's streets and national TV channels prominently feature real estate billboards and ads, promoting new apartments or villas with standardized visual symbols (e.g., 3D models, green areas, swimming pools). Media plays a large role in constructing our daily images, framed stereotypes, city perceptions, and defined standards of beautiful design (Regan et al., 2006). The term "mediatized world" emerged as a contemporary concept referring to the interrelating role media plays with society (see, among others, Hepp, 2010; Hjarvard, 2008).

The above observations expose the significant role visualizations play in planning and designing cities. Scholars emphasize the crucial role of visualization in urban planning and its impact on practice and planners (see, for example, Kitchin & Dodge, 2014). Visual communication in urban planning and design is the primary method for creating and exchanging ideas about the urban environment among planners, architects, and the public (Al-Kodmany, 2002; Langendorf, 1992; Rose et al., 2014). Many urban scholars in Egypt have also addressed the role of visualizations and graphics in planning and communication (e.g., Abotera & Ashoub, 2017; Selim, 2015). However, the extent to which these dominant narratives and visuals impact/construct professional planning practice and the planner's role is still under-researched.

I argue that the different media assemblages are employed to visualize cities and one can use them to reflect on planning practice and the kind of city planners envision/plan. This article investigates the ways in which the utilization of planning visualizations, specifically billboards, contributes to the (re)structuring of the planning profession, encompassing both planning practice and the roles of planners. This study's contribution to the field lies in highlighting certain dilemmas in the changing professional roles within the mediatized world.

To achieve this objective, street billboards are chosen as the case study to understand how planning visualization structures the planning profession. As seen in Cairo and elsewhere, street billboards significantly impact urban landscapes and the visual culture of urbanization (Hendawy & Saeed, 2019). Street billboards are becoming an increasingly prominent part of the urban landscape in Cairo, reshaping the visual understanding of the city (ElRouby, 2015). Billboards, in this sense, are not only perceived as a final product but are embedded in a network that employs agency in creating the presented visuality, both in the physical and imaginary space. Hence, the research question guiding this study is: How and why does the use of planning visualizations (billboards) restructure the profession of planning, including planning practice and planners?

This inquiry is developed by adapting an assemblage ontology and using actor-network theory (ANT). Starting from the street billboards as a representation of the urban-visual experience and tracing backward to the planning offices that create part of the billboard content (the promoted 3D rendered images), and following Latour's recommendation to "follow the actor" (Latour, 2007, p. 68; see also Kärholm, 2016), this article adopts a reverse/backward process to unravel the layers behind the construction of street billboards as a spatial phenomenon (product) and the embedded actions that produce them (Figure 1). The motivation for adopting a reverse process in this article is to delve deeper into the complexities of street billboards as a spatial phenomenon. This approach uncovers the underlying layers involved in their creation, providing a comprehensive understanding of their multifaceted nature, spatial significance, and the factors contributing to their construction and placement within urban environments.



**Figure 1.** The research process (following the billboard).

Billboards could be depicted within the described actor-network as geomedia, which function as communication devices in urban space and at the same time take part in its transformation. The concept of the geomedia city includes not only the digital infrastructures within urban spaces that circulate and embed data but, more importantly, the social and cultural dynamics that legitimize or marginalize certain norms, skills, forms of capital, and individuals in the urban context (Hartmann & Jansson, 2024). This is evident in billboards, which impact urban landscapes by promoting exclusive real estate projects to the socio-economic elite (see Abotera & Ashoub, 2017), thereby reinforcing territorial inequalities.

## 2. Cairo's Street Billboards

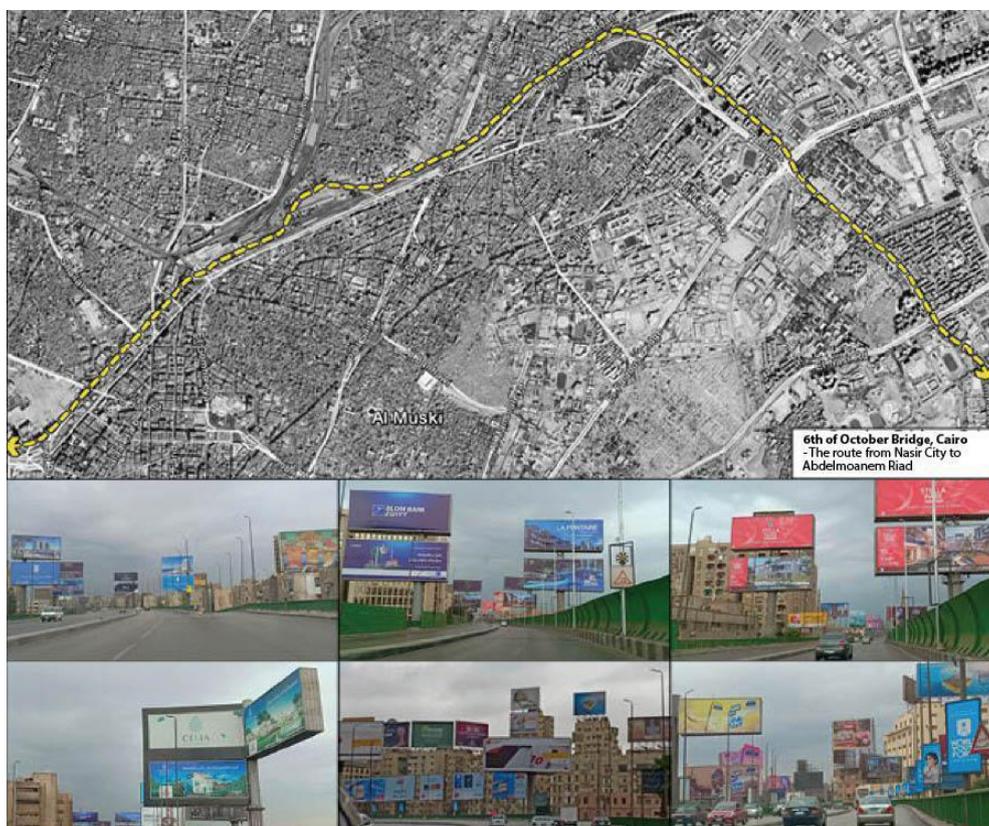
This study focuses on Cairo, which serves as an exemplary megacity for examining the billboard trend. There are two reasons for selecting Cairo. First, the sheer scale of the impact of “billboardism” in Cairo. In general, billboards are thought to convey “meaning and provide order to the landscape” (Venturi et al., 1977). In Cairo, billboards play a significant role as an outdoor advertising tool, communicating news, ads, and campaigns in Egypt, revealing what and who is made (in)visible (see Abotera & Ashoub, 2017). Second, the vast majority of the content of real estate billboards appeals to a social, economic, or cultural elite who form a small proportion of the population, drawing heavily on scarce resources in desert cities (Abotera & Ashoub, 2017; ElRouby, 2015). This context allows for an exploration of how urban planners are enrolled in this context.

