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Orientation Vs Accommodation —New Requirements for the HCI of Digital Communities

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1 Introduction

We focus on a single qualitative aspect of digital communities. One that we see as important yet ignored. The aspect we have in mind we baptize as *accommodation*. With this word we wish to draw attention to subjective factors of digital communities directly determining attitudes of accepting/rejecting ones environment.

2 Digital communities

There are many ways to define the term virtual, or digital, community (Mynatt et al 1997), e.g., by geographical area, social norms or types of social interaction. Our working definition is that a digital community must have at least these two important qualities:

- Being digital
- Having accommodation-like qualities

By accommodation-like qualities we mean that the digital community must be experienced as a place that can be visited. Accommodation-like qualities indicate a mental stance rather than a physical fact.

3 Hierarchies as logical scaffolding

Hierarchical hypermedia structures in one digital community project–WebHouse–were found to be unpopular among users (Hedman 1997), but isomorphic de-compositional structures received positive regard when deployed in the Learning Tree digital library (Hedman and Jacobsson 1998). Early investigations suggest that these isomorphic hypermedia structures performed functions that were differentially perceived in the projects.

In the WebHouse project we developed an application prototype that allowed users to generate their own web-based organizational spaces consisting of web pages. The structures were hierarchically arranged into organizations, groups, and individuals:

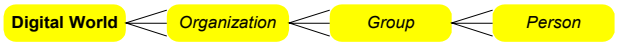

Figure 1 WebHouse Structure

Users interacting with this prototype were in general critical to its rigid hierarchical structure. As a result we were driven to rethink the entire project. In Learning Tree an analogous hierarchical structure was received with positive regard:

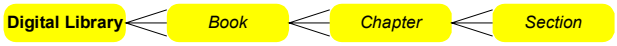

Figure 2 Learning Tree Structure

Thus the same logical ”scaffolding” was deployed in both instances: dynamically constructed hierarchical hypermedia structures. In addition, the user interfaces were similar. What accounted for the differential perceptions of the underlying scaffolding in each case?

We suggest that there is an obvious answer to this question. In the first case the users saw themselves as acting in a digital community, while they did not do so using the digital library. On the one hand, a *digital library* is something you primarily use to get information – the primary process is *orientation*. On the other hand, a *digital community* suggests something different. A digital community suggests a place of habitation – the primary process is *accommodation*.

4 Orientation

Orientation means knowing ones field of possibility within a particular software artifact. Classical HCI has focused almost exclusively on this area (Schneider

1998, Dix et al 1993, Baecker et al eds 1995). The movement from text based to graphical user interfaces can largely be seen as an effort to reveal the field of possibilities inherent in software artifacts. The interface is a mediator of functions and the functions define the field of possibility. Another way of putting this is to say that much of HCI efforts have been aiming at greater *perspicuity* for the user. The workings of a computer artifact must stand out to let the user *orient* herself within its field of possibility. The workings should be self-evident. However, in examining users in digital environments, we run into difficulties stemming from human subjectivity.

5 Accommodation

A digital community carries connotations. One connotation that is crucial is that of being a location, a place in time and space like any other place. Every place we visit makes an impression on us that goes beyond functionality and perspicuity. This is most evident in the cases of architecture and interior design, were the concept of impression management is systematically explored. Living accommodations can express a wide range of personal styles, they can for example be:

- Bohemic
- Practical
- Impressive

They also express esthetical and cultural concern and can be part of traditions:

- Gothic
- Roman
- Victorian

This latter list can naturally be extended almost endlessly. But we think the point we want to make is obvious: if choice of accommodations is such a complex issue involving mainly personality and culture, then these factors are similarly complex in digital communities. Unless of course one wishes to claim that accommodations can only be found in the physical world, which seems like a limited perspective in our minds.

6 Investigating new requirements

We plan to investigate further the accommodative aspects of digital communities, which we see as potentially very interesting. These investigations can be understood as following a more subjectively oriented approach to HCI (Laurel 1997, Nardi 1996, Moser 1996, Hedman 1996). We are also inspired by

Winograd and Tabor (Winograd and Tabor 1997) who examine software design from an architectural perspective.

On our proposed model we measure both orientation and accommodation, e.g., on scales ranging from 0 to 1. How well a user can orient herself and make use of the functional and informational aspects of a computer artifact is measured by the orientation index. The acceptance of the artifact as an electronic place is measured by the accommodation index.

Using this proposed model we aim to discover sets of predictor variables for orientational and accommodational attitudes.

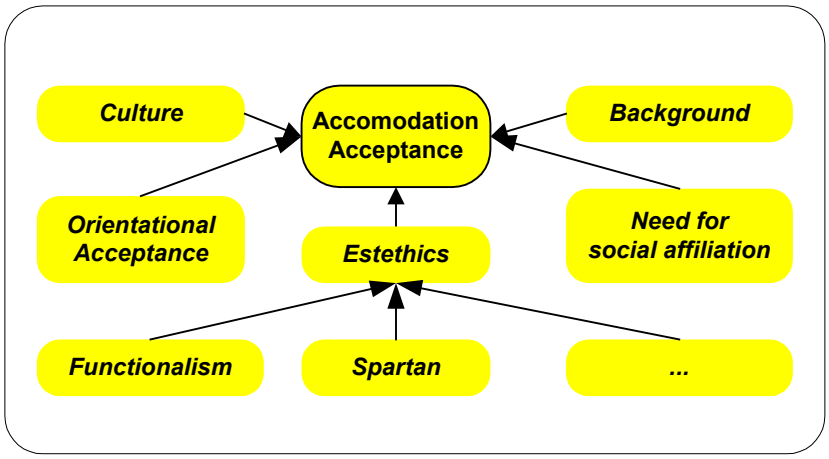

Figure 3 Accommodation Acceptance

We plan to explore these questions and others as we study users of our Learning Tree digital library[i] and users in our ongoing digital community's projects[ii].

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[i]The setting is students using Learning Tree during a course at Stockholm University. The project is sponsored by the Graduate School for Human Computer Interaction in Sweden.

[ii] Digital Worlds on the World Wide Web – Center for user oriented design at the Royal insititute of Technology, Sweden.<