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Citizen Participation in Healthy City Making: An Analysis of Infrastructural Work in a Low-Income City Area

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Abstract

Despite a strong participatory discourse on the healthy city movement, researchers and activists indicate that low-income groups and city areas often are excluded from participatory urban development and do not benefit from healthy city policies. To better understand the challenges that citizens who promote a healthy urban environment in low-income areas face, we analyzed the infrastructural work of a citizens' initiative. We focused on their building of a socio-material infrastructure in an empty park surrounded by neighborhoods the municipality and other organizations classified as problematic in multiple ways. The infrastructural work consisted of experiments to attract new publics; regular work to revive a neglected garden; and negotiations with the municipality about new trees, natural play elements, and other additions to the park. However, residents' work was thwarted by institutional control over the neighborhood public and by unreliable bureaucratic interactions that resulted in endless waiting, adaptations, and failures. In this setting, citizens adjusted their infrastructural work by establishing new alliances and engaging in "garden diplomacy" to maintain constructive relationships and a hopeful perspective. The work citizens do to make new local publics should be acknowledged. Moreover, institutional obduracy and bureaucratic ambiguities form a hostile environment for citizen participation. We characterize this hostile environment as shaped by a "residual realism" that reproduces problem neighborhoods. We end with our contribution to a co-constructionist approach to public participation.

Keywords

citizen participation; inequality; infrastructural work; neighborhood health; neighborhood public; socio-material infrastructure; urban commons; urban green zones; urban health

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1. Introduction

Healthy cities and neighborhoods require citizen participation, both in understanding what a healthy urban environment means and in exploring ways urban environments can be made healthier. At the 2017 International Conference on Urban Health in Coimbra, one speaker, dressed as a superhero in a harness, mask, and cape, introduced himself as *Peatónito* (pedestrian) from Mexico City. As it takes courage to cross a street in this city where public space is devoted to cars, he battled for a more walkable environment. He showed pictures of himself wrestling with cars to enable pedestrians and cyclists to cross the street. Citizen participation for healthy cities can be very visible and even heroic, as this example shows. However, not all citizen involvement takes this form. Indeed, citizen participation in improving urban environments is often more mundane and less easily discernible.

One major challenge of healthy city-making is developing and maintaining urban commons (Borch & Kornberger, 2015; Huron, 2015). Urban commoning practices enable resources such as water, public space, buildings, and air to be shared according to formal and informal rules and agreements; these practices are vital for regulating resource usage and for creating and maintaining common urban worlds where people with different backgrounds and societal positions can co-exist. Inspired by Latour's (2004) commentary on Ulrich Beck's peace terms, we understand attempts at sharing urban worlds as construction work. Latour (2004) observed that a shared "cosmos" is not a given starting point for politics but, rather, the result of construction work. People do not share a pregiven cosmos or universe but live in a "pluriverse." Making peace, therefore, is not a matter of finding the truth about reality by interpreting it but a matter of building shared worlds. Similarly, coming to share a neighborhood and its space requires construction work. Building an urban cosmos does not happen overnight: It requires significant daily work and interventions by citizens to facilitate shared urban life. Such citizen participation, however, faces the obduracy of a city's design. As Hommels (2005, p. 324) noted:

> It is very difficult to alter a city's design: once in place, urban structures become fixed, obdurate. As a consequence, urban artifacts that are remnants of earlier planning decisions, the logic of which is no longer applicable, may prove to be annoying obstacles for those who aspire to bring about urban innovation.

In the context of this thematic issue about citizen participation amidst hostilities, we focus on participation as constructing a shared urban cosmos. The hostilities encountered in our study are best approached as obduracy and ambiguity. In the case we present, citizens did not face overt malice, antagonism, or aggression directed at citizen participation; however, their efforts to promote a healthy living environment were thwarted. In the discussion, we consider what this case tells us about the hostile environment that citizens' initiatives face, despite a strong participatory ideology in urban governance.

We contribute to discussions about making common urban worlds by addressing citizen participation through infrastructural work oriented toward making neighborhoods healthier and more habitable. We explore the context of this infrastructural work that was thwarted despite overt municipal support for citizen participation. In this article, we first introduce inequalities and participation in healthy city policies and explain how we approach citizen participation as infrastructural work. We then describe our collaborative methodology as developed in the University With the Neighborhood (UwtN), a collaboration in a low-income area in the medium-sized city of Maastricht (ca. 125,000 residents). We discuss how citizens

challenge and revise existing urban infrastructures, the obduracy and ambiguity they face, and how they adjust their socio-material infrastructural work in response. We end by discussing the implications of our analysis for understanding citizen participation in the construction of common urban worlds.

1.1. Citizen Participation and Inequalities in Healthy Cities

With most of the world's population living in cities and continued urbanization expected, cities are increasingly seen as the locus of health promotion. The World Health Organization and healthy city networks assert cities are well positioned to fight noncommunicable diseases, such as cardiovascular diseases, diabetes, and cancer, and to promote mental health, social connectedness, and belonging (de Vries et al., 2016; Galea & Vlahov, 2005; Hartig et al., 2014; Partnership for Healthy Cities, 2024; Sisson, 2020). Initiatives to promote urban health often join forces with efforts to promote sustainable and biodiverse cities (The Global Goals, 2024). Urban struggles with the pollution of air, water, and soil, food deserts, heat stress, loneliness, marginalization, housing crises, and violence all impact citizens' health. However, these burdens of city life are not equally distributed across neighborhoods and income groups, which translates into health inequalities. Moreover, research about improvements in greening and sustainability shows that such efforts do not benefit all city residents. For example, Rigolon et al. (2021) concluded that, in Europe, green zones potentially have higher protective benefits for low-income groups compared to high-income groups; however, low-income neighborhoods have fewer green areas, and these are often of poorer quality than those found in high-income neighborhoods (Lee & Maheswaran, 2011; Rigolon, 2016). Parks and green zones of lower quality may be empty and unsafe areas that generate stress and fear.

