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Interpretive Flexibility as an Approach to Designing Inclusive Urban Space: Learning from Medellín and Beirut

Hanne Cecilie Geirbo
Associate Professor, Department of Computer Science, Oslo Metropolitan University
Hanne.Cecilie.Geirbo@oslomet.no

Lisbet Harboe
Associate Professor, Institute of Urbanism and Landscape, The Oslo School of Architecture and Design
Lisbet.Harboe@aho.no

Kristian Hoelscher
Senior Researcher, The Peace Research Institute Oslo (PRIO)
Kristian.Hoelscher@prio.no

Sobah Abbas Petersen
Senior Researcher, Department of Technology Management, SINTEF Digital
Sobah.Petersen@sintef.no

Abstract
In this article, we examine how urban design can promote inclusion by simultaneously accommodating multiple expressions of interests and identities and providing common ground for interaction between different social and cultural groups. Borrowing from science and technology studies, we use the concept of 'interpretive flexibility', which recognises multiple and incongruent perspectives as a resource in design and extend this by drawing on the architectural notion of 'generality', which supports the ability of a design to accommodate change in usage without a change in its properties. We illustrate the potential of interpretive flexibility as an approach to designing inclusive urban space with a comparative case study of Medellín, Colombia and Beirut, Lebanon. This approach treats architectural considerations about materials and form as an integral part of planning interventions for social change. In discussing this approach, we identify key insights from our cases and their relevance for Nordic and other urban contexts.

Keywords
Beirut, generality, interpretive flexibility, Medellín, inclusive urban spaces, participation

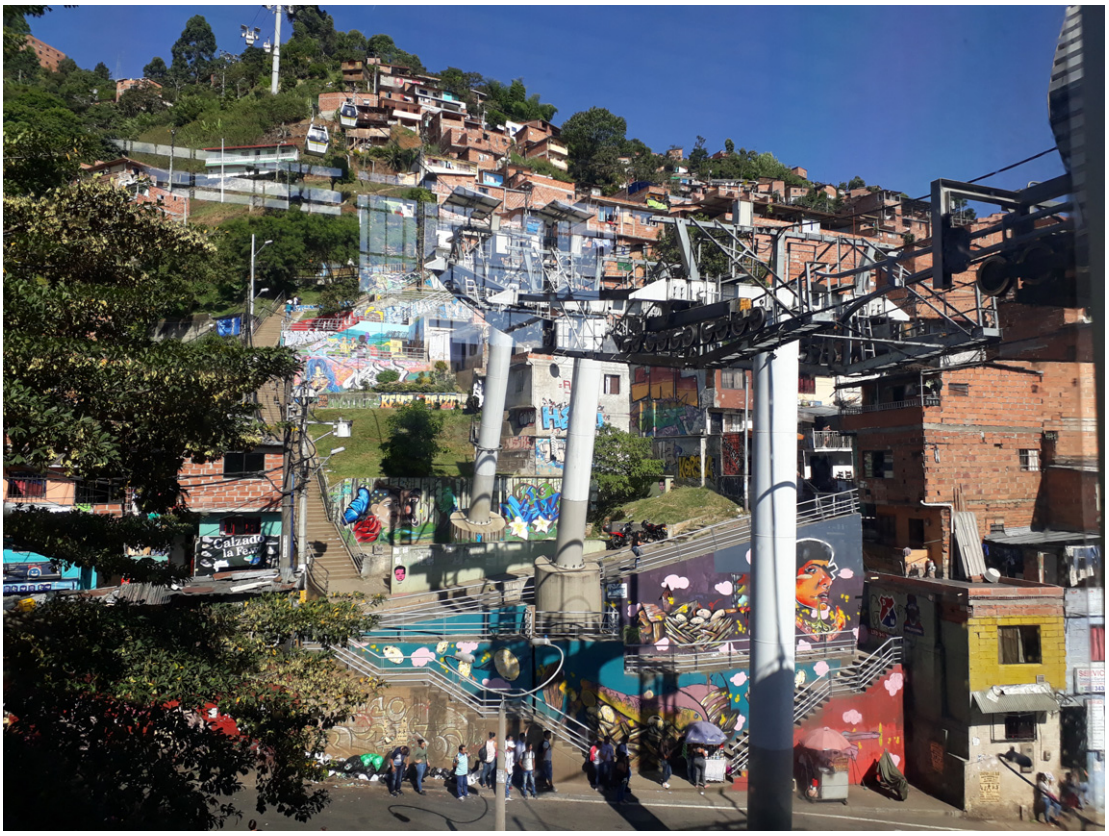

Fig. 1
Medellín's urban district Comuna 1 Popular and urban regeneration projects of mobility and public space. Photo: Hanne Cecilie Geirbo.

Introduction

How can we design urban spaces that promote inclusion? As urban growth increases and cities become more diverse, this question has implications for the dynamics of power and citizenship (Irazabál, 2008; Jensen, 2011), the inclusion or exclusion of citizens (Eizenberg et al., 2021; Ye, 2019; Low & Iveson, 2016), and how infrastructure, mobility and service delivery are conceptualised, integrated and implemented in cities (e.g., Brandão & Brandão, 2017; Sheller, 2008).

A sizeable literature has examined inclusive urban public space design (e.g., Carr et al.,1992; Aelbrecht & Stevens, 2019; Pinto et al., 2010; Carmona et al., 2010; Madanipour 2021). This article focuses on how to create and renew places with the central principle of furthering inclusion and cohesion by offering multiple interpretations and uses for diverse inhabitants. Urban public spaces form physical arenas where social life is enacted, such that removing spatial barriers, providing greater spatial freedom, and designing accessible public space, for a variety of citizens, may contribute to social inclusion. Upgrading public spaces can thus be an important approach to creating (and democratising) urban arenas, allowing diverse citizens to meet and develop connections that foster social cohesion (Allen et al., 1998; Shaftoe, 2012; Farrell & Haas, 2017). This intersects with the democratising potential of public spaces (e.g., Oldenburg, 1999) where "being present in public space – making claims to and becoming visible in the streets, sidewalks, squares and parks of the city – is a vital, necessary step in making claims *on* the public and *as part of* the public" (Staeheli &

Mitchell, 2008: xiv). Social inclusion and exclusion often centre on issues of access: to resources, power, and shared symbols. In order for public space to promote coexistence, it needs to remove or reduce the socio-spatial barriers to exclusion (Madanipour, 2021). The role of public space is significant in three dimensions, according to Madanipour: investments into public infrastructure ensuring access for all, democratic public space open to equal political participation and free cultural presence and expression that allows for the many voices.

