Urban Transformations in Harvard Sq. During Covid-19

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ABSTRACT

The current urban models include only static representations of the city that rely on visual information and are incapable of capturing, representing, and accounting for the changing condition of cities and peoples' lives. The paper proposes a computational model to understanding and representing the temporal changes in the urban experience through sound. A novel system of representation will be constructed and a grammar-based approach will be developed to encode these temporal changes into visual rules. An interactive interface will be developed.

Keywords: Urban Transformations, walking experience, soundscape, COVID-19.

Index Terms: K.6.1 [Management of Computing and Information Systems]: Project and People Management—Life Cycle; K.7.m [The Computing Profession]: Miscellaneous—Ethics

1 INTRODUCTION

Cities are dynamically changing, complex environments, especially during unpredictable events like the global pandemic where parking lots and sidewalks evolve to become restaurants at certain times of the day. Yet, the current urban models and tools used by urban planners and designers include only static representations of the city, that rely solely on visual information such as maps and images. These static representations of the city are incapable of capturing, representing the changing condition of cities and changing urban experience. Thus, urban design and planning decisions remain insensitive to the social and spatial conditions that are in constant flux. As a result, they do not currently consider that the actual forms of urban spaces are ephemeral, temporal, and ambiguous in their nature and that they are best perceived in motion and through time.

The paper forms a first step in the development of a computational model to understanding and representing the temporal changes in the practiced space of the city, and in particular, the walking experience. Towards this direction, sound offers a more dynamic representation of everyday life in the city as it can convey information about the changes in the practices, actions, and events that take place in the space such as a sidewalk being converted into an outdoor sitting area or the lack of people in the streets because of lockdown during a pandemic. Moreover, sound can informs us about the changing rhythms in the cities that reflect the experience of the urban space in different periods of time, in different days, or different times of the day. These temporal changes in the practiced space constitute not only spatial transformations but also sonic transformations that shape the walking experience of a city. This paper argues that the coupling of visual and auditory information is crucial for mapping the changes in the walking experience as it correlates with space and time. How do our planning decisions affect the actual way people experience the cities?

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2 RELATED WORK

The paper introduces a case study

2.1 Methods

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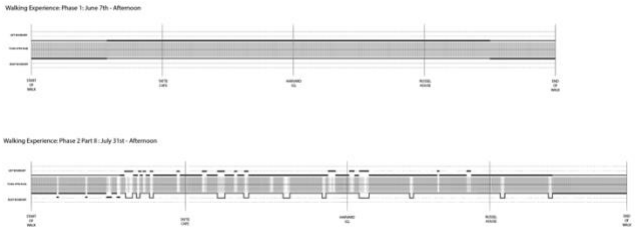

Figure 1: Two boxes. One filled with confetti.

2.2 Results

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3 DISCUSSION

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3.1 Subsection One

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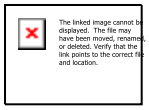

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4 Future work

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