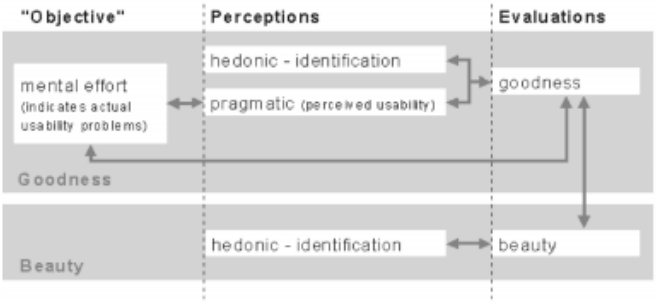
The Interplay of Beauty, Goodness, and Usability in Interactive Products (Hassenzahl, 2004)

Why: Interesting work into showing the relation between beauty, usability and goodness. This is very relevant knowledge to have as a designer

Learnings:

- Hedonic attributes in the context of design are focused on the pleasantness of usage, examples are stimulation and identification
- Goodness depends on both usability and pleasantness
- This paper goes outside the scope of just task accomplishments, and focuses on the subjective side of usability
- Interestingly, previous research showed beauty to be a good indicator of satisfaction for products, and also beauty and usability were strongly correlated.
- "This relation is believed to resemble the "what is beautiful is good" stereotype well known in social psychology (e.g., Dion, Berscheid, & Walster, 1972)"
- So beauty may increase the feeling of usability
- This paper's research however, does not find comparable correlations in a first study, where participants were not able to use the products (software skins)
- The authors conduct a second study that do include post-usage ratings to address the main limitation of the study
- Result of study 2 are that the correlations are not as strong as to be expected from earlier studies.
- The author made a visual 'model' of the relationships that summarize findings clearly

Figure 6. **Summary of relationships between attribute groups (pragmatic, hedonic), evaluational constructs (goodness, beauty) and experience (mental effort).**



Implications for PiV:

Understanding the importance and influence of beauty and how it is built by hedonic attributes.

References:

Dion, K. K., Berscheid, E., & Walster, E. (1972). What is beautiful is good. Journal of Personality and Social Psychology, 24, 285–290

Hassenzahl, M. (2004). The interplay of beauty, goodness, and usability in interactive products. Human–Computer Interaction, 19(4), 319-349.

User experience (UX): towards an experiential perspective on product quality

Why: Good for testing your belief about UX, and what UX really is build up off

Learnings:

- This paper discusses not only facts, but also personal perspective
- Concept of homines oeconomici: people who use technology only to gain time for pleasurable things. However, technology itself can also be pleasurable
- Author sees that UX is often treated as usability and user-centered in industry, whilst very different from traditional usability in the academic world. So clarity should be brought.
- Currently, the ISO definition is very vague, and produces more questions
- Paper searches for a definition that embodies both what UX is, and how it is 'made'
- UX is a temporal feeling/reflection while interacting with a product
- Pragmatic quality: perceived ability of a product to achieve do-goals
    - Make a call
    - Find a book
    - Etc
- Hedonic quality: Perceived ability of a product to achieve be-goals
    - Being competent
    - Being cool
    - Etc'
- Hedonic contributes directly to a good experience, pragmatic indirectly by making fulfilment easier
    - Note: usability itself is of no value. Only facilitating the persue of meaningful do-goals helps
- Autonomy and competence relate positively to a good user experience
- Relatedness was not linked well, but this might be due to shortcomings of products on this aspect
- Conclusion: focus on temporal, real-time subjective experience (which could be explained using the basic needs of autonomy, competence and perhaps relatedness)
- What the paper says: No one size fits all definition for all contexts, but a general understanding of the concept that's built on proven models

Implications for PiV:

- I believe that technology should not distract from the value of life. I'm very open that some types of technology might bring value. I will be more specific about this in my vision.
- I think it is interesting how the paper focusses on the interaction, but not on the outcome of the interaction. You are using the product to achieve a do-goal, but then the outcome performance is off little importance but the well-being is more interesting for the UX.

Reference:

Hassenzahl, M. (2008, September). User experience (UX) towards an experiential perspective on product quality. In *Proceedings of the 20th Conference on l'Interaction Homme-Machine* (pp. 11-15).

User experience over time

Why: I expect an analysis about user experience and if/how it changes over time. I see that there is a follow-up paper presenting an initial framework to read later, but without Hassenzahl.

Learnings:

- During the first experience you form judgement on utility, usability
- Introduction into Jordan's fixed hierarchy (Jordan, 2000), which seems logical but a bit superficial
- Authors explain this could vary with context, which seems plausible
- Measure quality of three aspects: Pragmatics, Stimulation and Identification, with seven bipolar attributes per aspect
- Then each attribute was analyzed separately, and 3D visualization between the attributes was done over different time periods
- First week: beauty judgements relate to attributes reflecting quality of stimulation
- After four weeks, beauty is related to classy.
- More detailed relationship changes are in paper, but key learnings:
    - Usability is most important when the product is new and people are exploring
    - When used, value is ownership-based and changes to social aspects (identification)
- Dependent on which study, identification or stimulation influence beauty
    - After time, stimulation loses dominance

Implications for PiV:

- Makes me consider how to create products that are both appealing during first usage and during long-term usage, and how this combines with what I find important as a designer.

