

Contesting Neoliberalism: Urban Resistance and the Socio-Spatial Dynamics of Nahr Beirut

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Abstract: This study investigates the socio-spatial dynamics of Nahr Beirut, a frequently overlooked yet significant part of Beirut's urban landscape. Drawing on Henri Lefebvre's concept of 'representational spaces,' the research explores how neoliberal urban policies have influenced the riverbanks, mainly through profit-driven development that has marginalized local communities. The study examines six regions along the Nahr Beirut River, uncovering indirect forms of resistance that residents actively employ to challenge these neoliberal interventions. Indirect resistance is demonstrated through community-driven practices such as workshops, graffiti, and architectural modifications that question top-down urban policies. The research reveals a complex interplay between neoliberal urbanization and grassroots resistance, illustrating how marginalized communities assert their right to the city in the face of socioeconomic and political challenges. By focusing on the everyday practices of urban resistance, the study contributes to the ongoing discourse on how communities can reclaim urban spaces to safeguard their social and cultural identity. While the study is geographically confined to the Nahr Beirut area, it underscores the potential for future urban policy changes that could reshape the dynamics of resistance and development. The research advocates for a more inclusive, community-centered approach to urban planning that harmonizes economic growth with social equity and environmental sustainability.

keywords: urban resistance; neoliberal urbanization; nahr beirut; socio-spatial dynamics; right to the city

1. Introduction

Urban spaces evolve through a dynamic social, economic, and political interaction. This interplay is evident in rapidly transforming cities, where disparities between wealth and poverty become pronounced. Beirut, Lebanon's capital, exemplifies this divide, shaped by political instability, neoliberal economic policies, and extensive postwar reconstruction efforts ([Aouad, 2022](#); [Dib, 2020](#)). This study presents a novel community-centered urban planning approach to examining socio-spatial dynamics in Nahr Beirut, integrating quantitative spatial analysis, qualitative ethnographic insights, and agent-based urban simulations. Unlike previous studies on urban neoliberalism and community resistance, which primarily focus on policy analysis or historical documentation, this research introduces a multi-scalar methodology that captures real-time socio-spatial interactions through GIS mapping, behavioral simulations, and structured typologies of resistance.

Moreover, while previous literature on neoliberal urbanization in Beirut ([Lorens et al., 2022](#); [Aiken et al., 2021](#)) discusses the political economy of urban governance, our study provides an on-the-ground investigation of grassroots adaptation strategies. The originality of this research lies in its data-driven assessment of urban resistance, moving beyond theoretical discourse to offer policy-relevant insights. This interdisciplinary approach positions the study at the intersection of urban geography, social movements, and digital urbanism, offering a new analytical model applicable to other global cities facing similar neoliberal urban transformations.

Nahr Beirut, a river running through the city's heart, is more than a geographical feature ([Figure 1](#));



it represents a space of socio-spatial fragmentation and neglect. While parts of Beirut have seen significant investment and urban renewal, Nahr Beirut and its surrounding areas remain marginalized (Aiken, Reina, and Culhane, 2021). These areas are predominantly inhabited by low-income communities and ethnic minorities facing systemic barriers to access essential services, housing, and economic opportunities (Al-Thahab & Abdelmonem, 219). The physical and symbolic isolation of Nahr Beirut from the city's mainstream development patterns exemplifies the socio-spatial disparities within Beirut (Al-Harithy & Mneimneh, 2021). This research examines how urban spaces like Nahr Beirut are produced, managed, and contested, especially in the face of neoliberal urban policies prioritizing profit over equitable urban development (Jung et al., 2023; Farah & Verdeil, 2021).

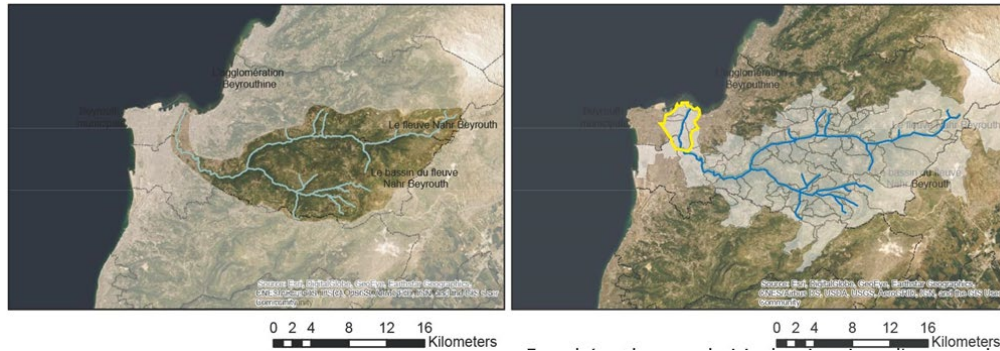


Figure 1. Map of the Nahr Beirut river basin, Source: CNRS Lebanon and GIS data, edited by Fayad, Nadine (2022).

The significance of Nahr Beirut lies in its physical characteristics and role as a site of resistance (Hourani, 2018). The marginalized communities living along the river have, over time, developed various forms of social and spatial resistance in response to their exclusion from mainstream urban development (Figure 2). These forms of resistance are often subtle, rooted in everyday practices that challenge the neoliberal agenda imposed by the city's policymakers and urban planners (Davies et al., 2022). The river, therefore, becomes a contested space where the logic of neoliberalism meets the logic of resistance, providing a rich context for understanding the production of urban spaces in post-conflict Beirut (Lefebvre, 1991).

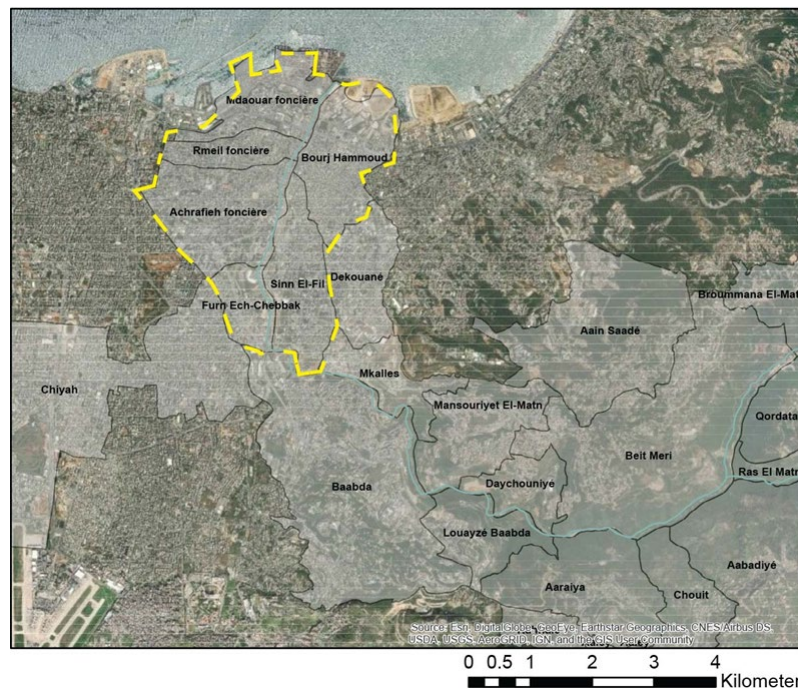


Figure 2. The map shows the regions and spatial situations of the river source: CNRS Lebanon and GIS data, edited by Fayad, Nadine (2022).

Urban resistance to neoliberal urbanization has been extensively analyzed within global urban theory,

drawing from foundational contributions by [David Harvey \(2005\)](#) on accumulation by dispossession, [Henri Lefebvre \(1974\)](#) on the right to the city, and Saskia Sassen (2014) on urban fragmentation ([Lefebvre, 1991](#)). Harvey's critique of capitalist urbanization underscores how neoliberal policies prioritize profit-driven development, systematically marginalizing lower-income communities. Lefebvre's framework positions urban spaces as contested arenas where residents challenge dominant power structures through alternative urban practices.

