

# Proposed methodological framework for empirical testing the product-based typology for nature-based tourism

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## *Introduction and research focus*

Following a deductive approach Arnegger et al. (2010) propose a conceptual framework for a product-based typology for nature-based tourism. Their framework is built on two dimensions, one reflecting the demand side and the other the supply side of tourism products. Arnegger et al. (2010) developed the typology as a conceptual framework for segmentation approaches of nature-based tourism products that on the one hand reflect the complex structure and diverse forms and types of nature-based tourism and on the other hand rely on a manageable number of indicators as a segmentation base of the market and for the socioeconomic monitoring of visitor segments in protected areas.

The aim of the present study is to adapt the product-based framework to tourism in protected areas and to develop and to empirically test an appropriate operationalization, which has –to the authors’ knowledge – not been done so far. Emphasis is given to the demand side dimension, namely “nature as point of attraction”.

## *Conceptual framework*

Arnegger et al.’s (2010) conceptual framework is based on two dimensions: a) travel motivations and activities, namely “nature as point of attraction” and b) service arrangement of the products, namely “individuality”. The first dimension consists of four discrete categories of travel motivations and activities: “nature protection”, “nature experience”, “sports and adventure” and “hedonist“. The dimension “individuality” consists of another four discrete categories, namely “independent”, “à la carte”, “customized” and “fully standardized”. Hence within this two-dimensional framework there are 16 ideal types of tourism products. This framework was developed for nature-based tourism in general. Within the present study the framework will be adapted to tourism in national parks.

The conceptual framework of Arnegger et al. (2010) lacks a clear definition of the tourism product and its production process as well as a discussion of the travel decision process and tourist motivations, which is necessary for operationalization. According to Smith (1994: 583f), from a demand side view, a tourism product is an (more or less) individual bundle of activities and service arrangements resulting in a “tourist experience”, the final output of a tourism product (see figure 1). From a supply side view the tourism product is a single product (like a guided tour) or several intermediate outputs (services), like transport services, cultural performances, accommodation, etc. combined in a tourism product or package offered by tourism companies.

Fodness (1994: 558) describes the travel decision process with a functional approach: Tourists are motivated by certain needs for travel and satisfy their needs by certain activities during their journey. The outcomes are travel experiences and certain benefits or satisfied needs (Fodness 1994). The pattern of motives/benefits and activities is also reflected in tourism typologies. Tourism typologies can be subdivided into cognitive-normative and interactional typologies (Hvenegaard 2002). The first named typologies segment tourist by motivations or benefits and the latter by

activities. The product-based typology combines central aspects of the tourism production process and the travel decision process (see figure 1).

