

Transformations of the Beirut River: Between Temporary and Permanent Liminality

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Abstract

This article presents the case of the Beirut River corridor in Lebanon, which defines the administrative border between the capital Beirut, its eastern and south-eastern suburbs. The Beirut River has undergone several transformations from being a lotic environment to becoming complex urban infrastructure. This is often unnoticeable due to the scarcity of its running water and its walled existence at the edge of administrative boundaries. The separation from its riverbanks, disconnection from the urban fabric, and continuous pollution have contributed to its liminality, being simultaneously neither present nor absent. To understand this in-betweenness, the river’s spatial, temporal, and social liminality are analysed by identifying major events, actors, and key urban planning interventions that impacted the river at the national, city region, and local scales. The article explores the development of the river corridor both in terms of urbanisation and population dynamics; its distinct positionality in different periods that corresponded to major events and decisions made; and the contrasting river experiences and perceptions across generations, which vary between reminiscence and aversion. By examining the various transformative processes, collective practices, perceptions, and diverse actors, the article highlights the contextual implications of this obdurate liminality, but also Beirut River’s potential alternative future positionality amidst present and imminent urban challenges.

Keywords

actors; Beirut River; border; canalisation; liminal; scale; social practices

1. Introduction

The Beirut River separates the capital city Beirut from its eastern and south-eastern suburbs. This article explores the river's transformations over time and its multiple positionalities, which have resulted in its in-betweenness on the spatio-temporal and social levels. Important milestones include the beginning of the area's urbanisation in the 1920s; the river's canalisation, which happened in 1968 and 1998; and an awakening regarding its social and environmental importance since 2009.

Urban rivers, particularly in developing countries, face numerous challenges caused by various drivers, including becoming alienated, hidden, invisible, forgotten, or dead (Travassos & Momm, 2022, p. 11; Youssef & Abou Ali, 2017). Urban rivers are interesting natural voids. These voids are useful due to their timelessness that highlights "new perspectives on our everyday reality" (Gruchow, 1988, p. 10 in Lawrence, 1997, p. 4). Although considered as "natural borders" (Krause, 2016), rivers are state-owned properties, which depending on their role, are formalised on maps into physical, institutional, or normative borders (Elden, 2007; Imai, 2013). Being organised under power influences, political priorities, and information-based administrative decisions, such urban borders form a territory with borderlands on either side (Elden, 2010; Krause, 2016; Mountz, 2010). The river is often a porous and liminal border, which shapes and allows interactions and negotiations across its two borderlands; the latter are often contrasting or contested areas based on practices, experiences, or perceptions (Imai, 2013; Morehouse, 2004). In reference to liminality, Lawrence (1997, p. 1) calls for further exploring "the roles played by ambivalence and hybridity [liminality] in everyday life," which affect practices and experiences including the ecological, economic, socio-spatial, and socio-cultural aspects (Elden, 2007, 2010; Krause, 2016; Imai, 2013).

The river's dynamic, liminal state provides opportunities for creative reconciliations across borderlands, which in themselves form the possible transformation between the present and the future (Imai, 2013; Zartman, 2010). In addition to the decisions, processes and practices that have shaped them spatially and given the border a width, borderlands could be understood through the involved actors, power relations, and socio-cultural processes (Diener & Hagen, 2010; Mountz, 2010; Paasi, 2005; Zartman, 2010). Therefore, understanding borderlands requires studying them at various scales, and from different perspectives (Zartman, 2010). Similarly, urban rivers literature indicates the importance of exploring different actors' roles and "politicized" decision-making through history to understand past influences on rivers, which were based on prevailing knowledge, values, and regulations, their current state, and future trends (Travassos & Momm, 2022, p. 4; Zingraff-Hamed et al., 2022), signifying the strong relation between the border and its borderlands.

Studying urban rivers at different scales would explain their role longitudinally as connectors serving infrastructural purposes at the international or regional scale, and laterally as possible local borders or connectors, where their treatment and width affect their positionality within their borderlands (Kondolf & Pinto, 2017, p. 183; Loftus & Harley, 2005). The variations of the impact on rivers' positionality is dependent on contextual specificities, whether natural, historical, morphological, political, or social (Castonguay & Evenden, 2012; Mauch & Zeller, 2008; Shaw et al., 2021). Urban rivers research highlights the technical approach to dealing with them as conduits, weaving other infrastructure along them, with less attention paid to the connection between rivers and their banks. In this case, rivers become marginalised, especially if inhabited by precarious population. They could gentrify in the case of new riverfront real estate

development within neoliberal real estate market dynamics and either way, issues of environmental and spatial justice become critical (Travassos & Momm, 2022).

While the literature highlights urban rivers' recurrent positionality as liminal space, there is limited research on this positionality and its local social and perceptual implications (Krause, 2016). This framework is particularly useful in examining the Beirut River. This article addresses several questions: What characterises Beirut River as a liminal space? What were the triggers behind its liminality over time? How is the river experienced by different individuals and groups over time? What are the implications for its positionality?

2. Liminal Space

Literature on liminality has been widely used across disciplines. Liminality is associated with the condition of in-betweenness, and suggests a dynamic border position, without being on either side of it (Hynes, 2009; Knudsen, 2009; Smyth & Kum, 2010; Waardenburg et al., 2019, p. 939). Liminality holds the potential for transformation that hinges on the past but signals a different future (Imai, 2013). The term liminal derives from the Latin "limen" or threshold and suggests a transition that is spatio-temporal (McDowell & Croke, 2019, p. 326; Thomassen, 2012).

Analysing the interlinked spatial, temporal, and social dimensions of liminality, provides the framework to understand urban rivers' changing positionality within different contexts (Agier, 2016 in Waardenburg et al., 2019, p. 940; Thomassen, 2012; Turner, 1974). Spatial liminality refers to the surrounding borderlands, reminding of the state of in-betweenness. An urban river and its ecosystem might connect or disconnect and interact partially or fully with the surrounding urban fabric, depending on its natural or modified morphology, according to processes and practices responding to different priorities. The extent of exchange across borderlands varies according to the liminal space's porosity either physically or functionally (Imai, 2013; Sletto, 2017). Temporal liminality begins with a "triggering event" (Waardenburg et al., 2019, p. 941) and signals different time intervals that are indicative of broader social struggles and negotiations among actors (Imai, 2013; Thomassen, 2012). More than one triggering event could occur over time due to power struggles, which would perpetuate liminality. For urban rivers, triggers could refer to decisions regarding their contextual role, such as canalising them, a transformation that affects the local level yet provides opportunities (Imai, 2013). Referring to triggers, Lawrence (1997) states that actors involved in transforming a liminal space support each other in maintaining it as such and are equally supported by the practices of other actors who have been conditioned to live with the liminal space.

Social liminality refers to the state of in-betweenness as experienced by individuals and groups and as manifested in shaping meanings in the process (McDowell & Croke, 2019; Waardenburg et al., 2019). The river as a liminal space presents a temporal struggle and negotiation extending between the past and the present as memories, and imaginaries for a possible future (Lawrence, 1997). These are expressed through the "changing life patterns, everyday practices, and personal tactics" (Imai, 2013, p. 59). Liminality is particularly suited to study unstable or "challenging environments"—such as Lebanon, a country in perpetual and prolonged instability—to check potential alternative futures (McDowell & Croke, 2019, p. 335). Murphy and McDowell (2019) extend the temporal dimension of liminality, to address unstable contexts and refer to permanent or obdurate liminality, which is defined as "a collective longitudinal experience of ambiguity and in-betweenness within a changeful context, [which] allows us to think of it [liminality] less as

a transition and as more of a prolonged and potentially negative hiatus to an unknowable future” (Murphy & McDowell, 2019, p. 56).

