

Cognitive Chrono-Ethnography: A methodology for understanding diverse tourists needs

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Abstract

Mass and niche tourism have been extensively studied in their relations with tourism destinations, products, and services. However, to understand fully the dichotomy between mass tourism and niche tourism one has to understand how tourists experience their visits to the tourist sites, identify factors that shape their behaviours, and then define the concepts of mass tourism and niche tourism from the tourist perspective by using the derived factors. This paper introduces a methodology, Cognitive Chrono-Ethnography, for understanding visitors' behaviour selection processes concerning how to enjoy their visits to tourist spots. CCE consists of ethnographical field study that is designed by considering cognitive constraints in order to understand service receptors', i.e., visitors', behavioural selections in terms of their chronological development. This paper also describes a case study of CCE at a hot spring resort, Kinokuni-onsen. It was assumed that there should be several styles of visit. Through the study, it was found that there are four types of activities, theme-park type, shopping type, hot spring type, and hotel and meals type. Each type has its characteristic behavioral pattern. These styles would represent mixed evidence of niche tourism and mass tourism. This paper finally discusses how niche tourism and mass tourism could emerge from the results of the CCE.

Introduction: Tourist behaviour as the results of *in situ* decision making

Tourist behavior is the results of a series of decision-making. A variety of decisions are associated with a single tour. For example, before arriving at the destination, one has to decide when to initiate planning a tour, how to collect information about the candidate destinations, which destination to go, who to accompany, which hotel to stay, which restaurant to have diner, and so on. These decisions would define a plan for the tour. On arrival at the destination, a tourist has to decide what to do in the specific situation according to the pre-specified plan. However, the plan should be regarded as one of resources for organizing human behavior. Human behavior is the results of a series of decision-making but it might not necessarily been carried out according to the pre-specified plan. Rather, it should be regarded as situated in the environment where the current activities are carried out, i.e., situated action (Suchman, 1987; Hutchins, 1996). A tourist makes a variety of *in situ* decisions on how to enjoy the visit to the destination. However, there might be unforeseeable circumstances that would force him/her to change the pre-specified plan accordingly. Therefore tourist's decision-making should be conceived as situated to the circumstances he/she is in.

Human decision-making has been a central topic in economics. Herbert A. Simon, a winner of Nobel prize in economics in 1978, proposed principles of human beings' decision-making processes, "bounded rationality principle" and "satisficing principle" (Simon, 1956; Simon, 1997). Simon claimed that agents, or human beings, face uncertainty about the future and costs in acquiring information in the present. These factors limit the extent to which human beings can make a fully rational decision, thus they possess only "bounded rationality" and must make decisions by "satisficing," or choosing that which might not be optimal but which will make them happy enough. Recently, Danil Kahneman (2003), a winner of Nobel prize in economics in 2002, has founded behavioral economics which stems on the claim that human decision-making is governed by so-called "two minds", i.e., human beings behavior is outcome of two different systems, "experiential processing system" and "rational processing system."

The former is a *fast* feed-forward control process driven by the cerebellum oriented toward immediate action, and experienced passively, outside of conscious awareness (one is seized by one's emotions). On the other hand, the latter is a *slow* feedback control process driven by the cerebrum oriented toward future action, and experienced actively and consciously (one intentionally follows the rules of inductive and deductive reasoning). There is a huge difference in processing speed between the two systems; rational processing typically takes minutes to hours whereas experiential processing typically extends hundreds of milli-seconds to tens of seconds (Newell, 1990, p. 122). A large part of human beings daily activities are immediate actions and therefore it is under control of the experiential processing system. The rational processing system intervenes the experiential processing system for the purpose of better organizing the overall outcome of the processing through consciously envisioning the possible futures.

CCE: Cognitive Chrono-Ethnography

This paper introduces a new methodology for studying a person's *in situ* decision-making process related to the activities. A research project is interested in by means of ethnographical field observation followed by interview sessions to elucidate chronological development of his/her long-term memory relevant to the person's activities in question. CCE is qualitative in nature and the results of CCE study would provide important design guidelines for quantitative studies that may follow. Examples of CCE studies can be found in Someya *et al.* (2009) for spectators behavior of professional baseball games, Kitajima *et al.* (2009) for human navigators who try to provide useful information for the drivers, and Kitajima *et al.* (2005) for passengers who try to find their ways at unfamiliar train stations by utilizing signs.

Decision-making is a cognitive process and thus its results should be directly influenced by *the cognitive processing capabilities* of the person who carries out decision-making process. A large part of decision-making at the site of tour is carried out in the form of immediate actions and therefore it is mostly controlled by the experiential processing system. This implies that the results of decision-making should reflect his/her accumulated experience stored in long-term memory, or his/her knowledge. Each tourist has his/her own long-term memory and is different from each other. Therefore understanding tourist's *in situ* behavior entails studying interaction between the representation of the current circumstances and the contents stored in long-term memory in decision-making process. The current construct of his/her long-term memory is the result of accumulation of his/her past experience. This paper claims that an appropriate form of understanding of tourist's *in situ* behavior should be *chronological* understanding which reflects development along the time axis of his/her long-term memory relevant to his/her current behavior in question.