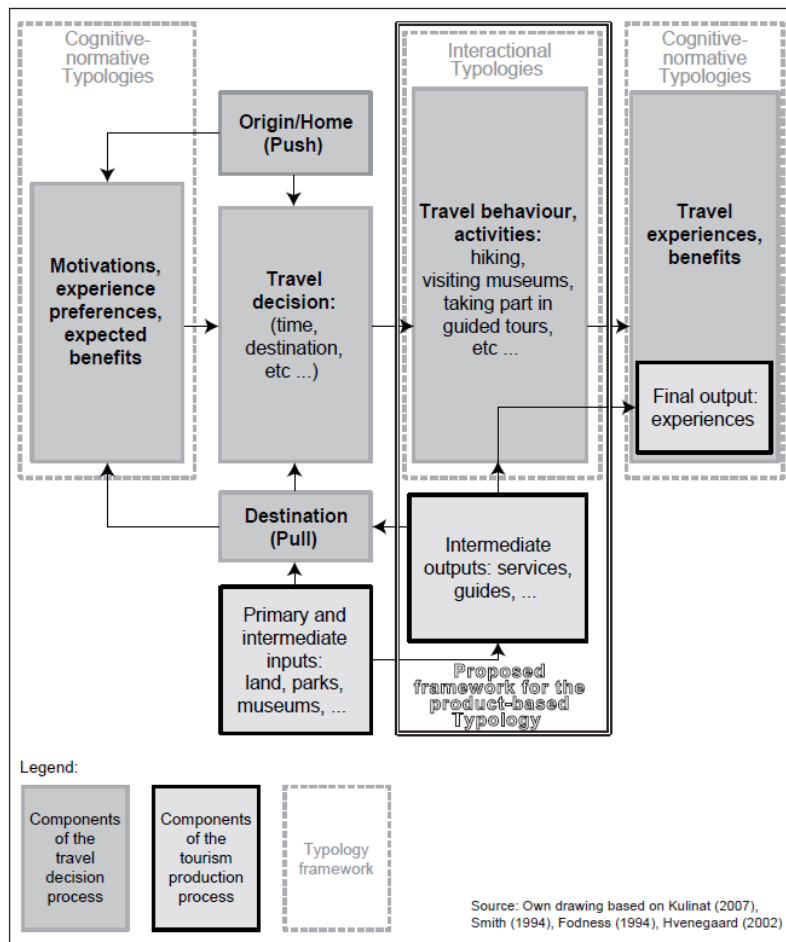


Figure 1: Tourism production and the travel decision process

### Methodological framework

Within this section a methodological framework for differentiating tourism products from a demand side view will be presented. Following the approach illustrated in figure 1, the dimension “nature as point of attraction” can be measured via motives/benefits or activities. Activities are used for segmentation amongst others by Hvenegaard (2002) and Mehmetoglu (2007). Hvenegaard (2002: 15) prefers activity-based segmentation approaches because they produce more distinct patterns than motivation-based approaches. Mehmetoglu (2007: 658) states that activity-based segmentations are better suited for the tourism industry. The reasons for this are that activities are highly related to the tourist’s environmental and economic impacts, i.e. caused by their expenditure. As Arnegger et al. (2010) claim that the product-based typology should be based on rigid criteria and be used in combination with socioeconomic monitoring, which includes an impact assessment of protected area tourism, an activity-based segmentation seems more appropriate for this research context.

To define products or activity segments from a demand side perspective, a factor-cluster segmentation approach is applied which is widely used in nature-based tourism segmentation studies. To describe the interest in nature of the different activity segments a Nature-Tourism

Interest Scale (NIS) was developed based on Juric et al.'s (2002) Ecotourism Interest Scale. The NIS is constructed via a principal component analysis (PCA) and consists of nature-oriented activity and expected benefit items. Hence it consists of items from both sides of the functional dimension of the travel decision process outlined by Fodness (1994): i.e. "to learn about nature", "watching wildlife" or "seeing wilderness and undisturbed nature". These items are measured on a five-point importance scale.

In order to test the developed operationalization for the dimension "nature as point of attraction", a visitor survey was carried out in Berchtesgaden National Park (Germany) in autumn 2013. A total of 175 questionnaires were collected with information about travel activities, motives and service arrangements.

### *Preliminary analysis and discussion*

A PCA of travel activities revealed four factors. To identify groups of similar trip activities, hierarchical clustering was employed (Ward's method). Using Mojena's test statistics, a five cluster solution was selected:

- The first cluster represents respondents who are overproportionally participating in activities with a strong focus on nature as excursions for environmental education ("special nature experience cluster").
- The second cluster is characterized by tourists whose activity pattern is dominated by activities with a general focus on nature, like visiting natural attractions ("general nature experience cluster").
- More physically challenging activities such as trekking or mountain biking are preferred by vacationers in the third cluster ("sports activity cluster").
- The fourth cluster reveals patterns of the hedonist category, but with a rather high interest in nature at the same time ("high nature interest hedonist cluster").
- The remaining cluster is characterized by very low activity rates in general ("low activity (hedonist) cluster").

The NIS shows significant differences between the five clusters: the cluster representing the segment with a strong nature focus scoring highest and the low activity hedonist segment scoring lowest, although the categories in between are less distinct from another.

On the whole three clusters can be matched with the first three categories of the typology. However the first empirical cluster identified in this analysis stands for "special nature experience" rather than "nature protection". As mentioned above, the two clusters revealing patterns of the hedonist category also show some deviations from the ideal type framework. Further analyses have to reveal if these deviations imply modifications of the ideal type categories.

### *References*

Arnegger, J.; Woltering, M.; Job, H. (2010): Toward a product-based typology for nature-based tourism: a conceptual framework. In: *Journal of Sustainable Tourism* 18 (7), pp. 915–928.

Fodness, Dale (1994): Measuring Tourist Motivation. In *Annals of Tourism Research* 21 (3), pp. 555–581.

Hvenegaard, G. T. (2002): Using Tourist Typologies for Ecotourism Research. In: *Journal of Ecotourism* 1 (1), pp. 7–18.

Juric, B.; Cornwell, T. B.; Mather, D. (2002): Exploring the Usefulness of an Ecotourism Interest Scale. In *Journal of Travel Research* 40 (3), pp. 259–269.

Mehmetoglu, M. (2007): Typologising nature-based tourists by activity—Theoretical and practical implications. In: *Tourism Management* 28 (3), pp. 651–660.

Smith, S. L. J. (1994): The Tourism Product. In: *Annals of Tourism Research* 21 (3), pp. 582–595.