The lens of liminality enables understanding how river transformations at the macro-level from its natural to canalised state impact urban life at the micro-level. This includes an exploration of power relations among actors, and specifically individual actors who could innovate and stop the condition of obdurate liminality. These “fringe actors” often work separately or collectively towards awakening ecological and social concerns (Geels & Schot, 2007, p. 400; Kanger & Schot, 2019). For these actors to achieve transformations, it is necessary to bridge across structural differences in unstable contexts, through approaches such as: place-based or interest-based ones, consensus orientated ones or working towards institutionalising the actors’ coalitions (Mady & Chettiparamb, 2017). Regarding Beirut River, while several studies addressed its border position and deteriorated environmental state (Shaban, 2021; Trovato et al., 2016; Youssef & Abou Ali, 2017), this article explores its liminal position in relation to urban planning decisions, actors, and social practices.

3. Methodology

This article builds on document analysis including publications, academic theses, websites, reports, population data from the Lebanese Crisis Response Plan, urbanisation data from the National Council for Scientific Research (CNRS), and building permits from the Order of Engineers and Architects in Beirut. The data is provided for several districts in two governorates: in Beirut, the districts of Ashrafieh, Medawar, and Remeil; in Mount Lebanon, the district of Baabda with Baabda and Furn El-Chebback, and the district of Matn with Bourj Hammoud, Mekalles, and Sin El-Fil.

From January to February 2023, the author conducted six online in-depth, semi-structured interviews with actors who engaged with the river. The interviewees included two researchers R1 and R2 who worked on the Beirut River, one architect and activist R3, one academic R4 who held a course about the river, one artist R5, and one resident and former member of Bourj Hammoud municipality R6. These interviews provided information on everyday activities related to the river. Also, seven structured interviews R7 to R13 were conducted with residents born between 1946 and 1973 who live or have shops in the eastern suburbs of Bourj Hammoud and Sin El-Fil. The resident interviews provide some indications to memories and perceptions of the river. These were coupled with the interviews done by Frem (2009). Frem’s thesis is a comprehensive reference documenting the river’s development in relation to national events and triggers and is referred to specifically in Section 4.

4. The Liminality of the Beirut River

Starting in the mountainous upper Matn region of Lebanon, the Beirut River Basin is fed by two rivers that merge to form the 15-kilometre coastal river corridor crossing flat peri-urban, mixed hilly and flat suburban, and urban areas, before discharging its water into the Mediterranean Sea (Institut d’Aménagement et d’Urbanisme, 2016; Shaban, 2021). This seasonal river transports sediments during winter and is almost dry for the rest of the year (Frem, 2009). Administratively, Beirut River meanders through several municipalities: the capital Beirut, particularly the districts of Ashrafieh, Medawar, and Remeil in the Beirut governorate; Bourj Hammoud, Sin El-Fil, and Mekalles in the Matn district; and Furn El-Chebback, Jisr El-Basha, and

Hazmieh in the Baabda district (Figure 1). The river is managed by the Ministry of Energy and Water (MEW) and not by the adjacent municipalities.

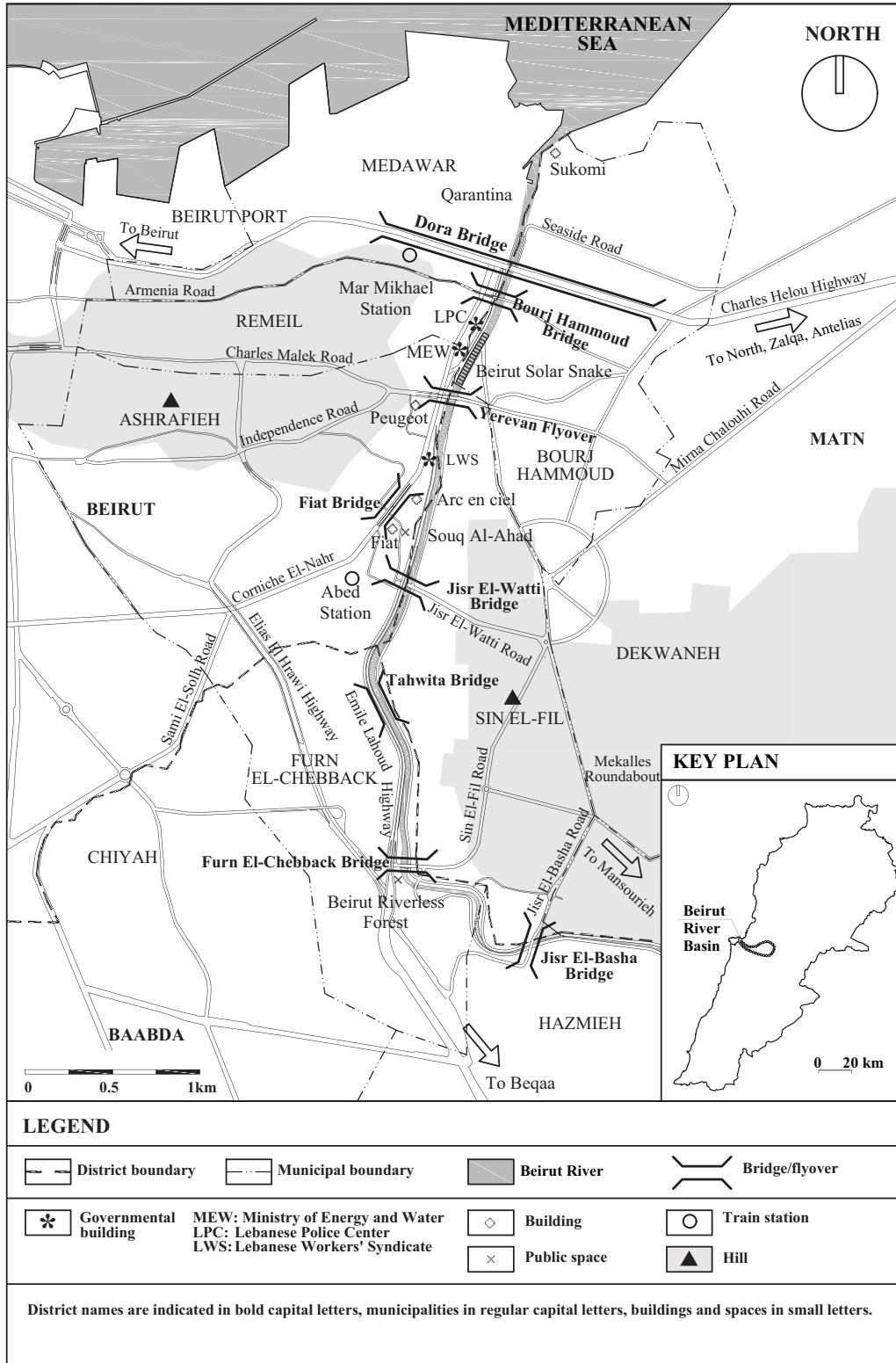


Figure 1. Beirut River corridor and administrative boundaries.

Moving along the river corridor, which developed at different periods, three land use zones could be distinguished. The first to the south comprises remaining fragmented, agricultural land in Jisr El-Basha, Furn El-Chebback, and Sin El-Fil amidst increasing real estate development encroaching on the agricultural plain (Trovato et al., 2016). The second middle zone spans from Beirut, Sin El-Fil, and Bourj Hammoud to the coastal highway. It includes predominantly industrial uses in Mekalles (Sin El-Fil), mixed and residential uses in Sin El-Fil, Bourj Hammoud, Ashrafieh, and Remeil. To the north, the third zone between the coastal highway (Charles Helou) and the estuary in Bourj Hammoud and Medawar (the former wetland), is partly occupied by industrial activities, namely solid waste management (previously by Sukomi), and the slaughterhouse in Quarantina, which closed in 2014. The following sections address the research questions and examine the river's liminality and its borderlands as transformed prior to, during, and after canalisation.