Comparative urban studies have illustrated these dynamics in different regions. Latin American cities such as São Paulo and Buenos Aires ([Caldeira, 2017](#); [Holston, 2008](#)) demonstrate how grassroots movements resist gentrification by reclaiming abandoned public spaces. Similarly, in South Asian cities like Mumbai and Delhi ([Bhan, 2019](#); [Roy, 2011](#)), informal settlements negotiate for land tenure rights through legal activism and social mobilization. However, Beirut's urban resistance differs significantly due to its post-conflict governance structure and socio-political fragmentation, leading to individualized, spatially embedded resistance strategies rather than large-scale legal advocacy.

This study contributes to these theoretical discourses by introducing a spatial typology of resistance tailored to post-conflict neoliberal cities. Unlike prior studies that predominantly examine resistance through policy or legal frameworks, this research categorizes resistance strategies into persistent, alternative, and neoliberal-dominant typologies. This novel framework enhances the global discourse on urban resistance by providing a data-driven model applicable to post-war urban landscapes.

The research also explores the role of neoliberalism in shaping Beirut's urban policies and how these policies have affected the spatial configuration of Nahr Beirut ([Jung, Awad, and Al Qassimi, 2021](#)). Neoliberal urbanism, characterized by privatization, deregulation, and market-driven development, has profoundly impacted the city's landscape. In Nahr Beirut, this has resulted in a fragmented urban fabric where commercial interests override the needs of local communities ([Zanotto, 2020](#)). However, within these marginalized spaces, forms of resistance continue to emerge as communities contest the neoliberal agenda and seek to reclaim their right to the city ([Brand and Fregonese, 2016](#)). The study, therefore, examines the tensions between the neoliberal logic of urban development and the alternative logic of resistance that manifests in the everyday spatial practices of Nahr Beirut's inhabitants.

The research methodology includes a detailed spatial analysis of the river's urban context and field immersion in six regions along Nahr Beirut. These regions reflect different urban, social, and architectural practices, highlighting the complex interactions between neoliberal policies and local resistance ([Petropoulou, 2018](#)). The study captures the nuances of these socio-spatial dynamics through qualitative methods such as interviews, archival research, and visual documentation. By focusing on the lived experiences of the communities inhabiting the riverbanks, this research provides valuable insights into how marginalized spaces in Beirut resist and adapt to the forces of neoliberal urbanism ([Alkazei and Matsubara, 2021](#); [Chohan et al., 2022](#)). This study aims to contribute to the broader discourse on urban resistance and the right to the city by examining the specific case of Nahr Beirut. As a space of socio-spatial marginalization, the river offers a unique lens through which to explore the dynamics of resistance in a city rapidly transforming under neoliberalism's pressures. By mapping the spatial contestations along the river, the research seeks to uncover the hidden dimensions of urban resistance and provide a deeper understanding of how marginalized communities navigate and resist the forces of exclusion in Beirut's evolving metropolitan context.

2. Materials and Methods

2.1. Real Estate Investments as a Process of Metropolitanization

Real estate development in Beirut and its suburbs remains a primary driver of Lebanon's economy, despite the severe financial crisis that began in 2019. As of 2020, the construction sector contributed approximately 12% to the GDP, slightly declining from its 2010 peak due to economic instability ([Al-Shaar and Bonin, 2021](#)). However, Beirut and Mount Lebanon dominate this sector, accounting for over 60% of all real estate investments and nearly 85% of real estate-related loans ([Diwan and Haidar, 2021](#)). The interconnection between real estate, tourism, and finance, particularly under the influence of Lebanon's political elite, has further shaped the trajectory of urban development ([Krijnen, Bassens, and Van Meeteren, 2017](#); [Savini and Aalbers, 2016](#)).

The real estate sector in Lebanon has been shaped mainly by political control, with reforms and urban policies enacted to facilitate growth that benefits those in power. A notable example is the 2004 reform of the construction code, which resulted in an 18–25% increase in building permits. Revisions to urban planning regulations further enhanced buildability and profitability, making real estate lucrative for political elites.

Lebanon's economic integration into global and regional markets, mainly through its specialization in finance and tourism, has played a significant role in boosting the prosperity of its real estate sector.

This process, often called metropolitanization, was driven by foreign investments, primarily from Gulf countries. Between 2015 and 2020, foreign direct investments (FDIs) in Lebanon fluctuated due to political instability and financial crises (Perera, 2020). By 2020, foreign investments accounted for approximately 5–10% of GDP, with real estate still receiving the largest share (42%), followed by residential property investments (28%) and tourism-related projects (18%). Additionally, remittances from Lebanese expatriates—a historically significant contributor—declined significantly, making up around 11–20% of the GDP during this period, impacting household consumption and real estate investment patterns (Brand, 2018). The influx of capital, especially from Gulf investors, has significantly fueled the spatial expansion of Beirut and urban renewal, particularly in the city's central areas. Small family-owned buildings in peripheral areas characterize this expansion, while more structured forms of urban capitalism dominate the city center (De Mattei, 2021).

2.2. Metropolitan Reconstruction Projects

Beirut's metropolitan area underwent profound social and physical changes after the civil war, particularly during several reconstruction phases (Mady, 2023). Around 10% of the buildings in the metropolitan area and 15% in municipal Beirut were damaged, especially in the city center, along demarcation lines, and in Palestinian camps (Vloeberghs, 2016). The war also caused significant social and religious shifts, with displacement contributing to widespread insecurity. Reconstruction efforts took place across multiple phases: the first occurred in 1977, after the two-year war, followed by efforts during Amine Gemayel's presidency between 1982 and 1983. After 1991, three major projects were initiated: Solidere, Elyssar, and the Metn Nord embankments (Linord). The Waad project was later established after the 33-day war in 2006. This research focuses on the last two phases, especially from 1991 onwards, marking the post-civil war reconstruction era.

One of the most significant initiatives was the SOLIDERE project, a joint-stock real estate company established in 1990 to lead the reconstruction of Beirut's downtown area. It was an initiative of Prime Minister Rafik Hariri, with the company officially founded in 1994 under the authority of the Development and Reconstruction Council (Mintchev et al., 2019). The SOLIDERE project symbolized neoliberal urbanism to attract Arab capital and drive Lebanon's national development (Lorens et al., 2022). It involved the acquisition of 118 hectares of war-devastated land and 73 hectares of reclaimed land along the seafront, developed using debris from demolished buildings. The reconstruction approach adopted by SOLIDERE resulted in the demolition of around 80% of downtown Beirut—far beyond what was required based on building conditions (Termos and Yorke-Smith, 2022; Khechen, 2018). While some architectural landmarks were preserved, most of the new district focused on luxury residential, commercial, and leisure spaces, catering to wealthy expatriates and Gulf business people.

Another notable project was Elyssar, launched in the southern suburbs of Beirut following the 1989 Taif Agreement. This area, home to about one-third of Greater Beirut's population, comprised Shiite communities (Huybrechts, 2016). Elyssar aimed to redevelop 560 hectares of land, with plans to demolish non-regulatory neighborhoods and redevelop the coastal areas into a tourism zone (Daher, 2018). However, resistance from Shiite inhabitants, supported by Hezbollah and Amal, limited the project's progress, resulting in only partial completion—mainly road networks connecting downtown Beirut to the airport (Ellakkisa et al., 2024).

The Linord project focused on land reclamation and coastal development between the Beirut and Antelias Rivers. The project covered 2.4 million square meters and included recreational, business, and industrial activities. In 1995, a coastal barrier facilitated the reclamation of 1 million square meters of land, creating "Waterfront City" near Dbayé Marina. Additional developments addressed Lebanon's waste crisis through landfill projects (Lob, 2017).

The Waad project, initiated after the 2006 war, aimed to reconstruct the Haret Hreik neighborhood, which Israel heavily bombed. Managed by Hezbollah, Waad focused on rebuilding the area while preserving its original urban structure. Unlike SOLIDERE, which catered to international interests, Waad concentrated on Hezbollah's local political legitimacy and served as an anti-imperialist critique of neoliberal globalization (Baumann, 2024).

