Designing for Social Navigation of Food Recipes

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Abstract. Social navigation has been proposed as a means to aid users to find their way through information spaces. We present an on-line grocery store that implements several different aspects of social navigation. In an initial study, we found that social trails seem to appeal to one group of users while they alienate another group of users. We discuss the implications for design of social navigation.

1   Introduction

In a typical on-line grocery store, there will be 10.000 different products to choose from. Navigating such a space is not only time-consuming but can also be boring and tedious [1]. We have designed an alternative store, based on ideas from social navigation [2]. In a social navigation design other users' actions are visualised in the interface. It can be through direct contact with other users, as in chatting. It can be through trails or footprints, that is, the object bears signs of how it has been used by others. Or, finally, through how the information space is structured, as in recommender systems. Much in the same way as we consult or follow the trails of other people in the real world for solving different tasks, we also try to support this in the virtual world.

But does social navigation 'work'? What are appropriate designs that are not perceived as intrusive or unhelpful? We conducted a small-scale study where we tried to determine whether users are influenced by the actions of others (as visualised in our on-line grocery store), and how they feel about this "intrusion".

2   On-line Grocery Store

We decided to base our on-line store on recipes rather than having to search for each product separately. Through choosing a set of recipes the user gets all the ingredients from the recipes added to a shopping list. This list can then be edited and new items added prior to the actual purchase.
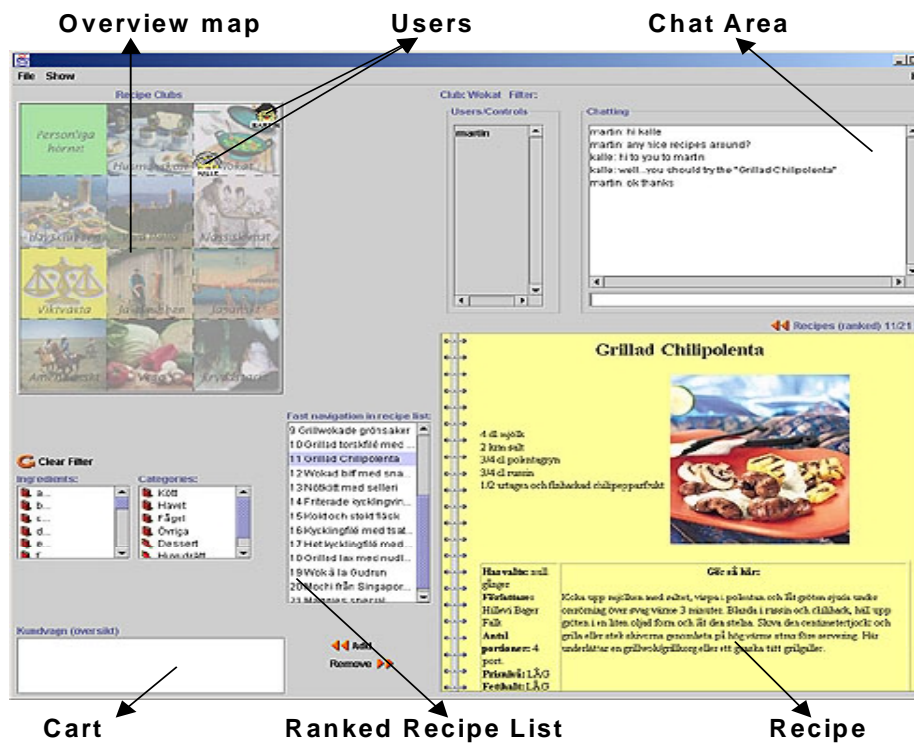
Figure 1. A screen dump from the on-line grocery store.

