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# Bodies in movement

## *Drawing the city rhythm*

Emika TAKAKI<sup>1</sup>, Pierre FILION<sup>2</sup>

1. PROURB/UFRJ, Federal University of Rio de Janeiro, Brazil  
e.takaki@gmail.com

2. School of Planning/UW, University of Waterloo, Canada  
pfilion@uwaterloo.ca

**Abstract.** *This research focuses on the everyday life body and raises questions about the body and city relationship. Our hypothesis considered the body movement as a sensory tool that defines the city rhythm; and is related to the body experience in the space. Body movement in the city is a human activity and a common denominator in human experience, while moving in an urban space we sensory and we interact in the urban space. This research documented the body movement in five urban areas in Toronto (during April to June of 2011); and analysed how the body experiences the space. The movement analysis was made during a week-day in the period between 11am and 13am.*

**Keywords:** *body movement, city rhythm, urban ambiance*

## Introduction

The relationship between the body and the urban space can be observed own their multiple manifestations of being in the city. Thibaud (2005) argues about the human interaction with the environment and explains that “we can see it, hear it, smell it or touch it”. In this sense, Greiner (2008) indicates that the body-environment interface is possible because the body captures messages from the environment through a perceptual process “that rebuilds the losses to any usual process of transmission” and those informations “are transformed into the body”.

The body experience in the city is constructed from everyday practices where the behaviours, gestures and movements are responsible for the micro-sociability and spatial dynamics. Thus, the body movement is translated as well as walking practices in the space. Wunderlich (2008) explain that walking is a mode of experience place and the city, it is a unconscious way of moving through urban space, “enabling us to sense our bodies and the features of the environment”.

Borden *et al.* (2001) states that the body is practical and fleshy, and experiences the space with the whole body and all senses, it allows more awareness of conflicts and so of a space that is Other. A body of tastes and smells, of left-right and front-back orientations, of hearing and touch; and it resists the tendency of abstract space.

This research focuses on the everyday life body and our goal was to observe the body movement in urban space, and to analyse its performance with the city. Our hypothesis considered the body movement as a sensory tool that defines the city rhythm; and is related to the body experience. We documented the body movement in five urban areas in Toronto and analysed how the body experiences the space. The movement analysis was made during a week-day in the period between 11am and 13am; through footage and systematic and unsystematic observation.

## Methodology

This exploratory research was developed during the period of April to June 2011 in Toronto, Canada; specifically in the sections corresponding to Yonge-Dundas Square, Yonge Street, Nathan Phillips Square, Bay Street and Lower Simcone Street. Through direct observations, footage and in such environments, we observed the body movement and behaviour in order to understand how the body moves and appropriates the urban space.

The body movements and its relationship in urban space were grounded in data from movement observations. We used footage and video to capture how the body moves in urban space. To understand the body movement a set of movement schemas was constructed in Labanotation<sup>1</sup> to analyse and visually represent the movement, spatial trajectories and behaviour in the streets. Care was taken to ensure these representations of moving bodies were generated within the context in which they had meaning and could retain their links to real human behaviour.

First, it was necessary to define the study area and the characteristics of the site through maps and spatial qualities. The study utilized digital video recorders and the video data was analysed using the same observation criteria about the body movement. All footages were made during a week-day between 11am-13am.

## Data

The chosen area is one of the busiest area in downtown Toronto and has approximately a daily traffic of 62,1m of pedestrian, 55,5m of vehicles.<sup>2</sup> The research was developed in the complex area formed by Yonge-Dundas Square, Yonge Street, Nathan Phillips Square, Bay Street and Lower Simcone Street (figure 1). The study area<sup>3</sup> was according to the relative amount of people and to the spatial aspects. It was defined the same distance walk in each case, approximately 30-40 meters.

Data analysis considered specific evaluation measures and was divided in two features classified as: 1) *Spatial Quality*: spatial characteristics and environment aspects and it was observed that the urban morphology and spatial characteristics influenced the body movement and behavior; 2) *Body Movement*: corresponds to the body axis orientation, position and axial forces – changing, speed/body route, axis orientation and spatial forces (attraction and repulsion). Labanotation symbols were used to describe the pathways and to map the trajectories in space.

The selected portion in Yonge Street (figure 1) is part of a business and commercial area, the principal structural aspects are connection and transit. It is a traditional commerce street with low openness and high vitality with high points of attractively. The movement analysis at Yonge Street can be described as straight and with high interaction at some points. According to Labanotation analysis, most people moved relatively slowly and it was observed slight shift body movement, slow and regular speed and head movements (left and right). The external elements states boundaries, facades aspects and points of attractiveness were noticed such as shop windows and entrance of the mall. It was notable, difference in the behavior of men and women, most of the women looked at the shop window, while few men looked. Indeed, observing the movement of people we were able to classify this area as a place of connection, i.e. an area that connects and works as passage and transit.

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1. Labanotation is a system of keyframe that captures positional information for various body parts at distinct points in time. Labanotation was created by Rudolf Laban in 1928; and the system enable to analyse and record the human movement.

2. Yonge-Dundas Square Annual Report. [www.yongedundasquare.ca](http://www.yongedundasquare.ca)

3. It was established the following assumptions to determine the study area: spaces with a variety of information and people; and spaces with different spatial characteristics for better assessment of body movement in each space.



