

Prosperity in the Twenty-First Century

Concepts, models and metrics

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Building co-designed infrastructures in Lebanon's spaces of displacement

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5.1 Introduction

What does it take to bring people together in socially fragmented and culturally diverse urban settings? How can communities affected by displacement and compounded crises establish a sense of shared prosperity? In what follows, we address these questions within the Lebanese context of large-scale displacement. Lebanon has a long history of receiving refugees and migrants. Over the past century, it has been the recipient of multiple waves of displaced people, including Armenians, Palestinians, Iraqis and, more recently, a large number of Syrians. At the time of writing, with approximately 1.5 million Syrian refugees, Lebanon has the highest number of refugees per capita in the world: approximately a quarter of its population (UNHCR, 2021).

The arrival of Syrians in Lebanon is often portrayed as exerting 'pressure' or 'strain' on the country's economy, services and infrastructure (Abid et al., 2017; see also Baylouny, 2020). But even if such claims are true in some circumstances and contexts, they do not tell the whole story, and they raise important questions about what opportunities there are to create pathways to livelihood security and sustainable prosperity in the context of large-scale displacement. Solutions to the challenges presented by displacement and migration must be approached on multiple levels simultaneously. On one level, national policies and humanitarian or development interventions that generate incomes, an effective educational system and decent public infrastructure are crucial for dealing with the effects of mass displacement. A primary focus on this level, however, runs the risk of relying on aggregate outcomes, as well as on

narrow conceptions of prosperity and progress, without considering if and how these outcomes translate into good-quality of life for people on the ground. On a second level, we argue that solutions must be locally driven and locally adapted in ways that prioritise the concerns that are relevant to people and the spaces they inhabit; crucially, this includes displaced people themselves as well as host populations.

This chapter focuses on possibilities for creating solutions at this second level through the co-design and community-engaged construction of urban interventions in a socially inclusive manner, whereby both host and refugee populations play an active role in the co-creation process and take ownership of the results. We illustrate the long-term and multifaceted value of urban co-design with the example of a participatory spatial intervention built in the town of Bar Elias in 2019, and evaluated in 2021. The aim of the evaluation was to understand how the intervention – with its specific history of being co-created with the community – affects people’s experience of the built environment, including their experiences and feelings of belonging to that environment and their relation to the people with whom they co-inhabit it.

Prosperity, as the chapters in this volume make clear, is a concept and a phenomenon that ought to be understood in a context-specific fashion. In the case of Lebanon, the incomplete recovery from the Civil War (1975–90), the wave of displacement from Syria since 2011, and the multiple recent political and economic crises, shape the local parameters of how prosperity is understood. Infrastructure is an important element in this context, because of longstanding deficits that the country has faced in infrastructure and in the provision of electricity, water, waste management, housing and open public spaces (see [Chapter 6](#) for more on electricity infrastructure).

Even before the current economic crisis, the quality of Lebanon’s infrastructure was ranked among the lowest in the world (Harake & Kostopoulos, 2018). The infrastructural rebuilding and recovery after the Civil War was partial and insufficient (Chalcraft, 2009: 155), and closely bound up with sectarian politics and regimes of power that directly link service provision to private economic and political interests (for a review of the infrastructural vulnerabilities in Lebanon, see Baumann & Kanafani, 2020). The Beirut post-war recovery process has been heavily criticised for exacerbating inequalities, displacing local residents, failing to improve community relations, and destroying heritage architecture to build luxury tower blocks (e.g., Bou Akar, 2018; Fawaz, 2009; Harb el-Kak, 2000; Hourani, 2015; Khechen, 2018; Krijnen & Fawaz, 2010; Sawalha, 2010). Part of the problem is that the planning and development of the reconstruction projects have shown little regard for the needs, experiences and

