The Information Culture Challenge: Moving Beyond OAIS

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ABSTRACT

One of the major challenges involved in digital preservation is to understand what the problem of preserving digital objects is in all of its diverse, idiosyncratic instantiations, rather than to look for uniform, technically feasible, economically sustainable, and standard-compliant solutions. We argue that by using a situated, descriptive approach to the investigation of actual environments where information is created, managed and stored, the socio-cultural dimension of digital preservation can emerge and be used as a basis for action. This approach provides a way to move beyond the constraints of the Open Archival Information System model.

Keywords

Digital preservation, Information culture, Organizational culture, Genre theory, OAIS.

1   INTRODUCTION

Digital preservation and digital curation efforts to date have focused largely on the development of standards, models and universal strategies. The most notable of these is the Open Archival Information System reference model [4]. Not surprisingly, the various communities involved have strived to develop 'solutions' that would ideally be technologically neutral, widely applicable, and cost-effective. Standardization and uniformity are basic ideas that have ever since been guiding those communities' efforts, as ensuring accessibility and usability of information objects and systems necessarily involve degrees of interoperability and universality. However, it seems to us that the domain-independency goal has been pushed too hard to the detriment of getting an understanding of the specific needs of each environment. A prescriptive attitude (a.k.a., requirement approach) is another characteristic of research in digital preservation. This is again a way of moving away or distancing ourselves from 'what goes on' in actual situations and focussing on the design of solutions that, in their coming close to 'perfection,' tend to depart more and more from the real-world problems faced by real organizations and individuals [6].

As individuals educated in the records management and archival discipline, we do subscribe to the values embedded in these standardized approaches; however, we at the same time recognize that as much as the term 'record' often means different things to different people, the notion of preservation is anything but neutral or univocal. We argue that a descriptive and situated approach, an approach that is sensitive to the cultural variations and the 'centrifugal impulses' [1] that exist between and within any human groups, should become a priority, if digital preservation is to serve the diverse needs existing in society – not just the needs of particular professional communities.

2   CRITIQUE OF CURRENT APPROACHES

Current preservation frameworks such as the OAIS take for granted but ignore the nuances of specific socio-cultural conditions of records creation and use. The consequences of this neglect could be one factor in the less than satisfactory outcomes experienced by the pioneers of digital archives [5, 9]. In such frameworks, if culture is considered at all, it is mainly understood either as an abstract concept or as a barrier to the implementation of digital recordkeeping initiatives. The ideal seems to be an organization without culture (i.e., without particularities that make it deviate from the norm). This would make the implementation of systems and strategies straightforward.

We believe that the question is not so much one of labelling cultures as 'good' or 'bad', or identifying barriers in order to overcome them, because this way of thinking implies that there is one best way of doing digital preservation that applies to all organizations and oversimplifies the complexity of the situation.

By drawing a parallel with theories of linguistics, current approaches to digital preservation seem to focus on the Saussurian *langue* (i.e., "language as a self-sufficient system of signs") while leaving aside the *parole* (i.e., "speech as the situated realization of the system by particular speakers") [12, 2]. Pierre Bourdieu objected to structuralism by saying that "this kind of distinction … leads linguists to take for granted an object domain which is in fact the product of a complex set of social, historical and political conditions of formations" [2]. Similarly, all our models and standards only scratch the surface of the object domain of digital preservation. New tools are needed to capture actual instantiations of the processes involved in the creation, management and storage of digital objects and their deep meaning.

3   THE CHALLENGE

Investigating 'information cultures' – that is, "manifestations of organizational culture that portray values and attitudes to information in organizations" [6] – seems to be a first, necessary step to start building a socio-cultural understanding of digital preservation. The theoretical and methodological tools that can help in this complex endeavour may be found in archival science (including records management), organization theory, knowledge management and information management, the socially-aware stream of IS literature, and genre theory.

Information culture preoccupations emerged in the mid 1980s in the context of the failure of IS projects. These failures were often the expensive result of a misfit between the culture embedded in the technology and that of the adopting organization. It became clear that a technological infrastructure for flow and sharing of information is not enough to ensure success. According to some studies, successful technology assimilation requires either the technology to *fit* the organizational or subgroup culture, or the culture to be *shaped* to fit the behavioural requirements of the technology [3]. In any case, it is clear that values are embedded in both the information created and the associated technology, and that these values are assumed in the underlying work practices that the IT is meant to inculcate.

Most IS research has investigated the cultural factors influencing technology development, implementation, adoption, use, and diffusion. Only relatively few studies have addressed the cultural transformations engendered by the continuous use of a given technology. Leidner and Kayworth suggest that studies need to move beyond trying to use cultural values to predict whether or not a group will adopt a new technology to understanding the dynamics of adoption [7]. Furthermore, Ortiz de Guinea and Markus suggest that over-emphasis on reasoned action theories by IS scholars has resulted in imperfect understandings of the complexity of human behaviour [11].

The implications for preservation are clear. Values, attitudes and behaviours all come into play in a discordant cacophony which challenges the appropriateness of our 'perfect' solutions. We argue therefore that identifying the components of information culture of specific workplaces is paramount to enable the development of a culturally sensitive digital preservation agenda. Because information culture is inextricably intertwined with organizational culture, a study of the former cannot be carried out without analyzing in detail the cultural levels that make up the latter (i.e., supranational, national, professional, corporate, and group culture) [7] as well as the factors that trigger such cultural characteristics. We have previously argued [10] that these social aspects of communication are often inscribed in the information objects themselves. This brings genre theory to the forefront as a lens that can be used to facilitate the capture of the situated meaning of texts and con-texts.

4   CONCLUSION

Existing models and approaches to digital preservation have enabled much progress to be made in developing the necessary technological strategies and systems. OAIS in particular has enabled attention to be focused on the essential functions necessary for successful digital preservation activities. However, the messy and difficult factors that people bring to the mix have only partially been taken into account and the risks involved have been over-simplified. By employing a context-specific, empirical approach, and by leaving aside any prescriptive purposes, our proposal to focus on the socio-cultural characteristics of real-world situations in order to identify the attitudes and values that people ascribe to information offers an innovative and promising approach. Our purpose is ultimately to bring to light the different needs of all stakeholders involved and to start mapping the digital landscape. Understanding and applying the information culture concept will enable the development of a culturally sensitive framework for digital preservation.

The envisaged framework will celebrate diversity and idiosyncrasy of approaches. It will not assume that the 'right' way of doing recordkeeping should be imposed in order to correct 'deviating practices' – which we would rather call 'innovations.' Actual uses of information artefacts, perceived values, and concrete appropriations of relevant technologies will be examined in depth, so that individual, specific, socially and historically situated 'preservation cultures' can be described and used as a basis for action.

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