In American and European cities, greening is often connected to market-driven urban redevelopments that push lower-income groups out of their neighborhoods or even cities (Anguelovski et al., 2022; Gould & Lewis, 2016). This impacts not only citizens' health but also their participation and voice in urban development. While urban planners experiment with participatory design methods, the opportunities for participation are often restricted to specific moments and procedures, excluding a variety of voices and forms of participation. In Amsterdam, this type of exclusion from decisions about neighborhood restructuring even led to a participation strike by citizens in the K-neighborhood, a high-rise neighborhood located in the Bijlmer, a low-income city area (Milikowski, 2020). During this strike, the K-neighborhood citizens refused to engage in participation trajectories organized by the municipality. To summarize, increased interest in citizen participation does not guarantee that citizens really have a say in urban development, especially in low-income settings. The restrictions on how, when, and where citizens can participate in shaping their living environments are examples of persistent hostilities toward participation. It is, however, because of the rise of a strong participation ideology that understanding such hostilities faced by citizens is difficult. We aimed to provide insights into these hostilities to imagine a more inclusive participatory development of healthy urban commons.

1.2. Citizen Participation as Infrastructural Work

Our analysis of public participation in urban commoning was inspired by scholarship in science and technology studies on infrastructures and infrastructural work (Bowker & Star, 2000; Dantec & DiSalvo, 2013; Star & Ruhleder, 1996) and a discussion about relations between infrastructures and public participation (Baringhorst et al., 2019).

In *Sorting Things Out: Classification and Its Consequences*, Bowker and Star (2000) examined infrastructures in relation to the practice of classifying objects, humans, animals, and so on. The international classification of diseases (ICD), for example, enables information-sharing and standardization supported by infrastructures of libraries, laboratories, sanatoria, the World Wide Web, and research networks. While classifying is human, when infrastructures are built around specific classifications, they become social and material realities with a life of their own and resistant to change. As such, classifications can have detrimental effects on people's lives. For example, infrastructures for housing and public transport that were developed during Apartheid, based on classifications of race, perpetuated forms of apartheid even after apartheid policies were abolished. As such, classification systems and the infrastructures built around them should be questioned, opened up, and adjusted when they may be harmful.

While infrastructures behave like objects, such as railways or roads, Star and Ruhleder (1996) conceptualized infrastructures as processes. Infrastructures do not exist independently of their use; they enable everyday practices and, in turn, are shaped by them. Indeed, infrastructures shape the conventions in communities of practice—that is, groups of people that share a specific goal or concern and regularly use these infrastructures in their interactions—and vice versa: users' conventions shape infrastructures. Korn et al. (2019) outlined a similar perspective that does not treat infrastructures as stable entities but, instead, looks at "infrastructuring," the continuous work of repair, maintenance, and use, to become a reliable basis for actions. The Paris subway, for example, was maintained and repaired through intense work on signs, standardizing the design of signs regarding directions and places at all stations, repairing damaged signs, and removing distractions (Denis & Pontille, 2014). Without regular maintenance of the signage system, confusion about places and directions would hinder the flow of people; likewise, commuters adjust their conventions to the requirements of public transport and its signage system and thereby shape how this infrastructure works.

Although infrastructures often fall into the background in our daily use of them, scholars point out that they increasingly become the objects of public contestation. Infrastructures are made public in the sense that they become objects of public scrutiny by concerned citizens (Baringhorst et al., 2019; Korn et al., 2019). Baringhorst et al. (2019) discussed relations between infrastructures and publics in an edited email conversation. They examined how new publics are formed in response to concerns about infrastructures and with the help of infrastructures. Citizens worry, for instance, about car-centered cities and self-driving cars and organize new publics of pedestrian activists. These publics that people form to resist existing or developing infrastructures are distinct from the public sphere of civil society that political theory usually foregrounds. Publics that contest specific infrastructures also engage in infrastructural work themselves by using and developing intersecting alternative infrastructures, such as walking routes. Marres (writing in Baringhorst et al., 2019), however, noted that a perspective on publics as those that are materially implicated also identifies other less activist members of publics. To illustrate, citizens are materially affected by air pollution, climate change, and the privatization of trains: They cannot refuse to breathe, and they still need to take delayed trains. While these are matters of widespread concern, such material publics lack the agency to resolve these issues. Marres referred to these publics as "intimately affected outsiders" (as cited in Baringhorst et al., 2019, p. 80) and argued that infrastructures can be seen as a materialization of interdependencies in our complex societies.