4.1. Spatio-Temporal Liminality

Being an urban river meant that Beirut River was both a reason for urban agglomeration and a victim of urbanisation. The first Roman bridge across the Beirut River was replaced by the current one linking Remeil to Bourj Hammoud, and the river was used as a source for potable water, water mills, and irrigation (Haqqi, 1918/1993). Given the riverbanks' fertile soil, agricultural activities were prominent by the riverside until the 1920s when urbanisation spread along the middle zone of the corridor except along the already existing railway and related infrastructure (Frem, 2009). The river served the nearby population, specifically the Armenians since 1922, whose settlements expanded in 1928 and 1939 (Fawaz & Peillen, 2002; Frem, 2009; Figure 2). Urbanisation continued with Beirut port's increasing significance and expansion in 1948, and poor neighbourhoods emerged around the port (Arnaud, 1997).

The 1950s–1960s was an important period for Beirut in terms of urban planning, an economic and urbanisation boom, with industries flourishing around the capital. Lebanese and foreign experts defined major infrastructure, industrial zones, urban densities, centralities, and areas in need of upgrading along the river (Verdeil, 2009). However, implementing and controlling the plans were unsuccessful due to limited capacities in the state apparatus, and prevailing market interests (Verdeil, 2009). This boom generated more traffic and triggered infrastructure development, such as the road network based on the 1931 Danger plan, specifically the construction of the coastal highway, the tramway, Corniche El-Nahr (Pierre Gemayel Boulevard), and several vehicular bridges—executed during the 1940s and in 1970—across the river including Dora, Bourj Hammoud, Sin El-Fil, and Jisr El-Basha (Davie, 2001 in Frem, 2009, p. 45; Figure 2). At the foot of Ashrafieh and Sin El-Fil, car sale companies located such as Fiat and Peugeot (Ruppert, 1999). Adjacent to the port in Medawar and Bourj Hammoud—the northern river zone—some services and industries emerged, and with the decline of tanneries and silk factories after World War II (Jidejian, 1997), industries near the river gradually changed to oil reservoirs and residential areas in the 1950s (Frem, 2009).

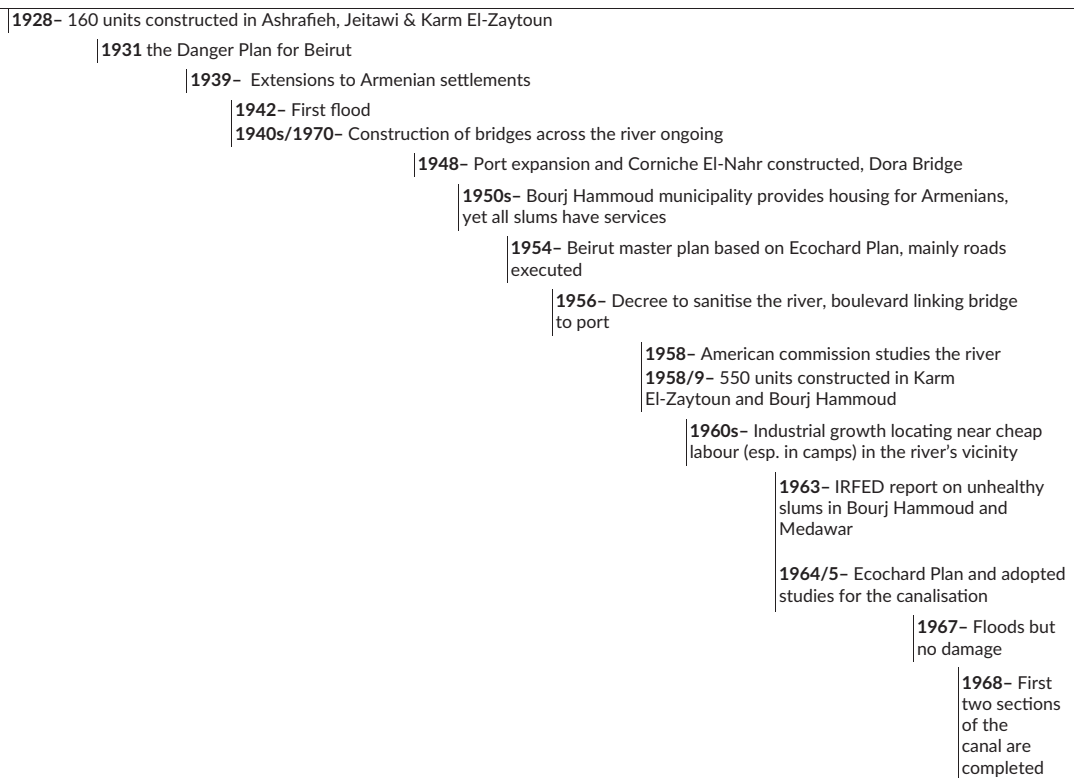
These activities required unskilled labour, which led to the construction of relatively cheap housing and emergence of informal housing along the corridor in its northern and middle zones (Fawaz & Peillen, 2002; Frem, 2009, p. 54). While the working class resided along the river, “middle class Maronites settled further away in residential areas of Sin El-Fil, Sioufi [Ashrafieh], Furn El-Chebback, and Hazmieh” (Frem, 2009, p. 58). In the Armenian settlements, the Bourj Hammoud municipality, and Armenian NGOs built housing units for the Armenians in the 1950s until 1959 (Fawaz & Peillen, 2002). Another densification trigger came with the 1954 zoning ordinance, which allowed for an increase in floor to area ratio “under pressure from speculators,

builders lobbies, and influential Arab capital” (Davie, 2001 in Frem, 2009, p. 55). The southern zone towards Sin El-Fil and Mekalles featured predominantly furniture and construction material industries. The 1954 Ecochard plan for Beirut included a road network based on his earlier plans, while Ecochard’s 1964 plan proposed another highway that is currently the interchange at Furn El-Chebbak and Hazmieh.

End of the First World War	Armenian population displaced to Lebanon	Constitution of the Republic	Lebanese families moving to Bourj Hammoud and adjacent areas to the river	Establishing the Ministry of Planning	1968
1918	1922	1943	1950	1963	

National Events

Beirut River Triggers



Beirut River meanings/ experiences/ perceptions/ practices revealed in the interviews R6 to R12 (years refer to birth dates of interviewees)

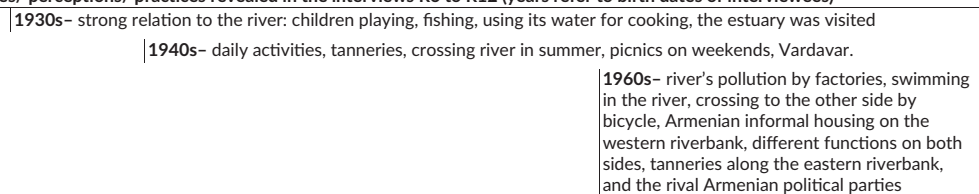


Figure 2. Timeline indicating the period before canalisation.

The first trigger to reconsider the river’s positionality was the flood in 1942, which affected the informal settlements. This event prompted the government in 1956 to issue a decree for the river’s canalisation, and in 1958 an American study was prepared for that purpose (Davie, 2001 in Frem, 2009, p. 33). The canalisation project had a dual role of technically managing floods and cleansing slums, which were reported as insalubrious in 1963 by the IRFED mission and supported by Ecochard’s 1964 plan. Another

flood in 1967 caused no damage, yet the decision to execute the canalisation was irreversible. The canal was built in three segments along with proposed highways, interchanges, bridges, and stormwater infrastructure (Frem, 2009). The Ministry of Planning executed the first two canal segments in 1968 after which no flooding damage was recorded (Frem, 2009). Then the civil war erupted in 1975 and lasted until 1989 (Figure 3).

