Seminar #3
Title: Design Exercise - Knowing What To Do
Week of Feb. 3 2020

Introduction

Good interfaces ensure that the user can not go astray, by limiting the choices or by drawing on the acquired knowledge which the user possesses (Chapter 3). In addition the application of constraints, affordance and visibility can greatly improve the usability of a design (Chapter 4). These criteria are then amalgamated into user centred design.

Summary

Chapter 3 of Norman talks about different forms of knowledge representation. The more tangible forms of knowledge deal with the information the user can extract from the environment and from life experience. These experiences constrain our actions.

Chapter 4 of Norman describes a multitude of criteria one can use to impose constraints onto a system. These constraints perform their function by limiting the choices one can make, or by limiting the choices available to the user. Constraints impose cues which allow the user to assess the operation of the artifact. In addition, the visibility and affordances discussed in earlier seminars also provide clues to the use of an artifact. We say these constrain the system, to hopefully a small finite number of obvious choices.

Objective

Become familiar with how knowledge is represented, and how this knowledge can be used to better enhance the usability of an artifact. When dealing with artifacts, try to understand what knowledge must be represented to achieve good usability. Furthermore, identify constraints that the system imposes to restrict the selections to valid choices. Start by examining an existing GUI as directed in the submission section of this seminar.

Readings

- Chapter three "The Knowledge in the head and in the world" of Donald A. Norman's "The Design of Everyday Things".
- Chapter four "Knowing what to do" of Donald A. Norman's "The Design of Everyday Things".

Submissions 

Using one or more existing software based user interface from anyone of the multitude of GUI systems. Keep the scope small enough to ensure completion. Be prepared to discuss the constraints, which are imposed to guide the user or at least help the user stay on the correct path. When you attempted to use the interface, what problems occurred and how could they be corrected by the use of constraints (Physical, Semantic, Cultural, Logical) or Knowledge representation. For this exercise it would be best to choose a poor interface rather then a good one. Be prepared to discuss various types of knowledge representation. If you find an interface with a unique type of representation be prepared to show screen shots and explain this representation.

Marking

Marks will be awarded for presentation, preparation and participation in the discussion which exhibit emulsion into the subject matter. Students who do not come prepared can expect a low participation mark.