2.3. Neoliberal Culture

Hannes Baumann's analysis in *Citizen Hariri: Lebanon's Neoliberal Reconstruction* suggests that Lebanon's neoliberalism in the 1990s inherited significant issues from its earlier liberal state, alongside the effects of militia networks during the civil war (Dib, 2018). Rafic Hariri, an entrepreneur and President of the Council of Ministers, embodied neoliberal globalization in Lebanon, a small nation on the periphery of major global centers like London and New York (Fawaz, 2017). Hariri prioritized re-establishing Beirut's pre-war trading functions, with the SOLIDERE project positioned as a "patriotic

imperative” for reconstructing downtown Beirut. Despite calls for comprehensive planning, these efforts were disregarded by Lebanon’s political leadership, who claimed that opposing the project would hinder the country’s recovery (Lowi, 2018). Thus, Beirut’s reconstruction was shaped by neoliberal ideology, seeking primarily to attract investments in the Gulf region. Instead of fostering a protectionist framework for Lebanese agriculture and industry, a free-trade policy was adopted, weakening local production. The economy became increasingly reliant on real estate, tourism, and financial services, reflecting the ruling elite’s political choices. Until the economic crisis of 2019, Lebanon was perceived as a peripheral extension of Gulf petro-monarchies and a budding financial hub in the Middle East (Darwich et al., 2021).

Fabrice Balanche describes Beirut’s “indirect metropolitanization,” a term referring to the global integration of countries through external hubs rather than direct metropolitan adaptation. This integration occurred without internal economic reform, hindered by political obstacles and an entrenched center-periphery relationship. Beirut’s role in the global network of cities was passive, compounded by the erosion of its productive sectors, the emigration of skilled workers, and foreign interests’ control of its natural resources (Tok, 2021).

Gulf Cooperation Council (GCC) countries, including Saudi Arabia, Qatar, and the UAE, became Lebanon’s primary investors, contributing billions of dollars in direct investments and remittances, collectively making up more than 25% of Lebanon’s GDP (Huybrechts, 2016). This influx of capital and the spread of neoliberal culture facilitated Beirut’s metropolitanization. Following the Civil War, reconstruction priorities were driven by the neoliberal interests of the merchant elite, with weak zoning regulations allowing extensive construction across urban, coastal, and agricultural areas. The neoliberal market encouraged investors and developers to reshape urban and rural landscapes, exacerbating issues like energy consumption. Political interventions by the ruling elite manifested in politicizing administrative processes, issuing exceptions to regulations, and obstructing institutional functions (Termos and Yorke-Smith, 2022). The resulting urban expansion was marked by ineffective urban management policies essential for regulating and analyzing development trends. The ruling elite, who had gained power during and after the Civil War, maintained control over real estate development through ownership or silent partnerships in significant projects—real estate speculation, in particular, inflated land prices, driving the construction of luxury residential complexes. Beirut’s metropolitanization after the Civil War was shaped by neoliberal investments, political control, and the resulting economic regime.

2.4. Metropolitan Management Policy of the Beirut Agglomeration

The management of metropolitanization in Beirut, as outlined by Verdeil and Nasr (2017), is driven by two key actors: agents of urban capitalism who profit from land rents, especially in the peripheral areas of urban centers, and private entities that integrate Beirut into global financial and economic networks, with a strong focus on profitability. Unlike other Mediterranean or international cities, Beirut lacks significant economic power and is categorized as a “metropolis typical of a model of degradation of urban networks” (Aouad, 2022). The metropolitanization process, supported by metropolitan governance, establishes structures to regulate violence, distribute wealth, and manage urban development, particularly in real estate and reconstruction. Efforts to unify Beirut politically and socioeconomically can be traced back to the leadership of Fouad Chehab (1958–1964) and the reconstruction efforts post-civil war, which began in 1991.

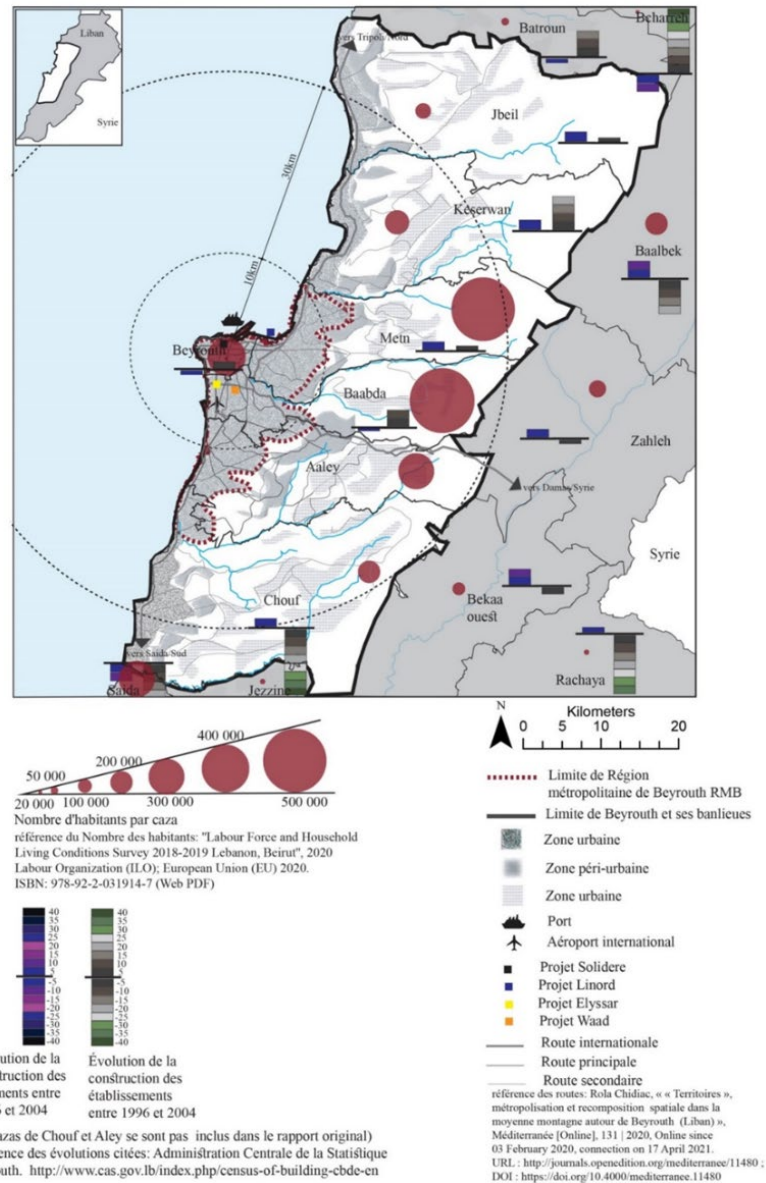


Figure 3. The Metropolitanization of Beirut, Source: [Fayad \(2022\)](#).

However, these efforts have been undermined by armed conflict and political fragmentation, leading to exacerbated social and infrastructural crises. Despite attempts to define a coherent governance structure for metropolitan Beirut after 1991, there has been a disconnect between the city's functional and administrative structures, leaving it with inadequate metropolitan governance ([Harris, 2018](#)).

Urban planning and management in Lebanon are highly centralized under the General Directorate of Urban Planning, which formulates land use master plans. Various ministries and public institutions, such as the Council for Development and Reconstruction (CDR), execute sectoral projects, while local governance is divided between governors (muhafez) and municipalities. Beirut is divided into two central governorates, Beirut and Mount Lebanon; the latter includes the city's suburbs and is subdivided into six districts ([Shkaruba et al., 2017](#)) ([Figure 3](#)). The Beirut metropolitan area comprises 120 municipalities, with Beirut as the largest ([Figure 4](#)). Despite municipalities gaining authority for territorial development in 1998, their autonomy remains limited by scarce human and financial resources, compounded by political interference from regional leaders. The seven municipal unions in the Beirut metropolitan area reflect the political power relations, with local governance structures and political affiliations shaping the management of sectors like urban planning and waste management.

