

2011

Tracking tourists: Mobility, experiences and the supply-demand gap in a Swedish mountain resort

Svensson, B.

Svensson, B., Pettersson, R. and Zakrisson, I. (2011) 'Tracking tourists: Mobility, experiences and the supply-demand gap in a Swedish mountain resort', *Journal of Tourism Consumption and Practice*, 3(2), p. 1-19

<http://hdl.handle.net/10026.1/11576>

Journal of Tourism Consumption and Practice
University of Plymouth

All content in PEARL is protected by copyright law. Author manuscripts are made available in accordance with publisher policies. Please cite only the published version using the details provided on the item record or document. In the absence of an open licence (e.g. Creative Commons), permissions for further reuse of content should be sought from the publisher or author.

Tracking tourists: Mobility, experiences and the supply-demand gap in a Swedish mountain resort

Bo Svensson, Robert Pettersson and Ingrid Zakrisson

Abstract

This study focuses on method development in the areas of visitor and experience tracking. It is about understanding experiences in a time-spatial framework made up by visits to a particular destination. These issues were identified as central for destination stakeholders in their attempts at meeting or exceeding visitor expectations at their destination. Development of methods here thus aims at supporting producers in generating such knowledge. The approach that emerged was to track and measure tourism experiences with the help of Global Positioning System (GPS) technology, follow-up surveys and in-depth interviews. The empirical findings are from a case study of the Swedish mountain resort Åre during the summer of 2008. Results in general partly confirmed what key destination stakeholders intuitively thought of different aspects of the destination, but also brought out new knowledge which seems to have implications for the preparations for coming seasons. These include the realization of the destination's unique qualities for "the comfort-seeking nature based tourist" and insights about visitor movements in time and space. On the basis of the latter, three new tourist typologies emerged as potential target groups; the excursion, activity, and village families.

Key words: Visitor tracking, Experience tracking, Global Positioning System (GPS), mountain resort, Åre.

Introduction

Experiences are often identified as a driving force behind travelling and the attention to experiences as a product has increased significantly, as there has been a growing recognition of the fact that experiences can be created and sold, and that this can make a big difference to revenue in the tourism (and other) industries (Pine and Gilmore, 1999). Experiences are usually recognized as something people pay for and something that has a high priority in people's consumption and this has raised the demand for knowledge about experiences and their qualities among businesses and other stakeholders in tourism. Also among researchers, not least in the tourism field, a growing interest in the different aspects of experiences has been obvious in later years (cf. Mossberg, 2003; O'Dell, 2002; Oh *et al.*, 2007; Uriely, 2004).

Studies do exist on tourists' movements and travel patterns (e.g. Lau and McKercher 2007; Pettersson and Getz 2009; Shoval and Isaacson 2006; Shoval and Isaacson 2007a; Shoval and Isaacson 2007b; Zillinger 2007). Furthermore, there are a number of studies of experiences, both in terms of perceptions, emotions, preferences, values, and attitudes (e.g., Bullock and Lawson, 2008; Hull *et al.*, 1996; Knotek *et al.*, 2008; Kyle *et al.*, 2004; Tanner *et al.*, 2008), in relation to visits to various kinds of destinations, and also within a certain time frame. This leaves a gap of knowledge when it comes to connection of mobility patterns and subjective experiences, which is a critical issue for destination planning and development as due to methodological insufficiencies, studies on time-spatial aspects of tourism experiences have up to now been difficult to accomplish.

Accordingly, the purpose of this article is to develop methods that place the visitor experience within a wider time-spatial frame for a better understanding of how the full visiting experience can be improved, thus narrowing potential supply-demand gaps in the destination. Our approach is to track visitor movements and experiences by use of GPS (Global Positioning System) devices and to tie this information to more in-depth knowledge on visitor experiences.

The need for more in depth knowledge about visitor movements, how much time they spent in different areas, and what was the strong and the weak spots at the destination was expressed by key actors in the Swedish mountain resort of Åre. In that way, this article is the result of close interaction between business and researchers and illustrates how the interests of the two may coincide when method development is linked to product development, thereby challenging the common notion that research play a very limited or non-existent role in tourism innovation processes (cf. Hjalager, 2002; Sundbo *et al.*, 2007). Taken to the destination level, some attention has been devoted to learning processes and innovative performance (Mattsson, *et al.*, 2005; Nordin and Svensson, 2007; Schianetz, *et al.*, 2007), but without further consideration of research input to such processes. From this perspective this article can also be seen as a contribution to the need for more research input into tourism and service innovation processes, as recently pointed out by Djellal (*et al.*), (2003); Hjalager, (2010); Kristensson (*et al.*), (2004); Shaw and Williams, (2009); Vargo (*et al.*), (2008).

The following section presents our perspective on experiences and how we arrived at the suggested approach, this is followed by a methodological section which briefly presents our

case before going into details on how data was collected. Finally empirical findings are presented in a concluding section.

The customer experience as a source of knowledge

As has been suggested, methodological development in visitor and experience tracking could be a way of helping tourism stakeholders to identify and narrow supply-demand gaps concerning services and activities, which is a longstanding dilemma to many destinations. For example, research from national parks in the United States over several years indicate that visitor-based standards of quality are generally unrelated to the actual provided conditions (Laven *et al.*, 2005). Our assumption is that tourism development is often taking place with too much of a supply perspective, where producers considers their assets, pair them with the resources available and their own ideas on what might sell, and thereafter swing into action. This might turn into success in some cases, but it is just as likely to fail (Getz *et al.*, 2004; Murphy and Murphy, 2004). More commonly it can be assumed that the outcome is somewhere in between the extremes and as a consequence most destinations fall short of their potential. This calls for a better understanding of customers, and as suggested here, their movement patterns and experiences.

