



Contents lists available at ScienceDirect

# Transportation Research Part A

journal homepage: [www.elsevier.com/locate/tra](http://www.elsevier.com/locate/tra)

## Transport-related lifestyle and environmentally-friendly travel mode choices: A multi-level approach



John Thøgersen\*

Aarhus University, Denmark

### A B S T R A C T

This paper introduces a deductive cognitive approach to, and a new instrument for measuring, transport-related lifestyle (TRL) and presents a first application of the instrument for identifying national and cross-national transport-related lifestyle segments based on a survey ( $N = 3216$ ) in 10 European countries. Principal component analysis is used to reduce the TRL instrument's 69 items to 18 dimensions within five lifestyle components. Based on multi-group confirmatory factor analysis, it is found that the instrument possesses metric, but not scalar (measurement) invariance across the 10 countries. Multilevel latent class analysis is used to classify participants to TRL segments and to classify the 10 countries into groups with similar segment structure. The final solution has six TRL segments and two country classes, which are profiled in terms of relevant background characteristics. Finally, a multivariate GLM analysis reveals that three behavioral tendencies of importance for transport-related environmental impacts vary significantly and substantially between lifestyle segments: vehicle ownership, everyday travel-mode choice and environmentally-friendly transport innovativeness. Further, when differences in transport-related lifestyles are controlled, country (cluster) of residence as well as the interaction between lifestyle and country (cluster) of residence also influence these three behavioral tendencies. In conclusion, the usefulness of transport-related lifestyle segmentation as a tool for transport planners and campaigners is discussed.

### 1. Introduction

Transport is one of the three consumption domains that are responsible for the largest share of negative environmental impacts (the other two being food and housing, cf., e.g., Steen-Olsen and Hertwich, 2015). The primary reason is that private cars and aviation have become key elements of a modern, fast-paced, high-carbon lifestyle (Capstick et al., 2015). In this perspective, it seems obvious to study the potential of lifestyle changes (not least transport-related) to drive the necessary transition towards a low-carbon future (e.g., Capstick et al., 2015; Neuvonen et al., 2014).

For example, the choice of vehicle type has tremendous impacts on fuel consumption and emissions per distance driven (Haq and Weiss, 2016) and is generally assumed to reflect or express the person's lifestyle (Choo and Mokhtarian, 2004). Also, everyday travel mode choices (Beirão and Sarsfield Cabral, 2007; Scheiner and Holz-Rau, 2007; Scheiner and Kasper, 2005) and vacation traveling have been found to be strongly related to lifestyle (Dickinson et al., 2010; Lawson et al., 2000) (although some research has found no or a weak relationship between consumers' attention towards sustainability at home and on vacations, see Barr et al., 2010). Even more basic, where people choose to live (Pinjari et al., 2007) and their lifestyles and activities in general generate a demand for

\* Address: Aarhus BSS, Aarhus University, Department of Management, Fuglsangs Allé 4, 8210 Aarhus V, Denmark.  
E-mail address: [jbt@mgmt.au.dk](mailto:jbt@mgmt.au.dk).

transport (Bin and Dowlatabadi, 2005). For example, Bagley and Mokhtarian (2002) found that attitudinal and lifestyle variables had a bigger impact on travel demand in the San Francisco Bay Area (in the early 1990s) than sociodemographic variables and neighborhood type.

In both sociology and marketing, it is increasingly acknowledged that people may not have just one, but perhaps several interconnected lifestyles and that rather than one overall lifestyle it is more meaningful to speak about domain-specific lifestyles (van Raaij and Verhallen, 1994). Since a person's lifestyle is not necessarily consistent across domains, descriptions and measures of lifestyles should be restricted to specific life domains. Consistent with this reasoning, there have been attempts to develop more targeted lifestyle research for transport planning and campaigns, defining domain-specific, transport-related lifestyles and identifying such lifestyles using a survey-based approach (e.g., Krizek and Waddell, 2002; Lanzendorf, 2002; Lee and Sparks, 2007; Lin et al., 2009). For example, based on data collected in four neighborhoods of Cologne (Germany), Lanzendorf (2002) identified different "mobility styles" and found that they explain the participation in traveling for different leisure purposes and the distances traveled by car.

However, this early transport-related lifestyle research had important weaknesses, including a weak theoretical foundation with no or only a vague definition of lifestyle (or other key constructs). As will be argued thoroughly below, this is something transport-related lifestyle research has in common with most other lifestyle research (cf. Grunert, 1993). At a more applied level, a narrow geographical focus (often a city or selected neighborhoods, in some studies up to a single country) is an added limitation of most transport-related lifestyle research, which has implications for the practical relevance of the specific results as well as the ability to generalize.