As a way of fostering inclusion, participatory urban planning and design methods are promoted for their ability to allow the design of public spaces to be informed by the perspectives of different, and often marginalised, groups (see Madanipour, 2010). In practice, these democratic ideals of participation often manifest as a contentious process between groups with different interests and degrees of power and agency (Calderon, 2020), and when not resolved, participants may experience that the design objects do not reflect the ideas and suggestions that they contributed with. Given the calls to acknowledge these discrepancies between ideals and practice (Calderon, 2020), this article will contribute to the discussion by suggesting an approach to the design of urban spaces where multiple, and sometimes conflicting, interests of different groups are used as a *resource* in design rather than an issue to resolve.

Nordic cities have developed within a context of political-administrative models aimed at fostering social inclusion and cohesion. Notably, these conditions have changed during recent decades due to deregulation, privatisation, and entrepreneurial competition in urban governance (Haarstad et al., 2021). Moreover, the heterogeneity of the urban population has expanded in part due to increased migration, with Nordic cities grappling with greater social inequality and segregation (Righard et al., 2015; Wessel et al., 2017. Despite these challenges, the inclusion of citizens in participatory processes of planning and design has been keenly promoted in the Nordics and is frequently regarded as a resource in addressing issues of diversity and inclusion in the city (Reichborn-Kjennerud & Ophaug, 2018; Ringholm et al., 2018).

This article contributes to a special issue devoted to exploring the connection between architecture and urban studies. In doing so, we are invited to discuss a somewhat awkward relationship. Nonetheless, the cases presented in this article reveal cooperative relationships through the practice of architecture and social sciences in urban studies. In grappling with critical and complex challenges, the collaboration between architects and social science professionals is here characterised by a shared sense of urgency and obligation borne out of the personal experience of living in a city characterised by crises and vulnerabilities. The critical need for practical interdisciplinary collaboration to solve problems overshadows the contemplation of disciplinary dynamics. In presenting our cases, we seek to reflect this interdisciplinary pragmatism. Our contribution to the discussion of the relationship between architecture and urban studies will therefore present an approach where architectural considerations of spatial organisation and materiality are treated as an integral part of planning interventions for social change.

Emerging from a broader research project (*Learning Flexibility: Novel Responses to Urban Challenge and Crisis*), examining how cities experience crises and develop knowledge and practices that may contend with urban vulnerability, this article will present an approach to designing inclusive urban space that is drawn from a comparative case study of Medellín, Colombia and Beirut, Lebanon. While distinct urban environments, both cities share a high degree of inequality, a lack of economic opportunities, and fundamental challenges regarding the availability of inclusive public spaces. Yet approaches to public space creation also differ as investments into public space have been a central part of an urban regeneration strategy in Medellín but have been severely limited in Beirut.

In comparing the range of urban design approaches in these similar yet distinct cases, we draw on focused key informant interviews with planners and practitioners, multiple interdisciplinary field visits in each city, and a review of practitioner- and policy literature, and academic literature. We apply an interdisciplinary perspective where we borrow the concept 'interpretive flexibility' (Bijker et al., 1987; Orlikowski, 1992) from science- and technology studies (STS) and extend its relevance to the urban built environment by drawing on the architectural notion of 'generality' (Klarqvist, 1969; Cold et al., 1984; Arge & Landstad, 2002). We use this to examine and illustrate how urban public spaces can be more diverse social, cultural, and political sites where meaning, use and identity can shift between users and across time. In using the lens of interpretive flexibility, we offer a perspective where insights from urban studies and architecture are merged and implicit. This emphasises designing public space to provide a common ground for interaction between different groups, inviting different interpretations and uses of the same space, and facilitating the expression of multiple interests and identities. In doing so, the article explores interpretive flexibility in design as both process and object, focusing on how different users may read and use designed urban spaces, while also paying attention to participants' readings of and engagement in design processes.

The rest of the article is structured as follows: section two outlines our theoretical framework, and section three briefly reviews the methodology of our study; section four presents insights from the cases of Medellín and Beirut in light of our analytic lens; section five synthesises findings across cases and discusses their relevance for the Nordic context; and section six concludes.

Fig. 2
A tree and its shadow outside the American University of Beirut. Photo: Hanne Cecilie Geirbo.

Theoretical Framework

Participatory processes are used in urban development to support the creation of spaces that foster social cohesion, ostensibly ensuring that urban space reflects the needs of the intended users, creates a sense of ownership, and increases citizen appropriation and use of space (Fors et al. 2021; Madanipour, 2021; Whyte, 1980). Yet, as argued by Calderon (2020), the ideals of achieving inclusiveness through participatory processes often fall short when faced with the realities of antagonistic or contentious competition for presence and resources between different social groups. Given this, questions of power are inherent challenges in the use and ownership of public space and in urban design processes (Calderon, 2020; Mouffe, 2005). While tension can be productive in highlighting the issues that matter to different groups, it can also lead to asymmetric degrees of influence, a breakdown of communication, or the disappointment of involved parties where results fail to reflect their interests. Moreover, participation may be undermined by dynamics of power (e.g., Cooke & Cooke, 2001; Huybrechts et al., 2020), risking that the outcomes reflect the preferences of dominant social groups over the needs of marginalised groups, and that these are legitimised by a 'participatory approach' label.

In this article, we explore a complementary avenue for designing socially inclusive spaces that centres on the multiplicity of interpretations and uses of urban space, and artefacts within urban space. In looking at the role of social interaction in public spaces, experiencing the presence of others as non-threatening and non-disturbing is an important property of social cohesion in a city. However, increasing the possibilities for fleeting encounters between strangers is by no means a guarantee for creating social cohesion. Fleeting encounters can also reinforce stereotypes (Matejskova & Leitner, 2011), and while contact theory would suggest that encounters between people with different backgrounds may engender tolerance and understanding, it may also lead to friction, for instance, over what is deemed the appropriate use of a public space (Raco, 2018). Exploring how the design of public space might contribute to facilitating encounters between diverse citizens that stimulate social cohesion rather than friction is thus important. We argue that this conversation can benefit from a closer engagement with architectural perspectives on the role of materiality and form in bringing forth ways of inhabiting urban space. Objects like the Camden bench, designed for excluding any other use than sitting, executes a particular kind of urbanism that suppresses 'undesirable' practices (Mould, 2019) and may be seen as hostile and excluding particular citizens or uses of the city (Rosenberger 2020). Conversely, urban spaces and objects can be designed for contributing to an inclusive urbanisation where multiple groups can thrive.