Although experiences may be regarded as something that can be planned, designed, and sold, it is important to remember that they actually take place within people's minds (Larsen, 2007). They are subjective phenomena stemming from a combination of several sources, of which expectation, actual experience and recollection are the most important ones (Jennings 2006; Larsen, 2007). The environment can be over-stimulating as well as under-stimulating (Bell *et al.* 1996). Both forms can have beneficial as well as detrimental effects. People thus tend to seek an optimal level of stimulation, in order to cope properly with their situation. Furthermore, this level may differ between everyday life and other situations, such as vacations. Vacation environments usually provide experiences that are extended in both time and space, and that support the individuals' intentions (Kaplan and Kaplan, 1989). Tourist experiences thus involve complex interactions between the individual and the environment.

The preference for certain environments may involve both understanding and exploration. Understanding represents the ability to make sense of an environment. Exploration, on the other hand, involves a certain amount of complexity and unpredictability. The perception of what is experienced as positive by one person, when it comes to making sense of an

environment, may be perceived as negative by another. Thus, instead of experiencing a place as enjoyable and comfortable, it may be perceived as predictive, boring or under-stimulating. Accordingly, individuals form their unique optimal levels of balance between understanding and exploration (Kaplan and Kaplan 1989; Bell *et al.* 1996). As a consequence, some people prefer to move about, vividly exploring their surroundings, while others happily stay in more restricted areas, trying to make sense of the situation. Thus individual differences in people's movement patterns may be expected, and that these also are related to differences in expectations, as well as of the character of their subjective experiences.

In this study we try to better understand the visitors by mapping their movements and experiences. As stated above, there is a lack of studies about how people move, and what they at the same time subjectively experience. Using GPS technology, in combination with other data sources, makes it possible to more fully understand the complexity of visitors' experiences. An important feature of this study was thus to explore in what ways information from various sources, such as GPS registrations of movements, questionnaires and interviews could be integrated.

Data collection in the Åre mountain resort

Åre is a small but thriving town situated in the mountain area in the middle of Scandinavia (see Figure 1). At present, the municipality is the home to 10,000 inhabitants and about 2,000 companies with most of the business life focused on tourism and tourism-related services. During the last decade vast amounts of money have been invested in Åre, not least in real estate.

The four main stakeholders in Åre are i) the Local Authority , ii) *Åreföretagarna* - the local business association (DMO), iii) *SkiStar AB* - a listed company that owns the lifts and various related facilities, and iv) *Holiday Club AB* with its congress hotel with water park and timeshare apartments. In this study dialogue was undertaken with all these stakeholders and especially *SkiStar* and *Holiday Club*. They stressed that the destination's development focus, besides the traditional winter season, also includes the summer. The current vision states the aim of making Åre '...the most attractive European alpine all-year destination'by2020, Having only limited knowledge about summer visitors and their preferences a summer oriented study was asked for.

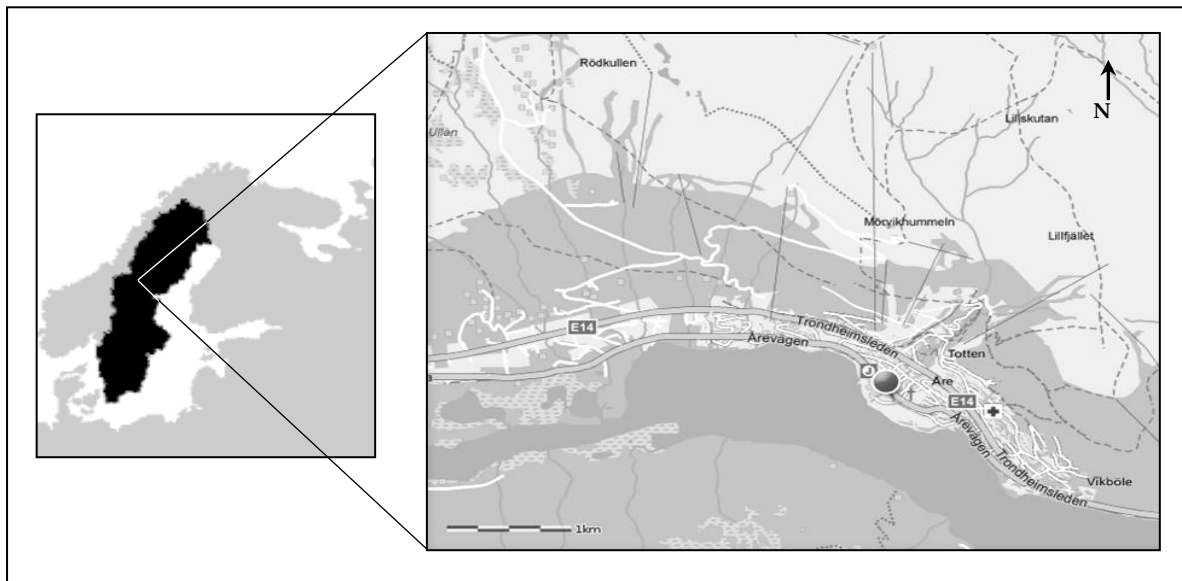


Figure 1. The tourism destination of Åre in Sweden.

The grey dot to the right marks the hotel where visitors were recruited and the thin, straight grey lines are ski lifts and cableways.

