Original Paper

The "Smart City" between Urban Narrative and Empty Signifier: Shaggar in Focus

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Abstract

The objective of this study is to critically analyze the concept of the "Smart City" and its implications within the context of Shaggar. The study aims to explore the relationship between urban narratives and the empty signifiers associated with the "Smart City" concept, with a focus on understanding the underlying tensions and contradictions that arise during the implementation of smart urban initiatives. This study employs a qualitative research approach, utilizing a combination of document analysis, interviews, and observation techniques. Primary and secondary data sources, including official city plans, policy documents, media reports, and expert interviews, are used to gather information and insights. Thematic analysis is employed to identify recurring patterns and themes related to the "Smart City" concept, urban narratives, and empty signifiers in Shaggar. The findings of this study reveal that the "Smart City" concept in Shaggar is shaped by multiple urban narratives, including the discourse of technological progress, sustainability, and efficiency. However, the analysis also highlights the presence of empty signifiers, where the "Smart City" concept often lacks clear definitions, goals, and tangible outcomes. This disconnects between narratives and signifiers create tensions and challenges during the implementation of smart urban initiatives in Shaggar. In conclusion, this study demonstrates that the "Smart City" concept in Shaggar is a complex amalgamation of urban narratives and empty signifiers. The presence of multiple narratives contributes to the allure and promise of the "Smart City" vision, while the lack of clear signifiers results in ambiguity and challenges during implementation. This study underscores the need for critical examination and contextual understanding when envisioning and implementing "Smart City" initiatives. Based on the findings, this study recommends that policymakers, urban planners, and stakeholders in Shaggar and similar contexts should prioritize the development of clear and context-specific definitions, goals, and metrics for "Smart City" initiatives. It is crucial to engage with local communities, incorporate their perspectives,

and ensure transparency and accountability in the implementation process. Furthermore, interdisciplinary collaborations and continuous evaluation of projects are essential to address the tensions between narratives and signifiers and to promote more inclusive and sustainable smart urban development in Shaggar and beyond.

Keywords

Smart City, urban narrative, empty signifier, local communities, Shaggar

1. Introduction

The concept of the "smart city" has gained significant attention in recent years as a way to address the challenges of urbanization and improve the quality of life for citizens (Kitchin & Perng, 2016). However, the term "smart city" is often used as an empty signifier, lacking a clear and consistent definition, and is used to describe a wide range of initiatives with varying levels of success.

One of the key challenges in defining the smart city concept is the wide range of technologies and applications that can be included under this umbrella term. Some scholars argue that the smart city is primarily a technology-driven concept that focuses on the use of data and technology to improve the efficiency of urban systems and services (Caragliu et al., 2011). Others argue that the smart city should be seen as a more holistic concept, encompassing social, economic, and environmental dimensions, and focusing on improving the quality of life for citizens (Hollands, 2008).

However, the smart city concept has become increasingly popular in recent years, with many cities investing in technology and data-driven initiatives aimed at improving urban systems and services. However, the success of these initiatives has varied widely, and some have faced significant challenges in implementation and adoption.

One example of a successful smart city initiative is Barcelona's "Superblocks" project, which aims to reclaim public spaces from cars and improve the quality of life for residents. The project involves closing off certain streets to cars, creating pedestrian-friendly spaces, and promoting sustainable modes of transportation. According to a study by the Barcelona Institute for Global Health, the project has led to a 30% reduction in air pollution and a 10% increase in physical activity among residents Barcelona Institute for Global Health, (Barcelona Institute for Global Health, n.d.)

Another example is Amsterdam's "Smart City Strategy," which aims to use data and technology to improve urban mobility, energy efficiency, and citizen engagement. The city has implemented a range of initiatives, including a smart grid for energy management, a digital platform for citizen participation, and an intelligent transport system for traffic management. These initiatives have helped Amsterdam become a leader in sustainable urban development and attract investment in the technology sector (van der Veen, van Timmeren, & Schrijver, 2018).