aspirations of local residents. As Aseel Sawalha's (2010) ethnography of Beirut's seaside neighbourhood of Ain al-Mraiseh shows, when the post-war reconstruction process excluded residents and their views from decision making, the result was resentment and disillusionment towards the state and the Solidere company in charge of reconstruction. People felt that a vision of reconstruction was imposed on them without any regard or concern for them and their views, especially when it came to the needs of the most vulnerable members of the community. Within the post-war recovery process, Sawalha claims, 'development and modernity meant creating a cosmopolitan global city, in the hope of attracting investors and tourists, but at the same time it excluded its vulnerable residents from its future urban plans' (2010: 131; see also Makdisi, 1997). Here, the vision of prosperity embodied in the process of reconstruction was a vision of diversity, cosmopolitanism and inclusion, but with a neoliberal twist: it was a vision of a welcoming cosmopolitan city, but only for those with enough money to fuel an economy of high-end consumption. All other residents – whether they are low-income Lebanese, Syrian migrant workers, refugees, or domestic workers tied to the callous and exploitative *kafala* sponsorship system¹ – are marginal to this vision of prosperity, despite the fact that it is through their labour that the city's activities and services, including the reconstruction process, are able to continue.

5.2 Prosperity in the context of urban displacement

To rethink or redefine prosperity, as this volume argues, means to engage in depth with locally specific experiences, and to do so in an inclusive way that values the voices of people of all social and national backgrounds. In contexts of displacement and migration, what must also be attended to is the question of how the Other – the refugee, the displaced person, the migrant, the stranger – fits within the project of building a better future. One response to displacement and migration that has become all too familiar is the populist, protectionist response that focuses on protecting the prosperity of those who have it by keeping others out, either physically, or socially and economically. Within this model, the inclusion of foreigners in national life is seen as an impingement or as an obstacle to building a better society. Recent critiques of this argument have pointed out that the presence of refugees can lead to economic benefits for host communities (for example, Betts & Collier, 2017; Betts et al., 2017; Fawaz, et al., 2018; Yassine & Al-Harithy, 2021), and that migration can also lead to vibrant and cohesive urban communities, as the case of London has shown (Mintchev & Moore, 2017, 2018). This means that

diversity can become the foundation of a prosperous society, and not an obstacle to it as proponents of the nationalist protectionist response often assume. But the question of whether (and how) countries, cities and communities can build shared prosperity depends on multiple variables such as the scale of migration, the educational levels and cultural backgrounds of newcomers, and, not least, the public services which have the potential to enhance everyone's capacities by covering their basic needs.

The question of how particular visions of prosperity come about and how they become embedded within societies needs to be examined across different scales, from governance to quotidian urban interactions. Top-level decisions about anything from legal rights for refugees and migrants to job creation strategies and funding for urban infrastructure are decisive for determining what kind of society people co-inhabit, but equally important is the way in which people manage their urban environments at the local level in everyday life. Attentiveness to subjectivity and agency is key to understanding how inclusive prosperity can be achieved in contexts of displacement. The way people relate to one another on a day-to-day basis depends on a range of subjective factors, including psychic representations and affective orientations towards others; it also depends on the kinds of practices that communities engage in, and the spatial and infrastructural conditions they inhabit and share. As Ash Amin writes,

urban infrastructure (layout of public spaces, physical infrastructure, public services, technological and built environment, visual and symbolic culture) [has] resonance as a 'collective unconscious' working on civic feelings, including those towards the stranger. ... [I]nterventions in the urban infrastructure guided by principles of multiplicity and common access have an important part to play in an urban politics of living with difference.

(Amin, 2012: 63)

In the Lebanese context of displacement, refugees are embedded in the urban fabric of large cities and small towns across the country. Unlike Jordan and Turkey (the other two main hosts of displaced Syrians), Lebanon has a policy of non-encampment, which means that the majority of Syrians have settled in and near cities, seeking job opportunities and access to services (Sanyal, 2017; Turner, 2015). This, though, does not make refugees' lives and livelihoods any less precarious and uncertain. Syrians who are able to find employment are usually poorly paid, with no job security, long working hours and limited time for rest or leisure. Since 2020, the economic crisis has made this situation worse for Syrians and for Lebanese. Precarity has expanded to the majority of

the population, including Lebanese in middle-class professional occupations, and pushed a huge number of people into poverty, energy insecurity and food insecurity, with Syrian refugees and poor people being disproportionately affected (for example, UNICEF, 2021; United Nations Economic and Social Commission for Western Asia, 2021).