The given methodological component of the study was the use of GPS technology for generating knowledge about visitor movements and experience mapping. Visitors were equipped with GPS devices during a day spent at the destination to enable their movements to be tracked throughout the day, which enabled us to directly respond to a demand for such knowledge among the main business stakeholders in the destination. Even though different types of surveys and other data gathering is part of the stakeholders' ordinary activities, they considered knowledge on the movements and time spent in different parts of the destination was something more or less unknown to them. And this was considered a weakness in their knowledge base and something that could be potentially important in the making of future plans and investments.

The GPS devices used in the study was a pocket-sized device (*Ebontek DL-3200BT Pro*) which logs longitude, latitude, altitude, time, distance and speed. The devices were set up so that they charted the position every ten metres. This setting was favoured over a time-dependent one which would chart the position for example every ten seconds, because it prevented a huge number of similar position points during inactivity. The participants' movements were analyzed both quantitatively and qualitatively. From the GPS information the *total travelling distance* (in metres), *longitude distance* and *latitude distance* (measures

between the highest and lowest latitude and longitude registration, respectively, in metres), *altitude distance* (measures between the highest and the lowest altitude registration, in metres) were computed. The z-transformed distance measures were then subjected to a hierarchical cluster analysis (Ward's method, Aldenderfer and Blashfield, 1984).

A solution was chosen with as few clusters as possible, but at the same time with the smallest increase in the disparity coefficient (squared Euclidean distances) as possible. This procedure ended up in three distinct clusters, or visitor segments. In order to better understand the nature of the pattern evidenced for each cluster, *movement pattern maps* were produced through the use of Google Maps, for each participant. These maps were categorized into groups according to their similarities and differences, first independently of the cluster analysis results, and then compared to the quantitatively derived clusters. The two approaches resulted in identical groups.

Besides storing coordinates for every ten metres, the GPS devices allowed the respondents to state their most positive and negative experiences by pressing a button. Also this feature of the given method responded to a need among stakeholders, namely to identify strong and weak spots in the destination, or even strong and weak moments in a visitor's day. Despite the usefulness of this method another need came up, namely the need for more in-depth knowledge about the visitors' experiences. The obvious conclusion then was that the visitor tracking should be complemented with follow-up studies. The design of these were developed by the research team and arrived at a set up where respondents when handing in their devices filled out a quick survey while waiting for the unloading of devices.

The survey included socio-demographic questions asking for sex, age, postcode and travel companions. There were also some supplementary questions about the experiences. Here, the positive and negative experiences were ranked on a seven-point Likert scales as *risky – safe*, *passive – active*, *non-instructive – instructive*, and *artificial – genuine*. How they felt during these experiences were also rated; *irritated – pleased*, *discontent – content*, *bored – excited*, *sad – cheerful*, *anxious – calm*, *afraid – unafraid*, *helpless – competent*, and *unhappy – happy*. The participants were finally asked about their strongest memory of the day and to what extent the GPS devices had influenced their behaviour.

While the survey was undertaken the GPS data with the individual routes were transferred to a computer and plotted on a map. When this was done the researcher could show the

respondent's track of movements and registered experiences during the day on a wide screen and a semi-structured interview was then undertaken. This was done by relating the GPS track to the marked experiences. The interview also included more general perceptions about the stay in the destination and also some questions relating to the vision and strategy of the destination. The interviews took about 40-60 minutes each, and were recorded.

Respondents were chosen due to the Åre stakeholders' expressed desire to learn more about one of their main target groups, namely families with children aged 10-15 years, why these families are the ones represented in the study. Also the data collecting period, mid-July 2008, were selected together with the stakeholders. The number of respondents was limited by the number of available GPS devices and altogether the study includes 54 respondents from 15 different families staying at one of Åre's main hotels: Holiday Club. During morning hours, in the hotel lobby, all passing visitors in the target group were asked to participate in the study. The response rate was good with approximately eight out of ten families accepting the request.

Evaluation of the GPS methodology

The GPS technique turned out to work correctly, leaving no spaces without satellite reception. However, it did happen that the GPS device reported an obviously incorrectly located point. Such errors appear in the data files extracted as "no fix", and were easily removed afterwards, and before any analyses were carried out. Using the GPS devices in combination with other methods like questionnaires has shown to be a successful approach in other studies, e.g. by Pettersson and Zillinger (2011), where it was shown that a combination of methods, including the GPS technique, is suitable for answering questions regarding both mobility and personal experience.

Studying people's precise movements with this kind of technique can be ethically disputable. In contrast to a method where the participants record their routes and activities themselves, *for example* like e.g. in travel diaries, the individuals cannot choose to exclude information on the places they visit or the routes they take. Hence, it was of utmost importance to inform the participants about their right to terminate their involvement in the study at any time. Furthermore, they were told that it was impossible to identify individual persons in the study. Participation was

completely optional, and the participants were informed that they could choose to opt out whenever they wanted to just by turning off the device, which no one did.

Empirical findings

As stated in the beginning, the usefulness of the approach is closely linked to the data it generates, and the usefulness of those findings to destination stakeholders. What information did then the GPS tracking of movement patterns and experience signaling bring in? Families showed a great variety in patterns and level of activity. Despite this rich variety, a few categories seemed to emerge. From the analysis and comparison, three dominating patterns or segments emerged which could be classified into the *activity family* (n = 20), the *village family* (n = 23), and the *excursion family* (n = 11).