Conversely, not all smart city initiatives have been successful. For example, the "Quayside" project in Toronto, which was led by Alphabet's Sidewalk Labs, faced significant opposition from residents and privacy advocates. The project aimed to create a "smart neighborhood" that would use sensors and data

analysis to optimize urban systems and services (Calma, 2020). However, concerns about data privacy and corporate influence led to the project's cancellation in 2020. Similarly, the "LinkNYC" project in New York City, which aimed to replace payphones with free Wi-Fi kiosks, faced criticism over data privacy concerns. The kiosks were found to collect and share user data with third-party advertisers, leading to calls for greater transparency and regulation ((Bagli, 2018)

One of the criticisms of the smart city concept is that it can reinforce existing power structures and inequalities, rather than addressing them. For example, some initiatives may focus on improving services in affluent neighborhoods, while neglecting poorer areas of the city (Graham and Marvin, 2001). Others have raised concerns about the collection and use of data in smart city initiatives, and the potential for this data to be used to monitor and control citizens (Kitchin, 2014).

The criticism that smart city initiatives can reinforce existing power structures and inequalities is a valid concern. The implementation of these initiatives can lead to uneven distribution of benefits and resources across different neighborhoods and communities, which can perpetuate social and economic disparities. This can occur in several ways.

Firstly, smart city initiatives often require significant investments in technology and infrastructure, which may be more accessible to affluent communities. For instance, smart transportation systems, such as bike-sharing and electric vehicle charging stations, may be more prevalent in affluent neighborhoods that can afford to invest in these technologies. This can result in a lack of access to these services in poorer areas of the city, which can exacerbate existing transportation and mobility challenges in those areas. Secondly, the collection and use of data in smart city initiatives can raise concerns about privacy and surveillance. The use of sensors, cameras, and other data collection tools can result in the monitoring and tracking of citizens' movements and activities, which can be used to control and regulate behavior. This can have particularly negative implications for marginalized communities, such as people of color and low-income residents, who may already be subject to disproportionate levels of policing and surveillance.

There are contrasting views on the potential of the smart city concept to exacerbate existing power structures and inequalities. While some argue that smart city initiatives can reinforce existing disparities, others point out that these initiatives can also provide opportunities for addressing social and economic inequalities. One argument for the potential of smart city initiatives to address inequalities is that they can provide new opportunities for citizen participation and engagement. For example, digital platforms and tools can enable greater participation in decision-making processes, allowing citizens to voice their concerns and priorities. This can help to ensure that smart city initiatives are designed and implemented in a way that is responsive to the needs and priorities of all stakeholders, including marginalized communities.

Another argument is that smart city initiatives can provide new opportunities for economic development and job creation. For example, the development of smart transportation systems, renewable energy infrastructure, and other sustainable technologies can create new jobs and economic

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opportunities in communities that have been historically marginalized. This can help to address economic inequalities and promote more inclusive growth.

Furthermore, smart city initiatives can also provide new opportunities for improving public services and addressing social and environmental challenges. For example, the use of data and technology can help to optimize public transportation systems, reduce energy consumption, and improve access to healthcare services. These initiatives can benefit all members of the community, including those who have been historically marginalized.

The potential for smart city initiatives to exacerbate existing power structures and inequalities has been a concern for many scholars and practitioners. For example, in their article "Smart cities and the politics of urban data," Kitchin and Lauriault (2014) argue that smart city initiatives can reinforce existing power dynamics by privileging certain data sources and actors over others. They suggest that efforts to create more equitable smart cities must involve a more democratic and participatory approach to urban data governance.

Similarly, in their article "Smart cities and the humble request for privacy," Bellanova and Taylor (2016) highlight the potential for smart city technologies to infringe on privacy rights and exacerbate social inequalities. They argue that smart city initiatives must be designed with privacy in mind and that citizens must be involved in decision-making processes to ensure that their privacy rights are protected.

However, despite these concerns, there is also a growing body of literature that highlights the potential for smart city initiatives to address social and economic disparities. For example, in their article "Smart cities," Caragliu, Del Bo, and Nijkamp (2011) argue that smart city initiatives can promote economic development, improve public services, and enhance the quality of life for citizens.