Tensions between refugees and hosts are also an issue in some areas, either because of sectarian and political differences, or as a result of competition over resources such as housing, jobs and services. Although Syrians were received with hospitality in the early days of the conflict in Syria (Christophersen et al., 2013), this dynamic soon changed, and the dominant narrative became one of 'hosting fatigue': refugees were said to be overstaying their welcome and becoming 'a burden' on the country's already strained infrastructure (Fakhoury, 2017: 686; Knudsen, 2017: 136). The result was an increasingly tense environment, culminating in fear of harassment and abuse in public spaces, as well as social disengagement from the public realm (Harb & Saab, 2014; DeJong et al., 2017; Knudsen, 2018: 108–9).

However, despite these circumstances, there are opportunities to develop spaces and practices that lead towards a shared vision of prosperity. One way to do this, as we argue in this chapter, is through co-designed and inclusive interventions. Such interventions must be inclusive in the sense that they embody principles of diversity, openness and accessibility. They must also be co-designed in a way that invites local residents, both short- and long-term, to make key decisions about what is needed to meet local priorities. The practice of co-design has a number of significant benefits: it ensures that interventions are responsive to locally relevant issues; it presents an opportunity for people from diverse cultural and social backgrounds to collaborate; and it supports people's agency by ensuring that local residents make important decisions and take ownership of the final outcomes. This approach is fundamentally different from large-scale top-down projects of infrastructural development, because it generates specific forms of affective engagement, not just between the people involved in the co-design, but also between the participants and the urban environment.

The participatory spatial intervention (PSI) presented in this chapter exemplifies how the process of co-design amplifies the impact of infrastructural recovery. The intervention was led by Andrea Rigon (Bartlett Development Planning Unit) and involved Hanna Baumann (IGP), and Joana Dabaj and Riccardo Conti (CatalyticAction). The PSI is a relatively small initiative that was created as part of a wider academic research project led by Henrietta Moore. As such, the scale of its impact can hardly compete with that of big infrastructural projects funded by

states or private companies. The fact that the PSI was co-designed, however, has meant that this relatively modest initiative has been embraced, maintained and further developed by the Bar Elias community in a way that has led to transformations of the urban environment as well as to experiences of sociality when people engage with one another. As the post-implementation evaluation reveals, the participatory approach and its focus on social diversity and inclusion supported Bar Elias residents in engaging positively with one another and with local infrastructures during and beyond the intervention. These new forms of engagement and their effects on the quality of urban life demonstrate the potential of collaborative development to improve public spaces and services and align them with new visions of shared urban prosperity.

5.3 Co-design in Bar Elias

Bar Elias is a refugee-hosting town in the Beqaa Valley, near Lebanon's border with Syria. Since 2011, the town has seen its population nearly double as a result of displacement. At the start of the project in 2018, the town was home to approximately 65,000 Lebanese citizens, 6,000 Palestinian refugees, 31,500 registered Syrian refugees and up to 15,000 unregistered Syrians (UNHCR, 2018; Ullrich, 2018; Haddad et al., 2018). This ratio of refugees to hosts places Bar Elias in a category that the UN classifies as 'high pressure' in terms of the potential for social instability (Inter-Agency Coordination Lebanon, 2015). And indeed, while Bar Elias has been welcoming towards Syrians, there are reports of tensions, in particular because the presence of the displaced has altered public spaces such as street-side markets (Ullrich, 2018). As a result, UN-funded projects have been targeting locations like Bar Elias with large-scale infrastructure projects in the hope of alleviating the social pressure and potential for political instability (United Nations Development Programme, 2018). While the infrastructural issues that preceded the arrival of Syrian refugees continue in the area, the town has seen significant infrastructural investment from a variety of international donors, including a new Médecins Sans Frontières (MFS) hospital at the entrance road to the town (where the PSI was focused), as well as a football stadium and a recycling plant.