Billboards are a defining feature of Cairo's urban landscape, reflecting urbanization, commercialization, socio-economic trends, and impacting the visual environment and daily lives of residents. The pervasive use of billboards in Cairo symbolizes the complex interplay of economic interests, cultural dynamics, and urban

challenges. On one hand, these billboards serve as vital tools for advertising and economic activity, providing a platform for businesses to reach a broad audience (Bhargava & Donthu, 1999; Taylor & Franke, 2003; Wilson & Till, 2011). On the other hand, they contribute to visual pollution, altering the aesthetic quality of the urban environment and sometimes overshadowing the city's historical and architectural heritage (Saghir, 2019). This transformation has both positive and negative implications for urban quality of life. The dense clustering of billboards, particularly in high-traffic areas, can overwhelm the visual environment, making the cityscape appear cluttered and less aesthetically pleasing (see Talaat & Osman, 2023).

### 3. Methodology

The billboards on the sides of 6th of October Bridge are used to understand the position of visual communication in Cairo. The bridge was selected because it is the longest bridge in Egypt, constructed in 1990, spanning 18.705 kilometers and ranging from 14 to 34 meters wide (Arab Contractors, 2019). It is located in the center of Cairo, links key areas of the city, and is accessible only to cars. It physically connects the old and new areas of the city, creating a communicative situation for the targeted public who use it. The 6th of October Bridge in Cairo is a major thoroughfare with several start and end points, as well as multiple intermediate access points, spanning various key areas of the city and making it a crucial artery for vehicular traffic. In 2017, the bridge was crossed by more than 500,000 people daily (Osama, 2017). The map and images in Figure 2 provide an aerial view and the atmosphere of the bridge, including a subset of the billboards on its sides.



**Figure 2.** Aerial view and images of the billboards on the sides of the selected route on 6th of October Bridge in Cairo.

With the help of an assistant, photographs of the billboards along the bridge were taken during an uncrowded day, constructing a series of photos for the entire bridge from the entry point at Nasr City to Abdel Moneim Riad and back (Figure 2). These photos were taken in November 2018 by simply moving along the bridge and taking photos.

The study uses a qualitative exploratory methodology, including visual and content analysis of 209 Cairo billboards. Photographs of the billboards were taken and analyzed to understand publicly mediated city images and messages.

In total, 160 photos were taken: 88 photos from Heliopolis to Mohandeseen and 72 photos in the other direction. After all the photos were collected, another assistant helped transfer the photos to a sample of 209 billboards by focusing only on large billboards and excluding smaller or repeated ones. Afterward, the sample of 209 billboards was sorted based on the needed information for the study. Identifying the needed information took place in parallel with the sorting process by reviewing the sample back and forth. It was a flexible, cyclic process which I chose to extract and analyze the billboards as there are no statistics for the number of real estate projects that use billboard advertising in Egypt. In addition, the empirical evidence provided by this study is significant.

Additionally, a content analysis was conducted on the billboards sample from four angles: the language used on billboards, the content of the billboards, the patterns of real estate billboards, and the geo-positioning of the billboards in reference to the advertising communicated through them. The content analysis focused on understanding the linguistic strategies used to target different demographics. This included examining the prevalence of Arabic versus English text, and the presence of multilingual content. It was assumed that the choice of language often reflects the intended audience's socio-economic status and educational background, with English typically targeting higher-income and more cosmopolitan segments of the population. Moreover, the content analysis investigated the themes and types of products or services advertised. For instance, it became clear that billboards advertising luxury real estate goods were prevalent. Furthermore, the patterns used in the real estate billboards were examined specifically to understand the marketing tactics used in promoting property developments. This included analyzing the visual and textual elements, the frequency of real estate ads compared to other types, and the messaging strategies used to attract potential buyers. Finally, a geo-positioning analysis explored the strategic placement of billboards in relation to the surrounding environment and traffic flow. This involved mapping the locations of the billboards and assessing their visibility and impact based on their placement. The geographic positioning also considered the socio-economic characteristics of the neighborhoods where billboards were placed, which could influence the types of advertisements displayed.

The collected data was interpreted and presented using the ANT approach. ANT was developed by Latour and Callon in the 1990s as a methodological approach that draws on assemblage philosophy to analyze the interaction of human, social elements and non-human, material, or technological elements in a network. According to Latour (2007), "a good ANT account is a narrative or a description or a proposition where all the actors do something and don't just sit there" (p. 128). In this sense, the actor is defined as "any element which bends space around itself, makes other elements dependent upon itself and translates their will into the language of its own" (Callon & Latour, 1981, p. 286). This allows the consideration of agency in all elements, or, in other words, the elements' power or ability to impact the process (see, among others, Healy, 2013; Ratnayake et al., 2016).

