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Urbanism in the Expanded Field

אורבניזם בשדה המורחב

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Urbanism has long been considered a complex and time-consuming form of practice, challenged today more than ever by a global condition of an unsettling instability. We propose to consider this fleeting moment in time and space as a case study and platform for understanding larger trends around urbanism, densification, ecosystems, and the infrastructures that connect them. This conference proposes to expand the field of urbanism not only beyond the existing fields of expertise but also beyond the commonly accepted territory of the city. It brings forward different forms of "urbanism," found beyond the city's borders, sometimes temporary and different from familiar definitions of what is called “urban”, and not always following the rules or even dogmas of the accepted discourse of “good urbanity”. We invite researchers, policy-makers, practitioners, students and teachers to share their experiences and join us in an attempt at disrupting the common understanding of concepts such as "city,“ "settlement," "village," and "suburb", with innovative thinking. We seek an urbanism that is resilient, responsive, porous and permeable - one that can invert the late-capitalist tendencies of perpetual into an ever-expanding conception of the “urban” and its mechanisms of sustainable growth.

Smart Neighborhood?

Decentralizing the Smart City Paradigm by shifting power from the city to the local neighborhood

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Abstract

Many researchers have criticized the smart city paradigm for being overly technocratic, and thus lacking the ability to respond to complexities and to the social issues the city faces. Thus, the cry to perform the 'social turn' and rediscover the social imagination of the smart city. In this article, I seek to highlight the matter of scale in smart city operations. Here, I offer the neighborhood as the optimal theater for smart city operation, offering a chance to perform the required social reset of the smart city. The transition to the neighborhood scale symbolizes not only the geographic space of a small urban unit, but also, and primarily, bases the neighborhood as an intermediary social and political unit between the municipal government and the local residents. In this article I propose a theoretical approach alongside an applicational toolbox to promote this approach. The article generates a theoretical analysis which links concepts and approaches from the field of urban sociology and collaborative planning, seeking to examine them in relation to the smart city paradigm. In applicational terms, this article utilizes the research of the 3S Lab project, which worked in collaboration with municipal government and civil society within the geographic space of the Hadar Neighborhood in Haifa. In the final section of the article I will offer a thematic analysis linking the theory with the practice of the 3S Lab, and conclude by presenting the advantages and challenges associated with the implementation of the smart city paradigms with a neighborhood sized scale.

Keywords: Smart city, Urban government co-production, Citizen participation, Urban governance, Neighborhood scale, Democratic planning

First part- Research background

This article was written in a difficult and complex political epoch in the State of Israel. Over the past few months Israel's future as a democratic and liberal state has been placed under threat. The conditions during this time have significant impact on the writing of this article, which presents it with an inherent paradox. In this article I seek to generate a new conceptual theory which examines the potentiality of changing the operational space of the smart city, from municipal management to neighborhood management. Why "management"? because the smart city is first and foremost a managerial conception of control and power (Kitchin 2013; Batty 2020). The smart city utilizes technology, regardless of whether the technology is a "smart infrastructure of the physical infrastructure of the city" or "smart digital interfaces for the resident" (I will return to these technological conceptions later in the article). The goal in both cases is identical – the creation of a system of power which grants the mayor the ability to optimally control and manage the city(Sadowski and Bendor 2019). Whereas urban studies maintain a lively debate about the social balance of power between government, market and civil society, the percolation of this debate into the smart city paradigm has been quite limited. The innovation I offer here is in the linkage between smart city technologies and democratization of cities: my claim is that these technologies represent more than optimization of municipal management processes, but generate power in themselves.

The question that is raised is to whom that power is granted and how that power changes the urban balance of power. I respond to this challenge by linking data management, urban analysis and 3D urban models with the neighborhood scale. The transition to the neighborhood scale symbolizes not only the geographic space of a small urban unity, but also and primarily the function of the neighborhood as a social and political unit mediating between the municipal government and the local residents. The

neighborhood is the space enabling the act of decentralization since it possesses a concrete presence in space, as well as localized municipal institutions such as the neighborhood council, schools and the like. These entities are the smallest, most basic analytical units on which democratic society is based.

Decentralization in the urban context

An example of urban decentralization is the Localism Act passed by the British Parliament in 2011. Its intent was to generate a process of decentralization of authorities from the central government to local communities. The localism act influenced many fields, such as education and health, and through the encouragement of managerial freedom and flexibility for local communities, the British Government sought to base its rule on a system of democratic and liberal values. The process also led to a reform in the field of urban planning, with a formal legal requirement to include neighborhood planning. The neighborhood planning requirement generates a process of decentralizing urban planning power away from the municipal government into the neighborhood systems of power. The law enables the residents to plan and design their neighborhood democratically. Via this law the residents can decide what new construction they are interested in (residences, stores and offices), its design and fabric, and what urban infrastructure they desire to preserve or add. The final product of the process is the formation of policy and plans by the residents themselves, which following a long process of external and internal reviews becomes legally binding. In other words, the plan receives statutory validity which obligates the local authority to act according to it, enabling local residents to object to any plans which are not compatible with the values represented by the locally generated neighborhood plan.