Reference:

Jordan, P. W. (2000). *Designing pleasurable products: An introduction to the new human factors*. CRC press.

Karapanos, E., Hassenzahl, M., & Martens, J. B. (2008). User experience over time. In *CHI'08 extended abstracts on Human factors in computing systems* (pp. 3561-3566).

A sample of one: First-person research methods in HCI

Why: Good because we do this all the time as designers

Learnings:

- Several methods that are done by the researcher:
    - “Autoethnographies focus on personal experiences to understand broader cultural meanings of technology.”
    - “Autobiographical design focuses on design research that draws on extensive, genuine usage by those creating or building a system.”
    - “Autoethnographical research through design is similarly inspired by self-design as a method of research. As a mode of knowledge production, autoethnographical research through design combines the openness and richness of individual accounts of a phenomenon with a systematic analysis to reduce complexity and to interpret these accounts in light of theoretical knowledge.:
- Interpretation using existing knowledge is important, to contribute to the body of knowledge

Implications for PiV:

- Paper did not provide insight that I want to add to Vision or Identity

Reference:

Lucero, A., Desjardins, A., Neustaedter, C., Höök, K., Hassenzahl, M., & Cecchinato, M. E. (2019, June). A sample of one: First-person research methods in HCI. In *Companion Publication of the 2019 on Designing Interactive Systems Conference 2019 Companion* (pp. 385-388).

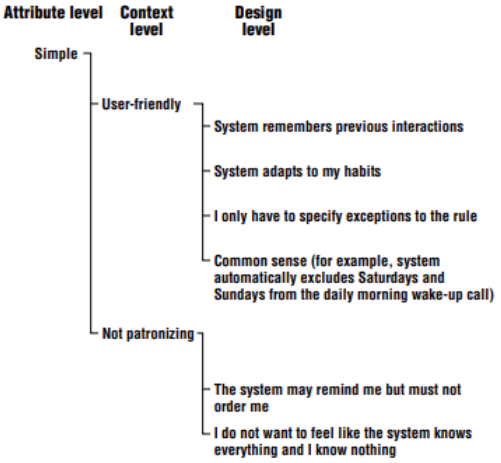
Engineering joy

Why: The paper sounds interesting, and makes you think: What is joy really? I believe that joy in products or in life should be central.

Learnings:

- Firstly, the paper is relatively old now, it comes from 2001 and is written in the context of software design
- I agree with the paper that most products already have ease of use, and that the focus has shifted towards engineering an experience
- Now the author explains three pespectives on joy:
    - Usability reductionism: joy results from usable software. Thus saying that usability leads to joy
    - Design reductionism: joy is created by qualities that graphical and industrial designers add to software. So no notion of interaction style and functionality
    - Marketing reductionism: reduces joy to a 'marketing claim' that has no substance
- Very interesting perspective from Erik Hollnagel, who thinks that emotions interfere with with efficiency and control in a working environment.
- Previous study found that joy in a product lead to increased acceptance and satisfaction (Igbaria, Schiffman & Wieckowski, 1994)
- Hendonic qualities (so task unrelated), can contribute to the appeal of a product
- Task related and task unrelated qualities actually weigh up to each other. So usable but tedious software can be as appealing as unusable but thrilling software
- So the author argues that researching task related knowledge and non-task related is a valuable road towards designing for joy
- Humans have need for change and novelty.
- "Optimal experience or flow describes the state when somebody is completely wrapped up in an activity" So to challenge but be able to reach the goal
- However, whether something is exiting and new can really depend on the background of a person
- When you design a system that is too novel, you raise adequacy problems.
    - How do you determine the (correct) level of novelty?
- Next to that, communication and experession are important. What is the status or expression a user wants?

- Researcher developed a semantic differential for measuring hedonic quality.
    - However, this scale is so general that you cannot understand why something is rated the way it is.
    - Secondly, there is the risk that the scale is not complete yet
- Authors then use RGT to find constructs, and use Shira to generate hierarchy between elements (Attribute, context and design level). See example on the right
  Authors state that these methods might be used later to find the joy of usage, but do not state that they create a model of what joy entails



Implications for PiV:

- Perspective from Erik Hollnagel is interesting to argue about. Though I think I disagree, I will look more into his papers to understand his opinion
- Interesting how non-task related qualities weigh up. Makes me consider where the balance is between task-related and non-task related. Since you cannot do both to the maximally I think.
- Inspires me see if research has proven (elements of) my vision to create joy, to give my vision more scientific basis

Reference:

Hassenzahl, M., Beu, A., & Burmester, M. (2001). Engineering joy. *Ieee Software*, *18*(1), 70-76.

Igbaria, M., Schiffman, S. J., & Wieckowski, T. J. (1994). The respective roles of perceived usefulness and perceived fun in the acceptance of microcomputer technology. Behaviour & information technology, 13(6), 349-361.

Key learnings:

I understand how beauty is important since it can contribute to a feeling of ‘goodness’ for a product

I consider that it is important that a product enables people to achieve meaningful do-goals, and how this related to theories in behavioral change and autonomy

I understand that user experience during first-usage is different from long-term usage, and will definitely implement this knowledge in my design