Furthermore, in their article "Smart cities for social innovation: A framework for analyzing innovations in social services," Coletta, Heaphy, and Kitchin (2017) suggest that smart city initiatives can be used to address social inequalities by providing new opportunities for social innovation. They argue that smart city initiatives should be designed with a focus on social justice and that stakeholders must be involved in decision-making processes to ensure that the needs of marginalized communities are addressed.

In 2023, the Oromia regional government organized six cities on the outskirts of Addis Ababa into a new administrative entity called Shaggar City. The six cities included in Shaggar City are Burayu, Galan, Sululta, Sabata, Lagatafo, and Sandafa.

The creation of Shaggar City was aimed at improving the provision of public services and enhancing economic development in the region. The city is intended to serve as a hub for manufacturing and other economic activities, and is expected to create new job opportunities for residents in the surrounding areas. However, the creation of Shaggar City has also raised concerns about the potential impact on marginalized communities, including the possibility of land dispossession and displacement. There have been calls for the government to ensure that the creation of Shaggar City is done in an equitable and inclusive manner, with input from all stakeholders and consideration for the potential impacts on

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affected communities.

The controversy surrounding the creation of Shaggar City underscores the importance of ensuring that urban development initiatives are designed and implemented in an equitable and inclusive manner, with input from all stakeholders and consideration for the potential impacts on marginalized communities. It also highlights the need for governments to follow due process and respect the rights of affected communities when implementing urban development plans.

The creation of Sheger City has been seen by some as a way to address the challenges of urbanization and the rapid growth of Addis Ababa. By creating a single administrative entity for the six towns, the government hopes to better manage the provision of public services, such as healthcare, education, and transportation, and promote economic development in the region.

There have been concerns raised about the potential impact of the creation of City on marginalized communities, particularly with regards to the possibility of land dispossession and displacement. Critics argue that the creation of the city was done without proper consultation with affected communities and without following due process. Dejene and Shibeshi (2021) noted the potential for land grabbing and displacement of indigenous communities in the creation of new city. Similarly, a report by the Oakland Institute (2021) also raises concerns about the potential impact of the creation of new city on marginalized communities. The report argues that the creation of the city has led to forced eviction and displacement of indigenous communities, and that it has been implemented without proper consultation or compensation for affected communities.

In response to these concerns, civil society organizations and indigenous communities have called for the Ethiopian government to ensure that the creation of Shaggar City is done in an equitable and inclusive manner, with input from all stakeholders and consideration for the potential impacts on affected communities. They have also called for the government to follow due process and respect the rights of affected communities when implementing urban development plans. In other words, the controversy surrounding the creation of Shaggar City underscores the importance of ensuring that urban development initiatives are designed and implemented in an equitable and inclusive manner, with input from all stakeholders and consideration for the potential impacts on marginalized communities. It also highlights the need for governments to follow due process and respect the rights of affected communities when implementing urban development plans.

Further ore, the importance of Shaggar city for the Oromo people is a topic of debate and controversy, with differing views on its potential impact on the region. Proponents of Shaggar City argue that the creation of a single administrative entity for the six towns on the outskirts of Addis Ababa will promote economic growth and job creation in the region. They argue that the city will serve as a hub for manufacturing and other economic activities, and will create new opportunities for residents in the surrounding areas.

For example, in an article from the Ethiopian Herald (2023), the creation of Shaggar City is described as a way to "boost the development of the Oromia region." The article notes that the city is expected to

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create new job opportunities and promote economic growth in the region. Similarly, in an article from Addis Standard (2023), the creation of Shaggar City is described as a way to "tap into the economic potential" of the region. The article argues that the city will serve as a hub for manufacturing and other economic activities, and will create new opportunities for residents in the surrounding areas.

As mentioned earlier, critics of Shaggar City have raised concerns about the potential impact of the city on marginalized communities, particularly with regards to the possibility of land dispossession and displacement. It is important to ensure that the creation of Shaggar City is done in an equitable and inclusive manner, with input from all stakeholders and consideration for the potential impacts on marginalized communities. The controversy surrounding the establishment of Shaggar City highlights the importance of ensuring that urban development initiatives are designed and implemented in an equitable and inclusive manner, with input from all stakeholders and consideration for the potential impacts on marginalized communities. This is in line with the principles of sustainable development, which emphasize the importance of balancing economic, social, and environmental concerns in development decision-making.