The neighborhood scale

When the British Parliament considered how residents could be enabled to participate in urban planning processes in a more democratic manner, they did not select either the all-city scale or the borough scale. Rather they zeroed in on the neighborhood scale, viewing it as ideal to generate a process of democratic planning. The "neighborhood planning" process is aware of the complexity in the transition from a municipal to neighborhood scale, and hence the first action the residents must undertake to initiate the planning process is to define precisely what the neighborhood is. The legal neighborhood requirement

sets two conditions for the definition of the neighborhood: the first is the marking of the geographic borders of the neighborhood plan. The second is the founding of a neighborhood forum which contains 21 members that represent the neighborhood's cultural and socio-economic diversity. If these two conditions are met, the residents of the neighborhood can approach the municipal government which has the power to confirm that the actions were undertaken in a democratic manner which truly represents the neighborhood with all of its complexities and layers.

The question therefore arises, when I seek to consider the idea of decentralizing the concept of the smart city to the neighborhood scale, what neighborhood do I refer to, and what the neighborhood scale can contribute to making the smart city conception into a more democratic decision-making space?

When I refer to the word neighborhood, I do not mean merely the delineation of a neighborhood a s a physical space with physical and geographic boundaries, but to the human components and the sense of belongingness which takes place within the neighborhood geographic space, emphasizing the leadership components occurring within the neighborhood. The sense of belongingness and shared fate cultivated by the geographic proximity between people offers the possibility of the developing the individual participation component within a neighborhood social network such as neighborhood committee or neighborhood NGO's.

Urban sociology refers to the neighborhood as the most simple and basic organizational form which is associated to the organizational method of the residents of the city (Park, 1925). Many sociologists attribute considerable importance to the shared fate of neighborhood residents. Thus, the idea of a neighborhood is often associated community and intimacy, and the connection between people living within the same geographic space. Often the geographic space is characterized by the physical, social and cultural characteristics which become the distinctive marker of the neighborhood. Neighborhoods can change in size from a small cluster of homes to an entire city or town. They can also differ in their socioeconomic and demographic properties and the heterogeneity thereof.

The interaction between the people living in close geographic proximity can be organized and reflected into many forms, beginning from informal gathering of neighbors who gather together for a joint community activity to formal institutionalization of such organizations as neighborhood committees or community corporations. The formal neighborhood organizations often get together to promote a specific aim such as crime reduction, the maintenance of public areas and so forth. These organizations have an important role in the municipal balance of power, and often fill a mediating position which links residents with the municipal authority (Hatuka et al, 2012) this mediating position is critically important for it actually creates the representative body of the local residents versus the municipal government institutions (Sampson et al, 2002). Thus, the term "neighborhood" in this article refers to the multidimensional network which incorporates the tension between the boundaries of the geographic space to the interpersonal interaction which enables the organization of the residents.

The smart city

The smart city is associated with progressive development conceptions which seek to promote innovation and technological developments as a means of improving the day-to-day municipal agenda. The Smart city is defined by two waves of development (Przeybilovicz et al. 2022): the first smart city wave approached the city as a physical space of infrastructure and systems. Thus, the smart city conception focused on making this infrastructure – parks, traffic lights and buildings – smarter. This was enabled via the deployment of sensors that were installed on the devices themselves and these were connected to the municipal systems, enabling the municipal government decision makers to achieve better control and management capabilities. The second smart city wave, which has gained strength over the past years, was triggered by criticism of the smart city as being overly technocratic, focusing overmuch on the physical infrastructure of the city at the expense of its residents. Technology companies therefore sought to generate a social reset via a citizen-centric approach, rather than one focused on the physical space (Cardullo and Kitchin 2019; Kitchin 2013). In this conception of the smart city, the urban municipal service systems are made accessible to the residents, enabling

democratic decision-making processes in which each resident is afforded the ability to express his opinion over the municipal decision-making processes. In this manner, this approach transforms the voice and opinion of the people into a databank which helps the mayor during the municipal decision-making process.

Public participation and the smart city

In order to understand what public participation means, and to what extent the resident can take an active part in the decision-making process we returned to the periodical " A Ladder of Citizen Participation", published by Arnstein back in 1969. Despite the many years that have passed since, this periodical still shapes our understanding of the processes of democratic planning and the manner residents are involved in the context of negotiations between the citizens and municipal governance.

There are eight steps in the eponymous ladder: the lowest is non-cooperation, the higher step represent partial cooperation or the seeming of cooperation for the sake of appearances, and the highest step is citizen power. In order to understand the highest level in which the government can enable public participation in the planning process we return to the aforementioned example of the "neighborhood planning" process, initiated by the British Parliament as part of the Localism Act. This act granted neighborhood residents the right to exclusively lead urban plans for their neighborhood. In order to understand Arnstein's participation scale in regard to the smart city, I will make use of the study of Cardullo and Kitchin (2019). This study generates a comparison between technological means that exist in the city of Dublin as part of the conception of the smart city in relation to the Arnstein participation scale (Figure 1). In their analysis they demonstrate how different initiatives of the smart city can enable resident participation on different levels of the decision making process. However, when delving in their analysis into the highest step of the ladder, citizen power, they found few smart city initiatives, and that most such examples were weak and insignificant.