This paper contributes to lifestyle research in the transport field by proposing a new, theory-based instrument for measuring transport-related lifestyle (TRL) and using it to identify national and cross-national TRL segments in ten European countries. The identified lifestyle segments are profiled and the practical relevance of the approach is explored by investigating how TRL is related to vehicle ownership, everyday travel-mode choices and to the travelers' openness to new environment-friendly transport opportunities (i.e., pro-environmental transport innovativeness). It is argued that the proposed TRL segmentation is useful for a wide range of campaigns and campaigners targeting the transport and traveling markets.

### 1.1. Lifestyle research

Lifestyle research is not limited to a specific discipline (Jansen, 2011), but has especially evolved within sociology and marketing (Holt, 1997). Lifestyle research in marketing is primarily used for market segmentation (Plummer, 1974; Vyncke, 2002). With the development of the affluent consumer society, socio-demographic characteristics became less and less predictive of consumer behavior and "psychographic" (Demby, 1974) or lifestyle segmentation was proposed as a more effective way to divide consumers into relatively homogeneous groups. These are survey-based approaches, where lifestyle groups or segments are identified by first using a data reduction technique, such as factor analysis, multi-dimensional scaling or correspondence analysis, and then a cluster analysis based on the dimensions found in the data. These approaches, like the Attitudes, Interests and Opinions (AIO) tool, where consumers responded to up to 300 survey statements (Wells and Tigert, 1971), have especially been criticized for their weak theoretical foundation and the segments identified by the instruments being unstable (Grunert, 1993).

The lifestyle concept also has a long history in sociology (see Lorenzen, 2012, for a recent review). Weber (2002/1921) used the term *Stilisierung des Lebens* and argued that social groups differ in terms of lifestyle. Bourdieu (1984) views lifestyle as the "practical metaphor" of the *habitus*. Giddens (1991) defines lifestyles as routines that include the presentation of self, consumption, interaction, and setting. Within the emerging practice approach in sociology, lifestyles are viewed as relatively consistent and coherent bundles of social practices (Axsen and Kurani, 2012; Spaargaren and Vliet, 2000). They are constrained by context (e.g., financial limitations, health, and family commitments), but not determined by it. An important function of lifestyles is that they "assist in organizing self-identity and self-expression" (Lorenzen, 2012, p. 97). According to Lorenzen (2012, p. 103), lifestyles "incorporate materials, practices, and themes connected by a life narrative that pulls these together with a coherent result". Hence, lifestyle change not only requires the changing of practices, but also the story people tell about those practices, "their narrative of self-identity." Sociological lifestyle research can both be based on quantitative methods, including factor and cluster analysis on survey data (e.g., Axsen et al., 2012), and on qualitative methods (e.g., Evans and Abrahamse, 2009; Lorenzen, 2012).

As mentioned earlier, a person's lifestyle is not necessarily consistent across domains and examples of studies of transport-related lifestyle have been cited. However, the domain specific lifestyle that has attracted the most research is food-related lifestyles (e.g., Grunert, 1993; Grunert et al., 2001; Thøgersen, 2017b). There are few empirical studies of domain-specific lifestyles outside the food and transport domains (e.g., Brengman et al., 2005; Thøgersen, 2017a), but a more general theorizing about domain-specific lifestyles has evolved, which makes it likely that meaningful domain-specific lifestyles can be identified in many important life domains.

### 1.2. Lifestyles in the head: Operationalizing domain-specific lifestyles

Empirical lifestyle research has been critiqued for being mostly inductive and having a weak conceptual foundation (Anderson and Golden, 1984; Kahle and Valette-Florence, 2012; Lastovicka, 1982). On this background, Grunert's (1993) deductive cognitive approach to lifestyle research was a major breakthrough in theorizing about lifestyles. It is a core characteristic of this approach that a lifestyle is conceived as a mental construct, which is different from, but a predictor of behavior.

Inspired by psychological means-end chain theory (Gutman, 1982), Grunert (1993) views domain-specific lifestyles as part of a hierarchical, cognitive-behavioral system, functioning as an organizing and guiding construct in a person's life. Lifestyles are means to achieve personal superordinate goals or values (e.g., hedonism, tradition, self-direction, cf. Rokeach, 1973; Schwartz, 1994). In

Download English Version:

<https://daneshyari.com/en/article/6780581>

Download Persian Version:

<https://daneshyari.com/article/6780581>

[Daneshyari.com](https://daneshyari.com)