Participatory design methods may invite different groups to voice their interests, values, and preferences, and strive to inscribe the outcome of a collaborative process in the design. In reflecting on this, we seek rather to explore an approach that aims to include this multiplicity as possibilities for different usages and for different interpretations in the urban form. Rather than being seen as detrimental, we argue for the possibility that variations in citizens' interpretations and use of designed artefacts can be approached as a resource for designing urban spaces with cohesive potentials. This approach benefits from participation of citizens to gain multiple insights about the neighbourhood, its' inhabitants, and their different preferences, particularly in the beginning of the process, but stops short of engaging citizens as co-designers throughout the design process.

Interpretive flexibility

In science- and technology studies (STS), 'interpretive flexibility' denotes how a single artefact presents itself as essentially different to diverse social groups (Bijker et al., 1987). One example is how the combination of oestrogen and progesterone, commonly understood as a contraceptive, was described in a Spanish catalogue of medication as a drug for regulating the menstrual cycle that has the serious side-effect of preventing pregnancy (Bodewitz et al., 1987). In these instances, there exists a single artefact, but two (or more) radically different interpretations of its usage can emerge. In the STS literature, particular attention is placed on how different interpretations of an artefact are reflected in different uses and how this has implications for the adoption of the artefact and its further development (Bijker et al., 1987). However, as the example with the contraceptive pill indicates, interpretive flexibility can also be reflected in different usages and stories of usage that appeal to different groups, despite actual use remaining the same across groups.

Use typically describes the performance of functions and actions. Looking at the interpretive flexibility of urban space, we employ an expanded concept of use, beyond the single action of a single individual, to include the ideas of use and stories of actions held by citizens and neighbours. Designing urban space with interpretive flexibility can entail focusing on inviting different ways of inhabiting the same space. By using materials and forms that trigger a wide range of associations, different groups could read different stories of use and of belonging into the design. This can be amplified by the use of a variety of materials and forms connected with different cultures and histories (Eizenberg et al., 2021). To flesh out this focus, we engage the concept of 'generality' from architecture.

Generality

Related to 'interpretive flexibility', we apply the concept of 'generality' from architecture. Generality denotes the ability of built spaces or objects to invite different uses and is used as a concept to see what properties are important in order for design artefacts to be able to facilitate a range of different uses, without changing the material form (Klarqvist, 1969; Cold et al., 1984; Arge & Landstad, 2002). The term is one of three – generality, flexibility, and elasticity – used in a Nordic context to describe different qualities of adaptability in built form and housing. (Manum, 2006; Dobloug, 2017) The concept originates from architecture's late modernism, like Team X member Herztberger (1991), who denoted the similar design concept of polyvalence (Forty, 2000). Other members of Team X explored the idea of generality as a wider concept, perhaps most explicitly expressed by Hansen & Hansen (1961) through their Open Form. This kind of adaptability and flexibility is rather about the opportunities created in the design, and the freedom of use and interpretation given to the users (Harboe, 2012). Forty (2000) connects these concepts of flexibility in architecture to how resistance to 'dominated space' (Lefebvre 1991) can only be effectuated by appropriation and the assertion of freedom of use, through the user's realisation of the space's flexibility and multifunctionality. A related contemporary concept is spatial redundancy, defined by Rem Koolhaas, where flexibility is seen as 'excess capacity that enables different and even opposite interpretations and uses' (Koolhaas, 1995, 240). We have chosen to combine the term generality, coined in a Nordic context, with the concept of interpretative flexibility. Using generality as a guiding principle in design may promote an interpretive flexibility in terms of multiple interpretations and uses of a designed urban site.

The extension of the concept 'interpretive flexibility' from Science and Technology Studies with 'generality' from architecture allows an extended approach to the design of urban public space to emerge where the diverse values, interests, and preferences of different

social groups are not negotiated in participatory design processes but are used as a participatory resource to design urban spaces to gain interpretive flexibility. In our two case studies of Medellín and Beirut, we demonstrate how the concept of interpretive flexibility, which comprises generality, maps onto the design of urban spaces and conclude with a brief set of reflections on interpretive flexibility for the design of urban space to promote social inclusion and cohesion, and a note on its particular relevance for the Nordic context.

Research Design

This article emerges from a research project that fostered collaboration between academic and professional communities in addressing how cities respond to crises with new forms of urban practice. Our approach is inherently interdisciplinary, linking insights from architecture, urban planning, anthropology, political science, and technology studies. This entailed an attempt to contribute practical knowledge of relevance to professionals who are grappling with urban challenges, rather than to contribute to a body of theoretical knowledge of primary relevance for an academic community. This is reflected in our research design, which promotes an opportunistic sampling of cases and an eclectic and pragmatic approach to analysis. Guided by the project's overall aim of examining what can be learned from cities beset by fragility, crisis and vulnerability, we identified potentially interesting cases through desktop studies and suggestions from professionals and professional journals in urban planning and development.

Drawing on a broader global set of comparative case studies (see Suyama et al., 2021), in this article we use data collected through fieldwork in Beirut and Medellín. We interviewed technical experts, political stakeholders, academics, and civil society groups in these cities, visited in October 2016 and August 2018 (Medellín) and in May–June 2019 (Beirut). Notes from field excursions are an additional source of data. The interdisciplinary composition of the project team enriched the observations made on site through continuous exchange of perspectives on our interviews and urban encounters. An example is the merging of the architect's sensitivity to material presence with the social scientists' focus on social practices. Through this, we developed a ground-up interdisciplinary lens that enabled new insights to emerge in a manner that would not have been possible if this research was done individually or with researchers with the same disciplinary background (Harboe & Geirbo, 2021).