Form and Level of Participation		Role	Citizen Involvement	Political discourse/ framing	Modality	Dublin Examples
Citizen Power	Citizen Control	Leader, Member	Ideas, Vision, Leadership, Ownership, Create	Rights, Social/Political Citizenship, Commons	Inclusive, Bottom-up, Collective, Autonomy, Experimental	Code for Ireland, Tog
	Delegated Power	Decision-maker, Maker				Civic Hacking, Hackathons, Living Labs, Dublin Beta
	Partnership	Co-creator	Negotiate, Produce	Participation, Co-creation		
Tokenism	Placation	Proposer	Suggest		Top-down, Civic Paternalism, Stewardship, Bound-to-succeed	Fix-Your-Street, Smart Dublin Advisory Network
	Consultation	Participant, Tester, Player	Feedback	Civic Engagement		CIVIQ, Smart Stadium
	Information	Recipient	Browse, Consume, Act			Dublinked, Dublin Dashboard, RTPI
Consumerism	Choice	Resident, Consumer		Capitalism, Market		Smart building/ Smart district
						Smart meters, Mobile/locative media
Non-Participation	Therapy	Patient, Learner, User, Product, Data-point	Steered, Nudged, Controlled	Stewardship, Technocracy, Paternalism		Dublin Bikes, Smart Dublin
	Manipulation					Traffic control

Figure 1- The connection between the Arnstein participation scale and examples of how residents can be involved in municipal activity. Source: Cardullo and Kitchin (2019)

From full citizen power to co-production

It may be that the reason the smart city finds it difficult to implement the conception of citizen power as described by Arnstein in the public participation ladder derives from the nature of the smart city. As currently constructed any action performed via the smart city approach is top-down, led by the municipal government either for the residents or, at best, in cooperation with them. According to Arnstein's ladder, citizen power refers to the municipal government entitling the residents with the option of self-governance, leaving room for initiatives for bottom-up activities. This situation is almost impossible in relation to the concept of the smart city, which requires extensive financial and human resources.

The smart city is not the only approach struggling with the idea of implementing a process of democratic planning at the highest level as Arnstein notes in her participation ladder. Planning processes also find it hard to implement the concept. Thus, while British Parliament passed a the "neighborhood planning"

law promoting the idea of citizen power, implementation has lagged. Most neighborhoods in the UK have proven unable to implement the process, with those neighborhoods who have implemented the process being high socio-economic status neighborhoods with abundant human and financial capital (Yossef Ravid, 2018)

As a response to the failures in implementation of the ideal of citizen power, in which the citizens autonomously lead urban processes, the professional literature in the field of urban planning suggests transitioning from a conception of citizen power to one of co-production, a concept drawn from the field of public policy and administration (Watson 2014; Rosen and Painter 2019).

The idea of Urban government co-production began back in the 1970s and is identified with the political economist Elinor Ostrom, who coined the phrase in the context of public policy and administration. The concept on which co-production is based is partnership of citizens in the planning and urban services supply process (Ostrom 1996; Nabatchi et al, 2017). The basis of this idea is associated with the neo-liberal urban governance ideas, in which the municipal government conceives of itself as a service provider, and joint action with the public can guarantee both efficiency and effectiveness. Unlike the process of citizen power as conceived by Arnstein, in which residents independently lead planning processes, or the top-down conception of the smart city, which focuses on developing centralized management tools by municipal decision-makers, the co-production conception seeks to generate a process of long-term partnership between municipal authorities and local residents in urban management and planning processes.

Second part- Research arena

The Smart Social Strategy (3S) Lab as a case-study of smart city co-production

The 3S Lab, held for the Hadar Neighborhood in Haifa between June 2020 and September 2023. The Lab is based on the Participatory Action Research (PAR) template (Kindon et al, 2007) . In which three

entities are partnered: 1-the Technion, via 3S Lab researchers; 2-the Municipal Government of Haifa, particularly the social welfare and community department in the city; 3-civil society activists of the Hadar Neighborhood.

The framework of the partnership and its goals were supported and defined by the Israel National Insurance funds. Thus, the 3S Lab was active from the very first in the co-production framework of civil society and municipal government are equal partners in the process. In addition, the project was from the first exclusively focused on the geographic reach of the Hadar Neighborhood rather than the entire city of Haifa.

The geographic boundaries were predefined by all of the partners of the process, including the 14 statistical regions identified by the Israeli Bureau of Statistics as part of the Hadar Neighborhood. The physical location of the project, the 3S Lab, has also been pre-selected by all the participants. The Hadrion structure, located in the heart of the neighborhood and owned by the Technion, has been chosen to house the project.