The first use of ANT in spatial research can be dated back to 1995 in the work of Murdoch and Marsden (1995), who attempted to link politics and geography, which at that time were still not sufficiently incorporated. By adopting a micro-sociology perspective, they discussed how space and politics restructure one another. They showed that actors at local levels are entwined into broader networks of national relations, and, in so doing, “the local and the national become ‘mixed up’ as actors build associations in pursuit of their goals” (Murdoch & Marsden, 1995, p. 368). Subsequently, Murdoch (1998) continued to relate his work more straightforwardly to ANT, particularly its concept of acting at a distance, to understand what and who acts at a distance and the spatial networks that appear accordingly. A more direct attempt to use ANT in planning literature came with Beauregard (2012) who advocates for a “place” for non-human objects in planning practice and theory. Building on the work of Latour (1992) and Murdoch (1998), Beauregard discussed how things used by planning professionals, such as apartment buildings and site plans, influence the practice of planning, reflecting the “micropolitics of planning” where planners use objects to “convey authority and commitment and to establish mutual understandings” (p. 1). Beauregard claims that understanding these objects helps us grasp the consequences of planning. Another attempt to integrate ANT in urban design came from Kärholm (2016), who follows a statue as a non-human object with design-political significance in public space, assembling other actors. In this study, I build on these endeavors and extend them to observe not only the influence of non-human actants on planning practice and theory but also the ways in which planners and the planning profession are entangled and restructured in this network.

In this article, the sample of billboards is analyzed through content analysis and is understood to be both an artifact of the planning profession and an influencer of the planning profession. The article proceeds to describe and present an analysis of the billboards in Cairo as actors in an actor-network analysis. Using ANT, street billboards as examples of urban visualizations and media are perceived as both a method for research and a means for understanding planning practice and the role of planners. As such, the billboards were treated as actors in the planning process. As a planner who studied architecture, visualizing the network was a challenging task in this article, as designers generally share a known common language of communication to convey their ideas. Nonetheless, how things and networks are defined is still an open field. Not having a preconceived idea of what the network looked like was useful, as I attempted to develop more than one trial to reflect what emerged the more I looked at the network and tried to visualize it from an ANT lens. Rydin (2012) presented a visualization for studying the network regulating low-carbon commercial development with and without material actants. Figures 6 and 7 in this article are inspired by this before-and-after approach. Yet still, I think the presented figure (Figure 7) could be considered a success to the extent that it provokes discussion and criticism.

## 4. The Physiognomy of Real Estate Billboards on Cairo’s Bridge

This section provides an analysis of a sample of 209 billboards from four angles: the language used on the billboards, the content of the billboards, the patterns of real estate billboards, and the geo-positioning of the billboards in reference to the advertising communicated.

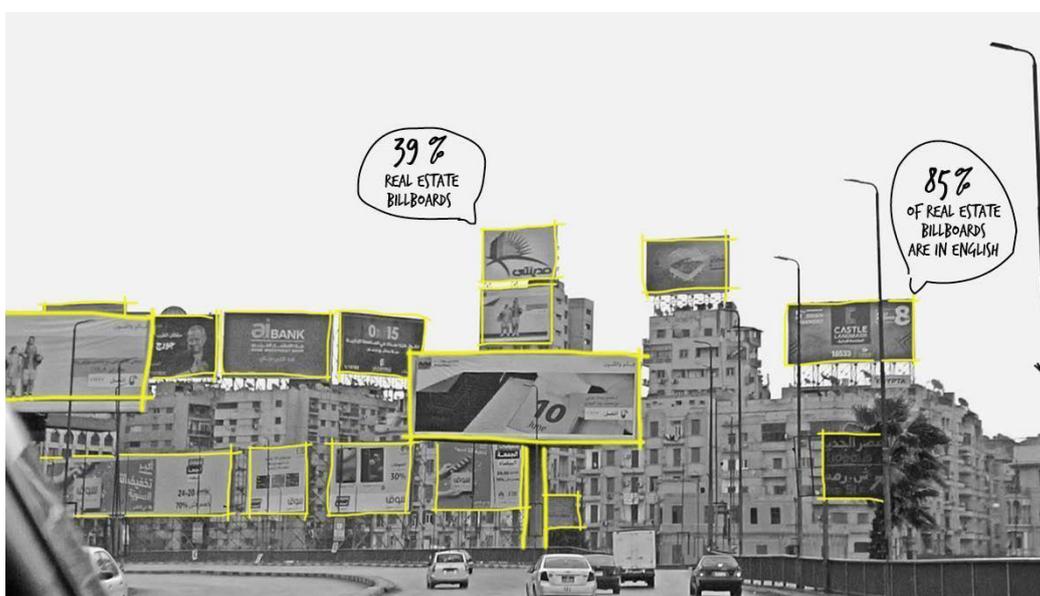
### 4.1. Content and Language of Cairo’s Bridge Billboards

The analysis of the 6th of October Bridge showed that around 39% of the 209 analyzed billboards were real estate ads, making the final sample on which this article works about 82 real estate billboards. Of these, a

striking 85% were in English, 10% were bilingual, and only 5% were in Arabic. Figure 3 shows photographs of the billboards on the bridge and an overview of these statistics.

Simultaneously, the study of the bridge revealed the names of 23 real estate projects or developers, 21 of which had Western names (English and French), with only two developer names in Arabic (Amer and Emaar). Nevertheless, Emaar, as a developer company with an Arabic name, offered two real estate projects with non-Arabic names (Mivida and Uptown Cairo) and one project with an Arabic name (Marassi). Similarly, Amer, another developer company with an Arabic name, promoted a series of real estate projects under the non-Arabic name “Porto” (Porto Cairo, Porto Marina, Porto Sokhna, etc.). In a country with an almost 25% illiteracy rate (“More than 25%,” 2014), billboards in English—or even Arabic—do not target 25% or more of the population, which is a significant percentage to be ignored.

Figure 3 also shows how significantly billboard advertising affects the street experience of the general public passing by the bridge. Moreover, it illustrates the influence of the billboards on the built environment nearby, as they are constructed on the facades and rooftops of buildings. In the same vein, Abotera and Ashoub (2017) discuss the dominance and exclusivity of billboards in Egypt, describing them as “reproducing nature and dominating spaces of representation.” They argue that billboards focus on marketing the scarce resources of water and greenery in the Egyptian urban environment (Abotera & Ashoub, 2017). The analysis in this article also shows that the promise of green living was one of the main messages continuously observed on the bridge billboards. Additionally, other dominant messages were communicated through the names and slogans of the real estate projects promoted by the billboards. Examples include: “Castle Landmark....More space, better life,” “The Ridge Villas....Elevated life,” “La Fontaine....Live the waterfront,” “Stella Park....Every home with a view,” etc. On the one hand, this illustrates the dominance of English and French names. On the other hand, it demonstrates the nature of the promises communicated through billboard advertising. In ANT terms, billboards as material actants emphasize other material actants (water and greenery) while simultaneously covering nearby materials (the surrounding buildings).



