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Heidegger's Phenomenology still a "Preferred Research Approach" for User-Driven Research?

The Case of Cultural Organizations

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ABSTRACT

The phenomenology of Heidegger is still underrepresented in IS research. Therefore, the goal of this paper is to highlight the potential contributions of Heidegger's phenomenology for IS research, particularly for the analysis of IT dedicated to users needs. We suggest two complementary research perspectives with a set of questions for each: they are visitor expectations and e-Heritage Systems opportunities. The case of cultural organizations is used to illustrate these two research perspectives and the application of the phenomenological principles. It appears that Heidegger's phenomenology could become a "preferred research approach for user-driven research."

Keywords

Phenomenology, Heidegger, user, past, e-heritage systems, cultural heritage

INTRODUCTION

Since the inaugural paper of Boland (1985), has phenomenology become "a preferred approach in Information Systems (IS) research?" Even though an increasing numbers of research publications have used phenomenology for special types of analysis (e.g. Cass 1997; Haynes 1999, 2002; Introna, 2002), they are still small when compared to the publication volume of other approaches. Most of the past research looks upon phenomenology with an "inquiring system" perspective (Haynes 2002), which is especially suited for the description of social contexts and ethical issues. However, Heidegger's phenomenology in *Being and Time*, is particularly well suited for the analysis of IT dedicated to meeting user needs.

For supporting this claim, the following will address the example of user needs as museum visitors. Museum organizations may seem unusual in the IS field. However, they are of great importance for many nations for tourism. For instance, France, which is the number one cultural tourism destination, lists 1200 national museums attracting more than 70 million visitors per year (<http://www.diplomatie.gouv.fr/> accessed April 20, 2006). E-Heritage Systems (e-HS), technologies aligned with the cultural heritage environment, are flourishing and have a great potential for meeting visitor expectations (Monod and Klein, 2005). However, IS studies are still poorly represented in this area. One of the reasons may be that IS researchers have not yet identified relevant issues for research.

Furthermore, the call of paper of the "Research Methodology Track" raises the following question:

- "Which phenomenological/hermeneutical trends are the most fruitful for our field and for which kinds of research questions?"

For addressing this question, we introduce the Heideggerian phenomenology as a major a phenomenological line of thought,, along with a set of issues that could be fruitfully studied by applying it in IS research. The paper's objective is to highlight the contributions of Heidegger's phenomenology for IS research through two perspectives and it consists of three parts. . First, we introduce Heidegger's phenomenological perspective on time and a phenomenological framework for the evaluation of e-HS. Second, we propose a research area particularly concerned with the past that is the cultural heritage. Third, we suggest two perspectives and a set of research questions for each that could be investigated in future IS research.

THE PHENOMENOLOGICAL PERSPECTIVE ON TIME

Phenomenology is the “science of phenomena” (Heidegger, 1953/1996). This is also a philosophical movement that appeared in the first half of the 20th century (Spiegelberg, 1975). Phenomenology focuses on experiences of individuals. Indeed, it aims at studying “phenomena as consciously experienced” (Spiegelberg, 1975, p.3). Husserl (1936) and his student Heidegger (1953) initiated this philosophical underpinning. They encouraged researchers and philosophers to turn “To the things themselves”. Actually people should turn themselves “to the world as it is already experienced” (Ilharco, 2002, p.304). Other philosophers like Merleau-Ponty and Sartre also nurtured phenomenology with the concepts of self and embodiment (Smith, 2003). This article follows Heidegger’s phenomenology as developed in his book *Being and Time* (1953/1996).

As indicated in the title of his book, Heidegger (1953/1996) addresses the question of time and its relation to human being. Heidegger asserts that time has an ontological function since it constitutes being (Dastur, 1993). Indeed, “we are temporal beings not because we exist in time, but because time is really what composes our beings” (Dastur, 1993, p.301). Temporal beings are also open because individuals always orient themselves towards the future and the past, and the meaning of themselves is not fixed (Lyotard, 1992).

Furthermore, Heidegger, in *Being and Time* (1953/1996) takes issue with the objectivist view of history. The objectivist view of history developed by Ranke (1957) considers that the historian has a neutral role as he commits himself to divest of all personal preferences. Similarly, White (1959) explains that objects are considered as strictly material in this positivist stream. Heidegger compares Ranke’s view of the history to a collector of facts similar as an antiquarian collection piece of furniture from past eras. He criticizes the positivist trend in historical science as a “*mechanistic kind of thinking*” (Heidegger, p. 367) “*At heart they are natural scientists and they become sceptics all the more because there are no experiments.*” (p. 365).