Adding the layer of the neighborhood scale to the 3S Lab

The theoretical basis of this article is part of a general call to perform a social turn of the smart city concept (Sadowski and Bendor 2019; Cardullo and Kitchin 2019; Verrest and Pfeffer 2018). The call for a social reset is a call to recreate the socio-technical imagination of the smart city, which links technological developments with the ability to generate social change and new political arrangements. In the context of the smart city, the intention is to lead to social change and a new class order by utilizing the smart city technology. Currently, the smart city technology sells the "social" as platform claiming to place the resident in the center, or via processes in which the opinion of the residents concerning a particular municipal issue is polled. In this way the smart city generates mechanisms which contribute to the social, political and financial capital of their mayors. However, the essential social issues of the city, such as inequality, loneliness, aging populations and gentrification remained unaddressed by the smart city technologies.

The first time I sought to join this group of researchers was in the " The Social Digital Twin: The Social Turn in the Field of Smart Cities" article, which describes the "Social Digital Twin" tool as a means for generating this social reset. The social digital twin is a 3D urban model which is based on social data which links between the physical and social tissue of the city, thus forming an essential tool in the urban decision-maker toolbox. On the second occasion, I sought to contribute to the social reset by utilizing the social digital twin tool as a tool to support the process of collaborative urban decision making (Article- Under review[1]). Another tool I sought to use to generate the social reset was architectural design, via the design and establishment of the joint decision-making space for the municipal government and civil society[2] (figure 2). In this article, I wish to suggest another means of generating the smart city social reset – a change in the urban measurement unit, from the entire city to a single neighborhood. Below, I will present scenarios and resultant actions which actually occurred in the 3S Lab.

Figure 2- Right- Proportional drawing for physital (physical+ digital) data driven decision-making space. It is an oval space of 34 square meters. The space is supported by interactive and immersive technologies. Left- second milestone workshop meeting which took place in the physical environment.

[1] (Under review) "Smarter Participation: Co-Governing Urban Aging with a Neighborhood Digital Twin". Co-author: Axel A, Yossef Ravid B, Aharon Gutman M. Journal: Urban Technology

[2] (Under review) "A room for their' s own: A physital space for urban government co-production". Co-author: Yossef Ravid B, Aharon Gutman M. Journal: Urban Design

Third part- the neighborhood scale of 3S

Power to civil society!

The Project "One hundred meters of responsibility" – the Hadar neighborhood is characterized by many areas of the public space and the private space between the buildings is neglected and unmaintained. Our project operated during the COVID-19 pandemic, a period characterized by social distancing and reduction of the ability to move in the public space. For several weeks the permitted range of movement of the citizens of the State of Israel was limited to a radius of 100 meters from their place of residence. Inspired by this limitation, the Hadar Neighborhood Committee chose to launch a neighborhood cleaning operation in which they encouraged the residents of the neighborhood to clean up the area around their residences. Since the Hadar Committee was familiar with the activity of the project and saw its potential, they asked us to assist them through the preparation of a digital poll data management dashboard (link to interface), as is common in smart city systems. The poll was made accessible by them to the residents of the neighborhood, who could participate in the operation either by leading the cleaning of their own building or volunteering to assist other buildings. The neighborhood Committee managed the cleaning project by using the project platforms. The neighborhood council thereby generated a neighborhood database of the building committees and community activists.

Civil control and management room during the "Guardian of the Walls" operation – In May 2021, violent riots broke out in the city of Haifa between the Arab and Jewish population, concurrently with the "Guardian of the Walls" Operation of the IDF vs Hamas in Gaza. The Hadar Neighborhood is a mixed Jewish-Arab neighborhood, suffered greatly during these riots. As part of the desire of the neighborhood residents to demonstrate solidarity, neighborhood activists decided to establish a civil control room in which citizens would assist citizens in need due to the riots. The neighborhood activists who were familiar with the activity of the 3S Lab, sought to use the tools and means offered by the project for this purpose. They were therefore provided with a digital interface which was advertised on

social media. Its purpose was to create a database for people or businesses which required assistance, and another database for people prepared to volunteer help people from the neighborhood who required help (figure 3). The social activists "managed" the event via use of the digital platforms and generated connections between volunteers and citizens requiring assistance.

