

Do the Number of Creators and Their Conversations Affect Re-Evaluation of a Familiar Place in Making a Tourist Map?

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Abstract—In this paper, we analyzed the effect of the number of creators and their conversations on making a tourist map as re-evaluating a familiar place. It means we try to study about collaborative decision making when mapping new places. We conducted experiments to make tourist maps where the participants described the tourist attractions as they actually walked in a familiar place. We compared three types of maps: (a) made by a single participant, (b) made by two participants without any conversations, and (c) with conversations. It was found that maps made by two participants with conversations had a higher proportion of unrevealed tourist attractions but a lower amount of tourist attractions than other maps. For these results, it seemed that conversations might bring introducing unrevealed tourist attractions to the conversation partner. Meanwhile, those also might waste the thinking-up time about the tourist attractions.

Keywords—conversation analysis; tourist map; re-evaluation of a familiar place; discovery of a tourist attraction; collaborative decision making.

I. INTRODUCTION

People often refer to a tourist map that shows tourist attractions to see when they go sightseeing. A tourist map can be found in guide books, Web pages, and tourist information centers in tourist places. People check the tourist map to know the rough shape of a tourist place and find tourist attractions. Then, they plan a route to visit the tourist attractions they are interested in and enjoy visiting them. A tourist map is indispensable for sightseeing.

A well-known tourist place often has many tourist attractions or a few tourist attractions that cannot be missed. Therefore, it is easy to enumerate the tourist attractions necessary for creating a tourist map. On the other hand, a place where newly promotes itself as a tourist place must begin with discovering tourist attractions to be included in a tourist map. At this time, it is necessary to re-evaluate a place whether the place has spots valuable for a tourist map.

Even if a place is not currently a sightseeing place, the place may have valuable spots known only by people familiar with the place. **We call such a spot an unrevealed tourist attraction.** To discover unrevealed tourist attractions, the help of people who are familiar with the place is necessary. However, it may be difficult for them to spontaneously list spots that would be tourist attractions for others because they are familiar with the place. We assume that (1) each individual

is influenced by his/her partner and can re-evaluate a place to list spots as tourist attractions if two people look for spots together instead of him/herself, and (2) the re-evaluation will be conducted efficiently if they have conversations when looking for such places. In this paper, we analyze the effects of the number of people and their conversations on the re-evaluation of a place in creating a tourist map. It means we try to study about collaborative decision making [1], [2] when mapping new places.

Many types of research are conducted to support tourism using the voice of people. For example, location information from microblogs is used to support tourism [3]. The previous studies focus on judging whether a spot is a tourist attraction. Our study focuses on analyzing the effects of the voice of people to discover tourist attractions.

Shirozu et al. designed a workshop to establish a mechanism that encourages people to deepen their awareness of their place and make discoveries by changing their perceptions of a familiar place and scene [4]. This study also asked participants to walk around a familiar place, acquire knowledge of the place, and create a tourist map. However, the present study differs in that it focuses on the effects of the number of people walking in a familiar place and the effects of the presence/absence of conversations when walking together.

II. HYPOTHESIS TESTING EXPERIMENT

The main hypothesis of this paper is: “if a tourist map is created by two people walking around a familiar place with conversations, the map will be different from a map created by a single person.” We break down the main hypothesis into the four sub-hypotheses. (H1a): The number of tourist attractions will be larger if two people create a tourist map without any conversations than if a single person creates it. (H1b): The number of tourist attractions will be larger when two people create a tourist map with conversations than when without any conversations. (H2a): The proportion of unrevealed tourist attractions increases when two people create a tourist map without any conversations, rather than a single person creating it. (H2b): The proportion of unrevealed tourist attractions increases when two people create a tourist map with conversations than when without any conversations.



Figure 1. Examples of created tourist maps by Gr. A to C. We used Google map (<https://www.google.com/maps>) to make tourist maps.

A. Experimental procedures

We conducted experiments to verify the hypotheses as follows. (P1) The experimenter instructs participants on how to make a tourist map. (P2) The participants walk around a place for 45 minutes and take photos of what they consider to be tourist attractions. (P3) The participants upload the photos to Google map, write the title and description of the photos, and complete to make the tourist map.

The participants created a tourist map of the Biwako Kusatsu Campus of Ritsumeikan University as a place that did not have many famous tourist attractions. The participants were 35 students who belonged to the campus for more than one year. All of them were familiar with the campus.

The participants were divided into three groups: a participant makes a tourist map alone (Gr. A, seven participants), two participants make a tourist map without any conversations (Gr. B, seven pairs, 14 participants), and two participants make a tourist map with conversations (Gr. C, seven pairs, 14 participants).

B. How to judge whether a place is unrevealed

On the campus, there are facilities used for lectures, research, administration offices, and so on. The participants might list these facilities as tourist attractions. (1) If a spot is a facility described on a campus map published by the university, the spot should be regarded as a famous tourist attraction that everyone knows well. (2) However, even a spot is that mentioned above, **if there is a description of personal memories or impressions, a new perspective of enjoying the spot will be added.** In this case, the spot on the campus map and the spot mentioned by a participant are considered to be different. Therefore, it should be regarded as *an unrevealed tourist attraction* is found in creating a map. (3) If a spot is not described on the campus map, the spot should be regarded as an *unrevealed* tourist attraction.

C. Experimental results

Figure 1 shows examples of created tourist maps by Gr. A through C. Balloons on the maps indicate the tourist attractions. Figure 2 illustrates examples of photos, titles, and descriptions of the tourist attractions obtained from the participants of Gr. C.

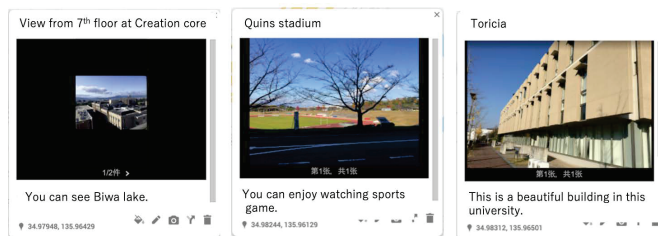


Figure 2. Examples of tourist attractions obtained by Gr. C participants.

The averages of tourist attractions were 17.6 (Gr. A), 18.1 (Gr. B), and 10.3 (Gr. C). The average time for making a tourist map was 32.1 minutes (Gr. A), 28.6 minutes (Gr. B), and 22.1 minutes (Gr. C). The averages of the proportions of unrevealed tourist attractions were 68.3% (Gr. A), 73.7% (Gr. B), and 86.1% (Gr. C).

We found that the hypotheses H2a and H2b should be valid. Note that a significant difference was not obtained by statistical testings. It is necessary to increase the number of experiments in the future to conduct statistical analysis. We found that the hypotheses H1a and H1b were not valid. This is because that it took time to think about unrevealed tourist attractions, which reduced the number of tourist attractions on the maps.

III. CONCLUSIONS

In this paper, we analyzed the effects of the number of creators and their conversations on re-evaluating the familiar place in making a tourist map as a collaborative decision making study. We conducted experiments that participants walked a familiar place and made a tourist map. We found that when two participants made a tourist map with conversations, the tourist map has more unrevealed tourist attractions than that made by a single participant. However, the number of tourist attractions on the maps with that settings was the lowest among the three groups. For these results, it seemed that conversations might bring introducing unrevealed tourist attractions to the conversation partner. Meanwhile, the conversations also might waste the thinking-up time of participants about the tourist attractions. As a future work, we would conduct interviews to deepen the findings.

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