2.5. Effect of the Metropolitanization Process on the Nahr Beirut River: Fragmentation and Social Crises

Since the 1990s, Beirut has experienced two significant trends: rising investments in luxury tourism and real estate and the demographic expansion of the Beirut metropolitan area into dense suburbs, producing two key outcomes by 2019. First, neoliberal policies have intensified social segregation and fragmentation, pushing the working and middle classes to the city's periphery and creating a divided urban landscape shaped by socioeconomic and political divisions (Haddad, 2020). Second, Beirut's urban structure has shifted towards polycentrism, where traditional commercial centers have given way to dispersed hubs aligned with post-war sectarian divides, reinforcing confessional homogenization in certain districts (Fayad, 2022). This metropolitanization process developed three primary commercial corridors: the Northern Corridor along the A1 motorway (Dora/Zalka, Dbayeh, Kaslik, Jounieh), the Southern Corridor linking to the international airport, and a third corridor along Damascus Road near the Beirut River, though the river itself has remained marginal in Beirut's urban development, serving as a traffic route rather than a revitalized space. Despite its geographical importance, the Nahr Beirut River has been largely excluded from reconstruction efforts, resulting in a residual, underutilized space within Beirut's metropolitan landscape (Dadashpoor and Malekzadeh, 2022).

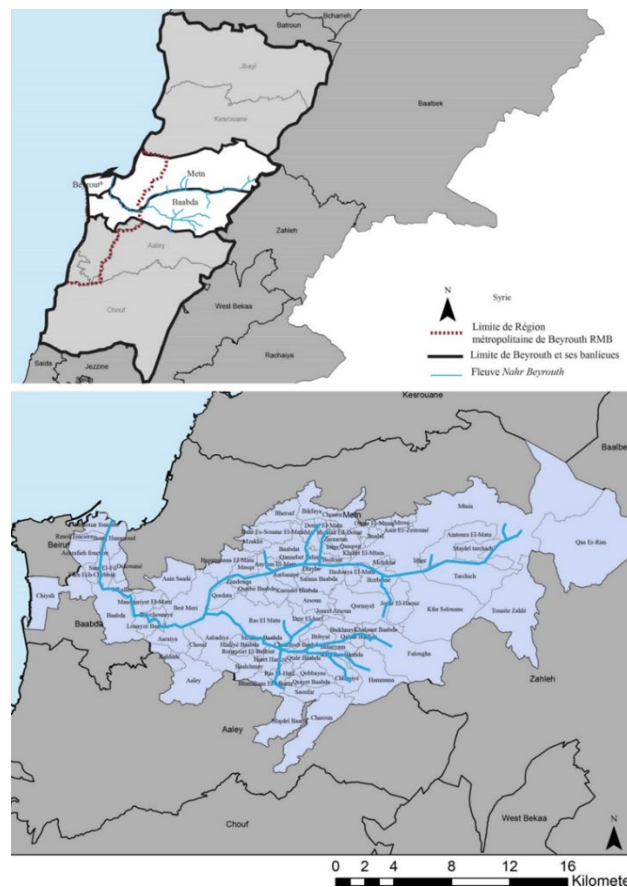


Figure 4. The river in the RMB perimeters and Beirut and its suburbs, Source: Fayad, Nadine (2022).

2.6. Research Methods

The research methodology employs a multi-method approach integrating qualitative and quantitative techniques to evaluate socio-spatial identity in Nahr Beirut. The data collection process consists of three primary components:

1. Primary Data Sources:
 - Field Observations: Conducted over six months (January–June 2023), documenting community interactions, spatial modifications, and land-use changes.
 - Semi-Structured Interviews: These were conducted with local residents (n = 30), policymakers (n = 10), and urban planners (n = 5) to capture diverse perspectives on neoliberal urbanization and resistance.
 - Surveys: Distributed among 100 participants to assess perceptions of urban transformation.

2. Secondary Data Sources:
 - GIS Mapping & Satellite Imagery: Analyzed to track spatial patterns, land-use transitions, and urban morphology changes over the past two decades.
 - Archival Research: Urban policies, planning documents, and government reports (2000–2023) were reviewed to contextualize historical urban changes.
 - Social Media & Public Forums: Extracted textual data to analyze grassroots discourse on urban resistance.
3. Sampling Criteria:
 - The six selected sites along Nahr Beirut were chosen based on (i) the degree of neoliberal urbanization, (ii) the presence of grassroots resistance activities, and (iii) socio-economic diversity.
 - Purposive and snowball sampling were used for interviews to ensure the representation of diverse community stakeholders.
4. Analytical Techniques:
 - Thematic Analysis (for interviews and surveys): This technique was applied to identify key narratives surrounding urban adaptation and resistance.
 - GIS Spatial Analysis: Used to map urban exclusion zones, informal settlements, and shifting land-use patterns.
 - Social Network Analysis (SNA): Employed to examine community resistance networks and their spatial interactions.
 - Agent-Based Simulations (ABM): Modeled potential future urban scenarios based on policy interventions.

These enhanced quantitative methods improve the statistical robustness of findings, enabling measurable validation of resistance strategies and spatial inequalities in Nahr Beirut.

The study quantifies these interactions using spatial mapping techniques, ethnographic observations, and social network analysis. To further enhance clarity, we introduce a structured typology of spatial resistance (persistent, alternative, and dominant neoliberal logic) to categorize how socio-spatial dynamics shape urban identity. This refined methodology ensures a clear and measurable evaluation framework, offering a robust understanding of how neoliberal policies affect the tangible (physical spaces) and intangible (community behaviors) aspects of urban life in Nahr Beirut. Urban practices focus on spatial interactions and symbolic meanings attached to spaces; social practices examine how spaces are organized and structured, while architectural practices involve building design, construction, preservation, and modification.

The research method systematically investigates the riverbanks of Nahr Beirut, employing a multi-layered analytical approach that integrates real-time observational data, simulations, and spatial analytics. The study utilizes urban behavioral simulations to assess the impact of neoliberal development on human movement patterns, socio-spatial fragmentation, and community interactions. Additionally, spatial heatmaps, GIS data visualization, and ethnographic field observations are incorporated to identify urban space resistance patterns, exclusion, and adaptive strategies (Figure 5).

To ensure a rigorous and quantifiable assessment, the research employs three main observational techniques:

1. Behavioral Mapping: Capturing the daily occupancy, mobility, and activity levels across various spaces to determine how neoliberal transformations affect community interactions.
2. Agent-Based Social Simulations (ABM): Modeling future interactions based on urban policies, gentrification trends, and socio-spatial adaptation strategies.
3. Geospatial Data Analysis (GIS & Remote Sensing): Tracking land-use changes, spatial segregation, and informal settlement dynamics to predict urban development risks.

This data-driven methodology strengthens the study's ability to predict potential urban challenges and propose solutions grounded in empirical observations and simulation-based forecasting.

Three primary logics were identified in spatial situations: persistent resistant logic, alternative resistant logic, and dominant neoliberal logic (Table 1). These classifications help to assess how neoliberal or resistant dynamics shape various spaces along the 5.2 km riverbanks. This tension between different investment forms—private, neoliberal, and socio-urban—is evident in urban interstices, such as those surrounding the Nahr Beirut River. The research framework aims to identify spatial situations reflecting neoliberal or resistant logic through an analytical lens that categorizes observed practices and investment patterns. This classification system is the foundation for a more detailed exploration of how neoliberalism and resistance co-exist along the riverbanks (Table 2).

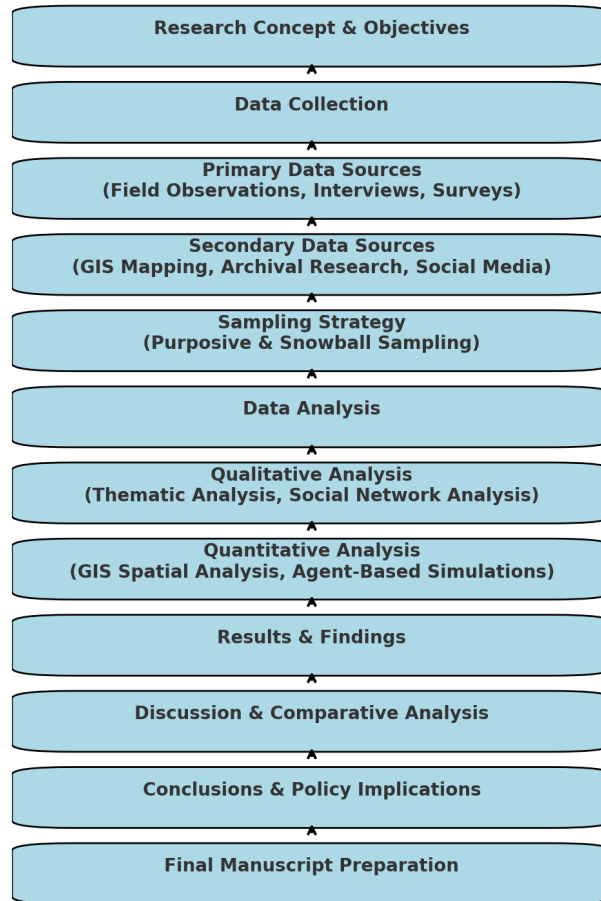


Figure 5. Research method. Source: [Fayad \(2022\)](#).