A typical movement pattern of a member of the activity family is shown in Figure 2. The activity family participated in arranged activities, such as downhill biking or the Zipline (an aerial wire slide). These are mainly sporty or adventurous activities, and activity families had often travelled with Åre as their main destination during their trip. They were there to try out the activities on offer, or with a special interest in one of the activities, in particular downhill biking. Although whole families were categorized into this group, the family members did not necessarily spend their day together: the children most likely went downhill biking, while the

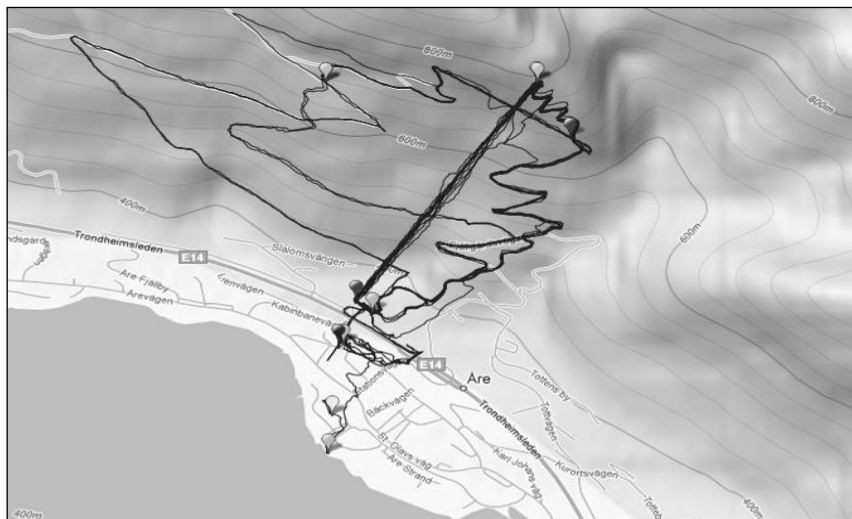


Figure 2. One day of downhill biking - a typical pattern of an *activity family*. Light and dark grey dots mark the visitors' positive and negative experiences (indicated by pressing the button on the GPS device).

parents spent their day hiking up and/or down the mountain. All in all, their activities centred on the main attraction of the destination; Mount Åreskutan.

The village family (see Figure 3) moved less and was somehow less active or at least less physically active during the day. They covered a smaller distance, usually walking, and passed the same street of the small village center several times. They also spent a lot of time in and near the hotel, enjoying the lakeside location with both indoor and outdoor swimming, and some other less demanding activities. As for the previously mentioned group, although whole families were categorized into this group, the family members did not necessarily spend the whole day together, but also moved about individually.

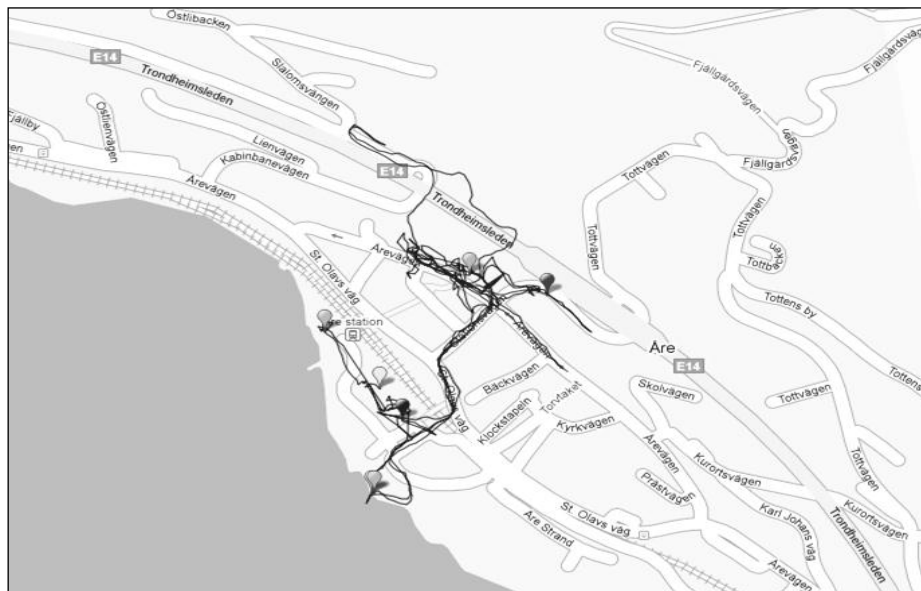


Figure 3. One day with the *village family*.

Light and dark grey dots mark the visitors' positive and negative experiences

Finally, the excursion family (see Figure 4) took longer trips in the surrounding area, usually by car. They visited waterfalls, looked at monuments or more historical points of interest, or visited other villages in the area. It was to a great extent about discovering what was in the neighborhood and their activities were not primarily arranged by the tourism business in the area, but created by themselves and without any particular fees tied to them. The participants in this groups consisted of whole families who spent their day together. This was mainly due to logistical reasons, the excursions without exception required the use of a car.