In this contribution, we combine this perspective on material publics (Baringhorst et al., 2019; Marres & Lezaun, 2011) with a perspective on social infrastructures (Klinenberg, 2018) to analyze work on

socio-material infrastructures as a way of constructing common urban worlds. Marres and Lezaun (2011) argued in an editorial about material participation that political theorizing should pay better attention to material practices and study them empirically as forms of citizen participation. Even the most mundane material interactions—for example, using or refusing to use water bottles—can be considered citizen participation. On this issue, Hawkins (2011) analyzed moral concerns about the case of water bottles—produced with oil and contributing to the global problem of plastic waste—and market responses, such as the promotion of water filters as a more responsible alternative. Such material objects become part of public contestation and concern, and handling or avoiding specific materials should be seen as enactments of citizenship (Marres & Lezaun, 2011). Baringhorst et al. (2019), in addition, suggested that many forms of citizen participation grow out of specific material practices, such as a repair café or urban gardens, through which citizens act upon their attachments and concerns. In these examples, citizens do not have readymade normative orientations as is often assumed in citizen participation research, but rather, they develop these orientations when they feel attached to a specific material infrastructure or place. Klinenberg (2018, p. 5) viewed such material settings as part of a social infrastructure, the gamut of interconnected "physical places and organizations that shape the way people interact." As with other infrastructures, these socio-material infrastructures are formed by practices of use. For instance, socio-material infrastructures are shaped by informal classifications of places and people, such as youth hangouts, drug users' places, "antisocials," "scooter youth," "foreigners," "nutters," and so on. These informal labels may be more or less directly linked to standards and formal categorizations of social status or disorder and, as such, affect how and where people interact with others.

In short, socio-material infrastructures can produce new publics, groups of citizens that are concerned about empty plots, loss of meeting places, or other impoverishments. The citizens' initiative that is central in this contribution can be seen as such a concerned public. Against the background of theories on infrastructural work, citizen participation, and the making of publics, we study how citizens engage in infrastructural work to promote healthy and inclusive urban environments and what challenges they face when doing so.

2. A Participatory Methodology

From 2013 until now (2025), we have developed long-term research collaborations with low-income neighborhoods in Maastricht, a medium-sized city in the south of the Netherlands. This city struggles with transforming from an industrial to a service and knowledge economy, with the young university that was founded in 1976 as a new big employer. While the historical city center is advertised as "*Sjiek en Sjoen*," a local dialect for chic and beautiful, our focus was on a residential area in Northwest Maastricht. The local public health institute, demographic statistics, and municipality characterize the neighborhoods in this area as having high rates of unemployment, high disease burdens, and low grades of citizen participation. This picture is produced within expertocratic knowledge infrastructures that monitor and promote neighborhood health in the Netherlands based on regular counting, measuring, and surveys involving little citizen participation (GGD Zuid-Limburg, 2022).

Based on initial years of participatory collaborations, we (authors of this article and residents of Maastricht Northwest) organized two citizen summits about urban health and well-being in 2014 and 2015, for which citizens were selected by lottery; the outcomes of the events shaped our research agenda. The central outcome was the idea that health and well-being were threatened by the fact that people did not know each

other anymore and that more public meeting places were required to address that problem. To address this need and to make structural space for new participatory pathways in making knowledge about the neighborhood, we initiated UwtN in 2017. UwtN is a collective for research, action, experiment, and engagement oriented toward making low-income neighborhoods more lively, habitable, and healthy. As part of the UwtN, researchers and research activities were present in the neighborhoods on a regular basis to enable collaborations with residents. In response to protests against professionals' stigmatizing assumption that residents only wanted to play bingo, we initiated a monthly philosophy café in 2017 that is still ongoing (Raap et al., 2023). With other residents, we initiated a working group, Social Green, with the aim of transforming a large boring park into a more attractive, lively social green (Knibbe & Horstman, 2022; Raap et al., 2022). We also organized a series of interactive, informal lectures in a neighborhood center to address themes that emerged during other neighborhood meetings, and we engaged with various existing neighborhood collectives and professional organizations (Raap et al., 2021, 2024). With neighborhood networks and the owner of a shopping mall, we established in a mall a public meeting place that is run by citizens. In all these collaborations, residents were engaged not as a source of data but as producers of knowledge through experiments, actions, and reflections (Raap et al., 2024).

The citizens' initiative Together Greener (TG) grew out of these UwtN collaborations and the Social Green working group. TG started in 2018 and experimented with small events to transform empty and "asocial green zones" into more lively and interesting public meeting places. To work on more permanent transformations of the neighborhood green zones and to be able to apply for funding, the group started a formal foundation, TG, with a board formed by three residents. Despite the foundation's formal status, the initiative preserved its informal and open character, enabling a variety of ways to participate. A small group of residents meets on a regular basis to discuss all ongoing projects and collaborations; however, a wider circle of residents joins in gardening and supporting events in the park.

To collect data (2013–2024), we used a participatory ethnographic approach with a mix of qualitative data collection methods, combining participant observations, walking interviews, individual and group in-depth interviews, film discussions in neighborhood centers, and neighborhood diaries, including texts, photos, and drawings. A more extensive explanation of specific data collection methods can be found in previous publications, and an overview is provided in Table 1 (Knibbe et al., 2016; Knibbe & Horstman, 2022; Raap et al., 2021, 2022, 2023 2024). The participatory approach meant that we collaborated with residents in all stages of our research, including discussing our analyses while in progress. Our role as researchers, on the other hand, also involved providing practical support, such as co-organizing park events, collecting garbage, and functioning as chair or scribe for meetings. This meant not only did we learn from residents, but we also experienced challenges to citizen participation firsthand, which contributed to the interpretation of hostilities to participation.

