A Cognitive Chrono-Ethnography Study of Visitors to a Hot Spring Resort, Kinosaki-onsen

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ABSTRACT
There are a number of hot spring resorts in Japan. Some do well in gathering tourists. However, there little has been known why. This paper describes a cognitive chrono-ethnography study that has been done at a hot spring resort, Kinosaki-onsen. We assumed that there should be several styles of visit, e.g., some would enjoy hospitality, others would stick to the constituents of hot spring. We assumed also that those who have different styles would show different activities in terms of the kinds of places they visit and the order of visits. 21 groups of tourists with different visiting styles participated in the study. Each group arrived at Kinosaki-onsen early afternoon and was asked to tour Kinosaki-onsen as they liked. They were asked to carry a GPS and a digital cam-era for recording their activities. We conducted an interview on the next day with the recorded behavioral trajectories and photos. By compiling the data, we identified four types of activities, theme-park type, shopping type, hot spring type, and hotel and meals type. Each type has its characteristic behavioral pattern. This is useful for designing services that match the individual activity patterns.

Key words: cognitive chrono-ethnography, hot spring resorts, activity patterns, GPS.

INTRODUCTION
A sightseeing spot is a place that tourists visit to leave aside their daily lives for pleasure. Memory of their experience may sway them to return in the future. However, not all tourists enjoy the same site in the same way. For example, at a spa resort, some tourists enjoy the hot springs, some focus on the regional food, some are there for the ac-commodations and amenities, and others enjoy the hospitality, but all of them expect to have good experiences there. Their evaluation is based on how well their expectations are met. This paper introduces a study implemented for the purpose of exploring the characteristics of tourists who visit sightseeing spots. It applies Cognitive Chrono-Ethnography (CCE), a technique that we developed to analyze people’s selection of ac-tivities (Kitajima, Toyota 2010). CCE is used to investigate the process by which an individual selects an activity, using an observation study (ethnographic study) at the site where that activity is performed. Activity data are recorded and collected, and retros-pective interviews are conducted to clarify participants’ activity selection at the site. 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.

Description of Kinosaki
We selected Kinosaki, a spa resort in Hyogo Prefecture, as the object of this study. Kinosaki dates back to the Heian era, more than 1300 years ago. As Naoya Shiga’s novel At Kinosaki indicates, Kinosaki 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.

CONTENTS AND STUDY RESULTS
We implemented a CCE study to determine what tourists enjoy about spa resorts. For this study, tourists visited Kinosaki in a manner that was typical of sightseeing trips to spa resorts and recorded their activities during their stay; their records were then reviewed. It was important that the trip be typical. What activity was selected for the visit depended greatly on the context in which the event was executed. Selection varied with individual cases (e.g.,
traveling alone, with a group, or with family including children). Having all participants act naturally in a typical context for them will hopefully help determine an accurate description of spa resort visitors.

This study was implemented under the following study design. 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 (e.g., as a married couple, parent and child, or group of friends). The study was conducted during crab season in autumn (November) or winter (January), when Kinosaki is most attractive to tourists. However, the weather and the activities in autumn differ considerably from those in winter. Monitors recorded their activities on their first day in Kinosaki and on the next day. After the monitor checked out of the hotel, an in‐terview was conducted using those records. In the interview, the monitors were questioned about their trip to the spa resort: their reason for selecting the hotel, their reserva-tion 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 re‐sults 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. Procedures are detailed in the following sections.

Selection of the Monitors

For this study, it was necessary to select diverse monitors who enjoyed spa resorts in different ways (attributes of visiting spa resorts). Therefore, a Web questionnaire about hot springs was implemented, and the monitors were selected based on a response pattern indicating attributes of visiting spa resorts, as well as the number of companions and the monitor’s relationship with them. The Web questionnaire was distributed to 7,000 potential monitors from 8:00 p.m. on Oct. 3, 2008 (Fri.) to 10:00 a.m. on Oct. 8, 2008 (Wed.). The questionnaire included questions about awareness of, degree of interests in, and intention to participate in a wide range of hot springs and was not limited to the spa of Kinosaki. There were 1,649 responses, of which 1,337 were considered valid. The responses of 229 applicants who were considered valid were then analyzed. The app‐licants who had characteristics typical of spa visitors were then selected as monitors. For selecting monitors, cluster analysis of the responses to the questions was used to investigate the attributes of visiting. Figure 1 presents the questions that were used for the analysis. What the responders consid-ered when selecting a spa resort (Q13), when selecting a bath and hot spring (Q14), and when selecting a hot spring hotel (Q15) were addressed in general, regardless of whether or not they had ever visited Kinosaki. Those who had visited Kinosaki were asked to specify the places they had visited (Q22) and why they decided to visit Kinosaki (Q23).

Q13, Q14, and Q15 were answered by all applicants for participation (229).

Q22 and Q23 were answered by only those who had visited Kinosaki (111).

Figure 1. Questions to Classify the Ways Respondents Enjoy Spa Resorts
who had visited Kinosaki. The total number of combination patterns of clusters was 756 (4×3×3×4×3×3×4×5), of which 79 patterns were actually analyzed.