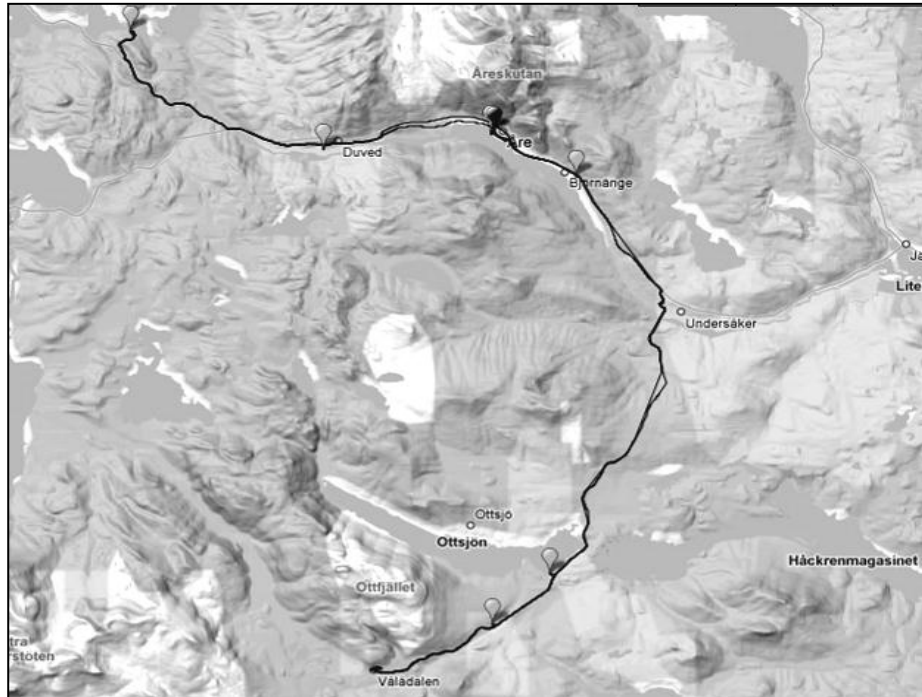


Figure 4: Following the *excursion family*.

Light and dark grey dots mark the visitors' positive and negative experiences

Even if the majority of visitors pointed out the great variety of activities, and mentioned this as a value in itself, relatively few actually participated. Two thirds (63 %) of their time was spent in the village where they often just strolled around, visited a café or went swimming. As it relies on occasional observations, this categorization might be better seen as a set of hypotheses about family patterns during their visit to the mountain resort. These hypotheses were not generated by the GPS tracking only, but also from complementary data gathered from surveys and individual interviews. Data from these studies will be presented in the following sections.

The participants came mainly from two regions; 1) the central parts of Sweden, the Swedish capital Stockholm and its surroundings (n = 26), and 2) the northern parts of Sweden and the neighbouring parts of Norway (n = 28). There were only minor differences between the groups regarding other demographics. The 'activity families' most often originated in the central parts of Sweden, while the 'excursion group' were most often from northern Sweden and Norway. The 'activity pattern' people were more often men, and younger people.

Perceived experiences

From the interviews it was possible to identify the value of the positive and negative experiences. What the respondents regarded as their most positive and negative experiences was categorized into five categories; “nature and places”, “supply of activities”, “infrastructure related to the supply of activities”, “infrastructure related to service”, and “personal and social”.

In order to investigate if there were systematic differences between the “family types” regarding their experiences as reported in the questionnaire and by pressing the button on the GPS device, this information was subjected to significance tests. There were differences between the family types regarding how many times they pressed the button on the GPS device, what they considered as their peak positive and negative experiences, how they perceived their most positive experience on three scales (risky – safe, passive – active, non-instructive – instructive), how they perceived their most negative experience on one scale (artificial – genuine), and how unhappy-happy they felt in relation to the most negative experience.

The activity family pressed the button on their GPS devices more often than the other groups (mean number of times = 10.95). The most frequent kind of positive experience was connected to the supply of activities, for example “*cycled fast as hell*” or “*reached the summit of the mountain*”. They did not consider these experiences as particularly risky, but active and instructive (see Figure 5). As the other family types they considered these experiences as being genuine. The most frequent kind of negative experiences mentioned was related to service, for example “*the breakfast closed early*”, or “*poor service at the restaurant*”. They characterized the negative experiences as safe, passive, and non-instructive (see Figure 6). In comparison to the other families they regarded the negative experiences to be less genuine.

The excursion family pressed the button on their GPS device fewer times than the activity group (mean number = 5.69). Their most positive experiences were related to nature and places, for example “*saw the sun over the mountain*”, or “*fantastic landscape*”. Their ratings of their most positive experience fell in between the ratings of the other two groups (see Figure 5). Their most negative experiences were related to both nature and places (“*very much mosquitoes and gnats*”, “*total fog, saw nothing*”) and infrastructure related to the supply of activities (“*the queue to the cabin car*”, “*went to some Sami village*”). They did not

differ from the other families regarding how safe, active, or instructive the negative experiences were perceived (see Figure 6). However, they considered them still as genuine especially compared to the activity family type. Furthermore, this family type felt unhappier, in relation to their most negative experiences, than the other two groups.

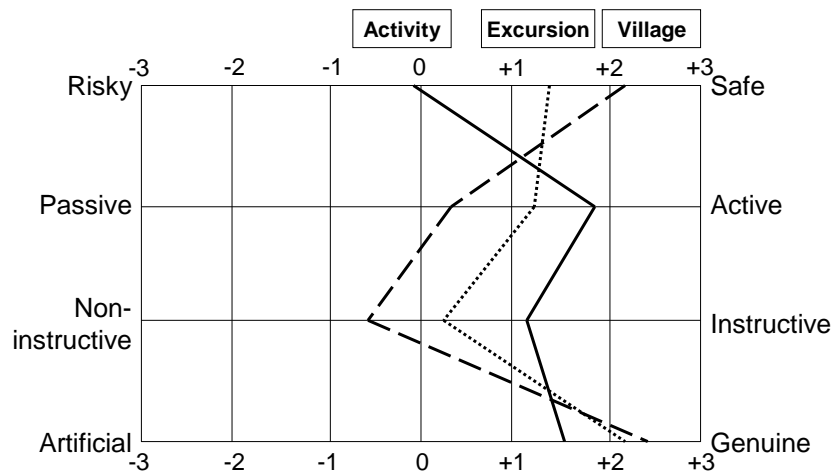


Figure 5. Differences between families regarding how they perceived their most positive experience.