However, as some UN representatives acknowledged in interviews, the technocratic assumption that increased infrastructural investment will automatically lower the potential for conflict between refugees and hosts is somewhat simplistic. The problem with this view is that it treats everyday urban politics as a zero-sum game in which residents fight over scarce resources, without duly acknowledging that living with difference

requires civic feelings anchored in joint aspirations and collaborative actions. The PSI was designed to embody a fundamentally different approach, one based on citizen social science as a mechanism of involving members of the community in the research process while capitalising on opportunities to bring people together to make joint contributions to the future of their town. Citizen social science, as we practise it, is a research methodology in which members of the community are recruited, trained in research and integrated into the research team, where they play an active role in all project activities, from research design and data collection to presentation and publication of findings and development of interventions (for more detail on citizen social science see Jallad & Mintchev, 2019; Jallad et al., 2022; Mintchev et al., 2022).

The research leading up to the physical intervention focused on the manner in which vulnerabilities created by public services (or the lack thereof) are shared, and how they can be jointly addressed to create solutions that benefit both refugees and hosts (for a detailed documentation of the PSI process and its outcomes, see Dabaj et al., 2020). The PSI began with the recruitment and training of local citizen scientists who subsequently carried out research over the course of 10 months, beginning with a one-week workshop in August 2018, to identify the town's public spaces, their uses and their users. The entrance road to the city was identified as the site for the physical intervention, because it is the only space used by all groups residing in and visiting Bar Elias. This was followed by a seven-day participatory design workshop with citizen scientists and other residents (Figure 5.1). The latter, like the citizen scientists, were recruited to reflect the diversity of Bar Elias's communities in terms of nationality, gender, age and class.

This attention to diversity was crucial, as participatory research and design often risks privileging the input of local elites and consequently reproducing entrenched power relations and inequalities (Mansuri & Rao, 2013; Rigon, 2014; see also Dabaj & Conti, 2020; Rigon et al., 2021). Our deliberate inclusion of residents from different backgrounds was intended to act as a countermeasure to this challenge. And indeed, some of the participants noted that the PSI was the first time that 'locals' (understood here as Lebanese and Palestinians, most of whom have lived in the town for decades) and displaced Syrians worked on a common project. The content of the discussion during the workshops also made a difference to cross-cultural conversation. The dialogues helped residents to engage with various points of view about the infrastructural challenges of the town, including the ones faced by all communities as well as those particular to certain groups or neighbourhoods. The dialogue highlighted the way in which local concerns were often shared, and gave



Figure 5.1 Bar Elias residents at the Participatory Planning Workshop, October 2018.

Source: Hanna Baumann

expression to a narrative that was in stark contrast to the commonly voiced allegations that others overstretch local services. By focusing the discussion on the interdependence of everyone in the town, participants' narratives centred on the need to construct an infrastructure to manage and improve the town's shared spaces and resources.

Within this framework of interdependence, participants and researchers studied and learned about the infrastructural conditions of the town and the various, intersectional vulnerabilities that these conditions generated. They brainstormed the underlying causes of local vulnerabilities and began to formulate potential solutions that would address them through small-scale interventions. A number of potential solutions were then proposed as a way to address residents' vulnerabilities, while contributing to a vision of the city that was shared by different social groups. Proposals included various types of urban provision: improved safety mechanisms such as traffic lights, pedestrian crossings and access ramps; improvements to the main road, where different communities meet, including street shading, benches and greenery to increase the hours of use and provide protection from summer sun and winter rain; beautification measures and signage intended to encourage a sense of shared identity and responsibility; and proposals for bigger centralised projects such as the creation of a park with a playground that would serve as an inter-communal meeting space. All of these proposed solutions were centred around a vision



Figure 5.2 A child playing on the circular bench.

Source: CatalyticAction

of improving opportunities for inter-group relations, fostering pride in the town, and improving the experience of diverse groups of users of the road, including children and people living with disabilities. These proposals were subsequently translated into designs, which were presented to the residents for feedback and consultation in December 2018.

