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A FRAMEWORK FOR RESEARCH ON PEDESTRIAN STREETS IN AMERICA

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HIGHLIGHTS

- There is a revival of interest in pedestrian streets in the U.S.
- Migration back into the larger US cities creates more demand for pedestrian space.
- Increased sophistication in thinking about streets has changed perspectives on street use
- Rigorous research is needed on the success factors for pedestrian streets in the U.S. context

ABSTRACT

Sustainable cities require sustainable streets, placemaking, and pedestrian-focused urban planning. Americans who visit Europe are often struck by the many vibrant pedestrian precincts and pedestrian friendly streets across the Atlantic. People walk these streets for utilitarian purposes or just to experience street liveliness. Healthful walking is integrated into their daily lives. Why aren't there more pedestrian oriented streets and precincts in the United States? What has made some pedestrian streets around the country not only endure but prosper? On the other hand, why have so pedestrian malls been re-opened to auto traffic? From the late 1950s through the late 1970s main streets across the United States were closed to automobile traffic in an attempt to compete with the emerging regional shopping centers. For the most part they failed and were eventually re-opened to automobile traffic. Other pedestrianized streets have been notably successful. Why? This article reviews the prospects for pedestrianized streets in the US, discusses factors that may have contributed to their success or failure, and outlines a program of rigorous research needed on success and failure factors for these streets. The aim is to advance understanding of this important part of a more sustainable street ecosystem so as to inform contemporary US urban planning policy

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1. INTRODUCTION

The startling success of the Time Square section of New York City's Broadway as a pedestrian street has revived the idea of pedestrianizing commercial streets in US cities. (Sadik-Kahn & Solomonow, 2016). This comes at a time in which nearly all of the larger US cities are re-urbanizing, reversing a decades-long trend of population loss to suburban and exurban areas (Ehrenhalt, 2012; Bates, 2013; Madhani, 2016). In parallel, the built environment professions and urban transportation agencies have been re-imagining streets as both links and places (Congress of the New Urbansim and Institute of Transportation Engineers, 2010; National Association of City Transportation Officials, 2013). Moreover, concern for the health effects of sedentary lifestyles adds to a zeitgeist favorable to this renewed interest in activating US streets with pedestrian movement (Jackson & Sinclair, 2011; US Department of Health and Human Services, 2015).

These promising prospects for pedestrian streets and precincts in America have not been matched by rigorous research on the determinants of success or failure of car-free streets in the US context. This article describes a framework for this research and argues for the importance of both quantitative and qualitative investigation of the context for success in pedestrianizing US city streets and precincts. This work is a follow on to a conference presentation that posed the question of whether there was a future for pedestrian streets in America (Kott, 2016a).

2. LITERATURE REVIEW

Pedestrian streets proliferated in the two decades or so in the US from the celebrated first project in Kalamazoo, Michigan in 1957 (Bates, 2013). During this period at least 200 American city streets were closed to automobile traffic (Pojani, 2008). An important motive in these street closures was to meet competition from emerging suburban shopping malls (Robertson, 1995; Pojani, 2005; Bates, 2013). This competition, fueled by the concurrent exodus from American central cities to their suburbs, was empyting-out US central business districts (Robertson, 1995; Newman & Kenworthy, 1999). The consequence was a catastrophic four-fold fall in the take of downtown merchants in America from 20% of total metropolitan retail sales in 1954 to a mere 5% by 1977. Not only were their customers moving to the suburbs, but they were shopping there as well (Robertson, 1983). In this context of population and commercial decline, public transport patronage fell precipitously too, putting the survival of many US urban public transport systems in question (Gordon, 1991). These losses meant that by the end of the 1970s, many US city streets were distinctly less lively that those of Jane Jacobs beloved Greenwich Village (J. Jacobs, 1961). The nearly impossible task put to car-free streets was to re-enliven the commercial heart of downtowns and central cities that were gripped by economic, demographic, and transportation decline.

The European experience of pedestrianizing streets was contemporaneous to that of America, but took place in a distinctly different context. Urban cores of cities across the Atlantic from the US retained their population densities, economic vitality, and intensity in public transport services (Pojani, 2005). As a result, European urban centers kept their liveliness well beyond business hours, producing the vitality and "eyes on the street" that Jane Jacobs deemed the essence of urbanity (Jasobs, 1991). These contrasting contexts produced mostly success in Europe and widespread failure for car-free streets in the US (Robertson, 1990; Topp & Pharouh, 1994; Pojani, 2008; Bates, 2013; Sgobbo & Mocia, 2016). -

Approximately 90% of streets that were made car free during the wave of street closures from the late

1950s through the 1970s have been reopened, partially or in full (Judge, 2013). There are notable survivors, in places like Boulder, Colorado, Charlottesville, Virginia, Ithaca, New York, Santa Monica, California, Miami's South Beach, and several others (Robertson, 1995; Pojani, 2008; Pojani, 2010; Bates, 2013). Most of the survivors are anchored by a large university campus nearby or, like Santa Monica, are an important tourist destination. The demise of so many American pedestrian streets has been attributed to many possible causes. Non-transportation reasons cited are the out-migration of employment and population, poor retail mix, badly maintained and/or over-designed streets, and no night life or street festivals and other events (Robertson, 1990; Pojani, 2008; Feehan & Becker, 2011; Bates, 2013). Transportation causes cited are limited automobile parking, poor public transport service and ill-designed automobile circulation on streets near the pedestrian precinct (Pojani, 2008; Feehan & Becker, 2011; Bates, 2013) and limited cross street visibility provided by car circulation on these cross streets (Beyer, 2015). There has been no robust, comprehensive research, however, to examine the determinants of success or failure of pedestrianization in the US context.