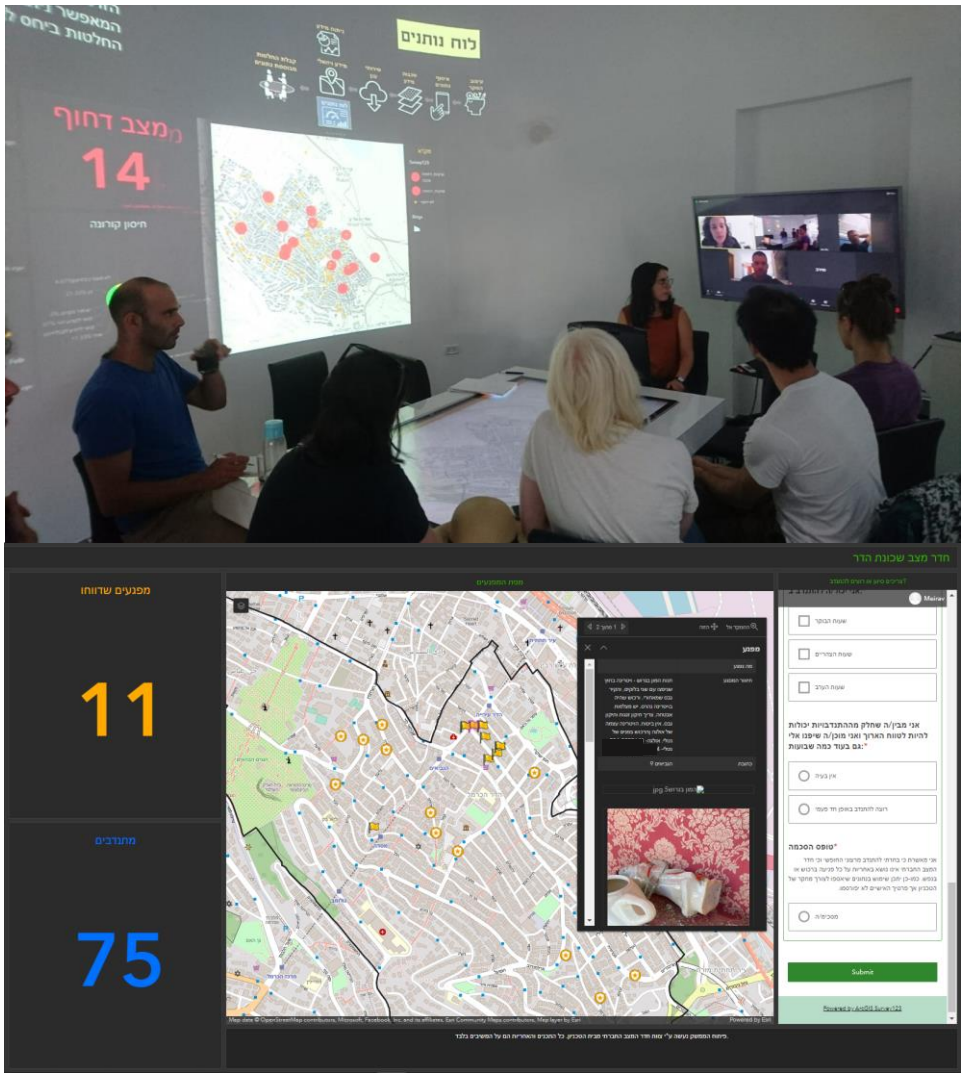

Figure 3- Top – social activist in Hadar Neighborhood activate and use the physical space platforms of the social situation room during the "Guardian of the Walls" Operation. Bottom – A digital platform of civil data management for cases and incidents in which the citizens seek assistance and information for the databank of citizens prepared to volunteer. Link: https://technion-gis.maps.arcgis.com/apps/dashboards/058f8ef536c446d6ad4a48c145785616

Insights – these examples illustrate the power of civil society and the mechanisms through which it can take action when it is provided with the tools and digital infrastructure associated with the smart city technology.

The blinds spots of the data

During the period the project was active, the question was raised by the partners in the process concerning the precision of the institutional database and the data gaps it contained. This question could only have emerged, as I see it, thanks to us being focused on the neighborhood scale. In other words, the discussion we held did not address the entirety of the city, but was solely concerned with the Hadar neighborhood. All of our partners in the project, both the municipal government and the civil society have been working in Hadar neighborhood for many years and hence could vouch for the veracity, or else question, the precision of the data. The Matter became more complex given the question of where and how elderly citizens live in Hadar Neighborhood.

When such a question is asked through a municipal lens, the local authority shall seek to understand the differentiation between the different parts of the neighborhood. Hence, a visual representation of the percentage of senior citizens in every statistical area (figure 4-1) can provide a satisfactory solution for the municipal government. However, when the discussion shifts from a discussion of a city matter by the municipal government to a neighborhood discussion in which people who know the neighborhood well are involved, the need also arises to change the scale in which data is presented. In our case, we chose to present the data in relation to the building scale, as can be seen in figure 4-2, representing the location of residence of the neighborhood's senior citizens. Figure 4-3 displays a spatial analysis linking the day-to-day routine of the senior citizens to various municipal infrastructure such as HMOs, public parks, public buildings and more.

