Second Reading: Donald Norman

1. Define an Everyday thing and constraint. Provide several examples.
2. Define an affordance and provide examples.
3. Explain what mapping is and give examples.
4. Describe a good design of computers according to affordances, mapping and constraints.

1. Everyday things are objects that make up you everyday life. As the book states, books, radios, kitchen appliances, office machines, and light switches. Poorly designed objects can be difficult and frustrate to use, it is this that makes up constraints to the person. The book gives an example of this through the use of the hold button compared with old telephones to new ones. With old telephones there was a specific button that lit up when pushed to indicate that the person was on hold. With new phones the button was not there or you had to do a series of button to put the person on hold. Another example of constraint given by the book was how “simple home appliances stoves, washing machines, audio and television sets look like Hollywood’s idea if a spaceship control room.” This was due to the designers spending more time on the technology of the product then use and functionality of the product. The book states that it’s like a catch twenty two because if the people keep buying the product that is too complex then the designers will continue to design products that have no useful functionality to the everyday person.

2. Affordance defined by the book as, to the perceived and actual properties of the thing, primarily those fundamental properties that determine just how the thing could possibly be used. You would take an object such as wood and make furniture, frame of a house, make a fire out of it. You don’t think of wood when making a car. Another example stated by the book is that, knobs are for turning. Slots are for inserting things into; balls are for throwing or bouncing. When affordances are taken advantage of, the user knows what to do just by looking: no picture, label, or instructions, the design has failed. Affordance need to be object that can be used without words. Light switches are one such thing, by flicking the switch up you know it will turn on a light. Key to a car you know that having keys will open a door.

3. Mapping is the relationship between two objects. As stated in the book, Natural mapping by which I mean taking advantage of physical analogies and cultural standards, leads to immediate understanding. The book gives examples of knobs, cars, and switches. With knobs when you turn it clockwise things tend to increase such as sound and light. Cars very good mapping of relationships, the car steering wheel you turn it counterclockwise you turn left. Key starts the car, signals are located on the left of the steering wheel, and dashboard indicated the instrument panel. Switches often turn thing on raising it or flicking it up, doing the opposite turns thing off. Mapping fails when you have to do a complex series of events to get an action. When dealing with phone operations, such as having to press a set of numbers to get a person on hold or to forward the call. When the process becomes redundant or confusing the mapping relationship becomes flawed.
4. A good design of computers according to affordances, mapping and constraints can be challenging. As the book states, as technicians become more competent and an industry matures, devices become simpler, more reliable, and more powerful….industry has stabilized, newcomers figure out how to add increased power and capability, but always at the expense of added complexity and sometimes decreased reliability. To manage the complexity of the design of the computer makes it more affordances. The mapping of the computer needs to be simple for the user, it need to have universal icons that the user would like to use. For example if the person wants to type show an icon in the desktop of a typewriter. You need to have setting on the computer that a person can switch between the levels of the person using it. A beginner would see lots of universal icons, then an advance user where the person could use more complex order of operations.