**Figure 3.** Analysis of the content and language of the bridge billboards.

#### 4.2. Patterns of Real Estate Billboards on Cairo's Bridge

Two main patterns of real estate billboards were observed (as seen in Figure 4). Pattern 1 included mostly text with the name and slogan of the project, the contact information of the developer, and their logo and slogan. Pattern 2 included this text in addition to 3D-rendered images of the project. These images visualized the promises mentioned above and were generated by the commissioned planning offices.

Rose et al. (2014), utilizing ANT, have emphasized the link between the computer-generated images of urban projects and the contextual national and international discourses of visual culture. By examining the images communicated through the billboards more closely, it was found that most of the images featured large green spaces, numerous trees, and water features, promising a good life that is unattainable by the majority of the population. At the same time, very few of the billboards depicted inhabitants, who, if present, reflected a high socio-economic status. By taking a broader perspective on the context of the advertising communicated through the billboards, the geolocations of the ads were determined and are presented in Figure 5.



Figure 4. Patterns of real estate billboards in Cairo.

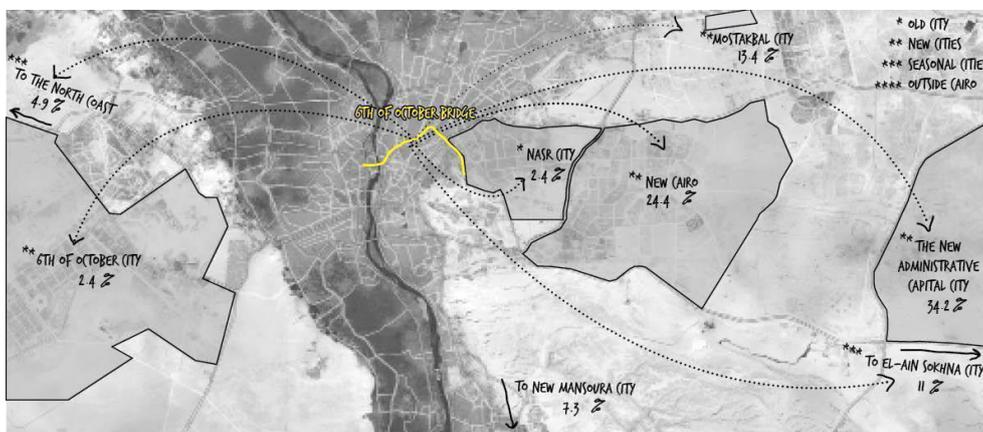


Figure 5. Geolocations of 82 real estate ads (out of the studied sample of 209 billboards).

### 4.3. Geo-Positioning of Cairo's Bridge Billboards

Figure 5 shows that 74.4% of the communicated ads were for projects in new cities, 23.2% for seasonal projects, and 2.4% for projects in the old city. While this mapping indicates that, in terms of size, ads seem spatially relevant, in terms of population, statistics from 2006 showed that only around 2.5% of the Egyptian population had actually moved to the newly built cities that most real estate ads market (World Bank, 2008). Meanwhile, approximately 15% of Egyptians can afford to live in the promoted elite compounds (Sims, 2011), and a minority of the population own a private car, as mentioned above, and hence can afford to live in the suburbs. These figures, in parallel with my analysis, show that the billboard ads were exclusively targeting a minority of the general public and highlight the need for massive infrastructure to support the development of these new cities.

According to the Central Agency for Public Mobilization and Statistics, in 2019, it was noted that the private sector established 221,187 housing units with a total investment of around LE 77.3 billion (approximately \$1.63 billion; "Over 326k housing units," 2019). Assuming that families in Egypt consist of four persons, the 221,187 housing units accommodate around 56,000 families. Given that the price of one 16 × 10 meter billboard on the bridge costs LE 200,000 (around \$12,000) per year (Issa, 2019), this also means that the advertising budget is allocated towards only 0.002% of the 100,972,073 Egyptian population (Worldometers, 2019). This accordingly raises several questions about the large size of these ads in contrast to how little of the population is served in the end. The previous analysis shows that a highly targeted elite has invaded public space. Therefore, the regular population is not only subjected to the communication of these projects but also, in one way or another, coerced into accepting them.

This deconstruction of the billboards reflects not only the kinds of messages they communicate but also the targeted audience. In a context with high illiteracy rates and most of the population living in informal areas (40% of the population in the Greater Cairo region live in informal areas; El-Shahat & Khateeb, 2013; and only 2% have moved to the promoted compounds; Shawkat & Hendawy, 2016), the current billboards do not target, nor do they include, the majority of the population. Accordingly, the symbolic icons and images communicated to the general public through the billboards during their everyday street encounters contribute to creating an exclusive city perception. In the case of Cairo, the billboards target and are accessible to certain segments of society (in the case of the 6th of October Bridge, those who understand the English language and own a car or use privileged transportation [taxi or Uber] and pass over the bridge).

At the same time, the plurality of billboards densely placed on the bridge and in front of existing buildings creates a sonographic facade and shapes the physicality of the bridge. This transformation has significant implications for the surrounding urban environment, affecting visual aesthetics, residential quality of life, economic inclusivity, environmental health, and public safety.

While the bridge is expected to provide its users with an aerial view of the city, the extensive use of billboards changes these expectations, transforming the cityscape into a commercial scape. This visual dominance impacts the surrounding areas by creating visual pollution, overshadowing local cultural and historical features, and continuously exposing residents and passersby to aggressive advertising, which can increase stress levels and create a sense of constant commercial bombardment. Moreover, neighborhoods close to the bridge, such as Zamalek, Dokki, and Mohandeseen, are diverse in terms of socio-economic

status and are affected by the presence of the billboards in several ways. The visual and noise pollution from the bridge can reduce the quality of life for nearby residents, leading to lower residential satisfaction.