The village family also pressed the button on the GPS device less times than the activity family (mean number = 2.20). Their most positive experiences were not related to any particular category. In comparison to the other family types they perceived the positive experiences as safer, more passive, and less instructive (see Figure 5). Their most negative experiences were related to service provision, for example “*the shop assistant was not nice*”, or “*the bank closed*”. They did not differ much from the other groups regarding how safe, active, and genuine these experiences were perceived (see Figure 6). What is evident from these results is that the movement patterns of the three family types also generated differences in how they looked upon and valued their experiences. Thus, what people consider as unique experiences varies, not necessarily along easily identified demographic lines, sooner according to what they choose to do. In order to be successful in the planning of activities and services in a destination, such differences should be taken into consideration.

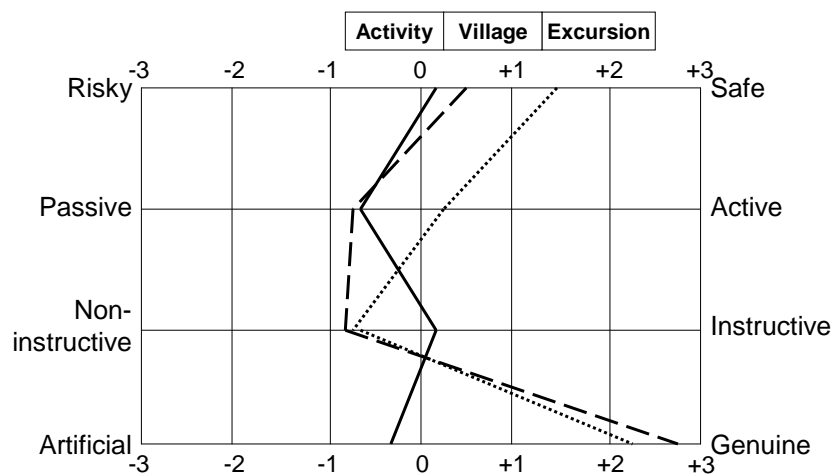


Figure 6. Differences between family types regarding how they perceived their most negative experience.

The destination experience

GPS traces and experience marks on maps leave questions unanswered. It was obvious where people had been and also where they noted particularly strong positive and negative experiences. Survey results, presented in the previous section, complemented the picture and presented an effort to measure the nature of positive and negative experiences. As a third kind of data collection personal, in-depth interviews were carried out for better understanding of the visitors' overall destination experience.

In general, people were strongly positive towards Åre and their experiences during the stay. Much of that was related to the active living and organized activities available and here both being actively involved personally and watching others performing activities were associated with positive experiences. In addition unexpected discoveries and experiences, things with a surprise component were pointed out among the positive things. Another common statement was that being together with the family in a nice location under relaxed circumstances was a great value; the well-being of others made people feel good.

The single most common and much appreciated activity was a cabin car ride to the top of the mountain for a stroll and to look at the view, or even walk all the way down. This was perceived as a very strong experience of nature. For the "true" outdoor person this would

probably not have scored so high because of the presence of ski lifts and other infrastructure. But obviously this combination of grand and easily accessible nature and the comfort of hotels and restaurants created a strong attraction for many of our respondents. We identified this as a largely unexploited potential in this destination, and something that could be further highlighted in the marketing of the destination.

Among the negative comments some, in particular mentioned by people from the northern part of Sweden (of which Åre is part), found the level of exploitation a bit disturbing, saying they almost got a big city feeling in the village centre. No one from the Swedish capital Stockholm and its surroundings expressed this feeling. Lack of visitor information, signs and marking of trails had upset some of the visitors. Littering and Norwegian visitors were a source of complaints among a few. The price level was considered high, making the visit expensive for families with children. Also the popular cabin car received some critical comments about lack of information during a longer stop and the short opening hours at night where the bright northern summer could be taken better care of.

As mentioned, most visitors expressed great satisfaction with their summer visit to Åre. They expressed positive impressions about the supply of activities and attractions at hand. Most people believed they would be back in Åre within 24 months. Some of them said they would not mind visiting also during winter, obviously something they had not done despite the tradition and reputation of Åre as a leading Scandinavian ski resort.

There was, however, a worry among some visitors about the future development of Åre. They saw a rather strong exploitation and marginalization of more genuine buildings and features of the destination. There was definitely a wish for more genuine and authentic environments in and around the village. On the same theme, there was a worry about exclusive and too touristic developments that they saw.

Conclusions

This article speaks in favour of continued method development that places the visitor experience in a time-space frame in order to better understand the complete visiting experience. Such knowledge contributes to the narrowing of supply-demand gaps in a destination. Several examples of this can be seen among the results drawn in this study.

Åre's vision 2020 is striving to become Europe's most attractive year-round destination. This should be reached through an offer about unique experiences, responsibility for the environment and boundless hospitality. This study is closest to the first target – unique experiences. One observation that surprised the research team and also the destination stakeholders was the combination of nature and comfort. The long-standing challenge of nature-based tourism in Sweden, and perhaps in Scandinavia altogether, has been its difficulty to bring commercial value to the areas where it takes place. The “comfort-seeking nature-based tourist” with appreciation of easily accessible and exciting nature experiences, in combination with good standard housing, quality eating and shopping can be seen as illustrating a potential break-through in this field.