In Medellín, our study of the Unidades de Vida Articulada (UVA – Units for Articulated Life) parks looks at the transformation of the city's water infrastructure reservoir sites into public parks, community centres and social services providers. During a nine-day field trip, we did 13 semi-structured interviews with key stakeholders in the architecture and design fields and key political figures, civil society, and academia stakeholders. This included individuals with central roles in the design and implementation of the UVA parks. We also did observation and informal interviews with citizens who use these spaces in five UVA parks. During a four-day field trip in Beirut, we engaged in participant observation of a tree-planting workshop arranged by the architecture company theOtherDada as part of the project Beirut RiverLESS. Approximately 25 volunteers participated in the workshop, and we did semi-structured interviews with most of them, and with the architect in charge. We have also reviewed written material about the project. Five additional interviews with representatives of civil society, the NGO sector, and academia provided contextual insight.

The analysis of our material has emerged in an iterative process of reading interview transcripts and fieldnotes, reviewing relevant literature, and using perspectives and theoretical concepts from this literature as sensitising devices (Giddens, 1984) in workshops where the project team members have discussed interpretations of the material and arrived at a

common understanding. This approach to analysis is grounded in the epistemological commitments in the intersection between social science and the humanities, where the aim is to offer a perspective on a phenomenon rather than to uncover a general truth. Such a perspective has emerged from a larger, explicitly comparative research agenda focusing on how urban challenges – in urban contexts and with different scales – are addressed by various actors in urban planning and development (e.g., Suyama et al., 2021; Hoelscher et al., 2022). In our comparison of cases, we have looked for similarities in the practices, mindsets, and organisational and material resources which these actors have engaged in their endeavours (Suyama et al., 2021). Correspondingly, the aim of our contribution here is to present cases that may offer new insights into urban design practices that may promote inclusion and cohesion.

Interpretive Flexibility in Medellín and Beirut

The UVA-parks of Medellín: Repurposing utility infrastructure as inclusive urban spaces

Medellin, the capital of Antioquia province in Colombia, has a history of violence and insecurity. The epicentre of Pablo Escobar's narcotrafficking network, Medellín had the world's highest homicide rates and was paralysed by powerful criminals and armed groups in the 1980s and 1990s. Yet Medellín has since undergone a process of social urbanism, which has transformed the physical, political, and social institutions and infrastructures of the city. This process integrated mobility, public space, public health, public education, and public safety interventions, explicitly designed to address inequalities and reduce violence (Corburn et al., 2019; Brand & Dávila, 2011; Maclean, 2015; Doyle, 2019).

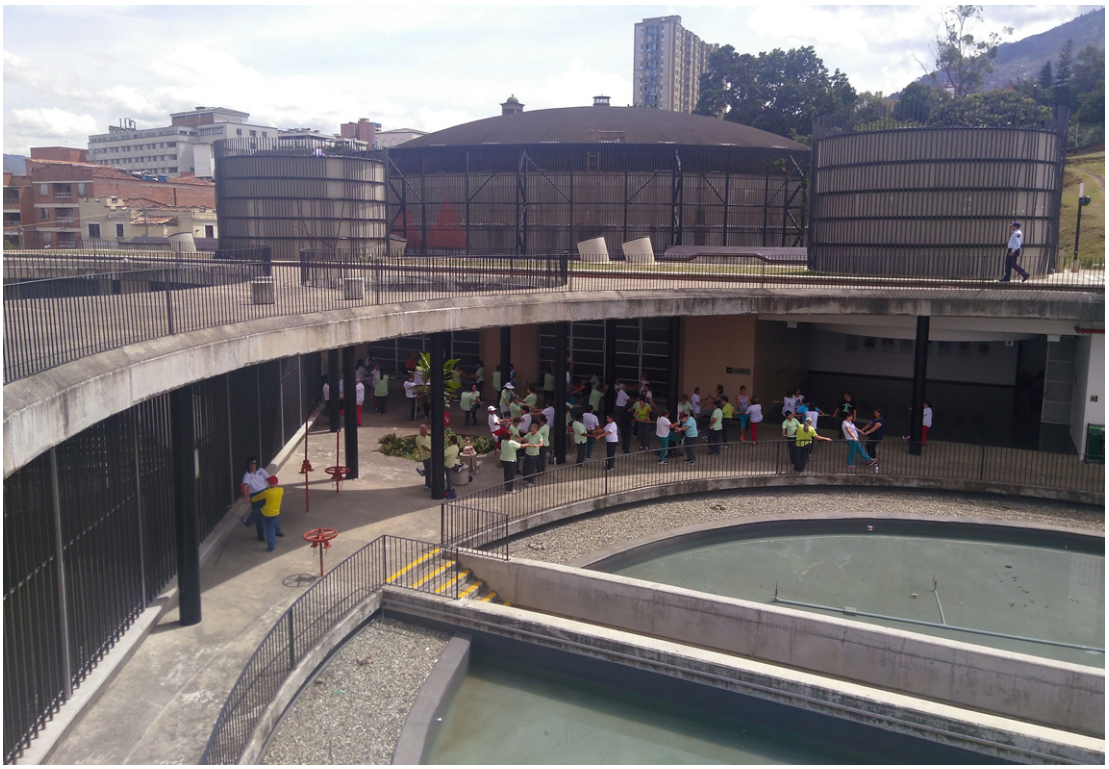

Fig. 3
UVA de La Imaginación in the urban district Comuna 8 Villa Hermosa of Medellín. A group of adults attend a rhumba class while a security guard patrols the viewing deck. Behind is the water tank and the indoor community centre. Photo: Hanne Cecilie Geirbo.

A central feature of Medellin's success has been participatory interventions in public space and the inauguration of urban public places. There has been a commitment to prioritise the poorest neighbourhoods and to invest in high quality materials and execution. Coined as an 'ethics of aesthetics' (Corburn et al., 2019), this approach acknowledges the power of objects as expressions of institutional commitment (Mould, 2019). Residents have been involved in visioning workshops, discussions and priorities on public functions, services, spatial resources and urban upgrading. An additional but key actor in this process is the public utilities company Empresas Públicas de Medellín (EPM). EPM is a public-private company wholly owned by the Municipality of Medellín yet operating as a private for-profit enterprise. Thirty percent of its operating profits are provided to the city's municipal budget and used for social urbanism projects, which have been instrumental in supporting Medellín's mobility, public space and infrastructure projects (Maclean, 2015).