Data analysis proceeded through an iterative process of deductive and inductive coding. Deductive coding was shaped by sensitizing concepts connected to our different studies: restoration, enablement, public sociability, "commoning," collective action, placemaking, and formal-informal collaborations. In the inductive coding of previous studies, struggles with neglect, bureaucratic interactions, and dealing with stigma emerged as central themes (Knibbe & Horstman, 2022; Raap et al., 2022). For this article, we further analyzed the themes of stigma (stigmatizing classifications) and bureaucratic interactions guided by the concepts of infrastructural work and the theme of this thematic issue: citizen participation amidst hostilities.

Table 1. Overview of data collection methods.

Methods	Years	Data collection
Walking interviews with neighborhood residents	2017–2018	15 audio-recorded walking interviews conducted by researcher SR to gain insights into experiences with public neighborhood space, including green zones.
Participant observations of park events	Spring festival 2018 Yearly Summer Park Program 2018–2024 Willow-hut building during the 2020 lockdown Christmas gatherings in the park (in 2022 and 2023)	For example, pop-up tea gardens, theater workshops, children's games, singer, campfires, giant bubble blowing, giveaway tables, reading corners, dancing, outdoor philosophy cafés, neighborhood camping, etc. Pictures and videos were captured by TG members and the authors/researchers. Field notes were written for a selection of these occasions interchangeably by the authors/researchers.
Participation in TG meetings to develop and discuss plans	2018–ongoing (every 3–4 weeks)	Researcher KH participates in all meetings, and researcher MK contributes to specific event-related meetings. Researcher KH keeps notes that are shared with TG members.
Park diary	Fall 2021–Spring 2022	With the help of a student, TG members collected citizens' experiences in traveling park diaries, which were notebooks with a short introduction, including open questions about the park and an invitation to the reader to write and draw about their experiences in the park. An edited version of the park diary was distributed in neighborhoods and in the municipality.
Dog walker interviews	Fall 2022	A student conducted participant observations and informal conversations with dog walkers in a park. Recorded in field notes.
Park seminar	January 18, 2024	Residents and institutions involved in the park sat together to discuss past and future development of the grounds.
Meetings with the municipality	Meetings at the municipality, but also in the park and the neighborhood center	TG members, the municipality, and researchers KH and MK discussed plans to redesign the park and reflected on collaborations in the transformation of the park.
Weekly garden days Monthly garbage/cleaning days	2021–ongoing Every 4–6 weeks in Spring, Summer, and Fall	A garden team gathers every Tuesday and Saturday to maintain the park's garden. They invite people walking in the garden to write something in a garden notebook, or they make notes themselves about the conversations they had. TG members and other residents gather each month on a Saturday to clean up litter and picnic in the park.
In-depth interview about citizen participation and hostility	Summer 2024	Researcher MK conducted an in-depth interview with a member of the garden team about experiences with the garden regarding the topic of this article.

3. A Park Between Low-Income Neighborhoods

Citizens initiated TG to make large and empty stretches of green grass livelier and more attractive. The Project for Public Places (2016) describes placemaking as a way of challenging and renovating socio-spatial infrastructures, most notably those inherited from modernist city planners. According to urban activists and sociologists, the functionalist organization of modernist architecture and planning leads to vast stretches of boring, empty, and unsafe green zones, car-dominated cities, and dull residential areas with scarce public space (Jacobs, 1961; Sennett, 2018). Jacobs (1961) was especially critical of the idea that cities could be designed on a drawing board. She analyzed the many desolate and violent places that resulted from such utopian city-making and, in contrast, described the richness of neighborhoods that developed organically, bottom up, with little interference from urban planners. Inspired by this critique, placemakers in the United States and other parts of the world promote walkability and tinker with small spatial changes and new connections to cultural, economic, educational, and other infrastructures to enable places to combine multiple functions.

The park that is in focus for placemaking by TG is situated between so-called "parochial neighborhoods" (Ziegler, 2010) that were designed as villages, with a church, shops, and a school located around a central square. Each neighborhood was separated from other neighborhoods by green zones (Figure 1). Over the course of time, church communities lost members, and small shops closed, as did many schools. Furthermore, sports facilities were concentrated in several big sports parks in the city, and the former soccer

Figure 1. Green infrastructure and "landscape-idiom" of parochial neighborhoods (Ziegler, 2010, p. 50).

fields between four parochial neighborhoods were converted into a park. This is the park in focus for TG. This green space was designed as a wedge between parochial neighborhoods with vistas as a reference to the surrounding countryside. However, the residents who initiated TG pointed out that, instead of a wedge, the space could become a bridge and a new social center connecting the surrounding neighborhoods. They stressed that the reference to the countryside was lost after new buildings blocked the view. According to TG, the spatial layout and infrastructure as meant by urban planners were outdated and in need of revision.