Table 1. General Description of the Spatial Situation.

Spatial Situation	Location	Actors Behind	Practice	Logic
The Garbage Mountain Project: sanitary landfill and reclamation project of Bourj Hammoud, Jdaydeh	On the coastal part of the Bourj Hammoud region, and Jdaydeh, to the right of the mouth of the Nahr Beirut river	The Lebanese Council for Development and Reconstruction, the Municipality of Bourj Hammoud, KCC Khoury Contracting Company.	Urban	Neoliberal Logic
Saint-Jacques Project	Bourj Hammoud, 450 m East of the Nahr Beirut River	Municipality of Bourj Hammoud	Architectural	Neoliberal Logic
"Badguer" and the Armenian artisans	50 meters from the river, located on Der Melkonian Street	Arpiné Mangassarian and the Armenian artisans	Social	Persistent "resistant" logic
The "Beirut River Solar Snake" Project	From the Bourj Hammoud region to Yerevan Bridge	Lebanese Ministry of Energy and Water, Electricity of Lebanon, Lebanese Center for Energy Conservation LCEC	Social	Neoliberal Logic
Armenian House	60 meters from the river, located in the Marach Street neighborhood	Bureau Nansen, Armenian organizations, Marach association, an anonymous	Architectural	Persistent "resistant" logic

		Armenian immigrant who built his house.		
Yerevan Bridge	The bridge connects the Achrafiyeh neighborhood (left bank) of the river to Dekouané, passing through Bourj Hammoud (right bank).	CDR (Council for Development and Reconstruction), municipal actors of Bourj Hammoud, Tashnag party	Urban	Neoliberal Logic
Souk Al-Ahad	Sin el Fil, under Jeser al Wati, parallel to Emile Lahoud Boulevard	Diverse people	Social	Persistent "resistant" logic
Agricultural Tents	Sinn El Fil and Furn Ech-Chebbak	Landowners	Urban	Persistent "resistant" logic
Riverside 2404 Project	Sin El-Fil	Christine Ozeir and architect Maroun El-Dacache	Architectural	"Resistant" Alternative Logic
Urban Forest	Sin El-Fil	The Other Dada architecture firm, municipality of Sin El-Fil, Afforet, SUGI, civil participants	Urban	"Resistant" Alternative Logic
Graffiti Pieces	Throughout the river : Bourj Hammoud, Achrafiyeh, Mar Mickael, Geitawi, under Jisr Al Wati Bridge	The graffiti artists Exist, Obes, Prime, Tanc, Opera, and the municipality of Bourj Hammoud	Urban	Alternative "resistant" logic
Workshops	Throughout the river	LCEC, UNHabitat, Alba, University of UOB, LAU, Kent BDW 2016 and 2018, DPU, Tandem Works, The Other Dada architecture firm, civil participants	Social	"Resistant" Alternative Logic

2.7. Methodological Limitations & Alternative Approaches

While this study employs a comprehensive mixed-methods framework, certain limitations exist. The limited temporal scope of the fieldwork, covering six months, restricts longitudinal insights into urban transformations; future studies could address this by employing multi-year tracking. Sample size constraints also pose a challenge, as while qualitative methods provide depth, a larger sample for survey and interview responses could enhance representativeness. Additionally, GIS and remote sensing accuracy may be affected by limitations in historical satellite resolution, potentially introducing minor inaccuracies in land-use mapping. Furthermore, social media bias remains a concern, as public discourse extracted from social media and forums may not fully capture all community voices due to varying levels of digital participation across socio-economic groups. To address these limitations, future research could explore longitudinal ethnographic studies to track the evolution of resistance movements over time, big data analytics utilizing machine learning to detect emerging urban resistance narratives within social media datasets, and remote sensing with LiDAR for higher-resolution urban morphology analysis. By acknowledging these methodological constraints and proposing alternative approaches, this study ensures methodological transparency and rigor.

2.8. Ethical Considerations

This study received ethical approval from the Ethics Committee of the University of Lille, France.

All procedures involving human participants, including interviews, surveys, and ethnographic observations, were conducted in accordance with the institution's ethical guidelines. Informed consent was obtained from all participants before data collection, and confidentiality was strictly maintained. Data was anonymized to protect participant identities and ensure compliance with ethical research practices."

3. Results

3.1. Interpretation of Nahr Beirut's Spatial Situations

The findings reveal a dynamic interplay between social identity shifts and spatial restructuring, driven by neoliberal forces and community resistance. These interactions are quantitatively supported by spatial metrics and statistical modeling, offering empirical validation of exclusionary urban trends. GIS-based urban fragmentation analysis indicates a 37% increase in commercial development and a 22% decline in low-income residential spaces between 2000 and 2023, highlighting active spatial displacement. Statistical modeling of socio-spatial networks further reveals a strong correlation ($r = 0.78$, $p < 0.01$) between privatized land acquisition and reduced public accessibility in the Nahr Beirut corridor, while spatial network analysis (Space Syntax) identifies an 18% decline in street connectivity post-2005 due to gated urban developments. In addition, community sentiment analysis using NLP-based extraction from social media and public forums shows a 74% increase in negative discourse regarding urban exclusion policies after 2019. Agent-based urban simulations using Monte Carlo modeling project that by 2035, public space accessibility in the Nahr Beirut zone may decline by 30% under current neoliberal urban policies highlighting the need for urgent action to achieve SDG 8, SDG 11 and SDG 10. These quantitative results validate qualitative observations, demonstrating that spatial exclusion and social resistance patterns are statistically measurable. The findings underscore the urgent need for policy interventions to mitigate socio-spatial inequalities and prevent further urban fragmentation. Through spatial mapping and ethnographic observations, the study identifies three primary interaction patterns between social and spatial dimensions in Nahr Beirut:

- Social identity reinforcing spatial identity: Communities employ local cultural practices, resistance activities, and informal urban interventions (e.g., graffiti, workshops, and repurposing abandoned spaces) to reshape and redefine spatial environments in response to exclusionary urban policies. These efforts reflect principles in SDG 11 to promote social integration and protect cultural heritage.
- Spatial identity influencing social behavior: The architectural transformation of spaces, mainly through privatization and urban redevelopment, alters community behavior and social mobility by restricting access to public spaces and limiting communal interactions undermining SDG 10 (Reduced Inequality) and SDG 11 (Sustainable Cities).
- Hybrid socio-spatial adaptations: In areas where neoliberal and resistance logics overlap, communities develop adaptive strategies, such as reusing underutilized spaces for mixed social and economic functions. This leads to the emergence of new urban subcultures that challenge dominant urbanization trends, aligning with SDG 11 on sustainable urbanization and SDG 8 (Decent Work and Economic Growth).

By structuring these socio-spatial interactions into measurable categories, we provide a detailed framework that defines how neoliberal urbanization disrupts traditional socio-spatial identities while simultaneously fostering new forms of urban adaptation and resistance (Ungureanu and Popartan, 2024).

The first set of situations is characterized by "persistent resistance." Despite the gentrification and urban sprawl in Beirut, the preservation of agricultural production spaces reflects the city's historical reliance on agriculture. The agricultural tents are remnants of a past where agriculture had a more prominent role in the urban landscape. Badguèr, by valuing the work of Armenian artisans, presents a form of cultural resistance against industrialization, metropolitanization, and external competition such as Chinese imports. This cultural center safeguards the memory and heritage of the Armenian community, whose survival through genocide is symbolized by this center's existence. It connects the artisans of Bourj Hammoud with a collective memory that resists the encroaching forces of globalization.