The UVAs were a joint intervention by the municipality and EPM. They typify an approach to reimagining and transforming the use and form of infrastructures and infrastructure services, creating new uses of space and place, and aligning these with broader urban policy agendas. The UVAs emerged in the 2010s when EPM undertook a mapping of street lighting infrastructure, discovering a large number of 'dark' areas within communities in the peripheral hills of Medellín. These 'dark' areas were found to be EPM's own water storage tanks and infrastructure: walled sites established in the mid-20th century beyond what was at the time the boundary of the city. Over time, these water infrastructure sites became integrated into the urban fabric, as migration and displacement from the Colombian civil war drove the expansion of the city's informal areas up the steep hills surrounding the city centre. These walled-off reservoirs were unlit at night, forming physical divisions within and between communities.

Beyond unintentionally eroding community security and cohesion, EPM's water storage infrastructures represented unrealised and unusable areas in communities that lacked public spaces and services. Yet since 2010, many of these closed-in – and closed-off – sites have been transformed into open spaces available to citizens, with green spaces, fountains, benches and walkways for recreation, playground equipment, and community centres that offer a variety of services to the community. All of EPM's 14 UVAs follow the same general design concept. The water tower emerges as a sculptural element in the middle of the UVAs, while the community centres are built into the surrounding hillside. There are platforms where people can enjoy the spectacular views over the valley. At the same time, the UVAs are designed to integrate with the natural topography and morphology of the area, so that each has acquired a unique form within the general frame. Moreover, the facilities and services available in each UVA differ, as they are developed in dialogue with the needs and wishes of the surrounding communities.

The UVA projects have been conceived in ways that align with the concept of interpretive flexibility, repurposing and augmenting the public interface with utility infrastructure while maintaining its intended use. Water storage tanks are an essential infrastructure that requires security measures. However, in the UVAs, they have become integrated within the communities instead of separated from them. The continuous presence of people is a measure that contributes to protecting the infrastructure from risks such as vandalism. By inviting people to the formerly closed-off spaces and establishing a connection between community life and service provision, the new public spaces have become a constituent element of the infrastructure itself.

The UVAs have also been realised as an intentionally redistributive project by providing public spaces and public services in underserved communities. Participatory engagement

has enabled the tailoring of a redundancy of assorted services inviting to various citizens in the areas and a generality in which citizens can differentially use the UVAs as public spaces. Still, the UVAs are disciplined spaces with signs that outline accepted behaviour and security guards who remove those that do not adhere to the rules. This conditional flexibility of use addresses a particular condition of urban design in Medellín, such that establishing a sense of safety was a necessary first step to get citizens to use public spaces.

Before the process of urban transformation, citizens of Medellín tended to identify more with their neighbourhoods than with the city (Corburn et al., 2019). While the UVAs promote social inclusion in the neighbourhoods, the shared design concept across all the UVAs is also an invitation to the residents to acknowledge their connection to the city as a whole. As the Chief Architect at EPM, Horacio Valencia, described it: "The main idea is just to connect. To connect (from place to place)." The prominence given to the water storage tanks accentuates this interpretative frame, as the tanks represent a utility infrastructure that is shared by the entire city and is a prerequisite for urban settlement in poor as well as rich urban districts.

In remaking these underutilised plots in the urban territory, the UVAs have emerged as places of interpretive flexibility, spaces that link both the cultural, social and physical infrastructures of the city, and which create and shape use, meaning, belonging and identity in different ways for different citizens. Keeping the overall design concept fixed and uniform across the city while inviting local residents to participate in planning the facilities and services within this frame has facilitated the emergence of urban space that is inclusive at a local level as well as including local neighbourhoods in the overall fabric of the city.

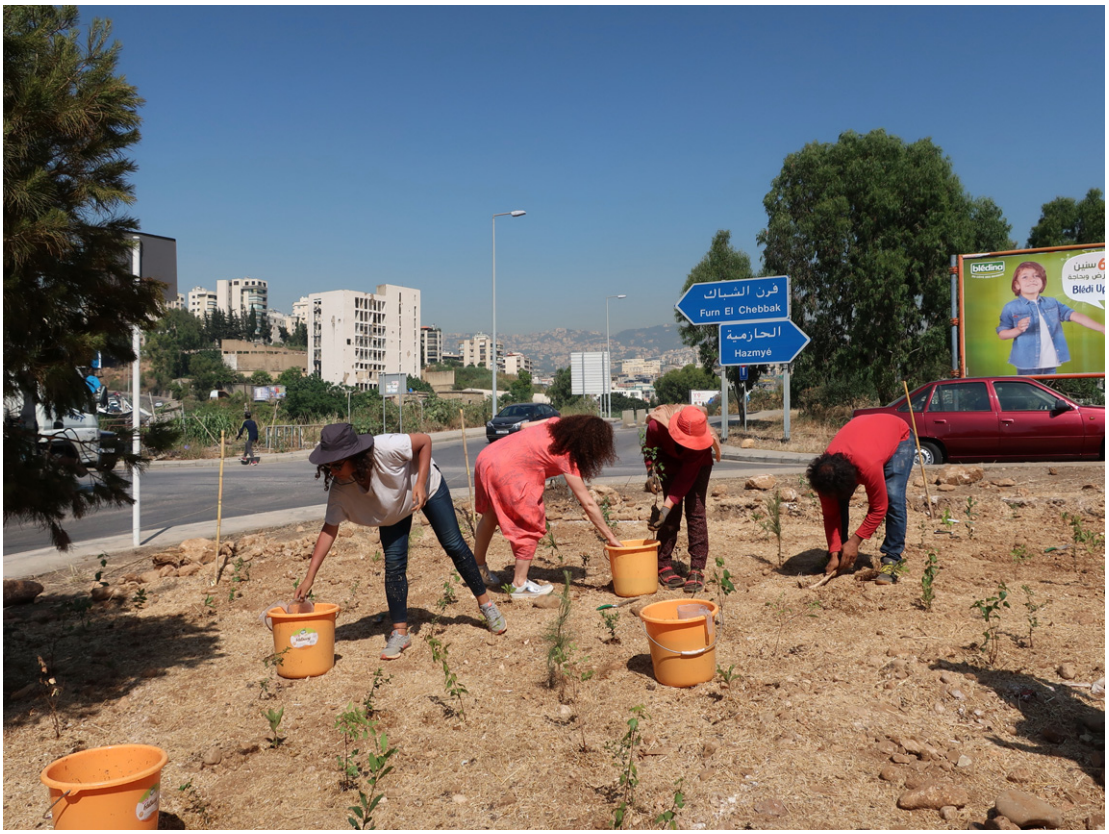

Fig. 4
Tree-planting workshop in Beirut as part of the project Beirut RiverLESS, organised by theOtherDada. Photo: Hanne Cecilie Geirbo.