The neighborhoods surrounding the park have a history of being stigmatized as low-income that has left traces that remain today. Many families who first moved in were poor families who were forced to leave the city center in the 1950s and were framed as "antisocial" by scientists, church officials, social workers, and municipal officials (Bokern, 2022). Such stigmatizing neighborhood classifications continue in current research and data infrastructures that monitor urban health, demographics, income levels, the prevalence of anxiety, depression, being overweight, and other health issues, and they show on all fronts a worse-than-average picture. As urban governments, developers, housing corporations, and commercial enterprises often use these numbers in the planning and design of activities and to account for their activities to stakeholders and urban democracy, the stigma attached to these neighborhoods is continuously reproduced.

When, from the 90s onward, other city areas were restructured, the continued low rents of social housing organizations in Maastricht Northwest attracted new low-income residents, including residents coming from mental health institutions and different migration backgrounds. This development brought its own struggles and stigmatizations, as "old" and "new" residents rarely mingled. A TG member shared her experiences of going door to door on a certain street to invite people to a park event. She recounted what she heard about the neighboring households on that street:

> There is a family that everyone talks about as antisocial. Next to that, on the corner, you have now a large Turkish family, and in the next house, the housing cooperation have now put a struggling family there. There you hear shouting, and they also have dogs, and there is a lot of noise and barking,...and next to that there lives a Moroccan family, and next to that an Eritrean family, and then there comes a boy who is not very strong socially, and then comes a single father...so you don't have a community there...it's all a bit loose here...and the people who originally come from Maastricht with that dog that terrorizes the neighborhood....Because they have [such] different backgrounds...and the "we do it together" thing isn't so strong here.

The specific history of these neighborhoods affects social interactions between residents. People often annoy and avoid each other, and this poses an extra challenge when developing lively public places. As residents concluded at the citizens' summits: "We do not know each other anymore." Next, we analyze the infrastructural work of TG to address that problem, the hostilities they encounter, and how they deal with them.

3.1. Infrastructural Work and Emerging Publics

Through their infrastructural work, TG members first assembled what could be described as pop-up publics. To make the park a vital part of the socio-material infrastructure of this city area, TG worked on social, spatial, ecological, and institutional connections. With a series of "light, quick, and cheap" actions (Project for Public Places, 2016, p. 635), TG experimented with small budgets and collaborations with various other

parties, such as students, architects, a folksinger, a dancing group, a welfare organization, and a nature organization, to organize activities in the park. New publics were invited to the park with sports, games, and theater workshops for children, a big Spring festival, a yearly Summer program, and several Summer campsite activities. During such campsite activities, the park was transformed into a neighborhood camping place for three days. Moreover, several Summer programs were held, including Dancing in the Park. Our Summer program field notes read:

> On a small wooden dance floor with a DJ and a group of line dancers taking the initiative, other people slowly join in. The local born Maastricht people dance together with students from "the North," Syrian children, and young parents from Ethiopia. A frail ninety-year-old widow sitting on a bench tells us that it is her birthday, upon which everyone starts singing for her. Later, she says that she had been crying at home as it was so long ago that she had experienced such a warm welcome.

These temporary transformations of the park produced new park and new neighborhood experiences. While the neighborhood was often labeled "backwards," and the state of the park was taken as a symbol of political neighborhood neglect, these transformations provided new hope and perspectives. The park events assembled neighborhood publics with a great variety of geographic and religious backgrounds. Such a diverse constellation is rarely seen in other neighborhood meeting places, such as neighborhood centers, mosques, or churches, where people gather in smaller, less diversified groups or communities. People noted that, with some creativity, the park could become a vibrant place that would be safer with more people and more social control. The temporary transformations also had a longer lasting social impact, as one of the TG members noted: "I get greeted now by all the children in the neighborhood. That was different before." The publics assembled by the park events can be termed "pop-up publics," as they only formed on specific days to play, dance, and interact. However, despite their temporary character, the new social exchanges indicate that they left their traces in the park as part of a socio-material infrastructure enabling neighborhood interactions.

In addition to assembling pop-up publics, TG's infrastructural work to revitalize an enclosed garden also led to the emergence of a more stable park public. Two residents noted that the garden had beautiful architecture but was neglected and overgrown with weeds. They joined TG and started working on the garden, weeding, and negotiating with the municipality (owner of the garden) about new plants, trees, furniture, and maintenance plans. Their work, the garden's beauty, and their regular presence in the garden resulted in new people habitually visiting the garden and meeting others. A TG member recounted:

> I don't see everything, but many people say, "I come here very often," or "I come here at least once every day." And I now really notice that a schedule of regular visitors is really starting to develop, of people who come very regularly. People enjoy letting small children play, and more and more people are coming to walk laps. We sometimes have a man and a woman walking rounds, talking to each other for a full hour...and an Iranian woman who regularly comes to the garden to walk rounds with a friend...and what she also does is walk barefoot in the garden through the grass. Enjoying the grass,...and I have the idea that some frictions between residents in that flat building, that in the garden they are softened. For example, there are these two neighbors that never talk—they both come to the garden.

Through their presence working in the garden, TG members fostered new connections to people in the neighborhood, engaged new residents to help on the garden team, and developed new knowledge about

how people used and experienced the park. While the diverse park events assembled pop-up publics, the gardening enabled the formation of a more stable park public.