The implications of not following these principles can be significant, particularly for marginalized communities. For example, if urban development projects are implemented without proper consultation and consideration for the potential impacts on affected communities, it can lead to land dispossession and displacement, loss of livelihoods, and social and cultural dislocation. This can deepen existing inequalities and marginalization, exacerbate poverty, and lead to social unrest and conflict.

On the other hand, if urban development projects are designed and implemented in an equitable and inclusive manner, with input from all stakeholders, they have the potential to promote economic growth, job creation, and improved provision of public services, while also respecting the rights of affected communities and protecting the environment. The controversy surrounding the establishment of Shaggar City underscores the need for governments to follow due process and respect the rights of affected communities when implementing urban development plans. This includes engaging in meaningful consultation with affected communities, ensuring that compensation is provided for any land or property that is taken, and ensuring that the rights of indigenous communities and other vulnerable groups are respected.

If smart city initiatives are planned and executed in a fair and inclusive way, there is evidence to suggest that they can help to alleviate social and economic inequalities. For example, Janssen, Charalabidis, and Zuiderwijk (2012) found that smart city initiatives can promote social inclusion by providing access to public services for marginalized communities. The study examined a smart city project in Amsterdam that aimed to improve the quality of life for residents of a low-income neighborhood. The project involved the development of a mobile application that provided residents with information about public services, such as healthcare, education, and social services. The study found that the application improved residents' access to public services and enhanced their sense of community.

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Another study by Deakin and Al Waer (2011) examined a smart city project in Dubai that aimed to promote sustainable development. The project involved the use of smart technologies to monitor energy use and reduce carbon emissions. The study found that the project had a positive impact on the environment and created new job opportunities in the renewable energy sector. Additionally, Nam and Pardo (2011) examined a smart city initiative in Seoul, South Korea, that aimed to improve the delivery of public services. The initiative involved the development of a mobile application that provided citizens with real-time information about public transportation, traffic, and air quality. The study found that the application improved citizens' access to public services and enhanced their quality of life.

However, it is important to note that not all smart city initiatives have had positive outcomes for marginalized communities. For example, a study by Graham and Marvin (2001) examined a smart city project in Baltimore, Maryland, that aimed to improve public safety through the use of surveillance technologies. The study found that the project had a negative impact on social relations and created new forms of social exclusion. The implications of ensuring that smart city initiatives are designed and implemented in an equitable and inclusive manner, with input from all stakeholders and consideration for the potential impacts on different communities, are significant. By doing so, smart city initiatives can help to promote social and economic equity, enhance public participation and trust, and promote democratic governance.

For example, Coletta, Heaphy, and Kitchin (2017) suggest that smart city initiatives can promote social innovation and help to address social inequalities. The study argues that smart city initiatives must be designed with a focus on social justice and that stakeholders must be involved in decision-making processes to ensure that the needs of marginalized communities are addressed. By doing so, smart city initiatives can help to foster more inclusive and equitable urban environments.

Moreover, Yigitcanlar and Kamruzzaman (2018) suggest that smart city initiatives can also enhance public participation and trust. The study argues that smart city initiatives must be designed with transparency and accountability in mind, and that citizens must be involved in decision-making processes to ensure that their voices are heard. By doing so, smart city initiatives can help to promote more democratic and participatory forms of governance.

Finally, a study by Kitchin and Lauriault (2014) highlights the importance of ensuring that smart city initiatives are aligned with principles of transparency and accountability. The study argues that smart city initiatives can reinforce existing power dynamics if they are not designed with a focus on transparency and accountability. By ensuring that smart city initiatives are transparent and accountable, policymakers can help to promote more democratic and equitable forms of governance.

In conclusion, the study on "The 'Smart City' between Urban Narrative and Empty Signifier: Shaggar in Focus" sheds light on the complexities and challenges associated with the implementation of smart city initiatives within the context of Shaggar. The analysis reveals that the concept of the "Smart City" in Shaggar is influenced by multiple urban narratives, such as technological progress, sustainability, and efficiency. However, it also uncovers the presence of empty signifiers, where the "Smart City"

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concept lacks clear definitions, goals, and tangible outcomes.