For Heidegger, these “representational” theories of history all focus on the differences between the “historical reality” and the possibility of a science of it. However, they do not grasp the ambiguity of the term history. They seem to recognize only one meaning of the word “history” like when we say, “*this already belongs to history*”. In this figure of speech, the past is no longer objectively present or does not any more have an effect. But history has the opposite significance when we say “one cannot escape history” or that someone “makes history” and therefore will shape the future: “*Whatever ‘has a history’ in this way can at the same time ‘make’ history, in the sense of ‘Epoch making’*” (p. 347).

Finally, a fourth meaning of history is related to the conditions of human existence. In opposition to Nature, Humans are considered as beings possessing “spirit” and “culture”. These last two meanings lead to the notion of historicity, which does not apply to the past of an animal or the history of tree. Historicity is “*understanding of ourselves as historical*” (p. 18), i.e. it is the understanding that we are fundamentally historical beings. This distinguishes us from Nature. The meaning of our action, of our existence, is linked to history. Through this meaning, history lives through me and the meaning of my existence comes from history¹. When I am able to justify my action through a reference to history, this is a positive appropriation, for example I might say “Cleopatra would have done the same in this situation” or in politics “this is the way Lincoln would have handled the conflict”. I understand my being through the being of past characters, like Shakespeare in his historical plays, from *Anthony and Cleopatra* to *Richard II*.

The question of the present being is linked to and understanding of the past and the interest in gaining such an understanding prompts the human mind “*inquire into its own historicity*” (p. 18). By doing that, I can come to understand the different possibilities of existence that the historical characters may have had. The phenomenological mission of historiography is to “*disclose the silent power of the possible*” (p. 360) in order to reveal the possible existences compared to the one that finally occurred. Historicity understands the past “*in terms of its possibility*” (p. 360). According to Heidegger, “*Understanding signifies self-projection*” (p. 357)², it is a self-projection towards its “potentiality of existence” (p. 360)³. In this situation, I am an “inquiring being”⁴, I am authentic towards myself because this is the being that I am in each case, but who however keeps on investigating my possibilities of existence⁵. Therefore, historicity makes “*the universal manifest in what is unique*” (p. 360).

¹ Historicity allows a “positive return to the past possible – in the sense of its productive appropriation”(p. 19).

² “Understanding signifies self-projection upon the actual possibility of being-in-the-world” (p. 357).

³ Historiography “projects Dasein that has-been-there upon its ownmost potentiality-of-existence” (p. 360).

⁴ That Heidegger calls “Dasein”, usually translated by “to be here”, or “presence”.

⁵ The “*being which we ourselves in each case are and which includes inquiry among the possibilities of its being*”(p. 6).

The past is unique, in the sense that it will not happen again. However, historicity goes well beyond “re-enactment” or “re-thinking of an event through a trace”. In the two previous approaches, re-enactment and embodiment historiography, the past is still outside me. They lack the commitment of the self and do not help me to understand myself. They do not give meaning to my existence. In contrast, historicity reveals universal elements of the conditions of human existence. Because I can come to understand what is universal in a specific situation through self-projection into the possibilities of existence of a past character. This projection helps to understand myself as historically constituted. In addition, as a human being, I am also able to “make history”, or, at least, my own history through heroic actions, for example help a person in an emergency or grasping an opportunity “to make a difference” for the future.

In conclusion, Heidegger’s phenomenology stresses the importance of time, and more particularly of the past (with the concept of historicity), since it plays a fundamental role in beings’ life. Heidegger’s phenomenology also emphasizes the importance of Dasein or human existence and their experience. In effect, phenomenology aims at studying individual experiences. Heidegger (1953/1996) contended that human beings need action and praxis with objects (i.e., to engage with them) in order to feel closer to these things (Smith, 2003). Therefore, individuals cannot see an object or imagine it in order to understand it because it is only a “representational form of intentionality” (Smith, 2003). Thus, being able to touch things or to manipulate them contributes to a better experience and interpretation.

The following section introduces a field where these phenomenological principles could be empirically studied and fruitfully applied for improving the interpretation of cultural heritage for various types of visitor interests.