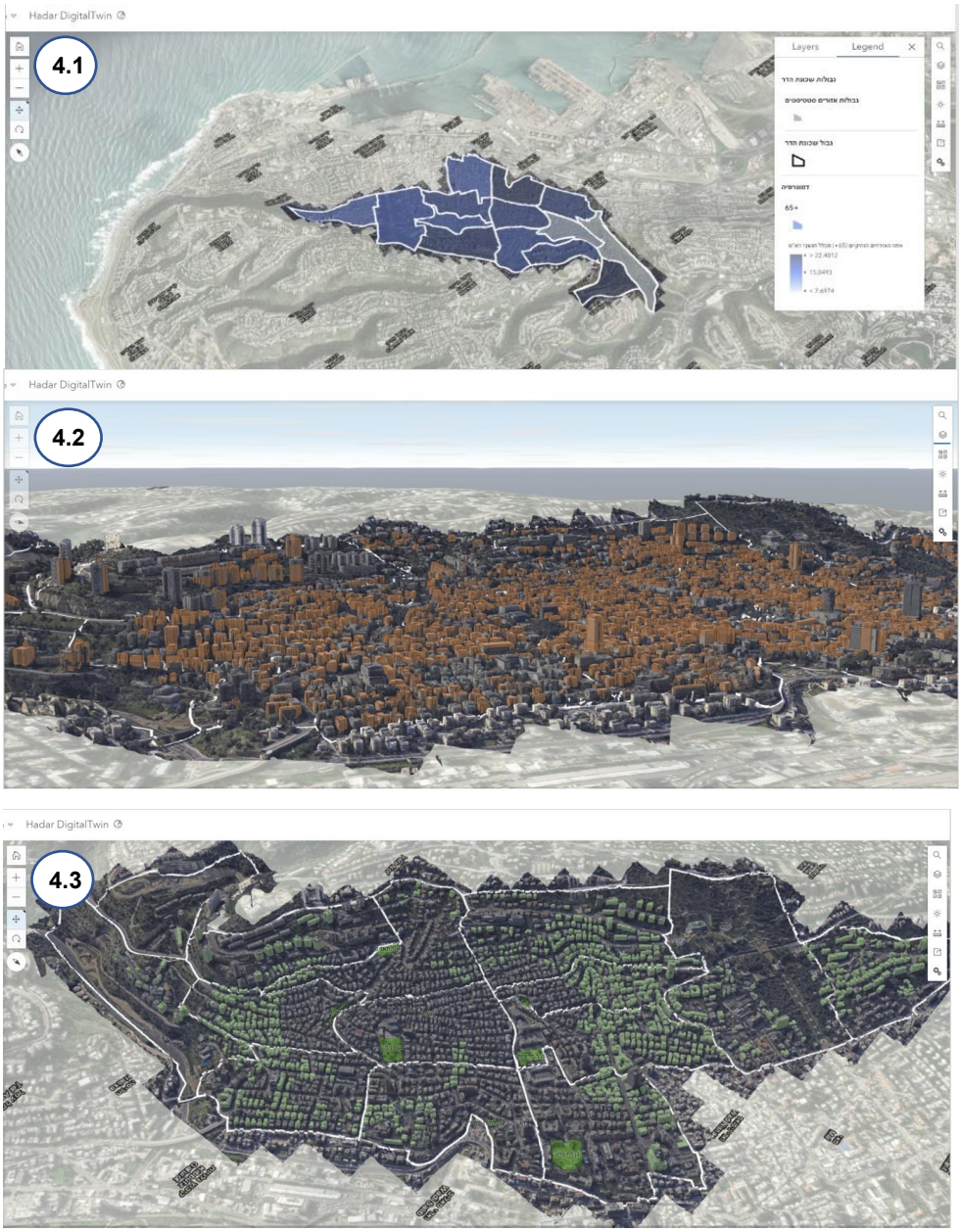

Figure 4-1: the statistical areas of Hadar Neighborhood, with the colored ranks describing the percentage of senior citizens as a portion of all senior citizens in that statistical zone. The darker the color, the greater the percentage of senior citizens in that statistical zone.
Figure 4-2: buildings in which senior citizens live. Every building marked with orange indicates at least one senior citizen living in the building. The data is based on an aggregation of the municipal fee file we received from the Haifa municipal government.
Figure 4-3: An example of a spatial analysis linking the place of residence of the senior citizens with municipal infrastructure. Green indicates all buildings in which senior citizens live, which are within 250 meters of public parks.
Source: Social Digital Twin

Our neighborhood partners noticed that there were buildings in which senior citizens were living, but were not marked on our digital twin model. They noted to us several specific addresses, and even took us for a neighborhood tour and visits of these senior citizens. It emerged that the Hadar neighborhood has a phenomena of senior citizens that are not recorded in the formal databanks of the municipality of Haifa. The reason these citizens are not registered is that their problematic financial circumstances obligate them to secure inexpensive housing solutions which are often unapproved and unrecorded by the municipal government. In one case we visited a senior citizen who lived in the ground floor of a residential building. However, archival research uncovered that he was living in the warehouse of a commercial store (figure 5). The second case is that of a senior citizen who lives in an apartment subdivided into 6 smaller housing units rented out at 1000 NIS, including utilities and taxes. In this case as well, archival research revealed that there was no record of a reparcelization of the apartment. Either way, the above cases represent a broader phenomenon in which lack of legal authorization for the residential unit leads to residents not being registered in the municipal fee records of the municipal government.