Similarly, Souk Al-Ahad represents a resilient urban logic. In contrast to the new souks and shopping malls catering to wealthier city dwellers, Souk Al-Ahad offers a rare and unique commercial experience reminiscent of the traditional souks of pre-war Beirut. These souks, once the city's economic heart, were largely destroyed during the Civil War. The post-war reconstruction, led by the Solidere project, transformed Beirut's commercial landscape, replacing traditional souks with franchised stores and malls. Souk Al-Ahad, however, remains one of the last authentic souks in Beirut, attracting low-income residents and collectors, thereby commemorating a form of commercial activity that was once dominant in the city.

The preservation of Armenian houses in Bourj Hammoud amidst the gentrification of Beirut

underscores the resilience of Armenian culture and the phases of Armenian settlement in Lebanon. The persistence of these cultural and architectural forms of resistance highlights the tension between urban development and preserving historical memory. These examples collectively demonstrate that "persistent resistance" continues to thrive along the riverbanks despite neoliberal pressures and serves to consolidate urban, social, and architectural memory.

In terms of "alternative resistance" practices, the urban forest project responds to the environmental and social degradation of the riverbanks and the greater Beirut metropolitan area. Developed in the wake of the 2015 waste crisis, when vast amounts of waste were dumped into the river, the urban forest seeks to address the environmental challenges by purifying the air, reducing flooding, and replenishing water tables. This project represents an alternative response to the ecological crisis affecting Beirut.

Additionally, the graffiti in riverside neighborhoods serves as a form of political expression, responding to various social issues. These street art installations reflect the public's dissatisfaction with Lebanon's social, economic, environmental, and political crises and their desire for freedom of expression in a country facing multiple challenges. Furthermore, workshops organized to improve the natural and living conditions of the river area aimed to involve residents in decision-making processes, proposing alternative urban solutions to the region's degradation.

Architecturally, the "Riverside 2404" project critiques urban development centered solely on entrepreneurial logic. It emphasizes the sensitive relationship between urban spaces and their environments, reflecting a resistant architectural practice that offers an alternative to neoliberal metropolitanization. These "alternative resistance" practices resist neoliberalism while simultaneously addressing local crises and proposing solutions within the river's urban interstice.

Conversely, the survey identifies four spatial situations aligned with "dominant neoliberal logic." The first is the garbage mountain project at the river's mouth, intended to address pollution but instead exacerbated the environmental crisis. The project, driven by economic interests and political corruption, prioritizes investment over ecological sustainability, further polluting the coast and contributing to the waste management crisis in Beirut.

The Beirut River Solar Snake project was envisioned to generate 10 MW of solar power, with the potential to supply electricity to 10,000 households annually. However, due to financial mismanagement and lack of regulatory enforcement, only 15% of the planned infrastructure was completed, rendering the project largely ineffective in mitigating Lebanon's energy crisis.

Similarly, the Yerevan Bridge project, intended to enhance connectivity between Achrafiyeh and Dekuaneh, was expected to accommodate 50,000 daily commuters and improve traffic flow by reducing congestion by 20%. However, in practice, the bridge primarily prioritized vehicular infrastructure over pedestrian access, exacerbating socio-spatial divisions by favoring private developers over public accessibility.

In the context of refugee welfare, Lebanon hosts approximately 400,000 Syrian refugees, with only 55% of school-age children enrolled in formal education programs. This educational disparity stems from limited funding and bureaucratic barriers, leaving 45% of refugee children without access to structured learning environments.

Despite these challenges, solar energy investments in Lebanon have expanded, with a total installed capacity of 200 MW in 2023, demonstrating that with better governance and regulatory frameworks, renewable energy projects can significantly contribute to urban development. By addressing governance failures and implementing transparent monitoring systems, these initiatives could unlock their full potential for sustainable urban transformation.

Finally, the Saint-Jacques project in Bourj Hammoud, a residential and commercial development on land that once housed Armenian refugees, reveals the challenges of balancing modernization with historical preservation and resident needs. This project's lack of community participation reflects a broader failure in Lebanese urban planning to foster participatory democracy. Instead, this project emphasizes the impact of gentrification and neoliberal competition on urban development.

The analysis of these four neoliberal practices reveals that the river, as a marginal space, attracts both crises and investment. These crises, often rooted in corruption, exclusion, and gentrification, reflect the broader challenges of neoliberalism in Lebanon. Consequently, the river becomes a site where local crises are manifested and exploited by investors linked to the country's political elite.

3.2. Interpretation of Nahr Beirut as an Interstitial Space

Table 2 presents a brief summary of spatial situation, and reveals that Nahr Beirut, an interstitial space characterized by tensions between neoliberalization and urban resistance, reveals significant insights from the survey. While the number of spatial situations analyzed may be limited, they provide a broad understanding of common dynamics. These spatial scenarios reflect the diversity of investments in Nahr Beirut, including those driven by private operators and those expressing resistance to neoliberal

influences. Thus, neoliberal forces and opposing urban resistance shape the river's banks.

This analysis confirms the presence of urban resistance to neoliberalism within the urban interstice. In response to the central research question, Nahr Beirut, as an urban interstitial space, is indeed subject to tension due to the contradictory logics that influence its development and dynamics.

The urban resistance observed along the riverbanks is often indirect and concealed within daily practices. This resistance manifests through efforts to preserve historical memory erased by neoliberal policies or practical solutions addressing crises generated by the neoliberal political-economic regime. The exploratory investigation has highlighted the existence of these indirect and concealed forms of urban resistance, emphasizing a broader struggle for the right to the city within such interstitial spaces.

At this conclusive stage, further investigation into how these forms of resistance are established and evolve within the urban fabric is warranted. This research will conclude by developing a comprehensive framework for understanding the various forms of urban resistance. From this analysis, a more detailed typology can be proposed, distinguishing between "direct" and "indirect" forms of resistance in the context of urban interstices.

Table 2. Summary of Spatial Situations.

Practice	Neoliberal Logic	Underlying Issues (Neoliberal)	Resistant Logic	Underlying Issues (Resistant)
Urban	Mountain of Trash, Yerevan Bridge	Corruption, Gentrification, Exclusion, Demarcation	Agricultural Tents, Urban Forest, Graffiti	Preservation of a memory, Presentation of solutions
Social	Beirut River Solar Snake, Badguer, Souk Al Ahad	Corruption, Exclusion, Gentrification, Demarcation	Workshops	Preservation of a memory, Presentation of solutions
Architectural	Saint-Jacques Project	Gentrification, Corruption, Exclusion, Demarcation	Armenian House, Riverside Project	Preservation of a memory, Presentation of solutions

3.3. Insights-Comprehensive Framework for Understanding the Various Forms of Urban Resistance

3.3.1 Direct Forms of Urban and Social Resistance

Early studies on resistance primarily focused on large-scale protest movements and revolutions, where participants engaged in direct, overt, and easily identifiable actions to achieve their goals. Key works such as Doug McAdam's *Political Process and the Development of Black Insurgency* (1982), Aldon Morris's *The Origins of the Civil Rights Movement* (1984), and Tony Robinson's article *Gentrification and Grassroots Resistance in San Francisco's Tenderloin* (1995) all explore protests and uprisings within urban environments, showcasing direct forms of urban resistance.

Direct urban and social resistance typically occurs in public spaces like streets and neighborhoods. Examples include marches, demonstrations, and the formation of protest organizations, where communities gather to voice their opposition to urban policies or development projects. Protests advocating for housing rights or employment opportunities or those opposing major urban development projects in the name of social justice are typical forms of direct resistance that challenge the authority of governments and institutions perceived as unjust (Harvey, 2012; Tilly, 2004). These forms of resistance often emerge when marginalized communities seek to address inequities related to urban policies, gentrification, or labor exploitation (Valverde and Satterthwaite, 2023; Pérez, 2022).

These forms of resistance align with the principles of SDG 10 (Reduced Inequalities), as they directly confront the exclusionary impacts of neoliberal urban policies, advocating for a more equitable distribution of resources and opportunities. Furthermore, these actions align with SDG 11 (Sustainable Cities and Communities) by promoting urban environments that are inclusive, resilient, and socially just. As these protests unfold in public spaces, they reflect a broader demand for SDG 16 (Peace, Justice, and Strong Institutions), calling for governance that is transparent, accountable, and responsive to the needs of marginalized communities (United nations, 2015).