The research and consultation process produced a series of designs that were implemented and built in May 2019. One of the designs was a large circular concrete seating area that was installed on a wide section of the pavement in front of the local polyclinic (Figure 5.2). Previously, this space was either blocked by cars parked on the pavement or, when this was not the case, used by waiting patients, who were forced to sit on the ground. The bench was covered by a shade under which patients and other users could rest and socialise. The bench was also designed to encourage children to play.

The aluminium panels that provided shade were laser-cut in a way that spelled out Arabic phrases on the pavement. The slogans reflected participants' values and aspirations of co-existence (for example, 'Bar Elias, the mother of strangers, cleanliness and togetherness'). Another key initiative of the PSI was the rehabilitation of a previously dilapidated green space behind the MSF hospital, which had been earmarked to become a parking lot. The space was cleaned up, planted and turned into a park with benches, with a specially added access path from the main road (Figure 5.3). All along the entrance road to the town, newly



Figure 5.3 The green space behind the MSF hospital after clean-up and planting.

Source: CatalyticAction



Figure 5.4 Access ramp onto high pavement.

Source: CatalyticAction

installed shades and seating encouraged people to sit and gather, while floor games invited children to play and use the pavements. Speed bumps were installed to calm traffic and pavement ramps to enable easier access for pushchairs and wheelchairs. Murals and signage pointing out local sites were added to enhance the aesthetics of the public realm and to make the town easier to navigate for visitors (Figures 5.4, 5.5 and 5.6).



Figure 5.5 Shade incorporating laser-cut phrases and recycled materials above newly installed seating. A sign in the background points passers-by to the revitalised garden.

Source: CatalyticAction

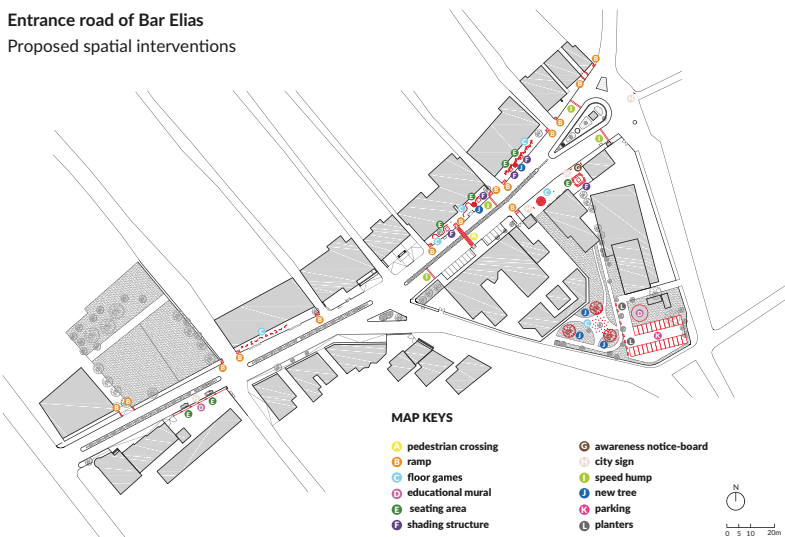


Figure 5.6 Overview of Participatory Spatial Intervention.

Source: CatalyticAction

5.4 Social impacts of co-designed infrastructures

Two years after the completion of the PSI, in September 2021, our team designed an evaluation programme to assess the intervention’s impact over time. The preceding period had been one of disruption and crisis. In October 2019, a revolution erupted across the country, with mass protests that eventually ousted the government. This was followed by a massive currency depreciation, which led to unemployment, rising poverty rates and a surge in the cost of living. In the spring of 2020, the Covid-19 pandemic hit Lebanon hard, especially since there was no social safety net to support people during lockdown. In August 2020, one of the largest ever non-nuclear explosions destroyed vast swathes of Beirut, killing over 200 people, injuring thousands, and displacing hundreds of thousands.

