

Feld's *Foci* theory and the relations between meeting locations and travel behaviour

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As the use of internet and Smartphone applications grow, our social networks no longer reside within the confines of family ties, neighbours, or school mates. Virtual groups and communication applications allow us to build up both our individual net of social ties, as well as group-based associated connections. While boundaries between friends and colleagues are blurring, so does our daily schedule intertwined between different types of meetings and groups. In such an environment, the role of smart, integrated transport becomes important; however it is not yet fully understood, how the triangle of social network, transport means and intelligent communication and management systems may synchronize into one.

The term “Foci” is defined by Feld (1981) as an entity, either physical or social, which generates joint activities. According to which, group activities are based in relation to a physical or temporal focus, hence individuals are connected via events, locations, or activities. Feld’s theory contradicts a tradition known as “the balance theory”, by which relations are based on psychological components, such as similarity, proximity, and membership. Second theoretical framework is the concept of fragmented activities, as coined by both Alexander et al. (2011) as well as Neutens et Al. (2011). As proposed by the authors, recent developments enable us to treat activities in fragmented manner and divide them into several small subtasks, performed at different times and locations.

This research relates to a growing multidisciplinary field at which leisure travel is analyzed via aspects of communication, travel behavior and social networks. All studies conducted thus far are based upon Wellman's theoretical framework, known as the "Network Individualism", according to which the modern society is in a state of transformation, from a society centered upon local structures, to one rooted within individuals' contacts. By relating both Feld's Foci theory and the concept of fragmented time-frame, it is the purpose of this study to understand the way meetings (between friends, colleagues, or family members) are taking place in the city and their related aspects of spatial arrangement and travel behavior patterns.

Following the two, the study has traced the travel behavior patterns of groups (i.e. three and more) via online questionnaires, as well as their spatial related patterns, analyzed by GIS based program. Rather than complete diaries, the focus is on the fragment of meetings: how they are formed, and in what ways their formation relates to socio-demographic parameters and the city's structure.

A spatial analysis of the city of Tel Aviv was conducted, based on the city's GIS services. It included the city's land-use patterns, street structure, and public transport network. The questionnaires were structured upon three parts, the first portrayed aspects related to the formation of the meeting, its location, and transport mode; the second defined the type and

strength of ties among the participants; and the third depicted the respondent's socio-demographic characteristics. By using a GIS based analysis, the study has integrated the spatial information gained from about 200 questionnaires, with that gathered from the Tel Aviv GIS services.

Two measurements were constructed for regression models: the first is a measurement of the social tie strength amongst the meeting members, and the second an 800 radii walkability measurement around meeting locations. Based on each measurement two multi variant regression models were constructed using the CART method. The first supports findings from current studies which identified the link between travel efforts and the strength of the social tie. According to which travel effort correlates positively with strong ties. The second model relates meeting locations with tie strength - as findings show, higher walkability measures correlates positively with stronger ties.