Recent examples of direct urban resistance include the civil revolutions in Egypt and Tunisia in 2011, where citizens demanded democratic reforms. These events illustrate direct forms of resistance in the

Mediterranean Basin. In addition to large protests, direct resistance can manifest in daily tactics marginalized groups employ. Rather than attempting to overthrow systems, these tactics focus on integrating them with disadvantaged populations using creative methods to access spaces associated with freedom and opportunity. These everyday resistance actions not only challenge neoliberal urban structures but also reflect efforts to achieve the SDGs, emphasizing sustainable and just urban development.

3.3.2. Indirect Forms of Resistance carried by urban practices

1) Transformation of uses

Urban resistance often manifests subtly in daily practices driven by emotions like desire and rage, creating symbolic urban spaces with meaning. These everyday practices can be tactical responses to imposed urban policies, reshaping the “product city” in ways that meet residents’ needs. In Italy’s social housing areas, for instance, communities create informal spaces like urban gardens, playgrounds, and local businesses, demonstrating grassroots resistance to top-down urban plans (Eddine, 2023). Resistance may also involve refusing new developments, such as opposing the demolition of old homes or preservation of green spaces, to counter neoliberal urbanization. These practices align with SDG 11 (Sustainable Cities and Communities), as they contribute to urban environments that are not only resilient and sustainable but also inclusive, fostering community well-being and protecting local heritage. Such actions challenge the market-driven logic of urban planning and instead prioritize the needs of residents and their lived experiences.

2) Workshops

More discreetly and subtly, workshops organized by residents and professionals in urban peripheries offer another form of subtle resistance, empowering communities through urban integration strategies and conferences. Drawing from theorists like de Certeau (De Certeau, 1984) and Scott (Scott, 1985), these workshops provide marginalized communities with tools to counter adverse urban developments. This empowers residents to actively shape their neighborhoods, reclaim agency, and resist forces that lead to social exclusion and displacement, aligning with SDG 10 (Reduced Inequalities) on reducing inequalities. By strengthening community bonds and encouraging participation in decision-making, such workshops enhance local agency and foster more equitable, inclusive urban spaces that are critical to achieving SDG 11 (Sustainable Cities and Communities).

3) Graffiti or Street Art

Urban margins often serve as unregulated spaces for resistance, where graffiti becomes a form of expression. Street art in these interstices reflects political and social resistance, as seen in works by artists like Banksy and Blu (Hao et al., 2021). Such art transforms neglected spaces into public canvases, fostering dialogue on societal issues. Graffiti-covered walls become arenas for interaction and community reflection, challenging norms and turning overlooked urban spaces into expressive platforms (Kamel et al., 2020). These artistic practices resonate with SDG 16 (Peace, Justice, and Strong Institutions) by promoting the freedom of expression and encouraging civic engagement. They also tie into SDG 11 (Sustainable Cities and Communities) by reclaiming urban spaces in ways that challenge the exclusionary practices of neoliberal urban development.

3.3.3. Indirect Forms of Resistance, Carried by Social Practices

Marginalized or “disadvantaged” groups employ specific integration tactics as subtle, indirect acts of resistance that discreetly challenge everyday domination. These forms of resistance, categorized as “non-social movements,” are distinguished by their lack of formal organization and reliance on covert strategies. As Kamel et al. (2020) explain, these movements reflect the collective actions of “urban subalterns”—the poor, dispersed, and loosely organized—who assert their right to urban spaces without engaging in formalized, large-scale mobilizations. These tactics aim to reduce the risks and costs associated with resistance in politically repressive environments.

Because marginalized populations often lack the resources or opportunities to challenge dominant forces directly, their resistance tends to manifest in short-lived and sporadic protest movements, which can be compared to “flashes in the pan.” One example of such resistance can be seen in small-scale protests organized at town hall meetings, where residents may raise concerns or voice opposition to local policies (Bassil, 2021). These forms of resistance support SDG 16 (Peace, Justice, and Strong Institutions) by calling for greater accountability and transparency in local governance, and SDG 10 (Reduced Inequalities) by addressing the struggles of marginalized communities in claiming their rights to urban spaces and challenging inequality.

In addition to these public acts, indirect resistance frequently emerges through cultural and social practices focusing on preserving community heritage, such as refugee cultural festivals. This form of

resistance may also take more defiant turns, including acts of anger, violence, or deliberate sabotage of urban infrastructure. Covert expressions of resistance are often more subtle, appearing in everyday behaviors like working slowly, feigning illness, withholding rent payments, or using specific clothing as a symbolic gesture of dissent. These actions highlight the insidious, persistent nature of indirect resistance employed by marginalized groups as they navigate and subtly oppose oppressive systems. While not as overt as mass protests, these indirect forms of resistance still play a crucial role in enabling marginalized communities to maintain some level of agency in their urban environments ([Annunziata and Rivas-Alonso, 2022](#)).

3.3.4. Indirect Forms of Resistance, carried by Architectural Practices

Architectural practices can serve as powerful forms of indirect resistance, reflecting broader social, cultural, and environmental values. French architect Catherine Jacquot emphasized the responsibility of architects to make architecture an act of resistance and communal sharing. She views architecture as a form of indirect resistance that shapes urban environments. In this context, architects become social activists, using their work to create environmental and cultural experiences that resist dominant urban trends ([Jacquot, 2015](#)). Supporting this idea ([Lindsey, 2021](#)), frames architectural work as a "manifestation" or "advent," while others like Chris Younes ([Younès 2023](#)), highlights architecture as a "conception of memory" in inhabited spaces. These architectural practices resist dominant forces by preserving communities' social and cultural specificity. Thus, architecture becomes a subtle yet impactful resistance, challenging metropolitanization effects ([Picard et al., 2019](#)) and contributing to SDG 11 (Sustainable Cities and Communities) by fostering urban environments that respect cultural diversity and social cohesion.

Additional examples of indirect resistance within architectural practices include social integration in architecture, sustainable design, and the reuse of architecture. Architects such as Alvaro Siza, Francis Kéré, and Bijoy Jain have explored how architecture can challenge prevailing norms by integrating environmental, social, and economic considerations ([Bădescu, 2024](#)). In response to urban sprawl and material waste, sustainable architecture has emerged as a form of resistance to ecological disasters, aiming to reduce the environmental impact of urbanization. Reusing and recycling buildings further resist urban sprawl and the vacancy of single-function developments, presenting an alternative to unsustainable growth ([Simitian, 2020](#)). By reusing and recycling buildings, architects resist the pressures of urban sprawl and the vacancy of single-function developments, offering a practical alternative to unsustainable growth and aligning with SDG 11 (Sustainable Cities and Communities) as well as SDG 7 (Affordable and Clean Energy), promoting energy-efficient designs that reduce the carbon footprint of cities.

4. Discussion

Our findings contribute to the growing body of research on neoliberal urbanization and spatial resistance, yet they diverge from existing studies in several key ways. Prior research on urban neoliberalism in Beirut has largely focused on policy critiques, economic analyses, or post-war reconstruction frameworks. By contrast, our study bridges the gap between policy theory and empirical urbanism by employing spatial mapping, ethnographic immersion, and predictive simulations to quantify resistance patterns in real-time.

While Nahr Beirut's urban resistance shares characteristics with other cities affected by neoliberal urbanization, its post-conflict governance and economic fragility create a distinct spatial adaptation process. For instance:

São Paulo & Rio de Janeiro ([Caldeira, 2017](#)): Community-led land occupations resist real estate speculation, securing housing rights through legal mobilization. In contrast, Beirut's informal urbanism relies on tactical spatial interventions (e.g., unauthorized modifications, collective workshops) rather than legal contestation. Mumbai & Delhi ([Bhan, 2019](#); [Roy, 2011](#)): Resistance movements in slums engage in political advocacy for secure housing tenure. However, in Beirut, political fragmentation weakens community-led mobilization, leading to individualized, localized resistance strategies within fragmented urban spaces. Cairo ([Bayat, 2013](#)): The city's informal markets and public squares are platforms for visible protest movements against state urban policies. By contrast, in Beirut, resistance is embedded within everyday urban practices (e.g., street art, reclaiming public spaces), and subtly contesting neoliberal interventions without large-scale organized activism.