The store has been enriched with a number of different functionalities that enhance social navigation. First and foremost, the recipes themselves are ordered by collaborative filtering methods [3]. Recipes are recommended to customers based on what other customers have chosen. In addition to recommending individual recipes, recipes are grouped into *recipe clubs.* A recipe club is a place with a special theme, for example 'vegetarian food'. Users can move around between clubs to get different recommendations. The selection and ordering of recipes available in a club are also maintained by collaborative filtering methods, and reflect which recipes visitors of the club have liked. On top of the recommendation functionality, users have a virtual presence in the store through avatars representing them in an overview map of the clubs. As the user moves from one club to another, the user's avatar will be shown in the map as moving from one club to another (see fig. 1). Users can also chat with other users who presently are visiting the same recipe club. Finally, we provide social annotations in the recipes themselves: each recipe bears signs of who authored it and how many times it has been downloaded.

3 Study

We believe that social navigation can contribute to the *efficiency* of the interface from the user's point of view, but that is not the only important metric. Social navigation is also useful if it leads to a more pleasurable or entertaining experience, or if it increases users' sense of satisfaction and comfort with the work they have performed.

In a study of our on-line grocery store, we tried to capture some of these issues. Here, we focus on results concerning to what extent users felt that they were influenced by what others did, and whether this was intrusive or not.

Subjects. There were 12 subjects, 5 females and 7 males, between 23 and 30 years old, average 24.5. They were students from computer linguistics and computer science. None of the subjects had any experience of online food shopping.

Task and procedure. The subjects used the system on two different occasions. They were asked to choose five recipes each time. Their actions were logged, and we provided them with a questionnaire on age, gender, education, a set of Likert-scale questions, and a set of open-ended questions on the functionality of the system. They were given a food cheque of 300:- SEK and encouraged to buy the food needed for the recipes.

4 Results

Overall, subjects made use of several of the social navigation indicators. They chatted (in average 6.5 statements per user during the second occasion), and they looked at which recipe clubs other users visited and moved to those clubs. Afterwards they answered the question "Do you think that it adds anything to see what others do in this kind of system? What in such a case? If not, what bothers you?" One subject said: "It think it is positive. One can see what others are doing and the chat functionality makes it more social. One could get new ideas". Not everyone was as positive: "No! I cannot see the point of it, I have never been interested in chat-functions".

In investigating this difference, we found that the subjects could be divided into two groups. 7 subjects claim not to be influenced by what others do, while 5 claim that they are. We asked if the subjects would use the system again. The ones who did not want to use it were the ones who claimed not to be influenced by the actions of others. Thus, it seems to be a correlation between people claiming to be influenced by social navigation and their willingness to use the system again. Interestingly enough, more or less all participants found the system fun to use even the ones claiming they did not want to use it again. One of our participants said: "the system became more alive and fun to use when you could see the other users".

Looking further into how they answered other questions, only 2 subjects were consistently claiming not to be influenced by the social annotations. The larger part of the group, 10 subjects, was positive towards the different social annotations. The logs also backed up their claims: they chatted, and they all moved between clubs without hesitation. In their comments, they also stated that visible activity in recipe clubs influenced them: they were attracted to clubs where there were other users and they became curious about what the other users were doing in those clubs.

The remaining two subjects were consistently negative towards social trails. They did not chat, they disliked being logged, they did not want more social functions added to the system, and they could not see an added value in being able to see other users in the system.

When investigating subjects' answers to the open-ended questions, certain aspects of social trails in the interface do not seem intrusive at all, while others are more problematic to some users. The fact that the recipes show how many times they have been downloaded is not a problem. Neither is the fact that choosing a recipe will affect the recommender system. Seeing the avatar moving between recipe clubs is more intrusive, and, of course, the chatting is even more so. In general, being logged does not bother users – they know that this happens all the time anyway, and they do not feel very secret about their food choice. It is when their actions are not anonymous and other users can 'see them' that some users react negatively.

5   Discussion

The main result of our study is that many users do in fact appreciate social navigation tools in the shopping scenario. In our study, the majority of subjects liked the social tools, used them, and was influenced by the behaviour of other users.

However, an equally important result is that not everyone was. We need to make the design of Social Navigation interfaces allow for privacy. We must appreciate that there are individual differences between users in this respect, as well as in many others that affect interface design.

References

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