Additionally, billboard placement and content have several impacts on urban quality. Billboards, particularly illuminated or digital ones, contribute significantly to light pollution, disrupting the natural day-night rhythm and causing discomfort for nearby residents. Visual pollution from bright and constantly changing ads can be overwhelming and reduce the aesthetic quality of the urban environment (“The true cost of billboards,” 2024). Continuous exposure to advertising can lead to “advertising fatigue,” where residents feel overwhelmed by constant commercial messaging (Abrams & Vee, 2007). The nature of advertised content can influence the socio-economic dynamics of the area. High-end advertisements may cater to wealthier demographics, which can feel exclusionary to lower-income residents and reinforce social stratification. Conversely, local business advertisements can support community identity but are often outnumbered by larger corporate ads (Woo, 2006). Billboards can obstruct important views, including natural scenery and traffic signals, posing potential safety risks. They can also block sunlight and ventilation for adjacent buildings, affecting the living conditions of nearby residents (Muvombo, 2017). Finally, the proliferation of billboards can erode the cultural and historical identity of the area, replacing it with a commercialized image that may not resonate with or benefit the local community (McMahon, 2023).

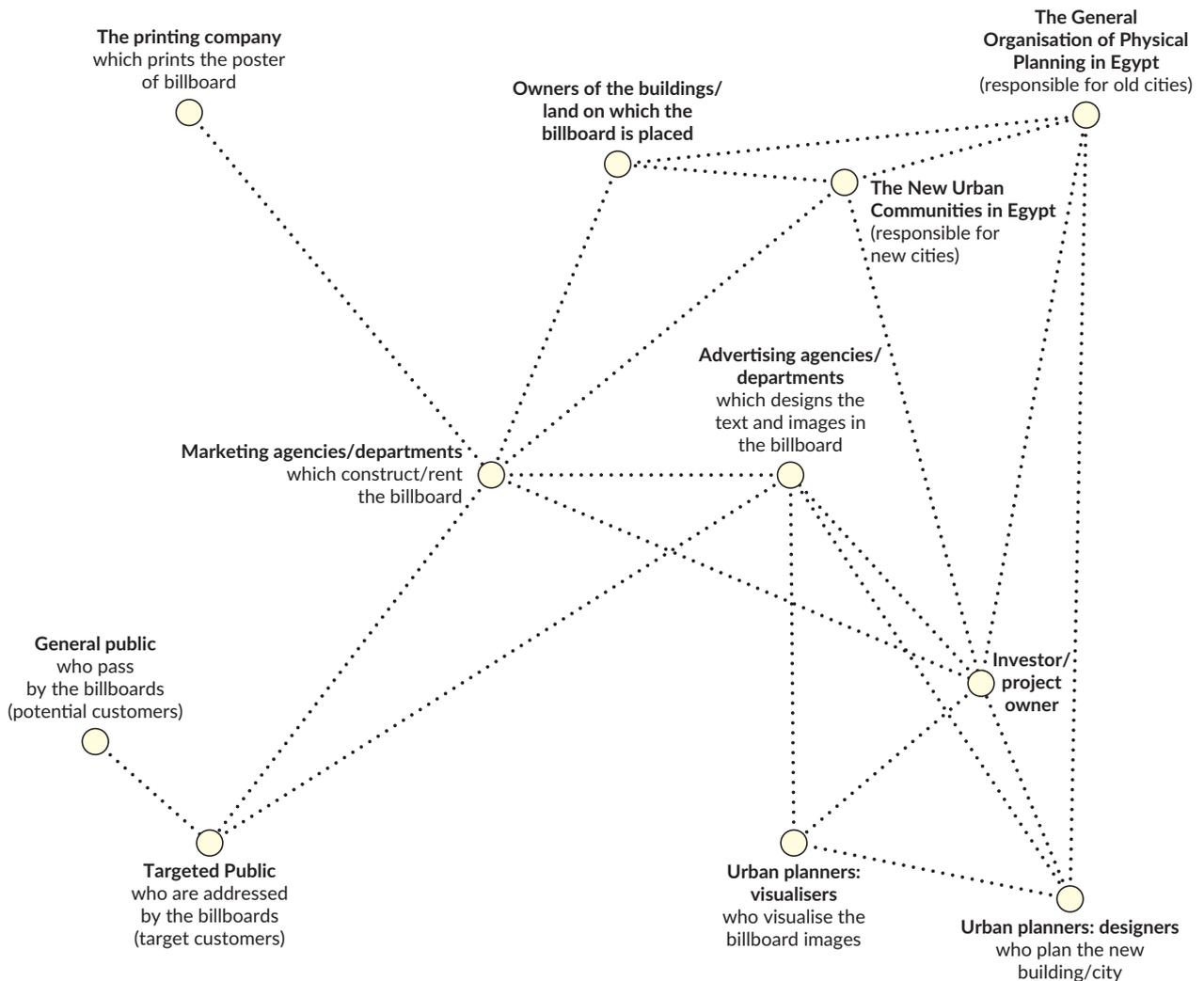
## 5. Following the Real Estate Billboards as Actors

The previous analysis has shown that billboards reshape not only the city’s visual experience but also its spatial everyday encounters. Additionally, the analysis demonstrated that 39% of these billboards are occupied by real estate ads promoting an idealized version of a good life. While the themes of these billboards are mainly created by advertising agencies, the 3D images used as content are developed by urban planners. Moreover, the analysis has shown that many of those who are not targeted by the real estate advertisements on the billboards are made invisible by them. Yet still, the billboards standing on the public streets of the city are seen by everyone, including those who are not targeted by them. Elsewhere, I have investigated the extent to which this invisibility results in social and spatial exclusion. I have argued that through the visibilities and invisibilities communicated by planning visualizations, justice in planning becomes a question, constructing spatial and visual injustice in cities (Hendawy, 2022).