Beirut RiverLESS: The interpretive flexibility of urban micro-forests

Beirut is the densely populated capital city of Lebanon with a religiously and ethnically diverse population. Sustained political turmoil has made governing the city challenging, and the recent influx of Syrian refugees has placed further pressure on already scarce resources, with the environmental status of the city significantly deteriorating since the onset of a rubbish collection crisis in 2015. Commercial appropriation of the war-torn downtown area is effectively excluding many social groups from attractive public spaces along the waterfront. Cramped living conditions and the scarcity of accessible public space place great pressure on the city's parks and green spaces. As an interviewee who works with co-design of urban space explained, the differences in what is deemed appropriate use of public space causes friction between the Lebanese population and the refugees:

> The Syrian refugees can occupy public space for long periods, for several hours at a time. Lebanese, for example, use it for less time: for a walk for example, or for a rest. [The Syrians] go to the public space to use it as a picnic space. They have food with them and whole families sitting and eating. So, they don't behave in the same way. These are different behaviours leading to increased tension in public spaces.

In addition to overcrowding, littering and general wear and tear were also mentioned in interviews as reasons why many Lebanese avoid the parks and seek private or secluded recreational arenas such as family properties outside the city. Thus, through self-segregation, the potential of parks as sites for creating social cohesion in the population is lost.

The architectural office theOtherDada, led by Adib Dada, has addressed several of the city's challenges through the project Beirut RiverLESS. Beirut River runs through several neighbourhoods occupied by different ethnic and religious groups. In 1968, the river was canalised within the city border, and it gradually turned into an open sewer that had detrimental environmental effects. This deprived communities along the river of places for recreation (Dada, n.d.). The name of the project, Beirut RiverLESS, points to what the city has lost by the canalisation of the river and seeks to revitalise its environmental, social and cultural properties through the planting of micro-forests with native species in small pockets of unused land along the canal. These micro-forests contribute to reducing CO_2 and heat island effects, recreating the natural ecosystem in the area and providing shelter for migratory birds and insects. They also provide recreational space by including clearings, pathways, and benches, and serve as a connection between the neighbourhoods of Badawi and Bourj Hammoud, located on each side of the river.

An assumption underpinning the project idea is that the social and environmental impact of the micro-forests will not merely be a product of the number of square meters planted, but of the network of forests scattered along the river and the network of people and organisations that are mobilised in the effort of creating them:

> One way to go against the current lack of ecological engagement is to collaborate with a number of like-minded individuals, firms, art centers and NGOs. This helps to collectively shift the way people think, and for "making public" shared concerns by insisting that small, bottom-up projects, when interconnected with different socio-environmental layers, can have a positive impact on the people and their surroundings. (Dada, n.d.)

The actual planting of the plots is an integral part of building this network of people and organisations. RiverLESS uses a workshop method that entails reproducing the natural

forest's composition of trees and bushes on a plot in the city. Workshop participants are partly recruited through an open invitation on social media and partly through targeted invitations to strategic partners including NGOs, academic institutions, and artists. This builds connections between the micro-forests and different institutions and individuals that are of strategic importance for sustaining the initiative. In addition, people who passed by at the time of the workshop were invited to join in. Such events create an opportunity to connect with people in the neighbourhood who were not initially a part of the network of urban activists.

Fig. 5
The beginning of a park, as part of the project Beirut RiverLESS, organised by theOtherDada. Photo: Hanne Cecilie Geirbo.

In discussions with workshop participants during a tree-planting session for one of the micro-forests in the Sin el Fil neighbourhood, we found a shared sense of enthusiasm. However, what sparked the participants' enthusiasm varied according to their different interpretations of the micro-forest and its potential. One woman emphasised the reproduction of a natural forest and saw this as an opportunity for the local community to revive the traditional knowledge of medicinal plants in danger of being lost due to urbanisation and the displacement from native lands and cultural heritages caused by war. This activity could bring Lebanese citizens and Syrian refugees together, she argued: "We are, after all, one people. The borders were fabricated anyway." Some participants interpreted the micro-forest in the context of a growing concern with food security and ecological farming among the middle class in Beirut. Another participant interpreted the initiative as an expression of a larger environmental movement in Beirut not only representing a shift towards more sustainable urban living, but also a growing political awareness and mobilisation. Tree-planting activists emphasised how the micro-forest in Sin el Fil would be connected to a global

community of rewilders. In addition, children who were invited in as they passed by with their caretakers showed enthusiasm for the opportunity to simply plant a tree.

These varied interpretations of the project demonstrate how different values were projected onto the micro-forest by the workshop participants, and how the micro-forest was able to mobilise groups with different ambitions. The case suggests that a participatory practice can itself constitute the common platform needed for engaging people and groups with different and potentially conflicting interpretations of the purpose. Moreover, the interpretive flexibility of the micro-forest might also be an asset after the design phase of planting trees, when the space will be open for use by the local communities and other citizens. As the different perspectives of the workshop participants revealed, a forest is a design element open to multiple interpretations. Trees are not only biological objects; they are also cultural and aesthetic objects (Pettersen et al., 2018), and through this they open a variety of avenues for attachment to public space.

Discussion

The case of the UVAs in Medellín and the urban micro-forests in Beirut both demonstrate the design of inclusive public spaces in cities that contend with intersecting social, political, and environmental challenges. A major difference between the cases is their scale, with the UVA initiative being a part of a city-wide, officially sanctioned programme of urban development conducted by a publicly owned company and Beirut RiverLess being an activist initiative conducted by one architectural office. Viewed together, the two cases illustrate different aspects of interpretive flexibility in the design of urban space, both with potential for social inclusion and cohesion.