Insights – through these examples I illustrate that cross-referencing the municipal government database, the guiding light of the smart city paradigm, with the local knowledge of neighborhood civil society activists can help unveil such technological blind spots and highlight the weaknesses in relying exclusively on such municipal databases. In our case, the local knowledge of our partners about the neighborhood enabled unveiling the "undocumented" phenomena in the city. The presence of such undocumented individuals is very significant for the city and the municipal government, as they add to the burden on municipal infrastructure, which are often not adapted to contain so many residents, whereas the "unrecorded" do not receive the municipal assistance they require, such as welfare services, senior citizen centers and more.

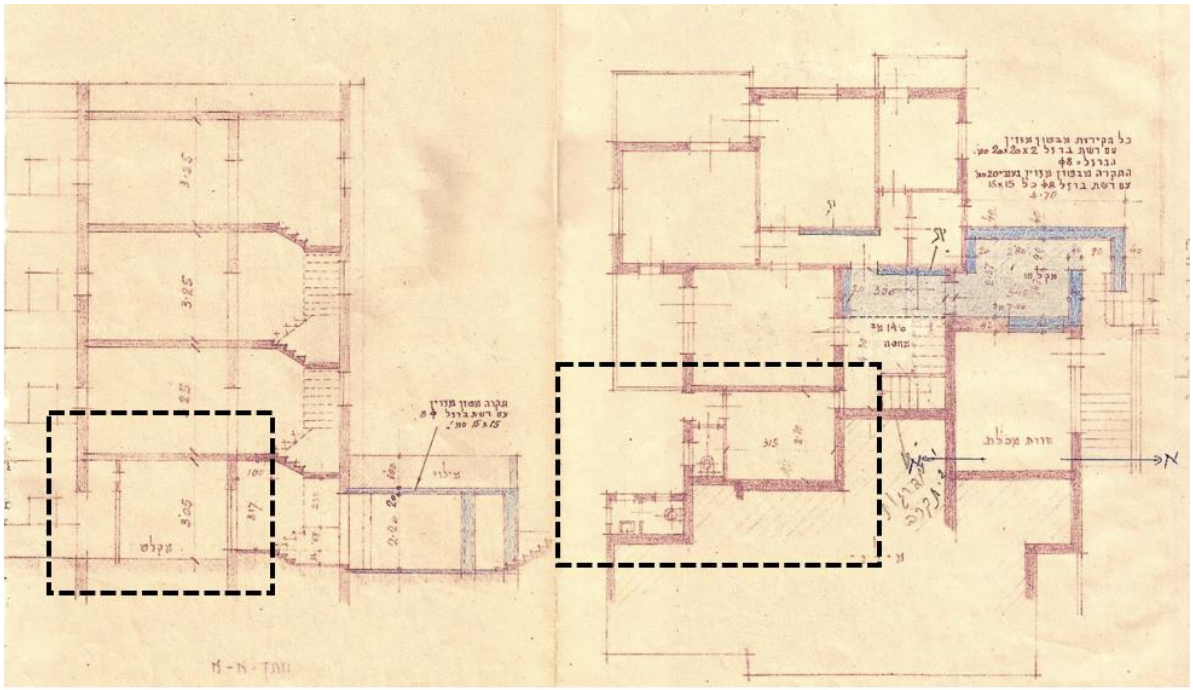

Figure 5- A ground floor plan from an construction permit application filed in 1958. The lined square shows the residence of a senior citizen. The permit shows that the residential space was originally the rear storage warehouse of the grocery store at the front of the building. Source: Haifa municipality Engineering Archive

Discussion

"*An F16 suddenly landed in the neighborhood, it is very significant and conveys an experience of boundless power. Now we just need to see what can be done with it*"

This quote by a social activist from the Hadar Neighborhood summarizes succinctly the 3S Lab project, as it illustrates the inherent tension between the technological innovation of the smart city paradigm and its assimilation within the neighborhood network of interpersonal relations and power. Here, I proposed that the neighborhood scale can serve as a milestone in generating the long called-for social reset in the smart city paradigm. On the basis of our experimental experience in this project, I offer a thematic analysis of the advantages and existing challenges in implementing the smart city perception in regard to the neighborhood municipal unit.

First, the issue of resources. Assimilating the smart city paradigm within the neighborhood setting requires both financial and human resources. For the most part, civil society organizations operate with

very meager budgets, and without any resources. Assimilating these technological tools requires resources that this neighborhood organization usually lacks. Hence, there is a need to think how the funding and infrastructure for such action can be generated.

Second, although this article presents the social organizations active in the neighborhood in a positive light, these organizations frequently do not represent the opinions of all neighborhood residents and seek to promote political agendas that are no supported by them. Thus, when we work with these social organizations, we must first map out the existing networks of interests and power in the neighborhood.

Third, this article is presented from the perspective of an Academica which seeks to assume an active part in the social and public agenda of the city. Our study positively illuminates the triple collaboration between academia, civil society and municipal government, illustrating how each of these entities are benefitted by the process. However, it is important to note that academic projects have both a start and end point in their involvement in the neighborhood life – unlike the local residents for whom the neighborhood is the home where they live their daily life. This issue must be taken into account and presented clearly at the very beginning of the project.