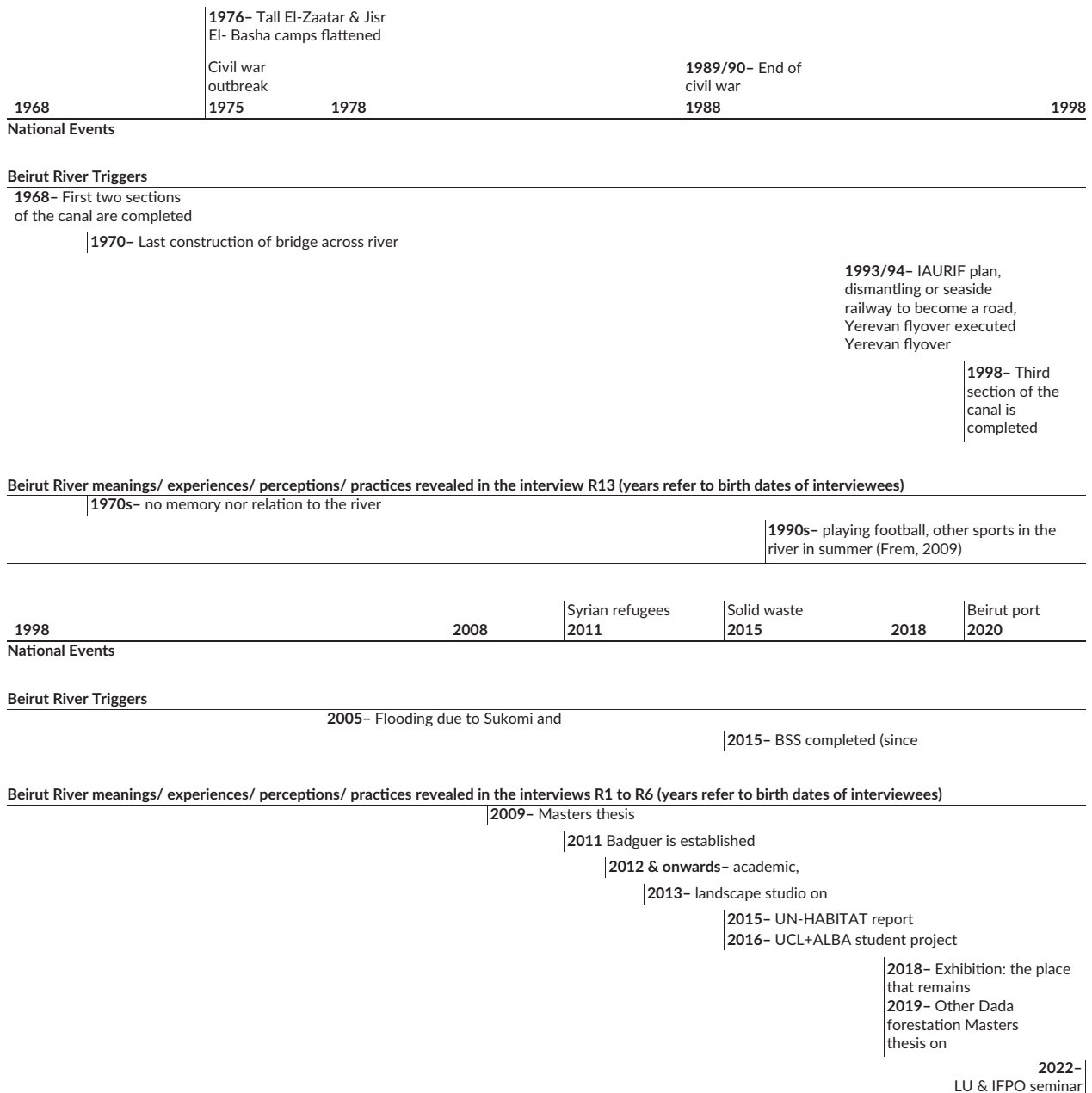


Figure 3. Timeline indicating the period during and after canalisation.

This war resulted in a weak state with weak planning, the emergence of polycentric development, communitarian provision of services (Combes & Verdeil, 1996), construction violations, unplanned densification, and the rise of the real estate market with private developers marginalising the environment,

agricultural land, and social networks. The war caused Beirut's division along a north-south demarcation line continuing to its suburbs, and significant population displacement occurred across the country (Mady, 2022a). The war's impact was evident along the river corridor, whose eastern bank became part of the eastern divide, and witnessed a population influx. The war tensions were equally scaled down to the river's neighbourhoods "nurtured by the amplification of deep social inequalities and degraded living conditions" (Davie, 2001 in Frem, 2009, p. 58). During the war some Armenians remained in the area, the well-off or second generation relocated, the Palestinians were uprooted, and a second wave of displaced Lebanese population arrived to the areas of Tahwitta, Hazmieh, Mansourieh, Zalka, Antelias, and beyond (Fawaz & Peillen, 2002).

Data from the CNRS on urbanisation between 1964 and 1998—spanning from before the war until its end—indicates a decrease in urbanisation in Medawar, Ashrafieh, Remeil, and Bourj Hammoud, which were affected by the war, and relative growth in the areas of Baabda (Hazmieh), Mekalles, Furn El-Chebbak, and Sin El-Fil. In 1994 and based on earlier IAURIF plans, the Yerevan flyover was executed, which itself resulted in population displacement (Fawaz & Peillen, 2002; Frem, 2009, p. 47; Figure 4). The third canal segment was executed in 1998 along with the Emile Lahoud Highway (Frem, 2009), creating a physical disconnection between Beirut and its eastern suburbs, reinforced by Corniche El-Nahr and a local primary road on the eastern side.

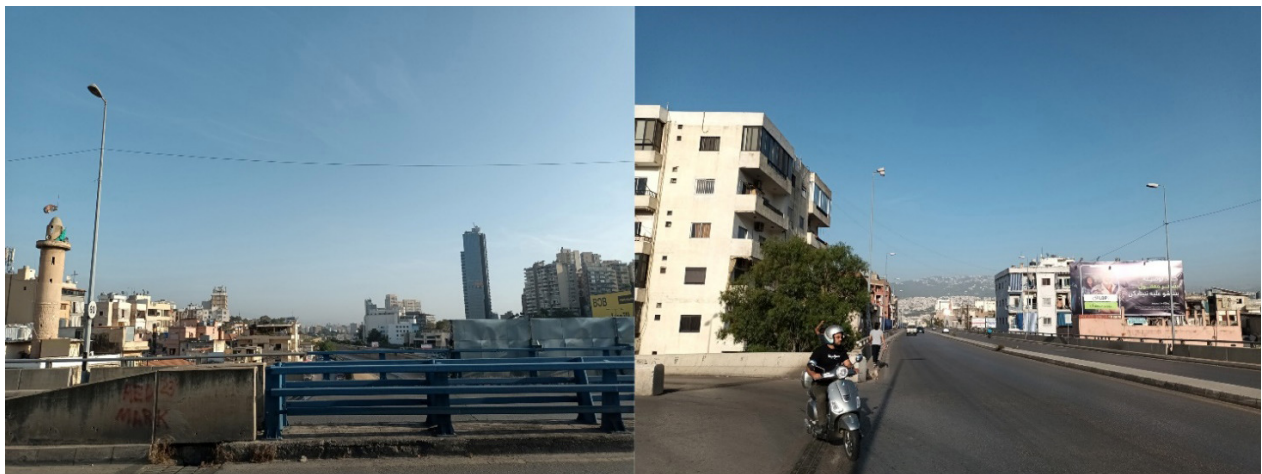


Figure 4. General view across the riverbanks and the Yerevan flyover.