Flexible use

A prominent property of the UVAs is how they are designed for flexible use. When fenced-in urban spaces were opened to citizens, providing services and leisure opportunities for the entire neighbourhood was prioritised. By aiming to increase the scope for different actors and social groups to read their interests and values into the same space, it could gain broader legitimacy. The confidence and ease that comes from 'being seen' can in turn strengthen the ability to share a common space. Interpretive flexibility with generality included is thus reinforced by a variety of functions and potential activities integrated in the same urban public space, such as in the UVA de los Sueños with a park square, seating, indoor social gathering space, computer lab, fountains, and a spectacular view to be used in different ways. As such, each UVA contains a multiplicity of possibilities for flexible use, including a temporal dimension – where the same space is interpreted and used differently by the inhabitants throughout the day, during the week, and throughout the seasons.

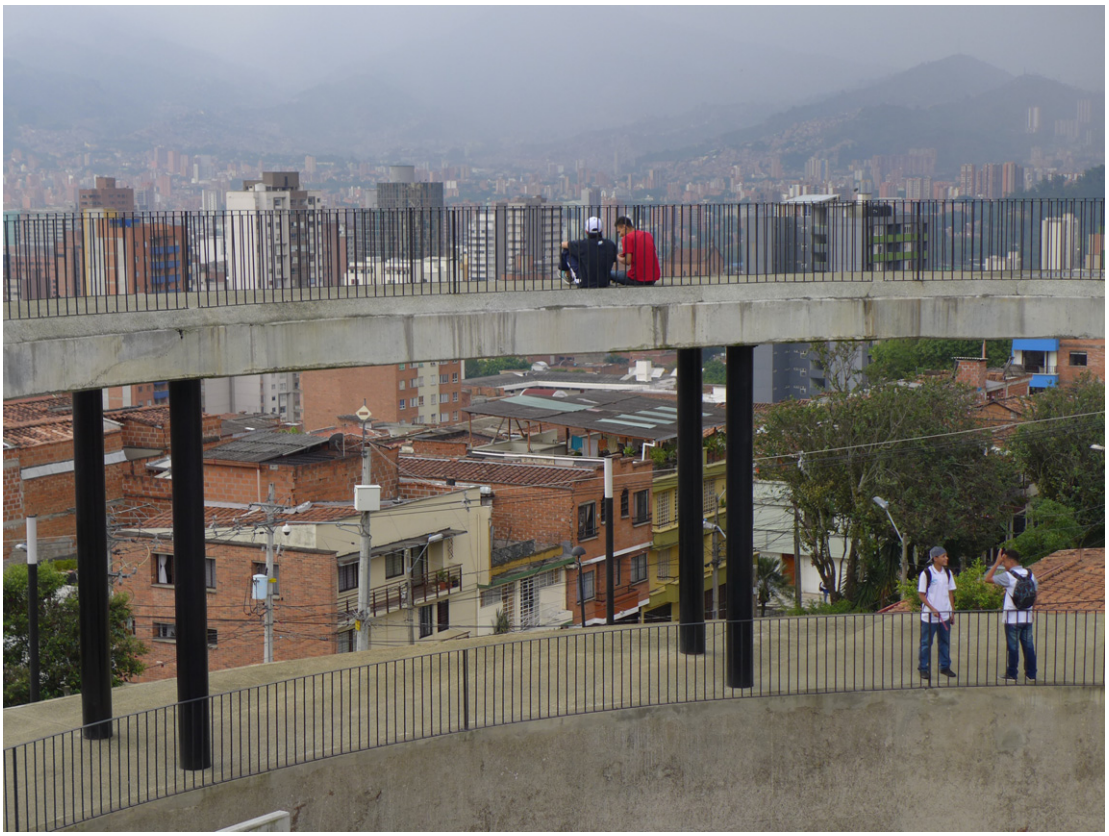

Fig. 6
In front of UVA de La Imaginación. Photo: Hanne Cecilie Geirbo.

In Beirut, rather than different functions lending interpretive flexibility to the micro-forest, the RiverLESS project was characterised by how different actors could read their varied interests into the forest and imagine unique social networks to be formed around it. The diverse interpretations of the people involved in the tree-planting workshop exemplify some of the potential interpretations and usage of the different groups and communities of Beirut. Forests and trees are an example of design materials that are likely to resonate differently in diverse individuals' and social groups' memories and cultural repositories, and through this invite multiple groups to connect emotionally as well as intellectually to the same space (see Eizenberg et al., 2021, for a related discussion of how design elements can be used to recognize the cultural and historical affiliations of multiple groups).

Giving visual prominence to uniting elements

In the case of the UVAs, the built structure is designed in a way that can promote interpretive flexibility. The buildings are sunk into the topography of the hills, so that the water infrastructure becomes a prominent visual feature. The various and more specific functions that the buildings may host, such as a library, computer lab or kindergarten, are only revealed when one comes close to the buildings or enters them. This way, no single type of use or user is prioritised in terms of defining the visual appearance of the place. This design choice opens for different groups to read their needs and desires into the structure.

At the same time, by letting EPM's water tanks dominate the visual appearance of the sites, the UVAs are infused with a narrative of a city-wide community that encompasses different social groups and individual identities. In other cities, there will be other narratives that

nurture social cohesion, but the design concept of giving visual prominence to an element that promotes social connections while allowing the different needs and interests of subgroups to unfold in non-conspicuous structures can be reproduced.

Interpretive flexibility as a resource in design

In the case of the UVAs, we see how the interpretive flexibility of an existing site is brought into play in the transformation of the site and the design of the new urban public space. The idea of creating the UVAs emerged from attending to how the walled-in water towers were interpreted by the communities living on the hillsides. The sites were a 'no-man's land' that functioned as physical and symbolic barriers, including between criminal groups controlling the neighbourhoods on either side. In the design of the UVAs, these sites are reinterpreted. The local interpretation of walled-in water storage tanks as borders between neighbourhoods inspired a design that turned these spaces into expressions of the opposite of disconnection and exclusion. The UVAs are designed as open spaces, where citizens are invited to use and enjoy the space, the architecture, and the greenery according to their preferences, and also partake in a range of free services and activities. The UVAs are also designed as spaces of trust, which is most powerfully expressed by removing the barriers between the critical water infrastructure and the citizens. By attending to the interpretation of the water towers, the quality of their sites, and which role they played in society, spaces of exclusion became spaces of inclusion and cohesion.