Park events and garden developments enabled a collective learning process about the physical organization of park space and potential improvements. The hot summers revealed that more trees, shadow areas, and comfortable benches were needed to attract people to the park. Children's games with small tree trunks generated new ideas to promote playability and attract small children with their parents. People shared their concerns and irritations with TG members about the lack of light, neglected park areas, dog excrement, and other nuisances, but they also expressed their appreciation for the flowers and the increasingly beautiful garden, with some wishes for wilder nature in the park. Based on these growing insights, TG developed proposals to promote the playability, pleasant seating, and nature experience of the park through more shadow with pergolas and trees instead of long open vistas, more comfortable benches, natural play elements, a kiosk, and a butterfly garden.

Over the years, some improvements in the spatial and ecological layout have been realized. With support from the municipality, a nature organization, and other parties, 46 new trees were planted, and a butterfly garden with wildflowers was sown. Moreover, hearing about the citizens' initiative, a nature education organization built a bees' hotspot in the park that is part of an exceptionally rich bee infrastructure in the city, hosting rare and endangered species, which is maintained with the help of citizens. However, many other potential improvements were not made. TG expects that a combination of three attractions in the park—namely, the garden; a nature playground financed by a local charity; and a kiosk with tea, coffee, and space for storing garden tools, financed by a municipal fund with the aim of promoting a habitable environment—will help to build a robust socio-material infrastructure. Working on this required intensive engagement with the municipality and other institutions related to the envisioned infrastructure. In these engagements, TG members experienced two types of challenges, in response to which they adjusted their infrastructural work.

3.2. Infrastructural Work in an Obdurate and Ambiguous Environment

The first challenge TG experienced was that the local government's promotion of citizen participation was accompanied by forms of institutional obduracy. This became manifest in municipal control over "the public" and the municipalities failure to give proper recognition to the emerging park public. With their participation in events and regular presence in the garden, neighborhood residents provided support for TG's efforts to improve the park's socio-material infrastructure. However, in interactions with TG, the municipality misrecognized this support and questioned the residents' right to speak. "In whose name are you here?" "Do you have support among residents?" "How can you show this?" With such questions about representation, the municipality positioned itself as the "controller" of public participation. Within the municipality, it is common to seek public input through questionnaires about specific predefined issues so that "the average resident" is represented. Even though many residents do not fill in these questionnaires, civil servants cling to the idea that it is possible to represent all residents. Moreover, historical informal classification systems shape ideas about support among residents. In response to a presentation about citizen participation in promoting healthy public space, a municipal official characterized TG as a small group of highly educated retired people, thereby contrasting them with other neighborhood residents and ignoring both the pop-up publics and the more stable park public assembled by TG actions. By taking a classical

political perspective of representation, assuming fixed preferences aggregated by a formal procedure at a fixed moment in time, the municipality discarded the knowledge built up through TG's years of intense engagement with the park's publics and the park as a public place. TG members were asked to give a quantified representation of a pre-given public and not to act as publicly engaged and highly knowledgeable residents who were constructing a socio-material infrastructure.

TG members shared their reflections on the resistance they encountered as a citizens' initiative in a meeting with several municipal officials. In this meeting, civil servants explained that citizen participation was complex for them:

> We [municipality] are used to thinking that public space is ours when, suddenly, a group of residents wants to work on improving the park. That is fantastic, but it is completely new for us. We had never experienced that before. We must get used to that. And then we have these aesthetic norms. Benches should not be too cheap, and the green department is not about citizen participation. It was pioneering for us. (Field notes from the Spring 2022 meeting)

While TG proposed to share the responsibilities for maintaining the park space, the municipality took a strong dichotomous approach: it is either the municipality's or the citizens' responsibility, and when citizens take over, they must position themselves as representatives of the neighborhood. TG responded by claiming their right to speak, not as representatives but based on being residents ("I live here!") and being especially knowledgeable because of their regular presence and work in the park.

A second challenge experienced by TG was the municipality's ambiguous bureaucratic way of responding to TG's participation. In the context of broader citizen participation movements, the municipality combined positive support for plans with letting recommendations go ignored, failing to follow up, failing to respond, and refusing to interact. For example, TG's insights about places for shadow, protection, and benches were disregarded, and emails with questions about the proposals of municipal designers went unanswered for months. Moreover, the nature playground could only be realized when the funding charity and the municipality agreed on tender, quotation, and billing. However, both institutions seemed unwilling to interact, leading TG members to walk back and forth in circles. During a TG meeting, one of the members remarked: "About the 'stiff-fund' [a nickname for the local charity], this is driving me crazy. Perhaps we should call it off." The location of the nature playground was chosen by municipal designers based on aesthetic judgment. This choice completely disregarded TG's recommendations based on multiple observations in the park. The municipality located a circle of play sand on two sides of the path used by dog walkers:

> More wrong is almost impossible. It is a path where people with dogs walk, and you do not have to be very mal-educated to be attracted to that sand [as a dog or dog walker]. (TG member interview)

The nature playground did not work out as imagined. It did not attract children or parents, and after the festive opening with the director of the funding charity and an alderman, the playground became a painfully visible failure in the park. While civil servants point to TG as the initiator of the plan, TG feels that it could have worked out better had TG's perspective been taken more seriously.