A standard actor analysis (i.e., stakeholder analysis) of the billboard would focus on the interaction between key social actors such as the urban planners who visualize the images on the billboards, the marketing agency that markets them, the general passerby public, the targeted public, etc. This is demonstrated in Figure 6, which illustrates the social actants in the billboard network.

Looking at the network from an exclusively human actant lens analyzes the production of the billboards but alienates the role of the billboards in the network (and other material elements) by perceiving them as only tools, receivers, or reactants to social actors. Thus, the use of an ANT lens reflects material–social relationships (particularly the billboard–planner relationship).

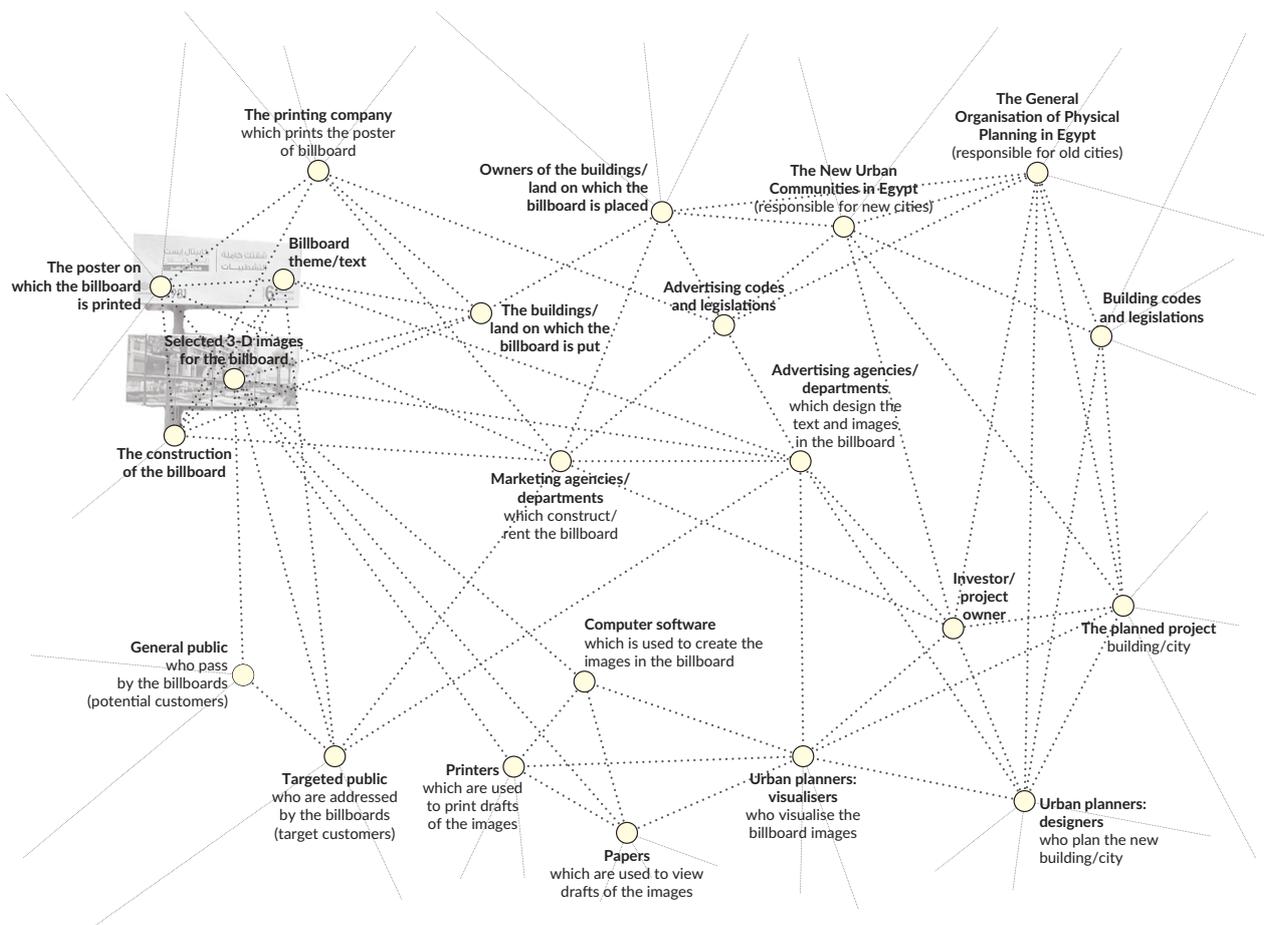
With a focus on planning visualizations that are primarily used as tools to communicate urban visions, Rogers and Hunt (2019) note, “the conceptualisation, planning, preparation and realization of any ‘future city’ is a complex but necessary requirement in a world where cities transition, transform, shrink, expand and evolve.”



**Figure 6.** Visualizing the human actants in the billboard network.

Earlier, Culkin (1967, p. 70) had said, “we shape our tools and thereafter our tools shape us,” based on the work of media theorist Marshall McLuhan. Through using ANT, I aim to unravel the layers behind the construction of street billboards as a spatial phenomenon (tool/product) and the embedded actions by planners and planning offices that produce them. Given that a full ANT analysis of all actants contributing to the assemblage of billboards would be too complicated, as an actor-network is essentially infinite (Callon, 1986), the analysis in this article takes only a snapshot of the planning network behind the billboard; this snapshot is chosen based on the data collected from field visits to planning offices and discussions conducted with planners working there.

To capture the equal role of material actants in the network, another scenario that does not alienate the billboards emerges, contrary to the one presented in Figure 6. I integrate the key non-human actants into the social network presented in the previous figure, now shown in Figure 7. In this mapping, other material actants become an integral part of the network, such as the billboard text or theme, the construction of the billboard, the buildings on which the billboard is placed, advertising codes and legislation, the paper or poster on which the billboard is printed, the images produced by planning offices and selected by the marketing agency, the computer software used to create these images, and so on.