Figure 1. Yonge Street View



Figure 2. Yonge-Dundas Square View

The section at Yonge-Dundas Square (figure 2) is a busy commercial area which performs as an open public space with an intense connection and transit structure (metro line). It is remarkable the spatial characteristics as identity, meeting place, focal point and also landmark (which is considered the Canadian Times Square). It is a place with social and community events, with arts and cultural events. The body movement at Yonge-Dundas Square was diverse; fast and straight movements, but also a circular motion, pauses and stops. According to the Labanotation, it was observed a lot of changes in the movement of some people, for example people coming out of the subway stop to guide themselves and decide which direction to go. The body has reacted differently to the numerous environmental information, illuminated signs, people and information flow. Yonge-Dundas Square is considered a destination point and connection space with various points of attractiveness and areas of transit and passage. There were no differences between the movement of men and women at Yonge-Dundas Square, both had the same pattern of movement and head movement. An interesting behaviour of some people that stayed close to urban furniture and subway exit while waiting for someone.

Nathan Phillips square (figure 3) is an open public space and gathering place (classified as destination point). Located in front of the City Hall it is an important public space and an outstanding destination point for the tourist and the community. Noticeable features as identity, meeting, leisure and landmark; with a high openness and access. Body movement analysis at Nathan Phillips Square were also quite diverse and variable; with straight and curved movements, pauses and stops. The body seems to relax in the midst of environmental issues, despite the high majesty of the City Hall building it was noticed free and circular movements. Through movement analysis we could observe that the rhythm of people at Nathan Phillips Square classified it as a destination point. There were no differences in behavior between men and women. High interaction with the environment; per-

manence points were close to the fount and it was observed intense use of street furniture such as bench and garbage.



Figure 3. Nathan Phillips Square View



Figure 4. Bay Street View

Bay street area (figure 4) is a connection point located in the Financial District, it's a business street bounded by high buildings and offices. The landscape is marked by large architectural-significant landmark buildings. It was observed high access and medium openness, the area performs as a transit place and few points of interaction at the lunch time. Body movements at Bay Street were very restrained and straight, no significant changes, such as stops and pauses. Most of the movements analysed were straight and fast. Despite being located in the Financial District and have a lot of people moving around, it can be described with low interaction in space, straight movements and movement of the head (face down). No difference between men and women's movement. According to the Labanotation, the body seems to react to environmental stimuli, high speed and low interaction with the urban space; how the people moves determined the area as a connection space and transit. It was observed the following physical-spatial characteristics: non-transparent facade, verticality, a few points of attraction and activities.



Figure 5. Lower Simcote Street View

The spatial characteristic of Lower Simcote Street (figure 5) is passage and transit, connecting the Financial District and Harbour area. The study area is limited by a construction site, and rail line and an open public space. Facade aspects were characterized as medium transparency and visibility, low attractively points and medium verticality. It performs as an empty space and the landscape is bounded by mixed uses buildings, public spaces and CN Tower. The body movement in Lower Simcote Street was straight and contained. According to Labanotation analysis, few changes were observed in the movement, such as curves, stops and pauses. Indeed, the movement and the head position ranged from straight and down, and slightly to the left. However, some people looked at the construction. Classified as a connection point, the body seems to react to the harsh environment located near a construction area and to the park, the street has four lanes of car and is close to the train station.

## Implications

This research, from a methodological point of view, brought as contribution an effective approach and easy applicability to map and understand the body movement in urban spaces. Through the use of exploratory observations, footage and Labanotation analysis it was possible to understand and characterize the body movement and the body-city sensory experience. Through a methodology applied to the movement of people in public space, but specifically from the point of view of body experience, placing the body as the main source of analysis for observing urban dynamics. Our concern was the body experience in the public space and how the body rhythm can enhance that experience. It is through the body movement analysis that we understand that the body importance to understand the urban rhythm; rhythms that reflects the relationships and flows of everyday life. The use of Labanotation analysis provided a framework to understand the body movement and we considered it as tool possible to analyse the spatial rhythm. The methodology also permitted to identify the destination points and the connection spaces in the urban fabric, as well to understand the city rhythm and frequency of activities. Body movements tell the length of their walks by the rhythmic spacing of recurring elements. Through the body movement and rhythm it was possible to classify and understand the spatial performance. Indeed, the applied methodology worked as a tool to classify the urban rhythm; characterized by hot spots and spots may be due to the locations of building types (shopping centre, subway station, stores) along the street, and also facades aspects contributes to define points of interaction. Thus, it was observed that some spaces performs as destination points and connection spaces.

## Conclusion

What we learned that the body can bring us many clues and answers about our relationship with the city. The methodology used can help to understand how the movement took place and analyse the urban rhythm. Another important point was the applicability and ease of using the tools (Labanotation, direct observations and spatial analysis).

We considered the body movement as a constitutive aspect of urban dynamic and everyday life rhythm. Thus the research mapped the body movement and its relationship with the urban space to understand and visualize the motion flow. We used dance methodology to apply a direct observation on each body. We assume that the body movement is more than a change position and it's part of the everyday practices in urban space. The study of body movement contributes to the movement analysis in the city. In this perspective, it is a direct observation that highlights the point of view of the body; and stresses the bodily experience as a means to sense the city.

We understand that researches about sociocultural and environmental impact are very important to appreciate the perceptions and expectations of the population for approval of projects of urban intervention. Thus, the proposed study is fundamental for understanding of the interrelationship between body and city, as well as to contribute to identify about design parameters for urban planning, urban design and architecture.

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## Authors

Emika Takaki, architect and urbanist. Doctoral student at Federal University of Rio de Janeiro, PROURB, UFRJ, Brazil. e.takaki@gmail.com

Pierre Filion, PhD in Urban Studies, Professor and Associate Director at School of Planning, University of Waterloo, Canada. pfilion@uwaterloo.ca