3.3. Building New Alliances and Engaging in Garden Diplomacy

In this obdurate and ambiguous institutional bureaucratic context, TG responded with two types of infrastructural work: building new alliances and engaging in garden diplomacy. Building new alliances to promote the park's socio-material infrastructure meant that TG first had to slow down. TG continued to maintain relations with the municipality by staying in touch about envisioned meeting places and the renewal and maintenance of the garden. They had no choice but to endure the setbacks and slow their pace while looking for new ways forward. While TG had found funding for a kiosk, conversations about the actual installment had been going on for years, and the two sides ended up in a deadlock with no clear directive on how responsibilities of the municipality (owner of the park) and those of TG should be handled:

> At first, we expected too much from the municipality as it is the owner and wants to be engaged in every step. But the municipal contacts looked at us like, let's see what you want. And we felt blocked by the municipality, which told us to first get a permit, first get water, first get electricity. And if you are sure that everything will happen, then the kiosk can be installed....And we said, we don't want to run the risk of having everything ready and then you, as the municipality, say, sorry, there is no permit. (TG member interview)

One way to build new alliances was through the park seminar, which brought together residents and some professionals working for a welfare organization and a nature organization to reflect on the park and prioritize actions:

> I thought it was fantastic that we had a room full of people who all contributed so actively. And after that, I think it's disappointing...not because of us, but it still comes down to us. We got stuck in that...because we were going to work on that kiosk after the park symposium. (TG member interview)

When follow-up on the park symposium was cancelled, some TG members had another meeting with the municipality. This time, TG was advised to apply for the permit to install the kiosk anyway, as "the municipality will not act unless there is a formal application." So, TG submitted the permit application, not expecting success soon, but considering the permit application as the start of another long-term negotiation process.

TG's second response to the ambiguity of both supportive and unreliable bureaucratic engagement was a form of "garden diplomacy." Diplomacy in international relations is commonly seen as the art and practice of maintaining peaceful relations, and diplomats are positioned as negotiators and as the eyes and ears of a government. With garden diplomacy, we refer to the practice of maintaining and building constructive relations between neighborhood residents and the municipality in all interactions in the garden. In the garden setting with the regular presence of and contact with both residents and the municipality, TG members worked on bridging and ameliorating old contentions between neighborhoods and the municipality. Like diplomats, TG members also saw the different faces of the municipality, formally and sometimes practically embracing participation while at the same time creating obstacles to participation. The garden team functioned as the eyes and ears of the garden, and as diplomats, they heard and saw the ambivalence in the park's public, for example, about the installation of arches forming a so-called *berceau* (tunnel) along which a *Laburnum* (golden rain tree) will be trained:

When that berceau came there, I was also curious about what the neighborhood would think. And I also hear "what have they come up with" and "how much does that cost,"...but there are also people who say: "I think it's really chic; it is special." People give me thumbs up. (TG/garden team member interview)

With their garden diplomacy, TG members faced confusion about their position and had to remind residents that they were there as citizens caring for the park and garden, not as part of the municipality:

Sometimes we are seen as part of the municipality, unless people know us. Then they say [in dialect]: "Yes, but we always see you...no this [critique] is not about you." (TG/garden team member interview)

Sometimes, when picking up garbage, other residents tell TG members: "The municipality should do this." TG members explain that they value the engagement of citizens in the making of the neighborhood and that they have an agreement that the municipality will do major maintenance and that TG will take care of litter in the park every three to six weeks. This garden diplomacy involved a complex balancing act because when the municipality made mistakes, TG refrained from complaining while at the same time staying wary of being held accountable for municipal mistakes.

The difficulty in promoting a livelier park was viewed by the municipality and other institutions as yet additional confirmation of the problematic nature of these neighborhoods: They tried but failed because of the lack of participation of the whole neighborhood. On the other hand, participation by residents with higher levels of education meets with skepsis because they do not fit the institutionalized ideas about these neighborhoods as poor and poorly educated. Our analysis of infrastructural work by TG members and the obduracy and ambiguity they faced also shows that "the problem neighborhood" with low participation and cohesion is reproduced in interactions with the municipality. The interactions are characterized by strong institutional control and unreliable support that seriously challenge the engagement of citizens in promoting a healthy environment.

4. Conclusion

Citizen participation forms an integral part of the healthy city movement and has almost acquired the status of the gold standard for city planning and development. However, the reliance on specific formats, time windows, and accountability structures makes citizen participation susceptible to dynamics of inclusion and exclusion, prescribing who can participate, when, and how. Citizen initiatives operate in a complex context, characterized by support as well as obduracy and ambiguity. The case of TG shows how the notion of infrastructural work elicits citizen engagement in building common urban worlds, placed in this complex context.

TG engaged in constructing a socio-material infrastructure by redesigning and maintaining a large, empty park. As their infrastructural work enabled the emergence of new publics—promoting friendliness, public familiarity, and helping hands between residents from diverse backgrounds—TG challenged the persistent classification of the neighborhood as antisocial, non-participatory, and problematic. However, TG's efforts to improve neighborhood life faced two challenges. On the one hand, encouragement of citizen participation was accompanied by institutional obduracy through expertocratic control over public space and "the neighborhood public," and on the other hand, bureaucratic interactions proved ambiguous as they were unpredictable and unreliable. In this context, TG's infrastructural work was characterized by the

maintenance of institutional relations, by slowing down and adapting to the rhythms of institutions like the municipality, and by engaging in garden diplomacy to maintain hopeful and constructive relationships with residents as well as institutional partners. For TG, maintaining both the precarious socio-material infrastructures they developed and their relationship with the municipality required quite some endurance.