These successive and compounding crises were felt in Bar Elias. There had been over 250 deaths from Covid-19 in the town at the time of the evaluation, according to local reports (see Lebanese Ministry of Health, 2022). At the same time, the economic crisis resulted in a decline of the public realm, with shortages of money and basic goods leading to a proliferation of theft of anything that could be of value, from cars to pieces of hard infrastructure such as manhole covers. The relationship between

long-term residents (Lebanese and Palestinian) and displaced Syrians also deteriorated during this period. Negative rumours were spread about refugees and there were occasional conflicts in the ubiquitous queues for health services at the polyclinic or for fuel at the petrol station. The acute economic crisis also meant that the municipality could not afford to maintain the built environment beyond the most essential services.

The evaluation of the PSI took place in this context of recession and the incapacity of the public sector. Like the research that preceded it, the evaluation was carried out in collaboration with citizen scientists, with four members of the original citizen science group taking the lead in monitoring and documenting the impact. The evaluation team observed and recorded residents' interactions with all elements of the PSI over six days and conducted short interviews with users and passers-by. The findings suggested that the majority of residents saw the PSI as having a positive impact on the town and the community. The PSI's focus on making the town centre a space where it is easier for people to socialise fostered inter-group interactions and a stronger sense of collective identity, while opening up new spaces to previously marginalised groups.

The most notable impact of the PSI was generated by its key design feature – the shaded seating area with play elements and mosaic decorations – which had transformed the town both physically and socially by encouraging social interactions. In fact, the space had become known locally as 'the new town square', a new landmark in the town which served as a gathering point for all residents and visitors across differences of nationality, class and age. It was used by children and caregivers waiting for doctor's appointments throughout the day, and by young men who needed a place to socialise in the evenings. The space was also the site for large gatherings, public demonstrations and communal celebrations: protests of up to 2,000 people during the October 2019 revolution; gatherings on the Palestinian national day (officially known as Independence Day) and protests against the Israeli attacks on Gaza in 2021; celebrations on Muslim holidays such as Ramadan, Hijri New Year and the Prophet's Birthday. All of these activities were now taking place at the newly developed space (Figures 5.7 and 5.8).

As one citizen scientist explained, the PSI transformed the landscape of the town and the way in which residents expressed their collective identity: the PSI, he said, was '*wajhet al mantaqa*' (the face of the area), and was comparable to Beirut's bustling Hamra Street. The space, he elaborated, had become a local landmark, and people would frequently say, 'Let's meet at the *saha* (square)', referring to the bench outside the polyclinic.



Figure 5.7 Gathering around the seating area during the Lebanese revolution, October 2019.

Source: Moayad Hamdallah, citizen scientist



Figure 5.8 Gathering to celebrate the Prophet's Birthday, 2019.

Source: Moayad Hamdallah, citizen scientist

But with increased use, prime location and a sequence of crises came increased securitisation. As the economic situation worsened, shortly after the construction of the PSI, the police placed a temporary police station (a container) next to the bench, in order to observe the main road and reduce theft. This blocked the flow of people and inhibited access to a drinking fountain, and also made the area aesthetically and socially less welcoming. The looming presence of police officers made people – and especially women – less comfortable in the space. Nevertheless, a young man who regularly sat on the bench said that, despite the police presence, the installation was hugely beneficial: “The space has been used a

lot more in the past two years, and it benefits everyone, but especially the Syrians who come here because their houses are too small.’ Initially, residents had expressed worries that creating a seating area in a public square would attract ‘thugs’, but this prediction did not come true; instead, the installation became a ‘place for all groups’, as another citizen scientist put it, and it also brought a sense of pride to the town, particularly among those who had taken an active part in the research, design and implementation.

