Retrieval from the Social Information Base

Hisao NOJIMA
NTT Basic Research Labs.
3-1 Morinosato Wakamiya, Atsugi-shi, Kanagawa Pref. 243-01 Japan
nojima@ntt-20.ntt.jp

Introduction

Whenever people think and act, they rely on the vast bodies of knowledge that exist in the outside world. Recently there are interests in the roles of other people as information sources, such as help from friends, consultants, and teachers (Bannon, 1986). The purpose of our research is to find out what kind of structure there is in outside knowledge; and how, and from which sources, people select the information in the social context. For the former question, we have found that in some cases there is an emergent structure that members have their own roles in helping others (Goto & Nojima, 1995).

Why users abandon their search?

For the latter question, we have analyzed the process by which people abandon their search in the belief that they cannot find the necessary information. We compared these processes when the searches were conducted on computer database retrieval systems (e.g. DIALOG and CAPTAIN, which is one of Japanese Videotex systems) and in the social information base. The social information base was named after the analogy of computer database. Transactions in the social information base include such activities as people's question asking behavior and helping behavior in daily situations (Nojima, 1995). We are particularly interested in the reasons why they think that they have failed in finding the target information. These reasons from users point of view are important because users decide their further actions to the system (whether to stop using it or to proceed further) based on these reasons.

Results

When people want to find something, they first have to decide whether the search can be achieved at all. First part of Figure 1 indicates that some people abandon the search at this level. This means that they could not have the clear meta-cognition of the system, which might be attributed to the fact that these computer/social-information base failed to give clear system images or self/other images.

Discussion

It is usually believed that information retrieval from computer databases is quite different from that from human networks, but there are some resemblance in the reasons why searches are abandoned. There are several interesting observations in these processes. One is that even though people fail in getting the information they need, they sometimes do not realize their failure. We are building a model of human information retrieval in social settings using the analogy of computer database retrieval.

References

Bannon, L. J. (1986). Helping users help each other. In D. A. Norman & S. W. Draper (Eds.), *User Centered System Design*, (pp. 399–410): Lawrence Erlbaum Associates.

Goto, S. & Nojima, H. (1995). Equilibrium analysis of the distribution of information in human society. In *Artificial Intelligence*, **75**,(pp. 115–130).

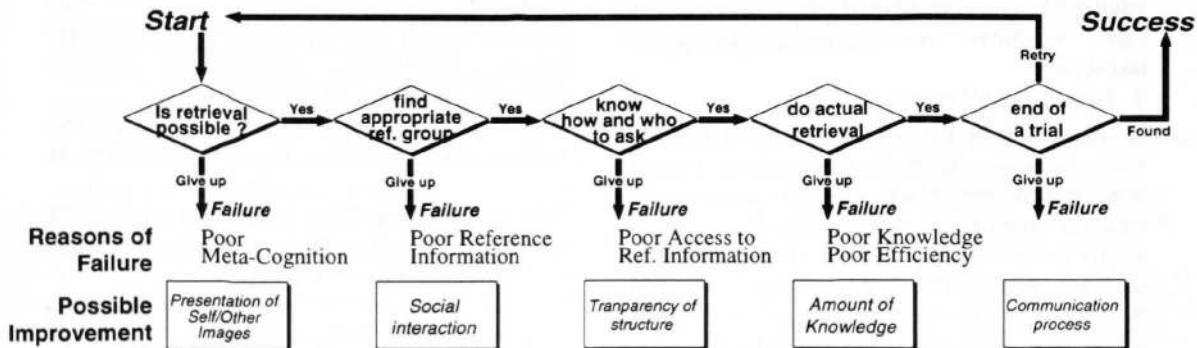Nojima, H. (1995). Society as Database. *Cognitive Studies*, **2**, (pp. 93–101) (in Japanese).

Figure 1: Reasons to abandon search in Social Information Base