Even if members of TG convince each other and neighborhood residents that this obduracy and ambiguity should not be regarded as hostilities, the analysis helps to gain insight into an institutional environment that is hostile to uninvited bottom-up forms of citizen participation. This hostility can be considered in light of a blindness in participatory policies and research for the unstable, co-productive character of publics. Following Chilvers and Kearnes (2016), we suggest this blindness stems from a "residual realist account" of a public that exists objectively, outside, and independently of research and policies. While social constructivist perspectives of objects—such as trees or benches that can become resources or nuisances—are familiar in research and policies, a residue of realism remains with respect to understanding and approaching subjects, the publics participating in the development of green space. This was also the case in Maastricht Northwest, where the municipality considered the neighborhood public and their opinions as given, to be discovered with questionnaires using pregiven social status classifications. The emergent publics that did not match this neighborhood picture were dismissed as not representative of neighborhood residents. This "old" realist approach to neighborhood publics, thus, reproduced the stigmatized "antisocial" neighborhoods and cut off the attempts to develop new neighborhood publics in the process. Such realist approaches to "problem neighborhoods" are not exceptional to our case; similar processes of reproducing problem groups and problem neighborhoods in institutional interactions have been described in other urban settings (e.g., Diers, 2004; Montoya, 2013). Montoya (2013), for example, pointed out how potential futures of Central City in Los Angeles are thwarted by narratives and statistics of deficits that require repair or removal before any other actions find support.

Our analysis contributes to discussions about relationships between infrastructuring and participating publics. Whereas in the literature on the co-production of issues, infrastructures, and publics, contestation and controversy play a central role (Baringhorst et al., 2019; Chilvers & Kearnes, 2016; Korn et al., 2019; Latour, 2005), our analysis foregrounds mundane socio-material practices more than contestation. In an edited email discussion about relations between infrastructures and publics, Marres (in Baringhorst et al., 2019) observed that new publics are formed around issues and by taking issue with existing or developing infrastructures. Pedestrian activists like Peatónito present a typical example of this issue-making as they publicly demonstrate the problems of traffic that make cities inhospitable for people without cars. TG members also take part in a public that emerged around the issues of loss of social meeting places and scarcity of city nature. However, residents who became part of the wider publics that formed together with the initial TG initiatives did not form a typical issue public, but rather a public that participates by engaging in material practices. Marres and Lezaun (2011) argued that material practices in themselves, even the mundane, everyday material entanglements, can be approached as forms of citizen participation and that material objects and settings are part of the organization of publics. Our analysis shows how residents participated in the park's socio-material infrastructuring with their material practices of regular walks and garden visits, help with gardening, litter pickup, picnics, and festivities. Compared to Peatónito, gardening, daily garden walks, and social interactions in the park may be less visible to the municipality, sunken into the infrastructure of the park. However, in a neighborhood pluriverse, these material practices become constitutive of a shared world. Even residents who do not join the garden group appreciate and

trust that every Tuesday and Saturday TG members are working in the garden, as a social rhythm of the neighborhood.

This perspective on material public participation in turn contributes to discussions on the remaking of participation from a co-productionist perspective (Chilvers & Kearnes, 2016). Literature on co-production between participatory technologies and publics points out how participatory formats perform specific publics (Voß, 2016). Voß and Amelung (2016) reconstructed participation method developments over four decades and observed how anti-technocratic citizen participation transformed into technological expertocratic control over participation methods and their political legitimacy. This expertocratic control, however, met with reflexive critique, re-placing citizens' matters of concern at the center of public participation. In our analysis, TG replaced institutionalized participatory technologies, such as surveys, signatures, or roundtable discussions, with material practices of gardening and experimenting in the park. The infrastructural work of experimenting and gardening can be regarded as participatory technologies performing a public that participated in building a common "neighborhood cosmos." When their validity was challenged or ignored, TG modified their participatory technologies. Adjusting to a hostile environment, gardening became garden diplomacy, in which the garden mediated constructive socio-material relationships between neighborhood and municipality.

Finally, our long-term collaborations with TG and related participatory collectives in UwtN also provided insights into pathways for remaking citizen participation. Our pathway to remaking participation was formed in response to worries about top-down technocratic control over participation and concerns about the aggravation of inequalities that result from the participatory turn (Calhoun, 2015; Polletta, 2015; Voß & Amelung, 2016). While many researchers and policymakers worry about hard-to-reach low-income groups (Knibbe et al., 2016), we approached this as a relational problem. Health inequalities should and will not be solved by seeking to include specific "problem groups," as this approach easily reifies and stigmatizes low socioeconomic status (which is a relational qualification) into "LSES groups" (Dijkstra & Horstman, 2021). Instead, health promotion and research for healthy cities should work on making relations of collective action and research more accessible by being present on a regular basis in a variety of roles and places in low-income neighborhoods. Such accessibility and presence enable the recognition and support of forms of citizen participation and building neighborhood commons that remain unnoticed or are easily thwarted in a participatory ideology that celebrates new initiatives, deliberative formats, and methodological approaches to public participation.

Conflict of Interests

The author declares no conflict of interests.

Data Availability

Our data are rich with detail and not sufficiently anonymized for public availability. They are, therefore, stored in a secure repository at Maastricht University. Upon reasonable request, parts of our data that are easily anonymized can be made available.

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