# Examining the impacts of diverse self-selections on people's life choices: A life-oriented behavioral analysis

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Previous research has shown that walking, cycling and public transport use are significantly higher in compact, mixed-use neighborhoods than in low-density neighborhoods, while car use is significantly lower (e.g., *Ewing and Cervero, 2010; Mokhtarian and Cao, 2008; De Vos, J. and Witlox, F., 2016*). The built environment, however, is not the only important explanatory variable of peoples' travel behavior. Over the past years various studies have confirmed that attitudes are important determinants of residential location choice and travel mode choice (e.g., *Bagley and Mokhtarian, 2002; Van Acker et al., 2011*). A positive stance towards a certain mode of transport will result in a higher use of that mode. These attitudes can also affect mode choice indirectly; individuals with an affinity towards a certain kind of travel will often choose a residential location that enables them to use their preferred travel mode for the most of their trips (*e.g., Cao et al., 2007, De Vos et al., 2012, Schwanen and Mokhtarian, 2005, Handy et al., 2005 and van Wee, 2009*). Since most low-density suburbs and dispersed land use pattern were suitable for car use, car-loving persons will try to self-select themselves in these neighborhoods, while short average distances in urban-type neighborhoods might attract people who prefer to walk or cycle to their destination. Some studies also indicate that people attaching great importance to the proximity of the workplace, shopping and learning facilities, recreational activities and other amenities, try to self-select themselves in compact, mixed-use neighborhoods (*Næss, 2009*). However, it might also be possible that people who like travelling choose to live in an urban neighborhood where most destinations are nearby, may mostly due to leisure and health related liking attitudes; while people who dislike travelling are not opposed living in a more suburban-type neighborhood with longer average distances, may attribute to the attitudes such as money saving preference. Obviously, these differences might be result from varying life related liking attitudes.

It is reasonable to assume that people self-select themselves living in a preferred neighborhood and people that have positive life liking attitudes and residential preferences will contribute to more life activities achievement and will be more satisfied and happy with their life. However, it is not clear whether the life related liking attitudes and residential preferences have the significant effect on one's life choices. In this paper we will examine whether people's life choices (including residential choices and travel behavior) are affected by one's life related liking attitudes, residential preferences or both. In line with such considerations, a life oriented approach (*Zhang, 2014; 2015; 2016*) is introduced here, which argues that people's life choices, captured from various life domains (e.g., residence, neighborhood, health, education and learning, job, family life, leisure and recreation, finance, and travel behavior), are interdependent with each other. And the conceptual framework is shown in Table 1.

For the purposes of this study, Zhang et al. (*2011*) conducted a web-based life choice survey in Japan in January 2014 with the help of an Internet survey company, who had more than 1.4 million registered panels at the time of survey. Respondents were randomly selected from the registered panels by considering the

distributions of age, gender, and residential areas (here, refer to prefectures) across the whole population in Japan. As a result, 815 valid samples were obtained. The survey included very detailed information of individual's different life domains, relevant question items are shown below.
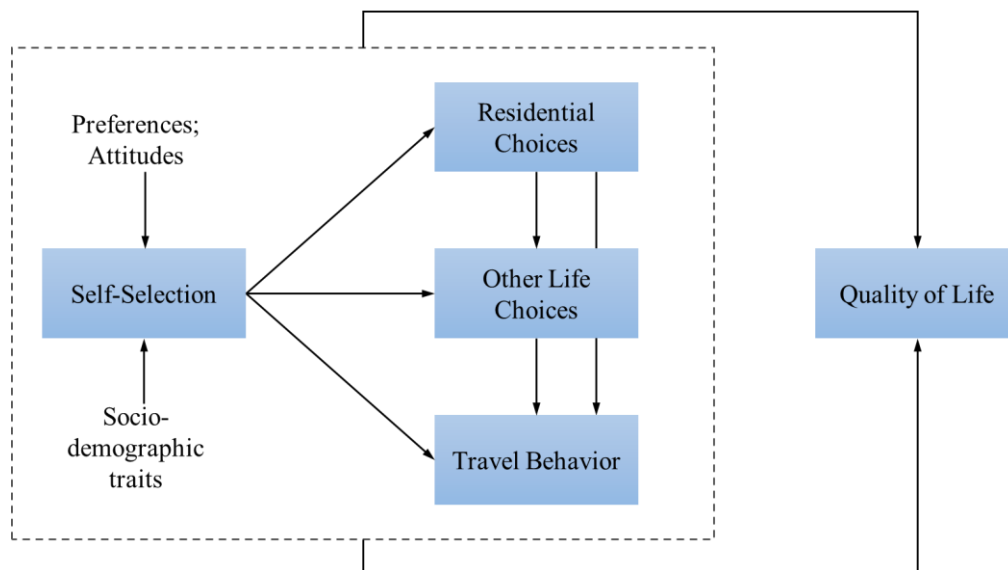


Table 1. Conceptual framework describing possible relationships between self-selection, life choices and quality of life

1)   Residence: location (zip code), duration, price (rental fee or purchase price), types, stories of building, living area, number of rooms, distance to daily facilities, etc.

2)   Finance: income and expenditure.

3)   Health: subjective health condition, experience of accidents and illness, sleeping time, frequency and activity time of different types of physical exercise, and distance to places of physical exercise.

4)   Neighborhood: frequency of neighborhood communication, participation in community activities

5)   Education & learning: academic degree, learning frequency and time, distance and major travel modes to different types of learning facilities

6)   Job: location of workplace, commuting mode, job type, working days and hours per day, start and end time for a normal working day, paid holidays in contract and number of holidays actually taken, working duration (years)

7)   Family life: in-home and out-of-home time use with family members on weekdays and weekends, communication frequency with relatives, care giving to pre-school children, the elderly or the disable family member

8)   Leisure & recreation: discretionary time on weekdays and weekends, use of leisure time at different facilities (activity duration, frequency, distance to place, travel party and major travel mode), tourism (domestic and overseas, frequency, travel party, expenditure), Internet usage (time and frequency)

In order to measure people's residential preferences, we asked respondents to indicate to which extent they agree with the following seventeen statements on a scale from one (totally disagree) to five (totally agree):

- I like to live in the residence with sound education facility.
- I like to live in the residence with open space and park.
- I like to live in the residence with sound sport facility.

- I like to live in the residence with outdoor activity facility special for family life.
- I like to live in the residence with sound neighborhood relationship.
- I like to live in the residence close to workplace.
- I like to live in the residence close to my family members/relatives/friends.
- I like to live in the suburb area.
- I like to live in the residence close to central city.
- I like to live in the residence close to shopping area.
- I like to live in the less money consumption area.
- I like to live in the less energy consumption area.
- I like to live in the residence convenient for housing business.
- I like to live in the walking and cycling promoting neighborhood.
- I like to live in the motorcycling promoting neighborhood.
- I like to live in the driving promoting neighborhood.
- I like to live in the public transit promoting neighborhoods.

In terms of people's life related liking attitudes, we asked respondents to indicate to which extent they like the following seven statements on a scale from one (totally dislike) to five (totally like):

- Do you like your current residence?
- Do you like spending or saving money?
- Do you like doing the sports?
- Do you like the current neighborhood?
- Do you like learning?
- Do you like working?
- Do you like doing the leisure activity?

In the analysis, a SEM model will be employed. It is expected that the life related liking attitudes and residential preferences have the significant effect on one's life choices. And various policy implications could be derived from analysis results.

# Acknowledgement

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