Åre, as being Sweden's leading ski resort has a unique opportunity in this respect, most investments are already made and under-utilized during the summer and autumn season. Our conclusion, on the basis of our interview material, is that Åre is well on its way to fulfill the objective of unique experiences through its summer concept, at least in a Swedish or even Scandinavian context, as a first step in the European ambition.

To reiterate, two observations, are related to this potential, the need for cheap activities and the large portion of time spent in the town village. The former relating to nature experiences, the latter to the village feeling which some asked for. The high proportion of time in the village, and relatively limited involvement in commercially supplied inactivity, is partly explained by the unusually hot and sunny weather during the period, according to the visitors themselves. Other explanations to limited involvement in activities expressed were lack of time, lack of courage, or that the activities were too expensive.

Studying and classifying tourists are complex challenges. As a result, any analysis of tourists, and tourists' experiences, is highly dependent upon the tools and methods used.

Furthermore, the evaluation of a method needs to be done in relation to the findings it generates, and from our perspective not least the use of those results to stakeholders in the destination.

To start with the quality of data, one can confirm that it is the combination of GPS technology, the survey data and the qualitative interviews that together form the strength of the study. Although knowledge about what people do and think while visiting can be obtained with conventional methods, like in a study of summer visitors to the Whistler Mountain area

(Needham *et al.*, 2004), the GPS technology generates detailed data on visitor movements that are difficult to collect otherwise. For example is it possible to explore how much time is spent in different areas. It also proved functionally reliable and and definitely attractive to the destination visitor, who generally responded positively when requested about participation.

The linking of GPS data with interview data became very explicit in this study, since interviews were carried out with the respondents' movement patterns and experience markings exposed on a screen during the interviews. This is an important feature and it proved to be a good way of supporting the memory of the respondents when recapturing their movements and experiences during the day. Similar approaches have been undertaken both in transportation (Clark and Doherty, 2010) and in tourism research (Shoval and Isaacson, 2010) where the need to combine GPS data with qualitative information has been stressed explicitly. Our conclusions are that the quality of interview data improved with the support of GPS data and that the interviewer could more easily ask relevant questions and get a richer picture of the interviewees' perceptions and values related to experiences. This is an important quality of the approach.

The only drawback we found with our approach is that it is how resource demanding personal interviewing is in terms of staff. . Even if the number of GPS carriers is easy to increase, the need to tie these data to more qualitative data remains. In future studies we will look into the possibility of using more sophisticated GPS devices, in order to gather more detailed data on registered experiences. Any such step must, however, be weighed against the disadvantages coming with more complicated devices, which inevitably becomes more demanding on the respondents familiarity and skills with handheld computers, or smart phones.

The question whether findings from the study can be useful for the stakeholders, must be answered yes. Research can help narrow the gap between supply and demand by bringing up new knowledge on customer values in relation to experiences. Such knowledge is in the end fundamental to stakeholders involved in destination development (also stated by e.g. Hjalager 2010). A concrete example of this is the fact that the brochure for the next season's summer campaign was redesigned after the research team's presentation of study results. Obviously the people in charge of destination marketing believed in the results of the study, picking up both "the comfort-seeking nature-based tourist" idea and the three visitor categories generated in the study. These categories can be seen as hypotheses about

visitor movements; the redesign of marketing can be interpreted as a kind of confirmation of the hypothesis. Another example is the new development of hiking trails surrounding the village. Our conclusion is that if stakeholders believe in research results, if research results seem to clarify "what goes on" at the destination, their likelihood of being correct increases.

In our destination context, and in relation to this particular study, research results helped stakeholders in their understanding of visitor experiences, as linked to time-spatial data, thereby enabling them to identify shortcomings in these. The highly interactive process between researchers and stakeholders, through the initial dialogue, research design, interpretation of results, and arriving at conclusions from research, brought positive results for both parties. Altogether it brings hope about a more present role for research in tourism innovation processes.

References

- Aldenderfer, M. S., Blashfield, R. K. (1984) *Cluster analysis*. Beverly Hills: Sage Quantitative Applications in the Social Sciences, No. 44.
- Bell, P. A., Greene, T. C., Fisher, J. D., Baum, A. (1996) *Environmental psychology* (4th ed.). Fort Worth: Harcourt Brace.
- Bullock, S. D., Lawson, S. R. (2008) Managing the "commons" on Cadillac mountain: A stated choice analysis of Acadia national park visitors' preferences. *Leisure Sciences*, 30, 1, 71-86.
- Clark, A. F., Doherty, S. T. (2010) A multi-instrumented approach to observing the activity rescheduling decision process. *Transportation*, 37, 165-181.
- Djellal, F., Francos, D., Gallouj, C., Gallouj, F., Jacquin, Y. (2003) Revising the definition of research and development in the light of the specificities of services. *Science and Public Policy*, 30, 6, 415-429.
- Getz, D., Carlsen, J., Morrison, A. (2004) *The family business in tourism and hospitality*. Wallingford: CABI.
- Hjalager, A.-M. (2002) Repairing innovation defectiveness in tourism. *Tourism Management*, 23, 465-474.
- Hjalager, A.-M. (2010) A review of innovation research in tourism. *Tourism Management*, 31, 1, 1-12.
- Hull, R. B., Michael, S. E., Walker, G. J., Roggenbuck, J. W. (1996) Ebb and flow of brief leisure experiences. *Leisure Sciences*, 18, 4, 299-314.
- Jennings, G. (2006) Perspectives on quality tourism experiences: An introduction. In Jennings, G. and Nickerson, N. P. (eds.) *Quality Tourism Experiences*. Burlington: Elsevier.