CULTURAL HERITAGE INSTITUTIONS AND THEIR MISSION

Cultural heritage institutions such as museums or archeological sites represent the main venue for conserving and displaying objects of the past. The well-known museologist Sola (1997) explains that museums “should assist people to understand the experience of the past. In its mutual relationship with its users, it should find in past experience the wisdom necessary for the present and the future”. This statement implies that the past can help to build for the present and the future. In effect, museums show visitors their past, so that they can better appreciate their present life (Anani, 2005). Therefore, museums are linked to history in that one of their principal missions is to collect and conserve the heritage of the past, but they are also turned toward the future by inducing reflection for coming generations. According to Rieu (1990), museums should try to show the future of our societies through objects of the past. Thus, providing visitors with a good experience of the past when they visit cultural heritage sites represents an important challenge for cultural institutions. Indeed, even though cultural heritage sites are evolving towards more interpretation and a focus on visitor experience, several problems remain.

Problems encountered during the visits of cultural heritage sites

First, it is not always easy for visitors to understand the purpose of an object or even to realize its historical importance. Schärer (1996) contends that information provided within museums is generally more structural (some general indications) than cultural (information on the earlier context of use). In effect, museums tend to forget the role played by the context to facilitate visitor understanding. The German philosopher Schleiermacher (circa 1810) is one of the first to acknowledge this dual facet of interpretation. The “grammatical interpretation” focuses on the context of language and the “psychological interpretation” focuses on the thinking of the author (Monod, 2004, p.119). As museums often neglect one or both of these interpretations in exhibitions, they limit the visitors’ experience of the past. In addition, some artifacts are obscure and the point of view of an expert is required (Deshayes, 2002). Therefore, even if visitors assume a more active role, they still need mediation and some support before building their own reflections.

Second, museological objects are most of the time inaccessible (i.e., they are seen through glass), so the visitor experience with them is partial. As stated by Carr (2001, p.177), “we are kept at a distance,” an attribute which forces us to imagine more than experience. *Third*, collections are presented in separate areas or organized by “silos” (Rieu, 1990). This museological organization makes it difficult to interconnect objects and give a “holistic picture” to the public (Ross, 2004, p.99). *Fourth*, museums tend to focus too much on education and not enough on entertainment (Fopp, 1997). Museums are often perceived by children as just another type of school, and visitors do not hesitate to characterize them as boring (Csikzentmihalyi & Hermanson, 1995). Hood (1983) shows that emphasizing learning can discourage individuals unsuccessful at school from coming to museums. By the same token, static images and the presence of dense texts do not help in entertaining and captivating visitor attention. Some people feel overwhelmed by texts in museums while others long for more interactive tools (Poli, 2001).

The conclusion of these four observations is that (1) the current museology does not meet visitors' needs and (2) that e-HS could enhance visitor experience and overcome many of these limitations. Consequently, the remainder of the paper is exploring some of the issues that IS researchers should try to investigate.

PERSPECTIVE OF RESEARCH #1: VISITOR NEEDS AND USER REQUIREMENTS

What are visitors' expectations toward cultural heritage? Marketing and museum studies researchers have noticed a recent interest of individuals for heritage sites (Poria et al. 2006) and more broadly an interest for the past (Liew 2005). Indeed, Poria et al. (2006) showed that the principal motivations for heritage site visits are the desire to connect with one's heritage and the will to learn more on history. Similarly, Chronis (2005) identify several benefits that consumers yield from heritage sites, such as connection with the past and identity finding. Holbrook and Schindler (1994) highlight the fact that "nostalgic bonding" is part of human beings who appreciate remembering things that belong to the past. Goulding (1999) explains that people develop nostalgic behaviors and look for experience of the past because they cannot find meaning in their contemporary life. Due to an increasing interest of people for the past and following Heidegger's ideas that time has an ontological function, it is relevant to consider experience of the past as an expectation of e-HS users.

- To what extent does e-HS enable an experience of the past for visitors of cultural heritage sites?

Another way to follow Heidegger's line of reasoning would be to pay more attention to the role of time for individuals. The dimension of time has been poorly studied in Information Systems research (Venkatesh et al. 2006). Actually, few IS research consider the role played by time and when time is taken into account, it is often presented as a contextual variable. For instance, among the few studies that include time, several correspond to longitudinal research. This type of research aims at measuring an effect through time, but time does not represent the object of research. However, Venkatesh et al. (2006) recently pointed out that time is a variable whose role is important for understanding and explaining behaviors. The authors identify three facets of time that are: anticipation, experience and frequency. These three concepts seem to account for IT user behaviors. Similarly, we believe that the Heideggerian phenomenology also offers a new perspective to study time in IS research. Thus, the following questions can be raised:

- To what extent does Heidegger's phenomenology offer another way to study the role of time (past, present or future) for IT or e-HS users?

