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The Climate Change and Environment in the Arab World Program aims to understand the climate change and environment policy process in the region and define the most appropriate policy recommendations by linking development in applied sciences on issues related to climate change and environment to social sciences.

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Improving Walkability in Beirut: Lessons from the Jeanne d'Arc Street case

Summary

Walking, it has been said, is the ultimate form of sustainable public transportation. Beirut, however, is one of the most pedestrian unfriendly cities in the world. Many streets do not even have sidewalks, and where they exist, they are often broken, or obstructed, or hazardous when wet. In 2010, two units at AUB, the Neighborhood Initiative and the Center for Civic Engagement and Community Service, joined forces to design Beirut's first barrier-free walkway on Jeanne d'Arc Street, a major thoroughfare in the university's neighborhood.

Recommendations

Lebanese citizens are often dubious about the capacity and willingness of public officials to make decisions for the public good over private interests. But small model projects, such as the Jeanne d'Arc redesign, offer hope that development for the public good is indeed possible.

Based on the Jeanne d'Arc case, the following recommendations may be made:

- Researchers can bolster the case to be made for public transportation in general, and walking in particular, by providing local evidence on the economic, environmental, social, and health benefits of investing in well-designed, barrier-free sidewalks.
- Researchers can also detail the impact on economic vitality and residents' quality of life by following the London versus Houston models of urban development in Beirut.
- The Beirut Municipality should implement the recommendations of the Île-de-France-funded "Liaisons Douces" projects, and in particular, the other model pedestrian street on Damascus Road. Taken together, these two model streets, the redesigned Damascus Road and Jeanne d'Arc Street, will provide visible examples of what is possible in a dense urban environment such as Beirut.
- Lebanese policy-makers need to make brave and visionary choices in order to promote shared and public transit over the private car. The public also needs to be educated about the implications of the various choices, otherwise they will continue to accept that the only option is more and wider highways and more and cheaper parking facilities, with walking on pleasant sidewalks a foreign curiosity.

Problem Statement and Key Messages

Walking is the most important form of sustainable public transportation, but Beirut is one of the most pedestrian unfriendly cities in the world. Sidewalks are either non-existent, or broken, blocked, uncomfortably high, or impassible due to parked cars and motorbikes. The situation is unsafe and unpleasant for able-bodied persons, but it severely limits the mobility of individuals with disabilities, older people, and parents with children. The fundamental right to walk in one's city is simply unavailable to the inhabitants of Beirut. The situation is made worse by the lack of public parks and green spaces in the city. Blocked and broken as they are, streets and sidewalks are Beirut's main public spaces.

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Key Messages

- Lebanese municipal and national policy-makers' emphasis on the automobile, and specifically on creating more highways and parking spaces for cars, is shortsighted and unsustainable in the long run.
- Researchers should evaluate the impact of car- versus public transport-centered urban development on economic vitality and quality of life in Beirut.
- There are many economic and public health reasons to encourage walking in Beirut, investing in sidewalks is therefore a smart choice.
- Policy-makers need to make brave and visionary choices in order to promote the various forms of public transport over the private car. The public needs to be educated about the implications of such choices, otherwise they will continue to accept that the only option is more and wider highways and more and cheaper parking facilities.
- Model projects, such as the redesign of Jeanne d'Arc Street, can offer a visible example of what is possible in a dense urban environment such as Beirut. They strengthen advocacy for policies in support of walking.

Beirut's First Barrier-Free Walkway

Over the past decades, architects, product designers, urban planners, and disability activist groups in many countries have advocated for the adoption of government policies to encourage barrier-free environments. Originally intended to enhance the accessibility for people with disabilities, recent manifestations of the barrier-free movement (Design for All, Universal Design, Inclusive Design, Age-Friendly Cities) recognize that barrier-free environments are beneficial to everyone². There is also mounting evidence of the positive economic and health benefits to society of non-motorized transport, including walking.³

In 2010, two units at AUB, the Neighborhood Initiative and the Center for Civic Engagement and Community Service, joined forces to design Beirut's first barrier-free walkway on Jeanne d'Arc Street, a major thoroughfare in the university's neighborhood. Jeanne d'Arc is similar to many congested and densely settled streets in Beirut, with a mix of land uses: retail, commercial, institutional, and residential.

2 Connell, B et al (nd) The principles of universal design. North Carolina State: Center for Universal Design; World Health Organization (2007) Global age-friendly cities: A guide. Geneva: WHO.

3 Dannenberg, A et al (2003) The impact of community design and land-use choices on public health: A scientific research agenda, Public Health Matters 93(9): 1500-1508; Duduta, N et al (2013) Saving lives with sustainable transport: Traffic safety impacts of sustainable transport policies. Washington: World Resources Institute; Ehrenfeucht, R and A. Loukaitou-Sideris (2010) Planning urban sidewalks: infrastructure, daily life and destinations. Journal of Urban Design 15(4) 459-471. DOI: 10.1080/13574809.2010.502333; Litman, T (2011) Economic Value of Walkability. Report by the Victoria Transport Policy Institute.

From the beginning, the AUB team saw Jeanne d'Arc as a possible model for other streets in the city, and believed that one success story in implementing Law 220 could inspire others around the city.

