Chapter 65
Reframing Dichotomies:
Human Experiential Design of Healthcare Technologies

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ABSTRACT

The aim of this chapter is to propose a new way to meaningfully bridge the dichotomy between technological and human concerns in the context of E-health systems. We see 'Design' as having the responsibility to ensure that humans can fulfill themselves in the world of things (or technology). First, this chapter raises issues surrounding human-centered design of E-health, caused by three major dichotomies which create imbalances that have caused a lack of true human-centered-ness: (1) the human-user dichotomy, (2) the virtual-physical dichotomy, and (3) the experiential-practical dichotomy. Second, this chapter reframes a categorization of customer, user, person and human, which allows us to discover new aspects of 'humans' and of true 'Human-centered design'. Third, the concept of Tangible Presence in Blended Reality Space, an emerging integration of HCI concerns and Mediated Presence research, is introduced. Finally, the author proposes a new way of approaching human-centered design, what they call Human-Experiential Design, through which the experiential-practical dichotomy is effectively blended. The author believes that this view will be significantly important in attempts to go a further step in the development of better E-health, capitalizing on seamless combinations of the virtual and the physical in blended reality. Such blends will release human beings from the strain that existing dichotomies bring.

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INTRODUCTION

What comes to mind with the term 'Design'?

René Descartes established a period of thinking about cognition that separated mind and matter, cognition and action. There is, by this view, a subjective world and an objective world, psychological phenomena and physical phenomena, and so on. This Cartesian view underlies much of science, and has allowed vast areas of understanding of previously mysterious phenomena to develop and flourish. On the other hand, the dichotomy has brought undesirable effects, and is even reflected in various aspects of so-called 'Human-centered design'.

From a Cartesian perspective, design in general is likely to be interpreted as a way to create decoration to adorn outer surfaces, producing transitory feelings without the need for any logical thinking. Because 'Designing' is an activity of craftsmanship that deals with internal images and subjective sense, it also contains aspects which are hard to illustrate through theoretical points of view. But if design is about touching people's heartstrings, it comes to fruition by way of a process that interweaves the sensitivity to and the logic of properties of material and colors (subjective phenomena), functionalities and usabilities (objective phenomena), amongst many others (Walls, J.G et al., 1992; Hevner et al., 2004). In other words, it actually implies that the senses and logic, the mind and the body, the surface and the structure affect each other. Even though it is not really possible to dissociate them, we are familiar with thinking about the origin of these matters as a dichotomy.

Liberal arts, visual arts, music and literature are essentially human activities that rest on the assumption of subjectivity. On the other hand, in the more mechanistic objective view of the universe, the whole world is seen as a material system that mechanically develops according to natural laws. Although the latter brought the apparent progress of recent technological change and economical opportunities (and pressures) into our life, it also brought a gap between the human scale and the industrial scale. That may be a sign of success for the human race as a whole (or not), but what have we lost in achieving this? Even though human life is experientially delicate and aesthetical, the industrial scale of forcible power within the economy and technology exposes human life to the intensity of rapid and accelerating world change. Also the gap between the human scale and industrial scale replaces design's deeper role with that of a presentation tool for introducing the novel fruits that technology brings.

Various resulting and unbalanced dichotomies raise serious concerns surrounding the concept of design (see Table 1). Human beings, and perhaps especially the vulnerable, the elderly and the socially handicapped, have become increasingly dissatisfied with their incomplete environment. We believe that they should no longer be expected to tolerate the pain that much current design of technology brings.

Essentially, no human being can be formalized. However, in our current recklessly progressive industrial era, human beings have been seen as formalized groups of user/customers with certain objective statistical characteristics. People struggle to understand and use computers, mobile phones and other embedded computing devices, whose designs are still largely based on the formalization of human cognition of the world. The

Table 1. Examples of dichotomies

Subjective----------Objective
Mind----------Body
Liberal Arts----------Natural Science
Human/Person----------User/Customer
Internal----------External
Implicit----------Explicit
Virtual----------Physical
Experiential----------Practical
Human-Experiential Design----------User-Experience Design