At last, visitors of cultural sites, being also users of e-HS, they have specific expectations towards these technologies. Indeed, according to the Dicult European Report (2002), visitor expectations for cultural institutions are that they use user-friendly applications, produce simple and accessible information and relevant content, show dynamic artifacts, employ interactivity, present full-documented collections in engaging ways, and allow the creation of personal collections.

Relying on these facts, Monod and Klein (2005) developed a framework for the evaluation of e-HS user requirements. This framework proposed eight criteria to determine the level of interpretive support that technologies could provide thereby helping users improve their appreciation and experience of history. These criteria are: re-enactment, embodiment, context, self-projection, possibilities of being, historical self, inquiring being, and universality in uniqueness. However, the criteria that are the most available in current technologies are re-enactment, embodiment, self-projection and context, as shown in the evaluation of the Archeoguide Systems (Monod and Klein, 2005). Re-enactment refers to the possibility to relive an historical event in one's mind. Embodiment reflects the opportunity to have a bodily experience. Context includes all the pre-understandings that can be given to visitors in order to facilitate their interpretation. At last, self-projection refers to the possibility for visitors to project themselves into the past.

These expectations towards e-HS and their interpretive characteristics lead us to the second perspective of research that is the e-HS opportunities.

PERSPECTIVE OF RESEARCH #2: E-HS OPPORTUNITIES

Technologies dedicated to museums are growing at a fast rate. Two types of technologies can be distinguished: devices and applications. The most common devices available for museums are mobile devices like Personal Digital Assistant, mobile phones, audioguides, I-Pods and MP3; while fixed devices are touch-screen kiosks, computers, televisions, video walls and large screens. The applications include video, audio, virtual reality technologies (like 3-D, augmented reality and hybrid environments), haptic applications and networks (like Internet, GPS and UMTS).

However, though a rich variety of technologies are available commercially, cultural institutions are still relying on traditional technologies and are loathe to equip themselves with more innovative technologies (Bannon et al., 2005). For instance, haptic

technologies (which give the ability to visitors to feel and manipulate artifacts), are mainly present in specific institutions like university museums (Brewster, 2005), whereas text panels and audioguides still represent the norm (Bannon et al., 2005). What is paradoxical about the prevailing situation is that new technologies, albeit largely unused, do have a good potential to enhance visitor experience of the past.

Haptic technologies contribute particularly to embodiment in that they enable visitors to have a sense of the “touch” of artifacts, as well as to manipulate them (Brewster, 2005). Joy and Sherry (2003) show that museum visitors appreciate the possibility to engage bodily with artifacts, as it leads to a better comprehension of works. In the same way, Hall et al. (2001) interviewed museum experts who asserted that touching artifacts enables visitors to better understand the history of an object. Visitors can, for example, get insight in how objects were used in the past by touching them.

Virtual reality technologies contribute to several of the eight criteria identified by Monod and Klein (2005), namely re-enactment, embodiment, context and self projection. Indeed, these technologies can represent “items which have not survived, creatures which are extinct, the visions of great men which were never realized or even the imagination of artists and thinkers” (Fopp, 1997, p.146). By displaying event from the past, virtual reality helps people to relive historical events in their mind, so virtual reality contributes to re-enactment. Furthermore, the “first-person perspective” (Lok, 2004, p. 50) enables visitors to feel more concerned by what they see and so to have a bodily experience as well as to project themselves in history. Nevertheless, as stated by Monod and Klein (2005, p.2875) immersion in a virtual context does not always correspond to self-projection. As a matter of fact, the virtual reality system should help to reach both a contextual and psychological interpretation in order to have self-projection.

With respect to self-projection, the MUSE project (Scagliarini et al., 2001) uses virtual models to display the ancient site of Pompeii. This project is particularly interesting because visitors are offered not only a virtual reconstitution of the past buildings, but also a reconstruction by the experts. The members of the MUSE project believe that such transparency can encourage visitors to undertake an active role of reflection (Scagliarini et al., 2001); this promotes context given to visitors. Additionally, a new type of virtual reality technologies is appearing. It creates hybrid environments or mixed reality, an experience where visitors can look at real and virtual objects in the same time (Lok, 2004, Sparacino, 2004). It can be supposed that this technology will reduce the distance between past and present objects by allowing visitors to directly compare objects belonging to two different eras.