The canalisation affected the river's trajectory, and administratively appended its flood plain to the Beirut Municipality (Frem, 2009, p. 34). The newly appended fluvial domain, which is non-constructible by law, was reclaimed by MEW, used for governmental buildings and yards, and some land given to NGO headquarters such as Arc-en-Ciel (R1—S. Frem, interview, February 21, 2023). Also, the public domain resulted in disputed land between the Beirut and Sin El-Fil municipalities and was used as a Sunday marketplace (Figure 5), which itself was described as a liminal space (Mady, 2022b): "The channel's adopted plan revealed the politics of its resulting form, which shifted towards the suburbs rather than Beirut....This shift has produced an immediate adjacency between Bourj Hammoud and Sin El-Fil and the canal" (Frem, 2009, p. 36).

Based on CNRS urbanisation data, the period between 1998 and 2005 witnessed remarkable growth in the south-eastern suburbs particularly in Baabda (Hazmieh) and Furn El-Chebbak. This trend continued on the

eastern riverbank between 2005 and 2010, along with further growth to the west in Ashrafieh and Medawar. From 2010 to 2016, all the surrounding areas expanded except for Remeil. Bourj Hammoud received Syrian refugees after 2011, who settled in some neighbourhoods with poor infrastructure that suffered from seasonal flooding (UN-Habitat, 2017). Along the eastern riverbank, the area between Furn El-Chebbak and Sin El-Fil was placed under a planning study, which prevented real estate development during the study period (R1–S. Frem, interview, February 21, 2023). Yet, since 2005, with the ongoing state of weak planning, real estate pressure led to annulling the study and constructing luxurious residential and mixed-use construction in formerly farming or industrial land, along with the conversion of industrial buildings, signalling the area's gentrification (Mady, 2022b).



Figure 5. Width of the river cross-section, both sides, and Souq Al-Ahad.

The post-war urbanisation along the river corridor was closely linked to population dynamics. While the available population data from the Lebanese Crisis Response Plan covers the period from 1998 to 2016, it reflects the remarkable pressure on Bourj Hammoud—mainly caused by the flow of displaced Lebanese, foreign workers (Egyptian, Ethiopian, Sri Lankan), and Syrian refugees (Fawaz & Peillen, 2002). Post-war Bourj Hammoud, Medawar, and Remeil were attractive to incoming population due to their “social tolerance to different ethnic groups” (Frem, 2009, p. 58). The population also increased in Hazmieh, Ashrafieh, and Sin El-Fil. The population growth figures corroborate the changes in urbanisation explained earlier.

Data on building count and uses between 2005 and 2017 as provided by the Order of Engineers and Architects building permits indicates variations in the river corridor's three zones. In the south, mixed residential, industrial, and commercial uses prevail in Hazmieh, reaching the river's flood plain; in Jisr El-Basha and Furn El-Chebbak, agricultural spots remain. In the middle, more mixed residential and some light industries prevail, and notable in Sin El-Fil is the gentrification mentioned earlier (Figure 7). In the north, there are residential, industrial, and port activities and some services. Comparing the two riverbanks, the western one (Beirut) is predominantly high-rise residential with some mixed uses, services, cultural, and recreational facilities, while the eastern (Bourj Hammoud and Sin El-Fil) is residential with commercial and industrial prevalence. The western bank is significantly denser than the eastern one as indicated in the permits between 2005 and 2017.

Beirut River's transformation reveals its liminality, which could be interpreted through a longitudinal reading reflecting its role at the national and city region scales; it provided space for transport infrastructure connecting the port through a transit route to the inland in the Beqaa, then to Syria and beyond. The river's relation on either bank was asymmetrical; it was detached from the capital by the motorised highways, while a local road maintained its relation to the eastern suburbs (R6—A. Mangassarian, interview, February 23, 2023; R2—F. Nour, interview, February 20, 2023). A lateral reading reflects local variations across the three corridor zones. The in-betweenness of the river corridor manifests on either riverbank through the binaries of capital city, suburbs, and peri-urban areas; different urban expansion and population growth patterns; different communities residing on either side along the river; different infrastructure and services; and varying levels of pollution, land price, and building density. Being a border, and with the additional infrastructure layers, the river is considered as the back of these administrative borderlands, rather than an active waterfront. Frem (2009, p. 72) indicates that "in the name of efficiency, sanitation and flood mitigation, such public works annihilated cultural ecosystems which allowed previously the interaction of people with existing habitats." With this positionality, what diverse perceptions, experiences, and meanings were generated around this liminal space?

4.2. Social Liminality

In addition to the spatio-temporal liminality, social liminality is evident in the contrast between reminiscences and realities that are reflected in the stories of the elderly and younger generations. These refer to diverse experiences, perceptions, and meanings that different generations attributed to Beirut River in the interviews conducted in 2023 by the author and the ones held by Frem (2009).

Before canalisation there were negative and positive perspectives on the river. For the state, sewers discharged from houses, and tanneries caused sanitation problems, generating a negative space associated "with decay, slums and health hazard" (Frem, 2009, p. 59; see Fawaz & Peillen, 2002 on the 1956 IRFED report). The interview with R6, a resident and employee at the Bourj Hammoud municipality, reflected the river's advantages. Before canalisation, the river was used daily, and crossed during summer. On weekends it served as a recreational space for family picnics and was considered "the breathing space for the population." Most importantly, in mid-summer, Vardavar—an Armenian festival related to water—was celebrated by the river. Only the narrow path along the river was inundated in winter but not the nearby houses. These houses were bulldozed and considered as having no value, although they "were ancient, they had stories, stories of people, a community" (R6—A. Mangassarian, interview, February 23, 2023).

From Frem's (2009) interviews, a respondent born in 1933 indicated a strong relation to the river: children playing, fishing, using its water for cooking, while the estuary was a place to visit and admire the view. Prior to the river's canalisation, the estuary was a recreational area with a restaurant, and a pilgrimage site (R3—A. Dada, interview, January 30, 2023; R5—L. Hakim-Dowek, interview, January 30, 2023). The 1940s generation added washing clothes on Saturdays, fruit trees, crossing the river when the water was low, water reaching the houses in winter, and the pleasure of being by the river until the industrial activities came in the 1960s. Reference to the old Roman bridge and the tramway was also made (Frem, 2009). From the February 25, 2023, interviews, R7 and R8, the 1940s Bourj Hammoud respondents' bitterness with its state was noticeable. Respondents indicated that the other bank had a different political Armenian community and was visited only when something was unavailable in Bourj Hammoud. The 1960s respondents also

indicated the political adversity among the Armenians residing on both riverbanks, with the bridge acting as a battlefield. One respondent appreciated the canalisation for separating the two areas (Frem, 2009). These aspects were echoed by the R9–R12 respondents who shared memories of swimming in the river, crossing to the other side by bicycle, Armenian informal housing on the western riverbank, different functions on both sides, tanneries along the eastern riverbank, and the rival political parties Tashnak in Bourj Hammoud and Hanshak in Badawi (Beirut; interviews, February 25, 2023). Other 1960s respondent highlighted the river's pollution by factories, despite the legally required 20-metre buffer for industrial activities (Frem, 2009).

