The Process of Organizing Personal Information

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ABSTRACT

This paper presents preliminary results from an ongoing research study, which explores the process of organizing personal information from a cognitive sociological perspective. Participants were asked to keep a diary for a week whenever they save or organize information in digital forms, and two post diary semi-structured interviews were conducted to ask how and why they organized information files. The initial analysis of the results showed that there are five stages in the process of personal information organization. The findings from this study will deepen our understanding about information organizing behavior and contributes to the development and design of various personal information strategies, devices, and interfaces that support individuals' organizing their information.

Keywords

Information organizing behavior, process of organizing information, personal information management, classification.

INTRODUCTION

Personal information is the information a person keeps for personal use either directly or indirectly. This research explores the process of organizing personal information in digital forms by identifying different stages of the process as well as actions, thoughts, decisions, and factors that are involved in each stage. Particularly, this research applies cognitive sociological perspective in understanding how people organize their information. Cognitive sociological perspective takes the social foundation of individuals into account, and assumes that information organization is a process of construction, and society influences people's cognition and how they organize information (Brekhus, 2007; Zerubavel, 1991). Eventually, this research aims to develop a new model which explains the process of organizing personal information.

BACKGROUND AND RELATED WORK

While numerous previous works which found critical findings in understanding information organization, most of the early categorization theories examined categorization conceptually or investigated classification of objects in the natural world (Aristotle 2007 [B.C.350]; Berlin & Kay, 1969; Rosch, 1978; Wittgenstein, 1953; Zadeh, 1965). In the Information Science field, while a number of insightful theories and research studies dealt with how people seek new information (Bates, 1989; Belkin, 1980; Kulthau, 1991; Savolainen, 1995; Wilson, 1997), fewer studies have focused on how people organize personal information (Jones & Teevan, 2007).

In addition, even those studies that examined information organizing behavior mainly focused on end-results of organization or a specific aspect of the process rather than examining the whole process. To be more specific, the major findings from these studies have been (1) organizational structures of people's classification systems such number of files, folders, size of each category, and the depth of the organizational structures (Bergman, Whittaker, Sanderson, Nachmias, & Ramamoorthy, 2010; Gonçalves & Jorge, 2003; Henderson & Srinivasan, 2009), (2) different types of personal information objects (Barreau & Nardi, 1995; Cole, 1982), (3) different types of personal information organizing strategies (Bälter, 1997; Boardman & Sasse, 2004; Fisher, Bruxh, Gleve, & Smith, 2006; Malone, 1983; Whittaker & Sidner, 1996), (4) criteria that were used in organizing personal information (Barreau 1995, 2008; Case, 1991), and (5) factors that influence personal information organization (Barreau, 1995, 2008; Kwasnik, 1989, 1991). As shown above, while there are many insightful studies which investigated personal information organization, studies that explored the *process* of organizing information are not found, yet.

Thus, we still know little about how these organizational structures are constructed, what decisions are made during the process, what is happening cognitively, and what factors impact people's grouping and separating information items during the process of organizing personal information Most importantly, social influence on the organization process has been not investigated when personal organization is actually heavily influenced by society (Zerubavel, 1991; Zerubavel, 1996). Thus, research that holistically examines

the information organizing process from a cognitive sociological perspective is needed.

METHODS

For the participants of the study, a particular social group, academic, is chosen. This study recruited 23 participants, consisting of 7-9 participants each from undergraduate students, graduate students and professors. In collecting data, a short background questionnaire, a diary study and two post hoc semi-structured interviews were conducted. More specifically, the researcher asked participants to record a diary over a week on a given template whenever they organized information in digital forms. Then, in the first interview, the researcher asked how and why participants organized information files based on the diary. Then, after 2-4 weeks, the researcher asked whether there had been any changes made to files or folders that were discussed in the first interview. Interviews were transcribed and coded with a set of categories based on the literature and the researcher's analysis of the literature. Then the researcher analyzed data to confirm, extend and otherwise modify the initial categories.

INITIAL FINDINGS

The initial analysis of the results showed that the process of organizing personal information consists of five stages: (1) initiation; (2) identification; (3) examination/comparison; (4) selection/creation/modification; and (5) categorization. In addition, each stage involved different actions, thoughts, decisions, and factors. Especially, social foundation of participants heavily influenced the process. The initial model is presented in Figure 1.This model will be further investigated, modified and expanded with more data.

CONCLUSION

The findings from this study will advance our knowledge about people's information organization process, of which little is currently known. This research will also lay an empirical foundation for further study of information organizing behaviors. Particularly, taking a cognitive sociological perspective has its unique contribution to the field. The results from this research will make direct contributions to the development of devices and interfaces that support individuals' organizing information.

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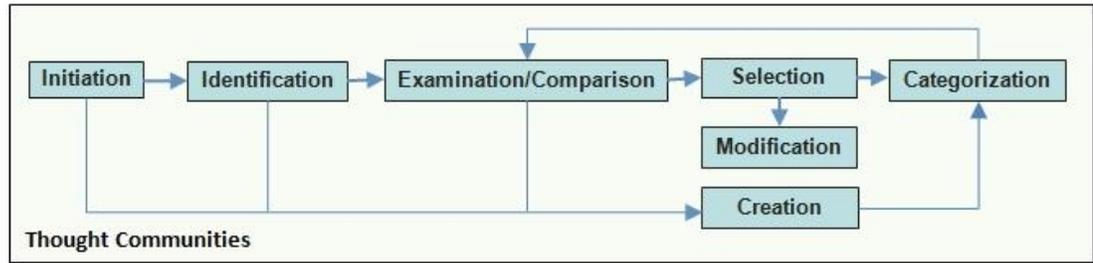
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	Initiation	Identification	Examination/Comparison	Selection / Modification / Creation	Categorization
Action (Behavioral)	• Receive file • Download file • Create file	• Focus on certain aspect of file	• Select personal devices • Examine existing categories • Compare unorganized file with organized file in relevant categories	• Select existing category • Modify previous category • Create a new category	• Place a file into a folder
Thought (Cognitive)	• Messiness	• Typification	• Remind existing categories • Assess similarities and differences between new and existing files	• Adjust mental gap between new and existing files	• Clean
Decision	• Organize or not	• Which aspect to focus on	• Which device to save • Whether relevant category exists or not	• Whether to select or modify existing category, or create a new category	• Done • Re-categorize • Delay re-categorization
Factor	• Future use • Number of related files • Necessity of differentiation • Time	• Purpose • Format • Subject • Source • Related person • Receiver • Time	• Availability (device) • Purpose (exist) • Format (exist) • Subject (exist) • Related person (exist)	• Purpose (select) • Format (select) • Marking (modify) • Facilitating access (modify) • Related person (select) • Source (select) • Number (create) • Necessity of differentiation (create) • Predicted size of the category (create)	• Appropriateness (done) • Inappropriateness (re-categorize) • Lack of time (delay re-categorization) • Changing value (delay re-categorization)

Figure 1. Personal Information Organizing Process (PIOP) model.