CCE utilizes two sets of data to study tourist's *in situ* behavior. First one is the activity records of the tourist which will be obtained through observation of the researchers, and/or various kinds of sensors, e.g., GPS, accelerometer, eye-camera, microphone, etc., that are attached to the tourist, and self reports of the tourist. Second one is the data from interview sessions that will be held after recording tourist behavior. The purpose of CCE study is to understand historical changes of interviewee's long-term memory. CCE accomplishes this by means of conducting interviews with the use of the participant's activity records while enjoying tour. The activity records are very effective information to reliably activate relevant contents stored in long-term memory because contents in long-term memory are organized according to the context in which the event associated with the contents happened, called "encoding specificity principle" (Tulving & Thompson, 1973), and contents in long-term memory can only be retrieved or activated and become reportable by placing relevant cues are present in working-memory (Ericsson & Kintsch, 1995)).

A Case Study of CCE at a Hot Spring Spa, Kinosaki-Onsen

This section briefly reviews a case study of CCE reported by Kitajima, et al. (2010).

Description of the Study Field

We selected Kinosaki-Onsen, a spa resort in Hyogo Prefecture, as the object of this study. Kinosaki-Onsen dates back to the Heian era, more than 1300 years ago. Kinosaki-Onsen is famous not only in the Kyoto-Osaka-Kobe area but also as a congenial spa town with various forms of amusement. Sea bathing in summer and crab dishes in winter attract many visitors. More than 30 events, including festivals of each season, are held throughout the year. However, what actually attracts visitors remains relatively unknown, and events are currently planned and executed based on intuition and experience. Therefore, it is important to obtain knowledge about the factors that attract new and repeat visitors, in order to enable the efficient and effective management of spa facilities.

Study Methodology

We implemented a CCE study this study under the following study design to determine what tourists enjoy about spa resorts. First, a survey for objectively understanding the diversity of spa resort visitors was implemented. Based on the results, we selected 20 groups (hereinafter called monitors) with different attributes of visiting spa resorts, and had them visit Kinosaki in their usual manner for a trip to a spa resort. The study was conducted during crab season in autumn (November) or winter (January). Each monitor received a briefing of the study after arriving at Kinosaki and then went sightseeing, carrying a digital camera and a GPS. The investigator retrieved these devices at 9:00 p.m. at the monitor's location, plotted the GPS data on a map, and printed the digital photos in preparation for the interviews. After each monitor checked out of the hotel, he/she participated in a 90-minute interview on the following day at a specified place using those records. In the interview, the monitors were questioned about their trip to the spa resort: their reason for selecting the hotel, their reservation method, how they spent their time there, where they had gone before visiting Kinosaki, where they were going after leaving Kinosaki, and where they would have gone if they had not come to Kinosaki. They were also asked to describe their lifestyle. The results of the interviews were summarized, an activity movement outline was extracted for each group, these outlines were integrated, and several activity models were configured in order to derive the characteristics of spa resort visitors.

Results: Characteristics of Spa Resort Visitors

By examining the monitors' activities collected through the interviews, we found that the following six activity categories would be useful to characterize each monitor's characteristics as spa resort visitors:

- ✓ Hot spring activity: Taking public baths frequently
- ✓ Hotel activity: Having a lot of interest in hotel selection; enjoying indoor bathing at the hotel
- ✓ Eating activity: Having a lot of interest in dining at the hotel; enjoying dining out
- ✓ Strolling activity: Strolling the streets; high interest in streets
- ✓ Entertainment activity: Use of service facilities/tour areas outside Kinosaki
- ✓ Shopping activity: Visiting souvenir shops, purchasing souvenirs, eating at various restaurants.

A matrix that represents the differences among the six activities was created and analyzed by means of the Hayashi's quantification method, type III. The results indicated that the differences could be explained by two-dimensional coordinates, with the first axis representing "Static vs. Dynamic" and the second axis representing "Shopping-Oriented vs. Bathing-oriented", and the monitors would be classified into four categories,

- ✓ Theme-park type,
- ✓ Shopping type,
- ✓ Hot spring type, and
- ✓ Hotel and meals type.

Discussion and Conclusion

The CCE study showed the variability of how people would enjoy their visit to a hot spring resort. However, the nature of variability reflected the nature of the locale, and showed some consistency. We found that the visitors behaviours could be best captured by four groups that mapped on a two-dimensional space.

I suggest that any tourist locale should show some consistency in terms of the variability of behaviors of its visitors, and this might be considered as mixed reflection of mass tourism and niche tourism mapped onto individuals that were used when making decisions. From the tourist's point of view, the more independent the decisions concerning the behavior to be taken at the locale, the more "niche" the tour would become. On the other hand, the less independent the decisions, the more "mass" the tour would become. I argue that behavior patterns to be found at a locale could be characterized in terms of the degree of feeling of independent decision that each behaviour pattern might be associated with, and characterization of the locale in terms of niche-mass dimension could make sense.

niche tourism

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