Considerations about the when and how of community participation

By suggesting interpretive flexibility as an approach to designing urban space, attention is given to when and how to invite user participation in design. As discussed above, participatory approaches are recognised for their ability to include the perspectives of diverse and often marginalised groups in the design of public space (Madanipour, 2010), but these approaches are also challenged by unequal distribution of power and agency, and failure to manage the expectations of the participants (Calderon, 2020). In Medellín, making the UVAs was part of city-wide approaches to collaboration between architects, different professionals, politicians, and representatives of communities. While community participation has been important for understanding the needs of the different communities, the form of the UVAs is, however, not a product of a collaborative design process. By *not* explicitly engaging local communities in deciding on the form of the UVAs, it has been possible to instil the UVAs with a shared design concept and through this make it possible to recognise a structure as an UVA regardless of its geographic location in the city. This feature creates a connection between each neighbourhood and the city as a whole, reiterating actual and symbolic shared identities and connections and strengthening social cohesion beyond the neighbourhood.

This emphasis on the importance of the connection between individual sites is also found with Beirut RiverLESS. Distributing the planted square meters across different administrative units is believed to increase their potential impact as change agents more than would a single site. This network thinking is also present in how the Beirut RiverLESS project includes participation. Workshops were designed to connect the micro-forests to strategic resources by inviting representatives from different organisations and communities. In this process, participation is used differentially as a means of securing support and creating legitimacy. To be able to connect diverse actors to the same project or object, they all need to be able to read their own interests into it and tell their own stories about it. In this way, interpretive flexibility can be a resource for generating support for design interventions from different actors and various citizens.

The generativity of interpretive flexibility

Interpretive flexibility can open for generativity beyond generality – the capacity to inspire practices, attract users, or set in motion processes that were not an expected or intended outcome of the design. The concept of generativity shares ideas with the concepts of open form and spatial redundancy (Hansen & Hansen, 1961; Koolhaas, 1995), and both the UVAs in Medellín and the micro-forests in Beirut can be seen as generative urban spaces.

The UVAs are spaces where different interests and uses are explored and can potentially thrive alongside each other and together. They are places where public services are provided for vulnerable and poor populations, and a business asset for EPM. They are recreational spaces for all ages, with formal and informal use, depending on the user, the time of day and other factors. They open, link and bridge both the physical city and the city as it is experienced by diverse citizens, creating new connections, pathways, activities, and interactions, potentially linking people across class and geography within the city.

The Beirut RiverLESS project is based on interpreting the Beirut River as a lost element of the city that used to fill the environmental, social, and cultural needs of the population. In seeking to compensate this loss, the project not only seeks to reproduce what used to be, but deliberately seeks generativity by extending an open invitation to different actors to read their interests and needs into the micro-forests and, through this, allow them to be a part of the processes and practices that extends beyond the project that initiated them. With projects such as the UVAs and Beirut RiverLESS, leaders and designers work to give some direction to the outcome of interpretive flexibility and generativity – towards inclusion and social cohesion.

Relevance for the Nordic context

Amplified by the changing demography and heterogeneity of the population in the Nordic cities, the question of whose voices are included in urban design, and how to facilitate participatory processes of conflicting voices, is a pressing issue. Egalitarianism is a cultural value in the Nordic region (Bendixsen et al., 2017), and implicit expectations of reaching consensus can follow from this. Such expectations can be a barrier if consensus is not likely to be reached because the preferences and needs of the involved groups are too diverse. Failure to meet implicit expectations of consensus can feed into the commonly raised criticism of participatory approaches being moot processes that do not invite actual influence on decision-making (Reichborn-Kjennerud et al., 2021), and for legitimising decisions already taken (Lehtonen & de Carlo, 2019).

Designing with interpretive flexibility is relevant for urban design practices in Nordic cities because it may provide an alternative to consensus-orientation. This includes a commitment to being candid about the conditions and limits of citizen participation, i.e., which decisions are open for influence and which decisions will be made by designers and planners, and to what degree the different voices of the citizens will be taken into consideration. Importantly, designing with and for interpretive flexibility entails accepting persisting incongruences and conflicts, and treating them as resources rather than impediments in design. The built results emerging from the design can, when viewed through a lens of interpretive flexibility, help with seeing and understanding how design opens for different ways of inhabiting and reading. The notion of interpretive flexibility may add to ongoing discussions and practices in the Nordic context on how to open for expansions of different citizens and cultures present.

Concluding remarks

In this article, we have brought the concept of interpretive flexibility from science- and technology studies (STS) into dialogue with urban design by drawing on the architectural notion of generality. We have used the concept of interpretive flexibility, where the notion of generality is included, to examine urban design processes and outcomes. In the two different cases of Medellín and Beirut, we have explored the relevance of interpretive flexibility in the programming and design of public spaces in the city, applying this as an interdisciplinary lens to the design of urban space to unpack and discuss its relevance and potential as an approach to strengthening social cohesion and inclusion. By drawing out aspects of this approach in real-world cases, our discussion invites further interdisciplinary explorations of the relationship between design generality and redundancy, interpretive flexibility, public space, social cohesion, and inclusion.

In reflecting on this, interpretive flexibility in urban design presents a series of considerations for research and practice: first, to encourage the use of design elements that ensure a rich repertoire of associations and possibilities for use, allowing places to be linked to the ambitions, identities, and activities of different individuals and groups; second, prioritising participatory engagement in the inception over the design phase, in order to ensure a grounded understanding of and contribution from the community, including local histories, power dynamics and diverse interests; third, to identify the flexibility in how local communities understand and use existing space and draw on this in design phases; and finally, to acknowledge, internalise and design for the generative capacity of interpretive flexibility, such that urban public spaces can be sites which engender new forms of meaning and use for diverse groups in ways that foster inclusion and cohesion.

In this article, we report from cases characterised by collaboration and mutual exchange between architecture and urban studies. These experiences of interdisciplinary collaboration are vital to reflect on when thinking about how we shape and reshape our cities. The importance of such collaboration across sectors, disciplines and citizens was underlined to us in an interview with the former mayor of Medellín, Aníbal Gaviria (2012–2015). The fight against the great challenges of inequality and homicide in Medellín, Gaviria stated, led them to realise that if the city and its different actors did not unify, they would utterly fail. From cities characterised by crises and vulnerabilities, like Medellín and Beirut, we can learn to nurture environments of combined visionary and pragmatic collaboration and to be guided by goals of equity and inclusion in our collective quest to address urgent and complex urban challenges.

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