The project evolved through a broadly consultative process. A wide variety of stakeholders were involved, including, early on, the Mayor and Municipal Council of Beirut. Attracted by the vision offered, the Municipality committed to constructing the AUB design as a model pedestrian-friendly street in the city. Construction is anticipated to begin in 2014.

Redesigning Jeanne D'Arc Street

The AUB team developed its recommendations for Jeanne d'Arc through an iterative process between research, outreach to/feedback from neighbors, and design. The research and outreach component of the project began with documentary films of wheelchair users navigating neighborhood streets. The AUB team used these moving testimonies to advocate for the project with the Beirut Municipal Council.

In-depth interviews with a variety of stakeholders were a central piece of the research phase. Stakeholders included residents, local businesspeople, users of Jeanne d'Arc Street, other special groups (parents of small children, older people, and persons with mobility impairments), and NGO activists on disability issues. They articulated the main discomforts and hazards to pedestrians: sidewalks that are too high, too narrow, slanting, slippery when wet, and with holes and broken or uneven paving. They complained about confusing signage and common obstructions: parked cars and motorcycles, parking meters, trees, poles, and construction sites. Interviewees also noted the characteristics of a pleasant street for walking: well-maintained wide and smooth sidewalks, good lighting, seating areas, trees for shade and beauty, ramps to reduce the up and down steps, proper rainwater drainage, and trash bins.

Other, more design-focused research complemented the interviews. Graduate students contributed to the project with a "body-mapping" exercise to map sidewalk obstructions with a visually impaired colleague. The team commissioned a physical survey of the street; reviewed existing design guidelines in Lebanon and Europe; and consulted with local experts on accessible urban design and non-motorized transport/"liaisons douces".

Unfortunately for Lebanon, the municipal and national policy-makers' current focus on the car, and specifically on creating more highways and more parking spaces, is short-sighted and unsustainable in the long run.

As the design developed, the AUB team organized several charettes with the technical focal points from the Beirut Municipality, local urban design experts, and wheelchair users. Experts suggested simple innovations not yet common in Beirut, such as elevated junctions and tactile pavers for a portion of the street. Members of the Beirut Municipal Council challenged the AUB team to come up with a design that assumed that cars, motorcycles and shops would obstruct the walkway where possible; our design had to make it difficult for them to do so. The Council also encouraged the AUB team to propose new ideas that could be incorporated into future urban design guidelines for Beirut.

Ultimately, then, a new design for the street was developed. Specific recommendations include:

- West side
 - » Sidewalk is widened.
 - » Removal of one parking lane.
 - » Creation of a 1.5m wide 'safe passage' with special paving to signify to all that it should never be encroached upon.

The Issam Fares Institute for Public Policy and International Affairs (IFI) at the American University of Beirut (AUB)

was inaugurated in 2006 to harness the policy-related research of AUB's internationally respected faculty and other scholars, in order to contribute positively to Arab policy-making and international relations. IFI is a neutral, dynamic, civil, and open space that brings together people representing all viewpoints in society. It aims to: raise the quality of public policy-related debate and decision-making in the Arab World and abroad; enhance the Arab World's input into international affairs; and, enrich the quality of interaction among scholars, officials and civil society actors in the Middle East and abroad.

- » To prevent parking of cars and motorcycles on sidewalk, development of a sidewalk protection 'system' that combines bollards, benches, trees and light poles.
- » Installation of gutters to facilitate removal of rainwater and prevent ponding.
- East side
 - » Repaired sidewalk, width as is.
 - » 'Pockets' that contain parking meters and other street furniture.
 - » Designated spaces for business deliveries, taxis and parking for the handicapped.
- Junctions
 - » Elevated junctions and flat crossings.
 - » Narrowed intersection to prevent obstructions to walkway by diagonally parked cars.
 - » Designated spaces on cross street for the parking of motorcycles and bicycles.
- Throughout
 - » Addition of improved energy-efficient lighting.
 - » Addition of mature jacaranda trees.
 - » Addition of improved signage.

The main challenge in working with policy makers responsible for Beirut's physical environment is the complex and overlapping jurisdictions between multiple public agencies, and especially the Beirut Municipality and Beirut Governorate. The Municipality decides on projects and the Governorate serves as the executive agency; approvals from both can be difficult to secure. In the case of the Jeanne d'Arc project, the removal of 32 legal parking stalls on the west side of the street became a sticking point in the approvals process with the Governor.

The Future City

As Richard Rogers, the visionary architect and urbanist, stated (and paraphrased here): The future city should be compact; polycentric; encourage walking and public transportation; accommodate diverse uses; include rich and poor residents; be just, secure and environmentally responsible; and create a sense of place through good design.⁴

From a policy perspective, Beirut is at a juncture in deciding which model of urban development to follow – Houston's or London's. The former is car-dependent, and characterized by congested freeways and suburban sprawl. The latter discourages private car use in the city center through a congestion charge, increases urban density through infill development on underused urban sites, strengthens public transportation, and encourages non-motorized transport such as bicycles and walking. Unfortunately for Lebanon, the municipal and national policy-makers' current focus on the car, and specifically on creating more highways and more parking spaces, is short-sighted and unsustainable in the long run.

⁴ Remarks at the Ninth Urban Age Conference, Istanbul, 4-6 November 2009.



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