For responses to Q13, Q14, and Q15 by those who had never visited Kinosaki (118), the top three patterns are ACA (35.30%), AAA (22.19%), and CCA (20.17%), accounting for 65% of the total. The fourth pattern is ACC (5.4%). The top pattern, ACA, represents those who select standard or major spa resorts; they place importance on hot spring/bath, air/atmosphere, accommodations, dishes/special products, and richness of nature/environment (A); prefer genuine hot springs and natural hot-water spring, quality and effects of the hot spring, and outdoor baths (C); and select a hotel based on cost and service (A). The second pattern, AAA, represents those who focus on facilities (e.g., the type of bath, outdoor bath, size of bathtubs, and unique bathtubs) rather than genuine hot springs. The third pattern, CCA, represents those who prefer unexplored areas/nature rather than major facilities when selecting a spa resort.

Using the results of this cluster analysis, monitors were selected on the basis of the fol lowing points.

1. They could attend on the specified study day and interview day.
2. They could participate in the study in a group of two or more persons, including companions.
3. The combined clusters were balanced.
4. Age group, gender, type of companions, experience of visiting Kinosaki spa, and place of residence were balanced.

Although 24 groups were selected, three groups cancelled; therefore, the final number of groups participating in the study was 21. Among the participants, twelve groups had visited Kinosaki before, while nine groups were visiting for the first time.

**Tourist Activity Study**

Two sessions of the study were implemented. The first session was from Nov. 19, 2008 (Wed.) to Nov. 22 (Sat.), and the second session was from Jan. 9, 2009 (Fri.) to Jan. 12 (Mon., holiday). Figure 3 outlines the study process. 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. Each monitor participated in a 90-minute interview on the following day at a speci-
fied place (Kinosaki Literature Museum for the autumn study and the hotel information office of the Kinosaki Tourist Association for the winter study). Monitors answered the questions while looking at records (GPS data and photos) of their activities, and prepared their own activity movement outlines from their arrival at Kinosaki until their arrival at the interview site, in collaboration with the investigator. This collaboration helped to clarify the tracks, reasons, and background of each monitor’s activity selection. Figure 4 presents an example of a monitor’s movement outline, drawn by summarizing the results of the interview.

![Figure 4. Example of a Monitor’s Activity Movement Outline](image)

### 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. The results are plotted in Figure 5.

![Figure 5. Two-Dimensional Plot of Ways to Enjoy Spa Resorts](image)

**Theme-park type**: People in this category fully enjoy a well-balanced hot spring trip (e.g., eating, shopping, and bathing). Their activities are diverse, with some
groups (A-01, A-05, and A-06) enjoying relaxation and others (A-02, A-10, W-04, W-07, and W-08) preferring to move about. These tourists feel that a two-day trip with an overnight stay is insufficient because of the shortage of time. Many arrive at Kinosaki early, before check-in, and depart late, after the check-out. When traveling by car, they enjoy sightseeing. Furthermore, because of these tourists’ comparatively vigorous desire for consumption and experience, their feeling of satisfaction may be improved by introducing ways to help them enjoy the whole day fully and/or by providing services that make them want to return.

Shopping type: Tourists in this category spend more time shopping than taking public baths. The main purpose for some may be to look for souvenirs; however, analysis of the study results also indicated some passive reasons for shopping, such as bad weather (W-06), long lines or crowds at the public baths (W-09), and “more enjoyable than bathing because it will not cause any trouble if we are taking children” (W-09). While these tourists may not buy many souvenirs, they may be dissatisfied with the spa resort if they find few attractive special products or only a few souvenir shops or goods.

Hot spring type: Tourists in this category spend more time taking public baths than shopping or dining at local restaurants. Although they do stroll the streets and go sightseeing, their main purpose during their stay after check-in until check-out is taking public baths. The sole purpose of some tourists (W-01 and W-10) is bathing in the hot spring. They may have time to buy souvenirs after check-out, but they may spend this time having lunch at a restaurant, due to limited time. They may be dissatisfied with charges for public baths after check-out (A-08 and W-01).

Hotel and meals type: Tourists in this category are not as active in taking public baths but do enjoy indoor baths and dinner at the hotel. Some may visit Kinosaki before or after check-in on their way into or out of the prefecture (A-07 and A-11). Therefore, they do not engage in activities for full enjoyment of the Kinosaki spa (e.g., public baths), but they do enjoy spending quiet time at the hotel (A-03 and A-07) or strolling the streets (A-11, W-03, and W-05). This category includes tourists who are accustomed to traveling (A-03, A-07, and A-11) and those who return to Kinosaki spa (W-03 and W-05). Because the cost of an overnight stay accounts for nearly the entire cost of the trip, these tourists tend to evaluate meals and services severely and are highly aware of the cost. Furthermore, tourists in this category tend to use such high-class hotels as Shimuraya (A-07 and W-03) or were considering it this time (A-11).

CONCLUSION

Kinosaki organizes various events and successfully attracts tourists. However, how visitors perceive these services has not been analyzed. The plan-do of a plan-do-check-act (PDCA) cycle has been performed without the check-act process. Results of the CCE studies in this study indicate that visitors to Kinosaki spa can be classified into four types, based on their expectations. Thus, it is finally possible to complete the PDCA cycle, and we can examine whether or not the currently provided services meet visitors’ needs and expectations. Quantitative analysis of participants is necessary to estimate how many belonged to each of the four types. Such analysis allowed quantitative pre-diction of the effect of the services provided. We have used CCE studies to configure activity models of people who accept each type of customer service not only at spa resorts but also at baseball stadiums (Someya et al. 2009) and movie festivals (not available in English). We do not stop here. We have been conducting projects for designing innovative services based on the activity models of service receptors. They should improve the productivity of services because they are targeted to heterogeneous individual customers. We believe that CCE is a powerful device for effectively carrying out the PDCA cycle.

REFERENCES