**Figure 7.** Following the never-ending network of billboards through an ANT perspective.

This proposed ANT diagram removes the centrality of social actors and illustrates the interaction and interdependence of both social and material actants in the billboard network. One of the many observations that arise from looking at the network in this way is how material actants are also actors in the network. For example, the images initially produced by planners also co-produce the final billboards and influence the planners who produce them.

Moreover, the diagram shows that the communication flow among actors indicates a lack of direct communication between planners and both the general and targeted public. Marketing and advertising agencies have become the connecting social actor, while the use of 3D images in the billboards produced by planners has become the connecting material actant. On one hand, this refutes the current global demands for communicative, collaborative, and participatory planning practices where direct communication between planners and those they plan for is expected (Cilliers & Timmermans, 2014; Healy, 1996; Rietbergen-McCracken, 2003). On the other hand, it confirms the financialization of land, property development, and the privatization of the real estate industry (see Hendawy et al., in press).

Visualizing the network with and without material actants helps highlight the mixed local and global networks (in Murdoch & Marsden's [1995] view, local and national) that the billboard reflects. It is still noteworthy to clarify that visualizing the network does not aim to draw a boundary for it. That's why in Figure 7 I kept the

boundaries of the figure open, resembling infinity. Additionally, I removed the colors from Figure 6 to indicate the equality of humans and things. ANT provides a different view whereby, in the construction of billboards, there is not only the abstract interaction of social actors but also the involvement of other assemblages such as knowledge, economy, text, images, and more. To study how these actants function in relation to one another and how they engage each other in the network, with a focus on the billboard–planner interactions, the next section reflects on planning practice in Egypt, the kind of city Egyptian planners see or plan, and the kind of public sphere they co-produce or are part of.

## 6. From Street Billboards to Planning Offices

This study has shown that most bridge billboards are occupied by real estate ads. While the themes of these billboards are mainly created by advertising agencies, the 3D images used as content are developed by urban planners. To meet these market needs, urban planning offices ensure that appointed urban planners possess strong visualization skills. We find that most job descriptions call for urban planners to master computer visualization software like 3ds Max and Photoshop. As such, the practice of urban planning and the planners' communication with the general public are limited to an exclusive view of the city.

During my research on Cairo's urban mediatization (see Hendawy, 2022), a graduate student told me, "We are asked to be visualizers, not designers or planners." This sentiment was echoed by many urban planners I met. Additionally, the owner of an architecture and planning office in Cairo mentioned in an informal discussion, "I build my image based on the mentality of the sales agency; this is paralyzing." These remarks were thought-provoking and highlighted the challenges faced by urban planners in the current mediatized environment.

Using ANT, Rose et al. (2014, p. 385) have argued that computer-generated images (CGIs) are not only alluring images found in urban spaces but also interfaces "circulating through a software-supported network space." Viewing billboards and visualizations as actors in the planning network reveals that the planning process is driven by investors, with no place for an inclusive urban planning process; rather, there is only urban media generated by planners. Understanding that planners are meant to generate urban media reflects a billboard–planner connection.

As the planning process becomes increasingly dependent on visualizations, the role of urban planners in Egypt is simultaneously reconstructed, entailing a shift in the professional roles and responsibilities of urban planners. As their work becomes more reliant on advanced visualization techniques, urban planners are increasingly required to possess technical skills in visualization software. This shift emphasizes the importance of creating visually appealing representations of urban projects, which cater to market demands and advertising strategies. Additionally, this reconstruction implies that urban planners are now key contributors to the visual culture of urbanization. Their work not only shapes the physical layout of cities but also influences the public's perception of urban spaces through the imagery displayed on billboards. As a result, urban planners play a pivotal role in crafting the visual narratives that define new developments and cityscapes. However, this focus on visualization can also limit the scope of urban planning to an exclusive view of the city. The communication and connection between planners and the general public become constrained by the need to produce market-driven, visually compelling content. This exclusivity may lead to a narrowed perspective on urban issues, potentially overlooking broader community needs and inclusive

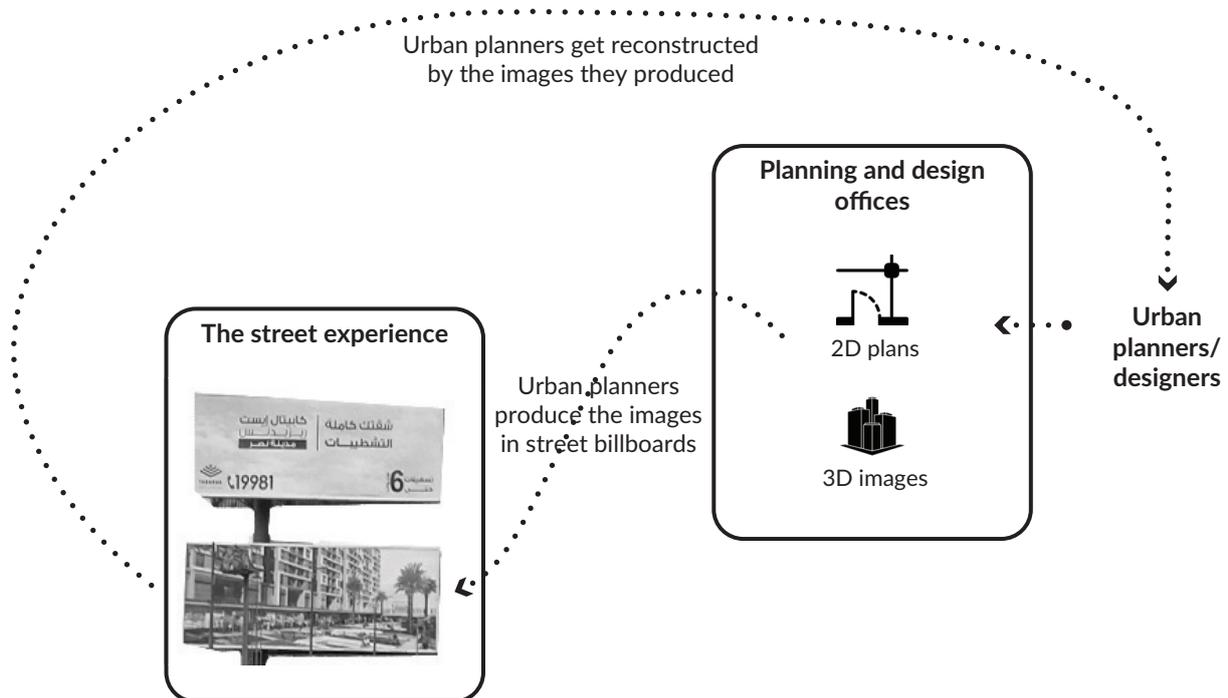
planning practices. Consequently, while visualization skills enhance the marketability and appeal of urban projects, they also reshape the urban planning profession, raising critical questions about the balance between aesthetic representation and comprehensive, community-oriented planning. Notably, this shift does, in a sense, make urban planners visualizers, focusing on the creation of aesthetic representations that meet market and advertising demands.