- Kaplan, R., Kaplan, S. (1989) *The experience of nature*. New York: Cambridge University Press.
- Knotek, K., Watson, A. E., Borrie, W. T., Whitmore, J. G., Turner, D. (2008) Recreation visitor attitudes towards management-ignited prescribed fires in the Bob Marshall Wilderness Complex, Montana. *Journal of Leisure Research*, 40, 4, 608-618.
- Kristensson, P., Gustafsson, A., Archer T. (2004) Harnessing the creative processes of users. *Journal of Product Innovation Management*, 21,1, 4-14.
- Kyle, G., Graefe, A., Manning, R., Bacon, J. (2004) Effects of place attachment on users' perceptions of social and environmental conditions in a natural setting. *Journal of Environmental Psychology*, 24, 2, 213-225.
- Larsen, S. (2007) Aspects of a psychology of the tourist experience. *Scandinavian Journal of Hospitality and Tourism*, 7, 7-18.
- Lau, L., McKercher, B. (2007) Understanding the movement patterns of tourists in a destination: a GIS approach. *Tourism and Hospitality Research* 7, 1, 39-49.
- Laven, D. N., Manning, R. E., Krymkowski, D. H. (2005) The relationship between visitor-based standards of quality and existing conditions in parks and outdoor recreation. *Leisure Sciences*, 27, 2, 157-173.
- Mattsson, J., Sundbo, J., Fussing-Jensen, C. (2005) Innovation systems in tourism: The roles of attractors and scene-takers. *Industry and Innovation*, 12, 3, 357-381.
- Mossberg, L. (2003) *Att skapa upplevelser – från OK till WOW*. Lund: Studentlitteratur.
- Murphy, P. E., Murphy, A. E. (2004) *Strategic management for tourism communities: Bridging the gaps*. Clevedon: Channel View Publications.
- Needham, M. D., Wood, C. J. B., Rollins, R. B. (2004) Understanding summer visitors and their experiences at the Whistler Mountain Ski Area, Canada. *Mountain Research and Development*, 24, 234-242.
- Nordin, S., Svensson, B. (2007) Innovative destination governance: the Swedish ski resort of Åre. *Entrepreneurship and Innovation*, 8, 1, 53-66.
- O'Dell, T. (ed.) (2002) *Upplevelsens materialitet*. Lund: Studentlitteratur.
- Oh, H.; Fiore, A. M., & Jeung, M. (2007) Measuring experience economy concepts: Tourism applications. *Journal of Travel Research*, 46, 119-132.
- Pettersson, R., Getz, D. (2009) Event experiences in time and space. A study of visitors to the 2007 World Alpine Ski Championships in Åre, Sweden. *Scandinavian Journal of Tourism and Hospitality Research*, 9, 2-3, 308-326.
- Pettersson, R., Zillinger, M. (2011) Time and space in event behaviour: Tracking visitors by GPS. *Tourism Geographies*, 13, 1, 1-20.
- Pine, J. B., Gilmore, J. H. (1999) *The experience economy. Work is theatre & business every stage*. Boston: Harvard Business School Press.

- Schianetz, K., Kavanagh, L., Lockington, D. (2007) The learning tourism destination: The potential of a learning organization approach for improving the sustainability of tourism destinations. *Tourism Management*, 28, 1485-1496.
- Shaw, G., Williams, A. (2009) Knowledge transfer and management in tourism organisations: An emerging research agenda. *Tourism Management*, 30, 3, 325-335.
- Shoval, N., Isaacson, M. (2006) Application of tracking technologies to the study of pedestrian spatial behaviour. *The Professional Geographer*, 58, 2, 172-183.
- Shoval, N., Isaacson, M. (2007a) Tracking tourists in the digital age, *Annals of Tourism Research*, 34, 1, 141–159.
- Shoval, N., Isaacson, M. (2007b) Sequence alignment as a method for human activity analysis in space and time. *Annals of the Association of American Geographers*, 97, 2, 282-297.
- Shoval, N., Isaacson, M. (2010) *Tourist mobility and advanced tracking technologies*. New York: Routledge.
- Sundbo, J., Orfila-Sintes, F., Sorensen, F. (2007) The innovative behaviour of tourism firms – Comparative studies of Denmark and Spain. *Research Policy*, 36, 88-106.
- Tanner, R. J., Freimund, W. A., Borrie, W. T., Moisey, R. N. (2008) A meta-study of the values of visitors to four protected areas in the western United States. *Leisure Sciences*, 30, 5, 377-390.
- Uriely, N. (2004) The tourist experience. Conceptual developments. *Annals of Tourism Research*, 32, 199-216.
- Vargo, S., Maglio, P., Akaka, M.A., (2008) On value and value co-creation: services, systems and service logic perspective. *European Management Journal*, 26, 145-152.
- Zillinger, M. (2007) Tourist routes: a time-geographical approach on German car-tourists in Sweden. *Tourism Geographies*, 9, 1, 64-83.

Author details

Bo Svensson and **Robert Pettersson** are with ETOUR (European Tourism Research Institute) at Mid-Sweden University

Ingrid Zakrisson is in the Department of Social Sciences, Mid-Sweden University