Contemporary research and writing on streets has transformed thought on the purpose of the urban street and the nature of the transportation and land use interaction in cities (A. Jacobs, 1993; Newman and Kenworthy, 1999; Gunnarsson, 2007; Congress of the New Urbansim and Institute of Transportation Engineers, 2010; Kott, 2011, National Association of City Transportation Officials, 2013; Schlossberg et al., 2014. Newman & Kenworthy, 2015; Schawartz & Rosen, 2015; Zipori & Cohen, 2015, Kott, 2016b). In this new way of thinking streets are embedded in a wider urban context, calling for "context sensitive" design solutions along a transect or continuum based on urban structure (Congress for the New Urbanism, 2010). Street types are part of an ecosystem that can be arrayed along a Venn diagram showing space allocated to moving vehicles at varying speeds and space allocated to pedestrians (Gunnarsson, 2005). Streets have a key role in urban "placemaking" attracting people and causing them to stay and enjoy the street experience (Thomas, 2016). There is burgeoning research of how urban design can be more effective in creating interest for street users (Ewing and Clemente, 2013) and how to manage parking in commercial districts (Shoup, 2011). The revival of urban and regional public transport and the rise of urban bicycling in the US are other hopeful trends that support renewed interest pedestrian streets and precincts (Newman and Kenworthy, 2015).

This new understanding, along with the re-urbanization of US central cities and the recent success of car-free projects in New York City, has transformed the terms of reference for the study of pedestrian streets in America. Robust research is now needed to illuminate the success and failure factors for these streets.

3. DISCUSSION

The literature on pedestrian streets in the US needs rigorous, comprehensive research on determinants for success or failure in the American context. This American context includes generally lower population and employment densities in central cities, greater automobile dependence in metropolitan areas, fewer historic city centers, larger motor vehicles, and other differentiating factors.

What would this research program look like? As an exercise in heuristics partly based on the methodologies I used in my doctoral dissertation (Kott, 2011), I suggest the following framework. The research methodology would include an inventory of extant pedestrian streets and pedestrian precincts in the US, along with those re-opened in recent years to automobile traffic, and creation of an initial typology of such streets and precincts. A typology is important to ensure that the streets being compared share similar characteristics. This typology might be refined in the subsequent study phases. The research team would conduct a literature review on pedestrian streets, distill potential success and failure factors from this review, and interview a Delphi group to weight the importance of these factors

and perhaps suggest additional ones to guide further research efforts. A Delphi group brings the collective judgement of subject matter experts. The Delphi group would also advise on a subset of streets or precincts to research in depth.
The research team would then conduct geo-spatial analyses. These re likely to be extensive, including population and employment densities, land use mix, location of potential pedestrian generators, property valuation, retail sales, crime and traffic casualty statistics, public transport access distances, and parking facilities on current and former pedestrian streets and their catchment areas. In addition, the research team would analyze street connectivity and collect primary or secondary data on pedestrian volumes; motor vehicle traffic circulation, volumes, and capacities on the nearby open streets; parking demand and turnover by location, time of day and day of the week in the environs of the current or former pedestrianized area; and public transport service frequency, boardings, and alightings in the vicinity. Other quantitative variables might be derived from the literature review and Delphi interviews. The study area could be defined as the street frontage along with a 25 mile (4 kilometer) buffer on each side and end of the street or precinct. This buffer represents the median walk distance in the US (Agrawal & Schimek, 2007).
The qualitative side of the research would include intercept surveys of street users and focus group sessions with street users and merchants. The intercept survey would tap into the judgments of typical shoppers and workers who frequent the street, judgements not obtainable without asking people. The focus groups would add texture to the quantitative findings.
This research may need to be undertaken in phases, depending on resource availability. One strategy would be to limit the first phase to a small sub-set of streets deemed to be the most pertinent by the Delphi group. The research could then be extended to a larger group of streets as additional study resources are acquired. A larger set of streets would ensure a sample size sufficient for application of parametric statistics for quantitative analysis. This research needs to investigate not only pedestrianized streets and districts that have been successful, but also those that have failed. The best opportunities for doing so will be among those for which before and after data are available or can be collected, thus creating “natural experiments” that minimize extraneous intervening variables such as may be present in contrasting stages of the macroeconomic economic cycle.

4. CONCLUSION

There is a revival of interest in pedestrian streets in America. The first wave of interest from the late 1950s to the late 1970s was a disappointment to urban planners and policymakers. This time the conditions are more favorable for success. The pedestrianization of New York’s Time Square may auger a more successful round of pedestrian streets and precincts. This optimism is based on more promising population and employment conditions In US central cities and a more sophisticated understanding of the relationship of streets to land use context. Pedestrian streets seem likely to gain a firmer hold this time around. More rigorous research is needed, however, on the determinants of success and failure for pedestrian streets. Applying research findings will increase the chances for success in selection of pedestrian street projects, even in the more favorable current economic and demographic environment for US central cities. A framework for comprehensive, rigorous investigation, such as the one proposed in this article, is needed to guide urban planning research, policy, and decision making for pedestrian placemaking in US cities.

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