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**UX – HCI Waves Design Essay**

In many ways the most creative, challenging and under-appreciated aspect of interaction design is evaluating designs of people. The insights that you'll get from testing designs of people can help you get new ideas, make changes, decide wisely and fix bugs. One reason I think design is such an interesting field is its relationship to truth and objectivity that surrounds us. I find design fascinating because we can say more in response to a question. Like how we can measure success, it's just personal preference or whatever feels right. At the same time the answers are more complex and more open-ended, more subjective and require more wisdom than just a number like seven or two.

It can be difficult to tell how good an interface is until you've tried it out with actual users and that's because clients, designers and developers may know too much about the domain and the user interface or have acquired blinders through designing and building the users interface. At the same time, they may not know enough about the user’s actual tasks and while experience in theory can help, it can still be hard to predict how real users will act with your interface.

The value of having a broad toolbox of different methods can be especially be valuable in emerging areas like mobile and social software where people's use practices can be particularly context dependent and also evolve significantly over time in response to how other people use software through network effects, etc.

one way to learn about the user experience of a design is to bring people into one place or potentially your office and have them try out the interface. We often call this process usability studies. The process of watching someone use an interface is a common Practice in HCI. This basic strategy for traditional user centered design is to iteratively bring people into one place until you run out of time and then evaluate. If you have the expenses, you can have the public being in one side of a mirror and the development team on the other side in a leaner environment. You can also achieve the same type of outcome of information but with a different method called focus groups. in a focus group you'll gather together a small group of people to discuss a design or idea.

There are also approaches and methods that are not as beneficial to gathering information for HCI. For example, If you're running controlled experiments online you don't get to see much about the person that's on the other side of the screen. If you're inviting people into your lab or office the behavior you're measuring might also not be very realistic. If realistic longitudinal behavior is what you're after, participant observation may be the approach for you.

This approach is just what it sounds like, observing what people actually do in their actual work environment. Long-term evaluations can be important for uncovering things that you might not see in shorter term ones. Brainstorming serves a number of other functions: like for example, brainstorming provides a way for members of a design team to demonstrate their creativity to their peers. It allows them to pass along knowledge that can then be reused in other projects and it creates a fun exciting environment that people like to work in and that clients like to participate in.

There are also studies on web surfing behavior models that have allowed us to be more accurate on what a user might do before he does it. These models enabled researchers to estimate for example which links somebody is most likely to click on by looking at the relevant link text. These simulations are often comparable with something like the Monte Carlo optimization.

In a real ecosystem all of these things are important to consider in addition to just how many ideas two people come up with. Nearly all experiments seek to build a theory on some level. These are just a few methods and approaches of HCI to help us have more understanding of human behavior and its interaction with a machine.

So far, we’ve analyzed many theoretical HCI methods, concepts and how they relate to interaction behavior in society. However, there are ways to organize these concepts. This is by addressing the three waves of HCI. Each wave has its purpose in the approach of how an interface relates to a client or the ergonomics of how we interact with machines.

// first

The first wave has an approach that stems directly from the root of engineering. The clear-cut concept of problem solving, metric studies, and making the bridge and practice of complex problems to simple solutions. pragmatic and focused on practical results over theoretical issues or bases.

// second

Where the second wave focuses on the psychological and cognitive science aspect of what happens in the human mind, information processing and the theoretical communication between man and machine. How the brain processes information displayed by a machine and how it communicated back to it. It is important to make the difference between a machine and a human. However, to make society work harmoniously and simplify our lives with devices, we strive to achieve an immersion in computing and human data processing.

// third

Unlike the second wave, the third emphasizes the relationship in the impact of society, culture, values and is guided to influence new liberations and social changes through HCI. It takes a broader outlook on how technology and machines relate to us. Its central goals in its interaction perspective is to support situated actions in the world. The third wave asks questions like what existing situated activities in the world should we support, how do user’s appropriate technologies and how can we imbed what we do to support this appropriation? How can we support interactions without focusing too strongly on what computers can do or understand? What in the politics of the world are the values we can support and how can we support them in design? Since human computer interactions are based on the three factors: computer science, cognitive science and human factor engineering it is the objectivity of the third wave to find a relationship between all of these combined in relations of the potential AI can offer and its impact on society. This can be another form of ubiquitous computing where computing is made to appear anytime and anywhere.

References:

Schumann Zion colleagues

Joel Brandt and his colleagues at Adobe

https://www.researchgate.net/publication/317269086\_Revisiting\_the\_Three\_HCI\_Waves\_A\_Preliminary\_Discussion\_on\_Philosophy\_of\_Science\_and\_Research\_Paradigms