This article represented the first foray into generating the social reset of the smart city via changing the point of reference of the smart city paradigm to the neighborhood. I hope that this study will encourage municipal government and academic institutions to support the establishment of neighborhood frameworks that connect civil society with municipal government via use of technologies and concepts associated with the smart city.

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References

Arnstein, Sherry R. 1969. “A Ladder Of Citizen Participation.” *Journal of the American Planning Association* 35 (4): 216–24. https://doi.org/10.1080/01944366908977225.

Batty, Michael. 2020. “Defining Complexity in Cities.” In , 13–26. Springer, Cham. https://doi.org/10.1007/978-3-030-36656-8_2.

Cardullo, Paolo, and Rob Kitchin. 2019a. “Being a ‘Citizen’ in the Smart City: Up and down the Scaffold of Smart Citizen Participation in Dublin, Ireland.” *GeoJournal* 84 (1). https://doi.org/10.1007/s10708-018-9845-8.

Hatuka, Tali, Roni Bar, Michael Jacobson, Hila Lothan, Merav Battat, and Jessica Fain. 2012. *Neighborhood-State*. Resling. Tel Aviv. https://lcud.tau.ac.il/essential_grid/neighborhood-state/.

Kindon, Sara, Rachel. Pain, and Mike Kesby. 2007. *Participatory Action Research Approaches and Methods : Connecting People, Participation and Place / Edited by Sara Kindon, Rachel Pain and Mike Kesby.* Routledge Studies in Human Geography 22. London: Routledge.

Kitchin, Rob. 2013. “The Real-Time City? Big Data and Smart Urbanism.” *SSRN Electronic Journal*, July. https://doi.org/10.2139/ssrn.2289141.

Nabatchi, Tina, Alessandro Sancino, and Mariafrancesca Sicilia. 2017. “Varieties of Participation in Public Services: The Who, When, and What of Coproduction.” *Public Administration Review* 77 (5): 766–76. https://doi.org/10.1111/puar.12765.

Ostrom, Elinor. 1996. “Crossing the Great Divide: Coproduction, Synergy, and Development.” *World Development* 24 (6): 1073–87. https://doi.org/10.1016/0305-750X(96)00023-X.

Park, Robert E. 1925. “The City: Suggestions for the Investigation of Human Behavior in the City Environment.” *American Journal of Sociology* 20 (5): 577. http://ezlibrary.technion.ac.il/login?url=https://search.ebscohost.com/login.aspx?direct=true&db=edsjsr&AN=edsjsr.2763406&site=eds-live&scope=site.

Przeybilovicz, Erico, Maria Alexandra Cunha, Stan Geertman, Charles Leleux, Ank Michels, Zsuzsanna Tomor, C. William R. Webster, and Albert Meijer. 2022. “Citizen Participation in the Smart City: Findings from an International Comparative Study.” *Local Government Studies* 48 (1): 23–47. https://doi.org/10.1080/03003930.2020.1851204.

Rosen, Jovanna, and Gary Painter. 2019. “From Citizen Control to Co-Production: Moving Beyond a Linear Conception of Citizen Participation.” *Journal of the American Planning Association* 85 (3): 335–47. https://doi.org/10.1080/01944363.2019.1618727.

Sadowski, Jathan, and Roy Bendor. 2019. “Selling Smartness: Corporate Narratives and the Smart City as a Sociotechnical Imaginary.” *Science Technology and Human Values* 44 (3): 540–63. https://doi.org/10.1177/0162243918806061.

Sampson, Robert J, Jeffrey D Morenoff, and Thomas Gannon-Rowley. 2002. “Assessing ‘Neighborhood Effects’: Social Processes and New Directions in Research.” *Annual Review of Sociology* 28 (1): 443–78. https://doi.org/10.1146/annurev.soc.28.110601.141114.

Verrest, Hebe, and Karin Pfeffer. 2018. “Elaborating the Urbanism in Smart Urbanism: Distilling Relevant Dimensions for a Comprehensive Analysis of Smart City Approaches.” *Https://Doi.Org/10.1080/1369118X.2018.1424921* 22 (9): 1328–42. https://doi.org/10.1080/1369118X.2018.1424921.

Watson, Vanessa. 2014. “Co-Production and Collaboration in Planning - The Difference.” *Planning Theory and Practice* 15 (1): 62–76. https://doi.org/10.1080/14649357.2013.866266.

Yossef Ravid, Batel. 2018. “Neighborhood Planning- Is It Democratization or Privatization of the Planning System? .” Master's thesis, Royal College of Art, London

Yossef Ravid, Batel, and Meirav Aharon-Gutman. 2022. “The Social Digital Twin:The Social Turn in the Field of Smart Cities.” *Environment and Planning B: Urban Analytics and City Science*, November, 239980832211370. https://doi.org/10.1177/23998083221137079.