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Title	バランス理論に基づく興味拡張のためのウェブ閲覧履 歴共有システムに関する研究
Author(s)	金屋,陽介
Citation	
Issue Date	2011-03
Туре	Thesis or Dissertation
Text version	author
URL	http://hdl.handle.net/10119/9730
Rights	
Description	Supervisor:西本一志,知識科学研究科,修士



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## A sharing system of web-browsing histories to expand interests based on the balance theory

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**Keywords:** information recommendation system, web browser, sharing system, balance theory, expand interest

In this research, I focused attention on 'Balance theory' to provide each user his/her acquaintances' histories of web browsing as a help for finding new areas of interests.

The ARPANET (father of Internet) was born in 1969. Since then, it connects the world to the internet. The information handled on the Internet increasing every day. It's not too much to say that quantity of the information is infinite. In such a state, various information recommendation systems that proactively provide pieces of information along with a user's interests have been developed. Those studies gained some result.

However, it is afraid that his/her interests would be fixed within a narrow scope only by deepening the interests that he/she originally had. The author developed a novel web browser named "ETSUKO" to which I applied the balance theory. ETSUKO provides each user his/her acquaintances' histories of web browsing as a help for finding new areas of interests. System consists of database and web browser. The database used MySQL5.1.48. It saves all users web-browsing histories. ETSUKO was made from C# using GeckoFX API. ETSUKO send web-browsing histories to database and sharing to each user's ETSUKO. And the user can know the web-browsing history of the acquaintance from shared data.

Since the balance theory can explain interaction in human relations. I verified that similar interaction could occur between an interest object and human relations. I had nineteen examinee use "ETSUKO" during four months. I put one review stage and three experiments stage during a period.

- Review stage : I had a subject use ETSUKO and I had examinee be used to a browser. At the same time heard an opinion. I improved ETSUKO grounded in opinion.
- Experiment stage1: This stage, ETSUKO displays the history of all users by one timeline. I divided a subject into two groups and experiment it. One was display web-browsing user name and the other didn't display it.
- Experiment stage2: This stage, ETSUKO display the history of the user whom users chose by one timeline.
- Experiment stage3: This stage, the indication turn of the web-browsing history changes for the interest of the user. I divided a subject into two groups and experiment it. One was displays in turn by interest level and the other was inversion display it.

From these experiments, we found that who he/she is that viewed a web page affects the users' behaviors of web browsing. I remarked to pull the interest of the person by using a balance theory than these experiment results.

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