In comparison with the circular bench, the rehabilitated green space was less successful in its goal of providing a safe and inclusive public space. This was because it required a significant amount of maintenance, which the municipality did not have the capacity to deliver in a time of crisis. During the design phase of the PSI project, CatalyticAction had negotiated with the municipality that only a small part of the park would be used for car parking, and that the municipality would water and care for the greenery in the park. Two years on, however, much of the space was used for parking, especially by the polyclinic staff, and the municipality only watered the plants when a member of the citizen science team followed it up with them. The newly installed wooden benches had been stolen six months after completion (with numerous unsubstantiated rumours circulating that refugees were to blame and that polyclinic staff stole the benches for their homes). Furthermore, the space was used for very limited periods during the day: in the daytime, the space was barely visited by anyone, because of the strong sun and lack of shade; at night, the absence of lighting meant that hardly anyone would visit, save for the occasional couple looking for a quiet date spot. The only time when the space was busy was in the evenings when it was cooler and still bright: children played football in the green area for several hours every evening, and families visited the space around sunset to let small children run around. As Moayad Hamdallah (one of the most active citizen scientists on the team) explained, this small green area holds enormous potential for improving residents’ wellbeing in the future: ‘If the park is maintained and a playground installed, it could create a peaceful spot for children who are badly impacted by the stressful economic situation and allow them to play in a safe area set back from the road.’

The smaller elements of the PSI that were placed along the main road (for example, seating, access ramps, speed bumps, trees) also led to mixed outcomes in terms of impact. Initial worries about young men loitering on the seats did not materialise, but other issues came to the fore. Some of the newly installed shaded seating was claimed by shop owners, causing tensions with other residents who were also interested in using



Figure 5.9 One of the trees planted as part of the PSI providing shade to a street seller, 2021.

Source: CatalyticAction

it. The seating installed for the local taxi stand also ran into problems: the fact that it was built for short waits meant that it was not comfortable enough for the longer periods that taxi drivers spent waiting for customers. This, combined with the lack of shade, meant that drivers preferred to bring their own chairs and sit on the tree-lined central reservation (median) of the road. The trees were well looked after by shop owners and daily street users, and they thrived, while providing much-needed shade (Figure 5.9).

The 16 ramps designed to enable access for wheelchair and push-chair users were successful at improving access to the pavement. A major problem – one that was correctly anticipated during the design phase – was that the ramps were used by motorcycles and tuk-tuks to drive onto the pavement. In response, one local butcher had removed the ramp near his shop because he felt that the exhaust from small vehicles affected the quality of his meat. The colourful floor games painted on the pavement proved to be particularly successful. They were regularly used by children, especially in the cooler summer evenings, and the murals and signage were generally well maintained. The speed bumps that were put in place to slow down some of the traffic had to be removed because of lack of maintenance, but the citizen scientists have committed to having them reinstalled once the municipality raises the necessary funds.

Another key part of the post-implementation impact was the way in which members of the Bar Elias community treated, maintained and built on the different elements of the PSI. As we suggested earlier, one of the benefits of co-design and community-engaged implementation is that residents of the community take ownership of the project and maintain a strong investment in its long-term maintenance and use. As the findings of the impact evaluation revealed, Bar Elias residents did in fact assume ownership of the PSI installations and took a number of actions on their own initiative to preserve and enhance them. Several people even replicated parts of the PSI. For example, about a month after the PSI's completion, staff from the aforementioned polyclinic added additional concrete benches with planters and a sign for disability access along the path to the rehabilitated garden. In another example, a local activist from the organisation Moltaka Shabab Bar Elias (Bar Elias Youth Meeting Point) installed murals in the different neighbourhoods of the town.

When maintenance could not be carried out by the municipality, members of the community were able to step in to maintain the intervention. A staff member from the polyclinic took on the responsibility of watering the trees in front of the building, while an employee of the MSF hospital watered the trees on the opposite side of the street. The citizen scientists also took an active role in the long-term maintenance of the PSI's different elements. In particular, one team member – Moayad Hamdallah – expressed a keen sense of responsibility to ensure that the installations remained in good shape: he notified CatalyticAction of any changes or need for repairs; he continuously negotiated with the municipality and local politicians about maintaining the positive changes despite the economic crisis; and he stored removed parts of the PSI, such as some of the speed bumps, at his home in the hope that they will be reinstalled at a later point. Hamadallah also co-ordinated several small maintenance works directly with the team and took part in the works while they were carried out.