The river's new cement walls and riverbed led to its separation from the city, and “gradually the people forgot about its presence for good...all those practices were gone.” In addition to the walls, the Beirut Solar Snake (BSS) further disconnected the river from the city in Bourj Hammoud. As for the remaining eastern bank, the road is crossed by nearby shop owners, who take a break in the shade of the river wall, a “phenomenon not practised on the other side.” For those who knew the river “it was an element of nature; it became a technical device” (R6–A. Mangassarian, interview, February 23, 2023) Despite Bourj Hammoud municipality's attempt to embellish the river wall by commissioning in 2004 the Armenian artist Kelekian to cover it with mosaics (“Embellishing Beirut with artist Lena Kelekian,” 2022; Figure 6), the canalisation produced a psychological boundary, ending some of the communities' river-based cultural rituals and—except for few children who ventured exploring it—hiding the river for those who encountered it after 1968. This included younger Armenians, Lebanese from other parts of the country, refugees, and foreign workers (R6–A. Mangassarian, interview, February 23, 2023) (Figure 3). One 1970s respondent R13 remembered crossing the river with a wooden ladder, an indication of water scarcity, while another indicated having no memory nor relation to the river (Frem, 2009; interviews, February 25, 2023). The 1990s respondent mentioned playing football and other sports in the river during summer (Frem, 2009).



Figure 6. The mosaic wall and the BSS in Bourj Hammoud.

Bourj Hammoud Municipality “had no capacity and was sceptic because it considered that it did not have the power to change things” and consequently had no vision for reinstating the river. This weak position was evident when despite the municipality's objection, the MEW decided to cover one river segment with the BSS (MEW & Lebanese Center for Energy Conservation, 2020), which further deepened its liminality (Figures 1

and 6). The older generation considered that “the river does not belong to us anymore, which is very deplorable. They had stolen from us all that life, all that view.” What was taken away from the community were “the two lungs: the river and its banks, and the shore...so we need lungs, a long promenade can be integrated in the city fabric along the river and can be that lung” (R6—A. Mangassarian, interview, February 23, 2023).

On top of the physical divide, the river’s abuse by industries and individuals led to solidifying its liminality. Other than the natural sediments, the river transported organic waste from the wholesale vegetable market in Sin El-Fil, and effluents from the industrial areas in Mekalles, Sin El-Fil, Jisr El-Basha, and Hazmieh (Frem, 2009, p. 39). One striking example was the red dye disposed in the river in 2012, which led the Minister of the Environment to urge “the Hazmiyeh and Baabda municipalities to cooperate with it [the ministry]” (“Environment Ministry launches probe as Beirut River turns red,” 2012). The Sukomi solid waste management facility built on reclaimed land at the estuary and the Quarantina slaughterhouse contributed to the pollution and disfiguration of the northern zone (Frem, 2009, p. 40; Figure 7). Additionally, individuals considered the river as a disposal location for unwanted objects and pets, such as a crocodile found in 2014 (“Hunter captures crocodile in Beirut River,” 2014). The river’s liminality was further reinforced by the solid waste management crisis, which turned it into a flow of garbage (Baghdadi & Burke, 2015). The state’s response to the solid waste management and the execution of the BSS were among the triggers for activists to raise awareness on Beirut River.



Figure 7. Gentrification in Sin El-Fil and the estuary.

4.3. New Meanings: From Permanent to Temporary Liminality?

The reminiscences of the depleted natural river, its utilisation as infrastructure, its current invisibility, and its treatment as a disposal channel, all reflect different knowledge and value sets accompanying the interventions of diverse actors (mainly governmental, local authorities, politicians, industrialists, and the real estate development) over time. The interventions since 1968, reinforced by the river’s ongoing deterioration, disconnections, and drastic changes along its banks, have generated a “collective longitudinal experience of ambiguity and in-betweenness” (Murphy & McDowell, 2019, p. 56), which led to its obdurate liminality. This positionality has triggered an awakening among new actors with different knowledge and value sets that strive to reverse the river’s obdurate liminality, with a clear shift from a technical and utilitarian, towards an

environmental and social role that acknowledges its local significance. This section provides an overview of some efforts towards a possible future direction for Beirut River by addressing it longitudinally and laterally (Figure 3).

The longitudinal interventions included scientific research on the river's importance on the national scale, which addressed the river basin (Institut d'Aménagement et d'Urbanisme, 2016); water resource management considering climate change, population growth, and water stress (Shaban, 2019); and the river's ecological role (Ghiotti et al., 2020). Similarly, the river's water resource potential was revealed by "using the water that is significant instead of having it wasted and resorting to the construction of dams," or its social aspect as an urban public space (R2—F. Nour, interview, February 20, 2023; see also Frem, 2009). The river was equally an academic subject in local and international design studios exploring environmental justice, landscape, and agricultural revival along urban rivers (R4—T. Mishkani, interview, February 23, 2023; Trovato et al., 2016).

The lateral interventions addressed the river's relation to its adjacent population, especially on the suburban side. One category of interventions included a workshop with the youth in the area for raising awareness on the river (Fattouh, 2016; Friedrich Nauman Foundation, 2023), or broader awareness activities including an organised tour along the river (Sursock Museum, 2020), and different art exhibitions (Avakian, 2016; Hakim-Dowek, 2016; Joreige, 2021; Morales, 2020; Nucho, 2020). Another category included the establishment of Badguer in 2011 in Bourj Hammoud, a renovated house of Armenian culinary and crafts culture, which became a community hub, and was studied within the crafts network in Bourj Hammoud by the NGO NAHNOO, and more recently in a UNESCO project addressing Armenian crafts (R6—A. Mangassarian, interview, February 23, 2023; NAHNOO, 2018, 2019). A third category was the implementation of a Miyawaki forest in the Sin El-Fil municipality riverside (Dada, n.d., 2018). While the initial intention was to involve the concerned ministries, the OtherDada consultants only managed to sign a memorandum of understanding with the Sin El-Fil Municipality. Realising this forest comprised involving residents in partnership with the NGO TandemWorks, recruiting volunteers, getting training from foreign experts, crowd funding from SUGi NGO and the private sector (R3—A. Dada, interview, January 30, 2023).

5. Discussion

Beirut River's value as an urban void was overlooked, and the "natural border" was transformed by the state to define an actual institutional, physical, and normative one between the differentiated borderlands of the capital and its suburbs. The prolonged liminality, and with the contributions of various actors, happened on several levels, including increasing the river's width by adding the canal and road infrastructure, the contrasts between both riverbanks, even within the Armenian community with the rival political parties; disputes over the river's legal border between the Beirut and Sin El-Fil municipalities; the multiple state entities (different ministries and directorates) involved with the river without a unified strategy; the numerous municipalities with little interest and no power to collaborate for a shared strategy for the river—a state property governed by the MEW. This obdurate liminality was opposed by the porosity through some connections such as the spillover of gentrification from Ashrafieh in Beirut towards Sin El-Fil, or more recent awareness raised by NGOs on the areas affected by the Beirut port explosion. Hence, opportunities for re-negotiating the river's local role emerged.

Disregarding environmental and social aspects, the dominant state decisions considered the river longitudinally and prioritised the country's modernisation, and the facilitation of trade from the port to the hinterland. This led to actions based on engineering knowledge, using urban planning tools, resulting in changes to the river's morphology that were evident on the updated map. Laterally, memories, practices, and experiences of the river were undermined, overlooked, or rejected. Beirut River as an agricultural hinterland was historically dissociated from the modern capital city (Jidejian, 1997), houses of transient population were not valued, and relations to the lotic environment were ignored, despite cultural and communal practices. This created an obdurate liminal space with distinct borderlands and a dissonance with the river's natural state.