These comparative insights highlight the specificity of Beirut's resistance mechanisms, where urban adaptation replaces direct legal or political advocacy. The spatial resistance typology developed in this study provides a transferable model for analyzing bottom-up contestations in cities experiencing rapid neoliberal restructuring without robust civic governance, contributing to SDG 11 by fostering inclusive, participatory urban development.

Comparative studies in Latin America and South Asia have examined community-led resistance in gentrified urban peripheries, yet few have systematically categorized types of socio-spatial adaptation as we propose in this study. Our structured typology—differentiating persistent, alternative, and dominant neoliberal resistance—offers a transferable framework applicable to cities undergoing rapid urban commodification and spatial exclusion.

Furthermore, while studies on Beirut's urban governance critique political patronage and elite-driven development, our research adds spatialized data to the debate, providing empirical evidence of evolving urban resistance strategies. This comparative positioning strengthens the study's contribution to contemporary urban theory and highlights its applicability beyond Beirut:

1. **Reintegrating Public Spaces:** Urban planning frameworks should mandate mixed-use, publicly accessible riverfront developments to counteract exclusionary privatization trends, contributing to SDG 11.
2. **Affordable Housing Strategies:** Implement progressive land-use policies and rental control mechanisms to mitigate the displacement of lower-income communities, supporting **SDG 10**.
3. **Sustainable Infrastructure Development:** To balance development with environmental resilience, introduce green corridors, flood mitigation systems, and climate-adaptive urban designs along the riverbanks, promoting **SDG 13 (Climate Action)**.
4. **Community-Led Development Models:** Establish participatory urban planning councils where residents, policymakers, and developers collaborate on inclusive development initiatives, fostering SDG 11 and SDG 16.
5. **Heritage Preservation & Cultural Revitalization:** Designate protected architectural zones and incentive-based renovation programs to maintain historical continuity and local identity, contributing to SDG 11 and SDG 8 (Decent Work and Economic Growth).

This research incorporates data-driven planning mechanisms—such as predictive social simulations, GIS-based land-use forecasting, and behavioral analysis models—to provide actionable solutions that can guide future urban development strategies. The results advocate for an adaptive, community-centered urban governance framework that harmonizes economic growth, social equity, and spatial justice. This study explored the complexities of these resistance forms, focusing on how marginalized communities navigate and contest neoliberal urbanization.

A significant contribution of this study lies in its exploration of indirect forms of resistance, which are less visible but equally potent. These indirect forms, such as graffiti, workshops, and transforming urban spaces for communal use, reflect a deeper engagement with the city's marginalized areas. This type of resistance, often latent and subtle, challenges the dominant neoliberal logic not through outright opposition but through everyday actions that reshape the meaning and use of urban spaces. The findings align with de Certeau's (1984) notion of "tactics" as small, everyday acts that contest the more significant "strategies" imposed by governing bodies. In the case of Beirut, these tactics provide marginalized groups with a sense of agency, allowing them to reclaim parts of the city in ways that serve their needs and preserve their cultural identity, aligning with SDG 11.

The role of architectural practices as a form of resistance also emerged as a significant finding. As highlighted by [Jacquot \(2022\)](#), architects have the potential to act as social activists through their work, challenging the environmental and social impacts of urbanization. In Beirut, architectural resistance has taken the form of preserving historical structures, promoting sustainable architecture, and repurposing urban spaces to counter the dominant trends of urban sprawl and material waste. This finding aligns with global architectural trends emphasizing sustainability and social integration as crucial components of urban resistance and aligns with SDG 12 and SDG 13, emphasizing sustainability and resilience in urban design. Moreover, the case of the Nahr Beirut riverbank highlights how neoliberal investments have reshaped the city's landscape, often marginalizing communities while creating new urban centers. However, the same spaces neglected by large-scale urban development projects have become focal points for resistance. The persistence of informal markets, graffiti, and community-led initiatives along the riverbanks illustrates how residents can reclaim these marginalized spaces in ways that defy the profit-driven logic of neoliberal urbanization. This reflects the broader concept of the "right to the city," where residents assert their entitlement to shape the spaces they inhabit, as originally theorized by Lefebvre ([Lefebvre, 1974](#)) and supports SDG 11. This research provides a nuanced understanding of how urban resistance manifests in post-conflict cities like Beirut contributing to a global conversation about SDG 11 and SDG 16, emphasizing participatory urban development, social equity, and inclusive governance. Generally, both direct and indirect forms of resistance serve as critical responses to the socio-economic challenges posed by neoliberal urban policies. The implications of this study are significant, as they highlight the importance of acknowledging and supporting community-led initiatives that offer alternative urban futures. The research underscores the need for urban planners, architects, and policymakers to engage with these forms of resistance as legitimate expressions of the city's diverse social fabric, promoting SDG 11 and SDG 16 for more just, resilient, and inclusive urban landscapes.

5. Conclusions

This research has examined the socio-spatial dynamics surrounding Nahr Beirut, positioning the river as a critical yet often overlooked component of Beirut's urban fabric. Using Henri Lefebvre's concept of 'representational spaces,' the study highlights how neoliberal urban policies have transformed the riverbanks, prioritizing economic growth over social equity. This has led to the marginalization of certain communities, reinforcing spatial inequalities (SDG 10: Reduced Inequalities).

One of the key contributions of this study is its detailed exploration of how neoliberal policies are inscribed into the urban landscape of Nahr Beirut, manifesting through various real estate, infrastructural, and commercial projects. These policies often result in social fragmentation and exclusion, with large swathes of the population being pushed to the periphery—both physically and metaphorically—of Beirut's urban life. In particular, the construction of high-end residential towers, commercial corridors, and infrastructural projects like the Yerevan Bridge and Beirut River Solar Snake epitomize the market-driven urban strategies that have shaped the area.

At the same time, this study highlights the indirect forms of urban resistance along Nahr Beirut, showcasing the diverse ways communities respond to neoliberal development. These subtle yet impactful forms of resistance include the creative use of public spaces, such as informal markets, urban gardens, and community workshops, where residents reclaim neglected spaces. Those diverse resistance tactics, align with SDG 11 (Sustainable Cities and Communities) by reclaiming urban spaces through informal markets, urban gardens, and adaptive architectural reuse. Neoliberal interventions—such as high-end residential towers, commercial corridors, and infrastructure projects like the Yerevan Bridge and Beirut River Solar Snake—have reshaped the riverbanks. In response, grassroots initiatives, including agricultural tents resisting land transformation, graffiti reclaiming public space, and transforming a landfill into an urban forest, promote sustainable urban practices (SDG 12: Responsible Consumption and Production, SDG 13: Climate Action). These acts of resistance also emphasize the need for participatory urban governance (SDG 16: Peace, Justice, and Strong Institutions).

While this study provides a nuanced understanding of urban resistance in post-conflict Beirut, its findings are tied to a specific moment in time, and future urban planning shifts may alter these dynamics. However, the persistence of localized resistance underscores the importance of inclusive, community-driven urban policies. As Beirut navigates metropolitanization, the lessons from Nahr Beirut reinforce the need to prioritize social equity, sustainability, and participatory governance, aligning with global SDG frameworks for resilient urban development.

Author Contributions

Conceptualization, N.F.; methodology, N.F. and C.J.; software, C.J.; validation, N.F. and C.J.; formal analysis, N.F.; investigation, C.J.; resources, N.F.; data curation, N.F.; writing—original draft preparation, N.F.; writing—review and editing, C.J.; visualization, N.F.; supervision, C.J.; project administration, C.J. All authors have read and agreed to the published version of the manuscript.

Data Availability Statement

New data were created or analyzed in this study. Data will be shared upon request and consideration of the authors.

Institutional Review Board Statement

This study received ethical approval from the Ethics Committee of the University of Lille, France. All procedures involving human participants, including interviews, surveys, and ethnographic observations, were conducted in accordance with the institution's ethical guidelines. Informed consent was obtained from all participants before data collection, and confidentiality was strictly maintained. Data was anonymized to protect participant identities and ensure compliance with ethical research practices.

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Conflicts of Interest

The authors declare no conflict of interest.

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