CAIS Poster: Research on serendipity: The methodological challenges of time and language

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Abstract: We explore the words academics ($N = 26$) in Germany use to describe unexpected and useful experiences with information. We further report on the perceptions of a portion of the participants' experiences during an exploratory work task and a follow-up survey designed to capture reports of serendipity several days later.

Résumé:

1. Introduction

Serendipity is "an unexpected experience prompted by an individual's valuable interaction with ideas, information, objects, or phenomena" (McCay-Peet & Toms, 2015). Serendipity is an ongoing concern, as designers and developers of digital information environments attempt to provide users with not just the information they explicitly seek, but unexpected information that may prove valuable. While recommender systems, for example, were originally evaluated based on properties such as accuracy, they are now evaluated on a wide set of properties which affect user experience including serendipity (Shani & Gunawardana, 2011).

While research interest in serendipity has grown in the past decade, two methodological challenges continue to exist, which complicate serendipity research: 1) time and 2) language.

Time. Though often conceptualized as an 'event,' serendipity may not be recognized until some time has elapsed and the value of the experience is understood. Thus, serendipity is often described as a process unfolding over time (Makri & Blandford, 2012; McCay-Peet & Toms, 2015). It is difficult, therefore, to complete a single-session experimental study if serendipity is the phenomenon under investigation.

Language. Studying serendipity is complicated by the continuing evolution of the meaning of the word and its uneven application in numerous contexts (Bogers & Björneborn, 2013). In response, researchers have used alternative language to probe peoples' serendipitous experiences (e.g., Heinström, 2006; Erdelez & Rioux, 2000). Examination of the phenomenon is further complicated because it is difficult to translate the term into other languages (Merton & Barber, 2004), making it hard to compare findings across populations.

Thus, this poster has two main objectives.

1) To test a method for capturing experiences of serendipity taking time into account.
2) To examine the language German-speaking scholars utilize to describe a serendipitous experience.

2. Methods

Participants (N = 26) included German social scientists (n = 12) and computer scientists (n = 14) who were predominantly male (n = 18) with a mean age of 35. Participants completed a web-based survey that included a scenario in which a student or researcher stumbling upon something they were not looking for but that proved valuable. Participants were asked how they would describe the experience. A portion of the participants, eight computer scientists and seven social scientists, also completed a 10-minute exploratory search task on a topic related to their area of research in a social sciences or computer sciences digital library; Sowiport (sowiport.gesis.org) or ACM Digital Library (http://dl.acm.org/), respectfully. This search was screen-recorded. Post-task questions asked participants about the usefulness and unexpectedness of the information they encountered.

Fourteen participants were invited to complete a brief follow-up survey; four completed this survey one to two weeks following their original session. In the follow-up survey, they were reminded of their post-task question responses and asked, "Now that some more time has passed, could you describe the value, if any, of this experience?"

3. Findings

Time. Of the 14 participants who found (n = 10) or 'maybe' found (n = 4) something useful during the exploratory task, five (36%) indicated that they found something unexpected, three (21%) said maybe, and six (43%) did not find anything unexpected. Of the four who completed the follow-up survey, two reported the exploratory search task session had enabled them to complete their literature review more quickly. The third, a computer scientist, noted, "So far no added value for me," while the fourth, a social scientist wrote, "Not yet, as I haven't read the article."

Language. Participants (n = 20) used 18 unique words or phrases to describe the scenario of finding something unexpected but valuable. Serendipity and luck were each mentioned by three participants, eureka, snowballing, and synergy were each offered by two participants, while the remaining thirteen terms and phrases were indicated only once (e.g., coincidence, miracle, openness, surprise).

4. Conclusion

Our study tested the application of a follow-up survey several days following an exploratory search session. While the response level was low, it is evident that even after several days, the specific value of what is perceived to be useful and unexpected may not yet be known. More research is needed to test whether further follow-ups could capture evidence of a serendipitous experience emanating from a study session. Our study also revealed that a minority of our German-speaking participants used the word 'serendipity' to describe a scenario we purposefully designed to be serendipitous. However,

serendipity was one of the more popular words and others were predominantly conceptually related to serendipity, suggesting the usefulness of this type of approach to the study of serendipity across languages.

References

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