Different priorities for the river were set by diverse actors, reflecting competing interests for the river as infrastructure or a social leisure space, a backyard, or a waterfront. For the authorities, it was cleansing the river's insalubrious milieu next to the capital city and optimising the use of this void by constructing additional roads and infrastructure to widen its cross-section, specifying land uses that should be supported or removed, zoning and building densities in the suburbs, and dumping solid waste during the 2015 crisis thus rendering the river partly invisible. For market players and with ongoing weak planning, it was facilitating mobility from the port to the hinterland and optimising under-utilised or undefined urban land for real estate development. For industrialists especially post-war within a weak state with lax control and absent planning strategy, it was violating and abusing the river as a disposal facility. For municipalities, it was managing the unplanned growth of the marginalised population, neglected low-income housing, and associated economic activities, then coping with the adjacency to the canal. For the residents and during its presence, the river was approached as part of the urban environment and people's everyday practices. It was seasonally adapted, and locally appropriated as a resource for different domestic, leisure, and livelihood purposes. The river acquired social values and cultural symbolism, and its banks reflected the livelihood of its inhabitants. After canalisation, residents used coping tactics to make the best of the walls, still using the usurped void as a backdrop for their everyday lives.

The emphasis on the river as a conduit has led activists, artists, and academicians to raise awareness on its socio-cultural role and attempt to re-stitch its riverbanks. Their actions marked the breaking of the "collective longitudinal experience" of prolonged liminality, and a shift from the state as the primary decision-maker to new actors trying to establish a dialogue with the state and local authorities through mediators or directly on their own (UN-Habitat, 2015). Their proposals encapsulated creativity and innovation that promised transformations of returning the river into its urban context through building shared place-based and interest-based identities. Yet, they have fallen short of reversing the river's condition, except in some spots. Coalitions such as the one formed by Dada allowed for upscaling the causes and arriving to an understanding with the local authorities, but not institutionalising them. However, the disaggregated state apparatus that oversaw the river, the disempowered local authorities and voiceless residents remain obstacles in achieving transformation. Also, the impact of these actions remained uncertain with the ongoing instability in Lebanon, and prevailing market players who do not see the financial gain in reversing the river's state, amidst a weak state, and the absence of planning control and strategies.

6. Conclusion

This article explored the transformation of the Beirut River corridor, from a lotic environment to an urban conduit, which over time became a liminal space due to several triggers. These included urbanisation, accompanying infrastructure and economic activities, population dynamics, the 1942 flood and the decision to canalise the river, and the river's uncontrolled abuse. This liminal state manifested in diverse urbanisation patterns, population dynamics, and social experiences on both riverbanks, and the river's erasure from people's perceptions as reflected in the contrasting stories of the elderly versus the young. Using the liminality framework with the spatial, temporal, and social dimensions provided the possibility to explore Beirut River's prolonged in-betweenness and identify attempts to alter this positionality through scholarly, artistic, and activists' initiatives. These included changing knowledge and raising awareness on the river's environmental role, and valuation of its ecological function amidst climate change; recognising the need for supporting agriculture and alerting on the lack of policies to protect the remaining fluvial plain from predatory real estate development; acknowledging its significance as a socio-cultural space, with community identities contributing to everyday life with the lack of open urban spaces within this area. The article calls for alternative approaches enabling new actors to reinstate Beirut River into the city, counteract the inaction of some decision-makers amidst weak planning and the neoliberal market's prevalence, and support the development of policies and regulation towards socio-spatial and environmental justice. It also sets the basis for further exploring the river's role following the Lebanese perpetual crises since October 2019, especially with implications related to limited state funding, the involvement of NGOs, population dynamics, and reconsidering the port blast-affected area. The Beirut River could still play its role as an open urban space between Beirut and its eastern suburbs.

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Conflict of Interests

The author declares no conflict of interests.

References

- Agier, M. (2016). *Borderlands: Towards an anthropology of the cosmopolitan condition*. Wiley.
- Arnaud, J. L. (Ed.). (1997). Beyrouth, Grand-Beyrouth [Beirut, grand Beirut] [Special issue]. *Les Cahiers du CERMOC*, 16.
- Avakian, V. (2016). *Composition with a recurring sound*. <https://www.vartanavakian.com/cwars>
- Baghdadi, R., & Burke, S. (2015, November 3). Rivers of rotting garbage anger residents in Beirut, Lebanon. *NBC News*. <https://www.nbcnews.com/news/world/rivers-rotting-garbage-anger-residents-beirut-lebanon-n453896>
- Castonguay, S., & Evenden, M. (Eds.). (2012). *Urban rivers: Remaking rivers, cities, and space in Europe and North America*. University of Pittsburgh Press.
- Combes, L., & Verdeil, E. (1996). Le regard d'un géographe allemand sur Beyrouth en 1967 [The perspective of a German geographer on Beirut in 1967]. *Les Cahiers du CERMOC*, 16, 171–227.

- Dada, A. (n.d.). *Posts tagged: Bourj Hammoud*. theOtherDada. <https://theotherdada.wordpress.com/tag/bourj-hammoud>
- Dada, A. (2018). Beirut riverless. In H. Younes & M. Zoueïn (Eds.), *The place that remains: Recounting the un-built territory* (pp. 22–24). Aleph Printing Press.
- Davie, M. (2001). *Beyrouth, 1825–1975: Un siècle et demi d'urbanisme* [Beirut, 1825–1975: A century and a half of urbanism]. Order of Engineers and Architects.
- Diener, A., & Hagen, J. (Eds.). (2010). *Borderlines and borderlands: Political oddities at the edge of the nation-state*. Rowman & Littlefield.
- Elden, S. (2007). Rethinking governmentality. *Political Geography*, 26(1), 29–33.
- Elden, S. (2010). Land, terrain, and territory. *Progress in Human Geography*, 34(6), 799–817.
- Embellishing Beirut with artist Lena Kelekian. (2022, June 22). *Lebanon Traveler*. <https://www.lebanontraveler.com/en/magazine/lena-kelekian>
- Environment Ministry launches probe as Beirut River turns red. (2012, February 16). *Naharnet*. <https://www.naharnet.com/stories/en/30227-environment-ministry-launches-probe-as-beirut-river-turns-red>
- Fattouh, M. (2016, May 6). A rumination on a proposed project that may or may not exist, for a river that may or may not be a river. *TandemWorks*. <https://www.ibraaz.org/projects/131>
- Fawaz, M., & Peillen, I. (2002). *The slums of Beirut: History and development 1930–2002*. United Nations Centre for Human Settlements.
- Frem, S. (2009). *Nahr Beirut: Projections on an infrastructural landscape* [Unpublished Master's thesis]. MIT.
- Friedrich Nauman Foundation. (2023). *Beirut River: Portrait & injection*. <https://www.freiheit.org/lebanon/beirut-river-portrait-injection>
- Geels, F. W., & Schot, J. (2007). Typology of sociotechnical transition pathways. *Research Policy*, 36(3), 399–417.
- Ghiotti, S., Dada, A., Abdul Massih, C., & Moukheiber, G. (2020). *Nahr Beirut: What is the river in the city? An open sewer, an oasis of freshness or a link between a city and its hinterland? Hypotheses*. <https://libecolo.hypotheses.org/nahr-beirut-what-is-the-river-in-the-city-an-open-sewer-an-oasis-of-freshness-or-a-link-between-a-city-and-its-hinterland>
- Gruchow, P. (1988). *The necessity of empty places*. St. Martin's Press.
- Hakim-Dowek, L. (2016). *Where do swans come from? Along the Beirut River*. <https://www.lesliehakimdowek.com/3282752-along-the-beirut-river#8>
- Haqqi, I. (1993). *Lubnan mabahith l'imiyah wa ljtima'iyah* [Lebanon scientific and social research] (Vol. 1, 3rd ed.) (A. B. Qiqano, Ed.). Dar Lahad Khatteer. (Original work published 1918)
- Hunter captures crocodile in Beirut River. (2014, April 3). *Naharnet*. <https://www.naharnet.com/stories/en/125002>
- Hynes, P. (2009). Contemporary compulsory dispersal and the absence of space for the restoration of trust. *Journal of Refugee Studies*, 22(1), 97–121.
- Imai, H. (2013). The liminal nature of alleyways: Understanding the alleyway roji as a “boundary” between past and present. *Cities*, 34, 58–66.
- Institut d'Aménagement et d'Urbanisme. (2016). *Liban: Une charte de territoire durable pour le haut-Matn* [Lebanon: A charter for a sustainable Upper-Matn territory]. *Note Rapide*, 732(Novembre).
- Jidejian, N. (1997). *Beirut through the ages*. Librairie Orientale.
- Joreige, L. (2021). *The river*. Vimeo. <https://vimeo.com/554062311>
- Kanger, L., & Schot, J. (2019). Deep transitions: Theorizing the long-term patterns of sociotechnical change. *Environmental Innovation and Social Transitions*, 32(2), 7–21.