While this chapter has focused on the impacts on the urban environment and residents' sociality of the co-designed social infrastructure, the participatory approach created a human infrastructure of trained and mobilised residents able to act for their town across boundaries of nationality, gender, age and religion (Rigon et al., 2021). Some of the citizen scientists who were initially recruited for this project went on to work on other research initiatives, where they were able to apply the training and experience they had gained while working in the IGP team. For others, the experience of working in a diverse group enhanced their understanding of their community. One citizen scientist, for example, said that

taking part in the PSI helped him to think from the perspective of other groups and consider their needs with greater awareness. Another member of the team made a similar statement about awareness, understanding and acceptance across social divides: ‘Working with colleagues from different backgrounds gave me more confidence and openness to accept people with different thoughts and ideas.’ Furthermore, being able to take ownership of the intervention and its outcomes helped participants to adopt new roles in their communities. One citizen scientist noted that the spaces enhanced by the intervention are known to her friends and neighbours as spaces she created, while another citizen scientist said that the team members who participated in the project were now ‘well known in the community’ for the work that they had done. Such recognition was always welcomed by the people who made a contribution, but it was particularly significant for refugees, whose participation in the improvement of their town meant that they could ‘give back’ to their hosts, as one Syrian citizen scientist put it. Within the context of displacement and often strained host–refugee relations, the process of the PSI, from research to implementation, was an opportunity to challenge the stereotype of refugees as passive recipients of aid and to highlight their ability and willingness to contribute to their town and community. Refugees were denied the rights of national citizenship (in the legal sense of the term), but they were both capable of exercising and willing to exercise urban citizenship (in the participatory sense of the term) by demonstrating a duty of care towards the town that they lived in and the people with whom they co-inhabited it (Rigon et al., 2021). Finally, citizen scientists used the skills and social networks they acquired to engage in a variety of other independent initiatives, including building a group with the aim of running for political office, student activism, involving neighbours in planning a better use of an empty space near their dwellings, and advocacy with the municipality.

5.5 Conclusion

The participatory spatial intervention presented in this chapter illustrates how collaborative creation of social infrastructures in which members of the public are involved in research, design and implementation can amplify impact and generate social value beyond the materiality of the infrastructures themselves (Rigon et al., 2021). This, we argue, has important implications for thinking about economic and infrastructural recovery, especially in the Lebanese context of displacement, where

tensions between hosts and refugees, competition over resources, and narratives about refugees as a burden persist. Investment in infrastructures is much needed at the moment, but it is important to question what that investment is used for, how it is implemented, who will benefit from it, and with what consequences. There is good reason to anticipate that the impact of infrastructural recovery will be not only very limited, but also fraught with a range of social and political challenges, if it is conducted in a top-down manner without any input or engagement from local community members. In order to achieve adequate delivery of services, as Fawaz (2018) suggests, infrastructural projects must build on existing informal arrangements and localised support systems.

Furthermore, efforts to improve quality of life are impossible to separate from efforts to address displacement-related challenges. This is because hosts and refugees inhabit the same spaces, and use (and contribute to) overlapping infrastructures, services and social support systems. But contrary to claims that hosts and refugees are in continuous competition over scarce resources in a zero-sum game, the experience of Bar Elias shows that it is both possible and beneficial to view refugees and hosts as interdependent actors who can support one another and work together towards shared goals. Future initiatives and interventions, regardless of their scale, should thus account for the value of partnership with communities and uphold principles of dialogue and inclusion, with the right mechanisms in place to embed these principles into practice.

If infrastructural projects aspire to delivering prosperity as it has been redefined in this volume, they need to include the intended beneficiaries in the process of creation. This means giving people the opportunity to express their voices, whether this is done through consultation and co-design of policy action, or, as in the case of the PSI discussed here, through participation in the building and implementation of the project. As our example from Bar Elias shows, this approach is beneficial for both the residents and the built environment: it gives people a chance to create an urban environment they want to live in, it strengthens feelings of belonging, it encourages people to care for their public spaces and, not least, it transforms social relations towards pathways to collaboration for meaningful change.

Note

1. Migrant domestic workers are excluded from the country's labour laws and are instead governed by the *kafala* sponsorship system whereby workers' rights to work and live in the country are tied to their employer. This frequently results in exploitation and abuse.

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