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Human Computer Interaction and Web Design

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Abstract

Two previous experiments were conducted to measure the human behavioural styles with different technology products which are unfamiliar to the experiments' participants. The findings from these experiments are aimed to gain more understanding of how people will respond to the new technology products and the trend of the interaction between human and the computer. The results from the experiments may be helpful in future web design to make websites more interactive with users. This report outlines the experiences of participating these two experiments, the differences between them and my opinion of the relationship between Human Computer Interaction(HCI) and Web design.

Introduction

With the development of technology, high-technology products such as computer and smartphones have become more and more important in our daily life. In order to make the user experiences of these products better, the study of HCI is important. We will describe the experience from two experiments and discuss the relationship of HCI and wed design below, before drawing a conclusion.

Background

Human–computer interaction (HCI) researches the design and use of computer technology, focusing particularly on the interfaces between people (users) and computers.[1] The purpose of these two experiments is to study the human reactions of various computer displaying components.

Experiences in primary experiment

In the first experiment, I was asked to do the experiment in a room with consistent environment and experimental materials. Firstly, I read a instruction about the experiment and its requirements. Then Galvanic Skin Response (GSR), disposable Electrocardiography (ECG) and Blood Pressure (BP) sensors were attached to me. Next, the eye tracking camera was calibrated to track my eye gaze. I was then notified to read the text content displaying on the monitor. In the reading process my eyes started to feel tired and dry while gazing at the screen. After several minutes of reading, I was asked to do an assessment. The whole experiment lasted about 30 minutes in total.[2]

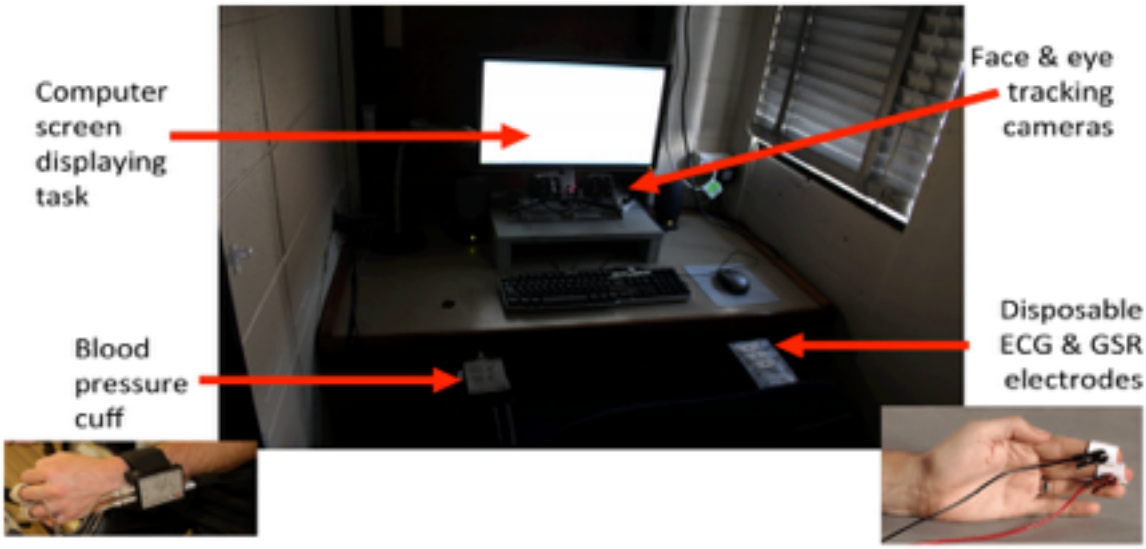

Figure 1: The experiment materials for primary experiment

Differences between primary and secondary experiment experiences

For the second experiment I was given two eReaders to study the user experience of them. We conducted the experiment during the lab session, so I felt much relaxed compared to the first one. I was asked to finish a list of tasks with eReaders and comment on each task. This time the tasks involved reading on eReaders. However compared to the monitor used in the first experiment, reading on e-Ink display makes me feel much better. This is because reading on eReaders are more like natural readings, the screen reflects the light from other sources to make the contents visible. The eReaders I tested were type R and type C, both were amazon kindle devices. Since they were tablets, I could read the contexts on screen more flexibly compared I gazed a fixed position screen in the primary experiment. [3]

HCI and Web design

From these two experiments, I gain some new ideas of how one should design the web. For the same content, different ways of showing or displaying it may result in a completely different impacts. A more user-friendly way of showing contents may result in a much positive impression of the website to the users. As a front-end developer, my job is mostly related to render the JSON data in the browser. For example, the JSON data may be some strings of weather information from the server. I may inform the users by directly displaying the text of weather information on the website, or I could render different weather animation in website based on the data from server. Both ways present same amount of information, but user may prefer to check the weather information on the second website in the long term. Moreover, from the experience of secondary experiment, I am feeling that portable devices may be even more popular in future. Therefore, the concept of responsive web will be more important in web design in future. The way of HCI in web may also change in future as portable devices tend to have touch screens with them, so the interaction may change to touch, hold, gesture or even shake the phone compared to traditional ways like click, scroll and type.

Conclusion

From the experiences of two experiments I think that HCI plays a more and more important role of designing new technology products and it may significantly change the life style of people in future. HCI plays a great role in user experience in web design too. However, the web designer may design the features, but he may not be able to design the way of using it by users.

References

[1] Human-computer interaction from Wikipedia, http://en.wikipedia.org/wiki/Human%E2%80%93computer_interaction

[2]Nandita Sharma and Tom Gedeon, 2015, Extracting a Person's Behaviour Patterns towards Different Types of Content

[3]Tom D. Gedeon, Ujala Rampaul, 2015, Popular eReaders