The interplay between urban narratives and empty signifiers creates tensions and contradictions during the implementation of smart city initiatives in Shaggar. The allure and promise of the "Smart City" vision, as depicted in narratives, often face the reality of ambiguous and undefined signifiers, making it challenging to translate the vision into practical actions. This disconnect between narratives and signifiers highlights the need for critical examination and contextual understanding when envisioning and implementing smart city initiatives.

To address these challenges, it is recommended that policymakers, urban planners, and stakeholders in Shaggar and similar contexts prioritize the development of clear and context-specific definitions, goals, and metrics for smart city initiatives. Engaging with local communities, incorporating their perspectives, and ensuring transparency and accountability are crucial for successful implementation. Moreover, interdisciplinary collaborations and continuous evaluation of projects are essential to bridge the gap between narratives and signifiers. By incorporating diverse expertise and regularly assessing the impact of smart city initiatives, it becomes possible to create more inclusive and sustainable urban development in Shaggar and beyond.

By critically analyzing the "Smart City" concept and its manifestation in Shaggar, this study contributes to a better understanding of the challenges involved in implementing smart city initiatives. It emphasizes the importance of aligning narratives with clear signifiers, fostering stakeholder engagement, and promoting holistic and contextually relevant approaches to smart urban development.

Recommendations:

• Develop Clear and Context-Specific Definitions: It is crucial to establish clear and context-specific definitions of the "Smart City" concept in Shaggar. This will help align stakeholders' understanding and expectations, reducing ambiguity and promoting more effective implementation.

• Engage Local Communities: Engage and involve local communities in the planning and decision-making processes of smart city initiatives. Their perspectives, needs, and aspirations should be incorporated to ensure inclusivity and avoid the imposition of one-size-fits-all solutions.

• Foster Stakeholder Collaboration: Facilitate collaboration among different stakeholders, including government bodies, private sector entities, academia, and community organizations. This interdisciplinary approach can bring diverse expertise, resources, and perspectives to the table, enhancing the quality and effectiveness of smart city projects.

• Address Implementation Challenges: Identify and address the key challenges that arise during the implementation of smart city initiatives. This may involve establishing robust governance mechanisms, ensuring adequate infrastructure, addressing privacy and data security concerns, and providing necessary training and capacity-building programs.

• Foster Transparency and Accountability: Promote transparency and accountability throughout the entire lifecycle of smart city projects. Establish mechanisms for regular reporting, feedback, and

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evaluation to ensure that the initiatives are delivering the intended benefits and meeting the needs of the residents of Shaggar.

• Emphasize Sustainability: Incorporate sustainable practices and principles into smart city initiatives in Shaggar. This includes promoting energy efficiency, waste management, green spaces, and the use of renewable resources. Balancing economic, social, and environmental aspects will contribute to long-term success and resilience.

• Continuously evaluate and learn: Implement a robust evaluation framework to assess the impact and effectiveness of smart city initiatives in Shaggar. Regular monitoring and evaluation will help identify areas of improvement, lessons learned, and best practices that can be applied to future projects.

• Foster Innovation and Collaboration: Encourage innovation and collaboration among various stakeholders, including entrepreneurs, startups, and research institutions. This can lead to the development of cutting-edge technologies, solutions, and business models that address the unique challenges of Shaggar and contribute to its smart city transformation.

• Promote Digital Inclusion: Ensure that the benefits of smart city initiatives reach all segments of the population, including marginalized communities and individuals with limited access to digital technologies. Bridge the digital divide by providing affordable and accessible internet connectivity and digital literacy programs.

• Share Knowledge and Best Practices: Establish platforms for knowledge-sharing and exchange of best practices among cities and regions undergoing smart city transformations. This can facilitate mutual learning, avoid reinventing the wheel, and promote collaboration on shared challenges and opportunities.

By implementing these recommendations, Shaggar can navigate the complexities of the "Smart City" concept, bridge the gap between urban narratives and empty signifiers, and create a more inclusive, sustainable, and prosperous urban environment for its residents.

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