Professional planners being asked to work as visualizers change correspondingly their self-understanding concerning their practice. They shift from planning a shared city to visualizing an exclusive city driven by the market and attainable only by the upper segments of society. Although the objective of planning is to create cities that function inclusively for all citizens, providing opportunities for both affluent and disadvantaged populations (UN-Habitat, 2010), these types of planning projects in Egypt, of a developmental social nature, are not seen in Cairo's street billboards or in most private planning offices. In the context of Cairo's billboards, planning complies with rather than resists the contextual political economy, which involves only the privileged minority.

The reconstructed role of planners as visualizers outlines the type of exclusive public spheres urban planners produce and are part of. A significant concern of this study relates to how and the extent to which planners and planning practice are shaped by the material environment they create and, more importantly, what happens afterward. This study has used ANT to reflect on these dynamics by tracing the relationships and interactions between various actors involved in the creation and dissemination of planning visualizations. ANT helped to uncover how different elements—such as urban planners, advertising agencies, visualization software, billboards, and the public—are interconnected and influence one another. By following the billboards as actors and their networks, the study reveals how the material environment, represented by visualizations, impacts the practices and roles of urban planners. It also explores the ongoing effects and transformations that occur as these visual representations circulate and interact with the public and other stakeholders. Through ANT, the study provides a nuanced understanding of the complex, reciprocal relationships that shape and are shaped by the visual culture of urban planning.

Chavarría and Stollmann (2018, p. 46) have claimed that “if designers become aware of their networked practice, they avoid reproducing existing power constellations unknowingly. Plus, they become more receptive to the expertise and knowledge types of the so-called laypeople, amateurs, or opponents.” This study emphasizes not only the importance of understanding the networked practices of urban planners and advertisers but also the need to recognize and incorporate the diverse perspectives of various stakeholders. By doing so, urban planners can avoid unintentionally perpetuating existing power structures and work towards creating more inclusive and equitable urban environments. This recognition and integration of multiple perspectives are crucial in addressing the territorial inequalities that urban advertising both reveals and conceals, ultimately contributing to a more holistic and inclusive approach to urban planning and development.

Reflecting on the planner–billboard interactions raises some critical concerns: Are we seeing a professional construction of exclusion in Egyptian cities, and what is the actual role of professional planners in this network? With the increasing reliance on visualizations, it seems urban planners are no longer just planning and designing future buildings and cities—they are now primarily visualizing them. Has the task of creating visualizations overshadowed their core responsibilities? In some ways, visualizing has become a strain on



**Figure 8.** Production and reproduction processes of planners and billboards.

planners' professional self-understanding. Alarming, even urban planning students are outsourcing the visualization of their projects to external offices (see Hendawy, 2021, 2022). The real issue here is the invisibility created by this visibility—the lack of diversity and inclusivity that these uniform visual representations generate.

Urban planners, being the central professionals focused on in this article, indicate that in the process of constructing the images/visualizations in planning and billboards, planning practice and planners themselves are closely linked, highlighting the changing profession of the planner. Hence, I link the billboards back through their production to the people or professionals and the computer machinery that made them (Figure 8).

This study provides an original analysis of urban advertising in Cairo, extending beyond a mere interpretation of project images. It reveals the significant role advertising plays in highlighting the territorial inequalities at work in Cairo, even as it attempts to conceal them. By employing ANT, the article demonstrates the integral role that advertising plays in both urban planning practices and the shaping of urban landscapes. The article confirms the heuristic value of using billboard advertising as a focal point for urban research. It incorporates unpublished empirical material that is particularly noteworthy and deserving of attention.

## 7. Conclusion

This study has provided a comprehensive analysis of urban advertising in Cairo, focusing on the role of street billboards in shaping both the visual and spatial dynamics of the city. By employing ANT, the research traced the intricate relationships between billboards, urban planners, and other network actors, revealing how these visual tools contribute to the restructuring of the planning profession.

The findings highlight the significant impact of billboards on urban landscapes, often promoting exclusive real estate projects to a socio-economic elite and reinforcing territorial inequalities. This visual dominance not only reshapes the cityscape but also influences the professional roles of urban planners, who are increasingly becoming visualizers. This shift in roles underscores the need for urban planners to possess advanced visualization skills, which are now central to their practice.

However, this emphasis on visualization has led to a narrowed perspective on urban issues, potentially overlooking broader community needs and inclusive planning practices. The study underscores the importance of recognizing and incorporating the diverse expertise and knowledge of various stakeholders, including laypeople, amateurs, and opponents, to avoid perpetuating existing power structures and to work towards more inclusive and equitable urban environments.

By using ANT, the study provides a nuanced understanding of the complex, reciprocal relationships that shape and are shaped by the visual culture of urban planning. It highlights the necessity for urban planners to navigate and influence these dynamics thoughtfully, balancing aesthetic representation with comprehensive, community-oriented planning. In conclusion, the research contributes to the literature by demonstrating the heuristic value of using billboard advertising as a focal point for urban research. It calls for a more inclusive approach to urban planning that addresses the territorial inequalities revealed by urban advertising, ultimately promoting a more holistic and equitable urban development.

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### Conflict of Interests

The author declares no conflict of interests.

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