- Knudsen, A. (2009). Widening the protection gap: The “politics of citizenship” for Palestinian refugees in Lebanon 1948–2008. *Journal of Refugee Studies*, 22(1), 21–73.
- Kondolf, G. M., & Pinto, P. J. (2017). The social connectivity of urban rivers. *Geomorphology*, 17, 182–196.
- Krause, F. (2016). Rivers, borders, and the flows of the landscape. In A. Kannike & M. Tasa (Eds.), *The dynamics of cultural borders* (pp. 24–45). University of Tartu Press.
- Lawrence, M. (1997). Heartlands or neglected geographies? Liminality, power, and the hyperreal. *Journal of Rural Studies*, 13(1), 1–17.
- Loftus, G. R., & Harley, E. M. (2005). Why is it easier to identify someone close than far away? *Psychonomic Bulletin & Review*, 12(1), 43–65.
- Mady, C. (2022a). Navigating through invisible barriers: The evolution of immured Beirut. In B. Yapicioğlu & K. Lalenis (Eds.), *Boundaries and restricted places: The immured space* (pp. 23–37). Edward Elgar.
- Mady, C. (2022b). The fluidity of a liminal marketplace: Souq Al-Ahad, Beirut. In C. Sezer & R. van Melik (Eds.), *Marketplaces: Movements, representations and practices* (pp. 76–87). Routledge.
- Mady, C., & Chettiparamb, A. (2017). Planning in the face of “deep divisions.” *Planning Theory*, 16(3), 296–317.
- Mauch, C., & Zeller, T. (2008). *Rivers in history: Perspectives on waterways in Europe and North America*. University of Pittsburgh Press.
- McDowell, S., & Crooke, E. (2019). Creating liminal spaces of collective possibility in divided societies: Building and burning the Temple. *Cultural Geographies*, 26(3), 323–339.
- Ministry of Energy and Water, & Lebanese Center for Energy Conservation. (2020). *Beirut River Solar Snake: The dawn of the solar market in Lebanon*.
- Morales, B. (2020). Beirut River: Embroidery on linen, ink acrylic wool. *Rusted Radishes: Beirut Literary and Art Journal*. <https://www.rustedradishes.com/beirut-river>
- Morehouse, B. (2004). Theoretical approaches to border spaces and identities. In V. Pavlakovich-Kochi, B. J. Morehouse, & D. Wastl-Walter (Eds.), *Challenged borderlands: Transcending political and cultural boundaries* (pp. 19–39). Ashgate.
- Mountz, A. (2010). *Seeking asylum: Human smuggling and bureaucracy at the border*. University of Minnesota Press.
- Murphy, J., & McDowell, S. (2019). Transitional optics: Exploring liminal spaces after conflict. *Urban Studies*, 56(12), 2499–2514.
- NAHNOO. (2018). *Crafts made in Bourj Hammoud*. <https://nahnoo.org/publications/crafts-made-in-bourj-hammoud>
- NAHNOO. (2019). *Lebanese craftsmanship insights for policymaking, case study on Bourj Hammoud*.
- Nucho, J. R. (2020). *The narrow streets of Bourj Hammoud*. <https://www.joannenucho.com/work/interiors-46pmy>
- Paasi, A. (2005). Generations and the “development” of border studies. *Geopolitics*, 10(4), 663–671.
- Ruppert, H. (Ed.). (1999). Beyrouth, une ville d’orient marquée par l’occident [Beirut, an oriental city marked by the occident] [Special issue]. *Les Cahiers du CERMOC*, 21.
- Shaban, A. (2019). Striking challenges on water resources of Lebanon. In M. S. Javaid & F. Siddiqui (Eds.), *Hydrology: The science of water* (pp. 87–102). IntechOpen.
- Shaban, A. (2021). Rivers of Lebanon: Significant water resources under threats. In T. V. Hromadka II & P. Rao (Eds.), *Hydrology* (pp. 79–92). IntechOpen.
- Shaw, E., Coldwell, D., Cox, A., Duffy, M., Firth, C., Fulton, B., Goodship, S., Hyslop, S., Rowley, D., Walker, R., & Worrall, P. (2021). Urban rivers corridors in the Don Catchment, UK: From ignored, ignoble and industrial to green, seen and celebrated. *Sustainability*, 13(14), Article 7646.

- Sleto, B. (2017). The liminality of open space and rhythms of the everyday in Jallah Town, Monrovia, Liberia. *Urban Studies*, 54(10), 2360–2375.
- Smyth, G., & Kum, H. (2010). When they don't use it they will lose it. Professionals, deprofessionalization and reprofessionalization: The case of refugee teachers in Scotland. *Journal of Refugee Studies*, 23(4), 503–522.
- Sursock Museum. (2020). *Toxic tour of the Beirut River: With Adib Dada*. <https://sursock.museum/content/toxic-tour-beirut-river>
- Thomassen, B. (2012). Revisiting liminality: The danger of empty spaces. In H. Andrews & L. Roberts (Eds.), *Liminal landscapes: Travel experience and spaces in-between* (pp. 21–35). Routledge.
- Travassos, L., & Momm, S. (2022). Urban river interventions in São Paulo Municipality (Brazil): The challenge of ensuring justice in sociotechnical transitions. *Frontiers in Sustainable Cities*, 3, Article 684109.
- Trovato, M. G., Farjalla, N., & Truglio, O. (2016). Gentrification versus territorialisation: The peri-urban agriculture area in Beirut. In B. Maheshwari, V. P. Singh, & B. Thoradeniya (Eds.), *Balanced urban development: Options and strategies for liveable cities* (pp. 481–498). Springer.
- UN-Habitat. (2015). *Beirut River-less: Bringing Beirut River back to life*.
- UN-Habitat. (2017). *Nabaa neighbourhood profile and strategy: Bourj Hammoud, Lebanon*.
- Verdeil, E. (2009). *Beyrouth et ses urbanistes: Une ville en plans (1946–1975)* [Beirut and its urbanists: The city in plans (1946–1975)]. Institut Français du Proche-Orient.
- Waardenburg, M., Visschers, M., Deelen, I., & Van Liempt, I. (2019). Sport in liminal spaces: The meaning of sport activities for refugees living in a reception centre. *International Review for the Sociology of Sport*, 54(8), 938–956.
- Youssef, M., & Abou Ali, B. (2017). Revival of forgotten rivers through recreating the cultural promenade: A case study of the Beirut River, Lebanon. *WIT Transactions on Ecology and the Environment*, 226, 725–737.
- Zartman, I. W. (Ed.). (2010). *Understanding life in the borderlands: Boundaries in depth and in motion*. University of Georgia Press.
- Zingraff-Hamed, A., Serra-Llobet, A., & Kondolf, G. M. (2022). The social, economic, and ecological drivers of planning and management of urban river parks. *Frontiers in Sustainable Cities*, 4, Article 907044.

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