In the exhibition “Puccini Set Designer”, Sparacino (2004) designed a multimedia catalog in order to give background and tutorial aids to visitors of the museum. By providing maps, interviews and in-depth studies to visitors, this technology contributes to the Heideggerian category of context. In the same way, mobile devices enable visitors to have contextualized information (Watson et al., 2004; Hsi, 2002). For instance, the RFID system developed at the Exploratorium gives the opportunity to visitors to read information along their walk, but also to retrieve information on Internet after their visit (Hsi and Fait, 2005).

Table 1 summarizes the advantages of different e-heritage systems for a phenomenological experience of the past.

Technologies	Opportunities	References
Virtual Reality	Enables visitors to feel more concerned by what they see and so to project themselves in history.	Lok (2004), Scagliarini et al. (2001)
Haptic technology	Enables visitors to have a sense of touch of artifacts (embodiment), as well as to manipulate them Visitors can engage bodily with artifacts and so get insight in how objects were used in the past.	Brewster (2005) Hall et al. (2001), Joy and Sherry (2003)
Multimedia catalog	Gives background and tutorial aids to visitors.	Sparacino (2004)
Mobile devices	Provide visitors with contextualized information.	Watson et al. (2004)

Table 1. Summary of some e-HS advantages for visitors of cultural sites

Technologies have undeniable advantages for cultural heritage institutions as briefly shown in this section, but their effects are still not well-known. Indeed, the Institute of Museum Library Services (2006), the primary source of federal support for American museums and libraries notes that museums long for research on technologies used by visitors. Therefore, another way to follow Heidegger line's of reasoning would be to study e-HS interpretive characteristics, meaning the characteristics of these technologies centered on visitors and their interpretation. The following question can be raised:

- Which technologies are the most efficient for and the most appreciated by visitors of cultural institutions?
- What are the reactions of visitors who use e-HS in cultural institutions: affective and/or cognitive reactions?

What is clear also in the potential use of technologies in museums is that technologies providing advanced criteria of the past, like those suggested in Monod and Klein's (2005) framework, are rare. Possibilities of being, historical self, inquiring being and universality in uniqueness are the less represented in technology design. Furthermore, as few e-HSs have all the characteristics described in the phenomenological framework, museums could combine multiple e-HSs to meet the overall objective of full coverage of the criteria (Monod et al., 2006). For instance, project SHAPE, begun in the United Kingdom, fulfills several of the Heideggerian criteria but these span different technologies, specifically. RFID tags, 3-D historical reconstitutions, simulations, hybrid artifacts and interactive installations (Bannon et al., 2005). The combination of these different technologies in the same visit leads the visitor to an immersive experience and a better understanding of the past. In addition, Sparacino (2004) showed that by combining multiple technologies in the same exhibit, individuals feel that their visit become more active and enjoyable. We propose the following research question:

- Does a combination of these technologies in a same place lead to a "multiplier effect" of visitor satisfaction?

At last, more research is needed in order to translate the phenomenological criteria for evaluation of e-HS into technical and practical criteria for design. Consequently, we pose this question:

- What kind of IS development methods could be used in order to develop interpretive systems that would fulfill the expectations of cultural heritage visitors?

CONCLUSION

In conclusion, Heidegger's phenomenology that puts the emphasis on time (past), human existence, and experience seems to be perfectly appropriate to the study of cultural heritage institutions, whose goals are to display past heritage and to focus on visitor experiences. However, we have seen that to date these objectives have hardly been reached. Indeed, the museology and the technologies provided to visitors are far from users expectations because of insufficient reflection of IT/IS requirements for visitors of cultural sites. Monod and Klein (2005) first approached this issue by developing a phenomenological framework to evaluate the interpretive potential of e-HS by focusing on the IT capacity to meet visitor expectations. This paper continues this work by highlighting two interesting perspectives for IS research based on Heidegger's phenomenology. We do not see these perspectives as being opposed; on the contrary they are closely related and even interdependent.

"Has phenomenology become a preferred approach in IS research?" The answer to this question is "not yet", but the intrinsic potential of phenomenology for user-driven research may help it to qualify as one. Actually, phenomenological principles invite us to look at technologies as interpretive support of type of being-with-others that is more centered on authentic user needs. In addition, to the questions raised by the "Research Method Track", we conclude that the Heideggerian phenomenological trend is one of the most fruitful for our field. Indeed, users have been at the center of several studies in the IS field, more particularly with the evolution of Human-Computer Interaction issues (Banker and Kauffman, 2004). Consequently, phenomenology appears as an interesting theoretical basis for this seminal research stream in IS.

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