Course Cognition and Emotion 2015-2016

Informatiekunde bachelor

Assignment week 3: Perception, attention and emotions

Practical

- work in pairs
- use the template provided below
- the complete report will be approx. 3 - 4 pages long
- use the literature for this week (Matlin Chapter 4), the references to literature in the slides of 23/11, the references in this assignment and find your own scientific literature
- send your results before Friday 27/11, 24.00 hrs
- by mail, to IKUCognEmo@gmail.com
- include in the subject of your mail “Assignment 3” and the name of your student assistant.

Introduction

In this assignment you are asked to develop three design guidelines that support interface designers to consider user emotions, when users’ perception and attention are important for satisfactory use of the application.

Emotions influence our perception and attention. Some views:

- Emotions direct and focus attention on important needs and goals; anxiety narrows attention. When people are afraid or anxious, they focus on what they are afraid of, or on safety, and disregard other things.
- Attention is greater to thoughts and stimuli that have relevance to the current mood state. Our current moods and feelings lead us to perceive emotion-congruent objects and events, thus prolonging our experience. According to Niedenthal & Setterlund, moods and emotions can redirect perception to objects and events that are relevant to current feelings.

In lab experiments effects are shown in for instance dichotic listening tasks: in state of fear attention is drawn away from the message the participant should track, to words presented to the other ear that are threatening (“death”, “blood”). In emotional Stroop tasks, the slowing of colour naming is greatest with words that correspond to the subjects’ greatest anxiety.

Interface designers should be aware of these effects so they can draw users’ attention to the important elements of an application; even if their attention is narrowed by for instance anxiety; or if their attention is distracted by too much information in the interface or in the environment. Design guidelines can help designers to do this efficiently.

Consider the following options:

- Develop guidelines to overcome negative effects of emotions (especially the narrowing of attention when an individual suffers from anxiety or stress);
or develop guidelines for the use of emotional cues to draw the attention to important elements in an interface or a device. An example is a happy scene or sound to encourage users to explore a specific part of a website.

A third option is to design guidelines to direct the attention away from the application to events in the environment. This may be important in the use of apps in traffic, when supervising children in a playground or at the beach, etc.

Select a specific type of application, for instance:

- Public transport planner apps (also to be used on a crowded railway station, when users are in a hurry, have to watch their luggage and listen to information coming in at the same time; so a multitasking scenario);
- First aid apps (typically used in stressful circumstances);
- Digital learning applications for secondary school pupils, teaching subjects such as history and economy (think of 14 year olds who have difficulties to stay focused and are bored quickly);
- Webshops (that try to enhance the mood of customers so they stay on and buy more);
- News sites;
- Or any other category that you think is appropriate.

In these applications, how can a designer draw attention to important elements/events in an interface?
Or conversely, how can a designer support the user to direct attention away to the environment, so away from the interface?

What is known on the effect of emotional stimuli/cues?

Objectives of the assignment

- learn how to conduct an effective literature search in an unfamiliar and quickly changing field;
- help you to go through the exam literature with more focus and engagement;
- encourage you to actively make the connection between cognition, emotion and HCI;
- make the translation from theory to practice;
- prepare you for the project assignment in part 2 of the course;
- practice accurate writing.

Grading criteria

1. Clarity of the presentation and convincingness of the guidelines. The guidelines should be relevant for the application, supported by theory and if possible by evidence from experiments (described in literature).
2. Adequate references to literature
3. Quality of the text.
4. Depth of discussion.

Important:
Plagiarism is the copying of another person’s documents, ideas or lines of thought and presenting it as one’s own work; this includes copying of other students in the course. So be original in your work.
Literature
For inspiration you can use:
Weinschenk, S. (2011), 100 Things Every Designer Needs to Know About People;
However, your report will refer to scientific literature. For instance (but also find your own literature):

Template for the assignment

1. Describe the problem
Why is perception/attention an issue in the application you selected? Describe the users, the context of use, the tasks they conduct with the application and their objectives.

2. Describe the three guidelines
For each guideline, describe:
   a. The guideline itself;
   b. The problem it is intended to solve or prevent; or the goal it is intended to achieve;
   c. The way the guideline will achieve it; you can also use drawings or images to illustrate;
   d. The theory on which the guideline is based. Refer to scientific papers and books; explain the underlying principle in your own words.
   e. Any existing examples that the guideline would be effective.

3. Your evaluation of this topic
Was it difficult to find relevant and recent literature? In the end, how did you succeed? (using specific search engines, exploring certain journals, etc.)?

4. The list of references in APA format