UX ethical design: Education responsibility of technology

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Disposition Matching in User Experience Design

Beginning with the progress of information technology and Internet penetration, web presences and mobile applications have become a ubiquitous part the public has to interact with every day. In the process of designing, what we can provide to users is not just limited to an action, but also includes emotions and attitudes about using a product. A meaningful, accessible, and effective human-computer interaction can enhance user satisfaction. This, in return, determines whether our products pass through the bottlenecked human nervous system and have a better chance to get exposure in personal networks. The question naturally arises: how to do human-centered design?

One of the answers to this question is to match dispositions. Basically, the idea is to design a meme based on who is our audience, because users tend to resonate a meme that matches their Individual differences in disposition. From a psychological perspective, the individual differences include personality, age, needs, aand so forth. When our meme gives users an aha moment where they perceive that “this is what people like me want”, users definitely will have a better experience with our inventions. With that in mind, UX designers should have a deep understanding of their users, including who they are, what they want, and what they value.

Developmental Stages and Eriksonian Questions

Although personality remains fairly stable throughout our life spans, the thing we are essentially interested in changes within the certain age ranges, also known as developmental stages. From infancy to senescence, we will keep asking ourselves separate existential questions regardless what kind of personality we belong to.

Erik Erikson, one of the most comprehensive developmental psychologists, in 1959, came up with eight questions that go through our lifespan. In his theory, the deep questions in different psychological stages influence the direction of our lives and represent the tendencies that we think about this world.

The eight questions are as follows:

- 0-1 years: Can I rely on others?
- 1-2 years: Can I do it myself?
- 3-5 years: Am I good or bad?
- 6-12 years: Am I good at something?
- 12-19 years: Who am I?
- 20-39 years: Can I share my life?

- 40-64 years: Do I matter?
- 65+ years: Can I die in peace?

The eight questions can guide content creators to know what your target audience are concerning about. If your meme can help users to answer the question they are facing in their developmental stage, your meme is more likely to attract attention from that age group.

UX Ethical Design in Developmental Stages

It is true that users will be more engaged if our memes can provide a platform or a channel for users to solve one of Eriksonian questions. However, design is not just for temporary needs, and the influence range can reach out to people who are not supposed to be the target audience. Especially in today's information age where children can easily access technologies and the virtual world, the meme we spend time and efforts on can consciously or unconsciously shape a child. Education not only occurs in school and family, but also happens in every interaction children have with a technology product.

If content creators just focus on the target audience or one age group and take advantages of user psychological vulnerabilities, it can have an adverse impact on both business and users in a long run. Therefore, during the creation process, ethical designers should keep the following principles in mind:

1. Behavioral designers should consider marginal user groups especially children they may have an impact on rather than just zeroing in the target audience.

As one of trending technologies, smart speakers, such as Amazon Echo, Apple HomePod, Microsoft Cortana etc., have become a normal household appliance in recent years. As of winter 2017, it is estimated by NPR that 39 million Americans equaling to 16% of the population own a smart speaker (Edison Research, 2017). Although most of the owners are adults, children automatically become users of smart speakers in a domestic setting. In fact, according to *The Smart Audio Report* released by National Public Radio, "eight in ten parents say these devices have made it easier to entertain their children, and nearly 90% say their children enjoy smart speakers."

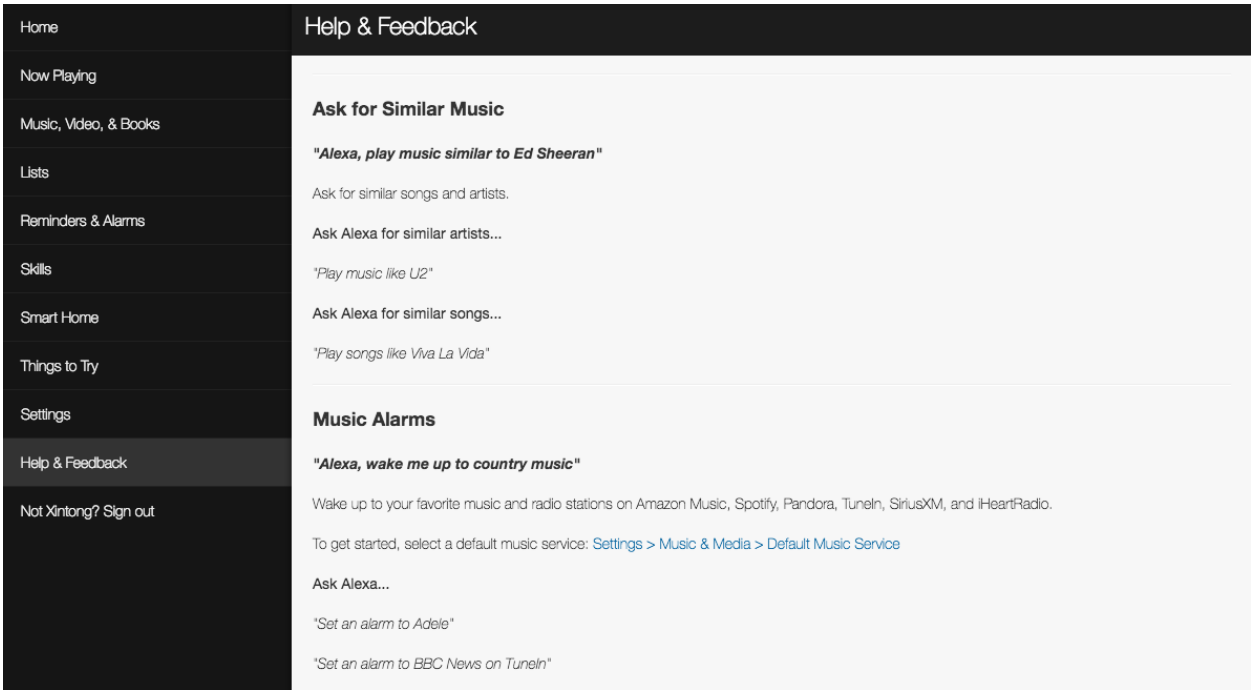
However, what smart speakers can bring to children sometimes can be the opposite of entertainment. An online video with eight million views shows that an Amazon Echo responses inappropriate content related to porn when a little boy asks the device to play "digger digger" (https://www.youtube.com/results?search_query=children+response+alexa+). It is lucky that the parents of the kid immediately stopped Alexa when they noticed the answer went in a wrong direction. But what if the parents were not there?

Apparently, this is not something we cannot control. Smart speakers have the capacity to recognize a person's age from audio signal (Sedaaghi, 2009), and age classification technology

has already integrated to some products for a long time. Therefore, smart speakers should have the capacity to adjust their response based on different age groups. When a kid asks an inappropriate question, smart speakers should zip up their mouth instead of treating the kid like an adult. An adult-friendly device can destroy the trust from parents and keep itself from entering a huge market, home.

2. Behavioral designers should make efforts to establish future equal relationships between human and artificial intelligence.

The final goal of artificial intelligence we have been working on for years is to make machines like real human beings, but the way we design them right now keeps us from achieving that goal. For instance, as the screenshot shows below, the way Amazon Echo educates users to interact with Alexa is to use imperative sentences, such as “play music”, “Set an alarm”, and so on. In real life, however, imperative sentences sound like direct, forceful, even rude in some scenarios. When making a command to a real human, instead of using a verb to begin the sentence, we will say “could you please play music” or “please play music”. This is a way we show respect and politeness to each other.



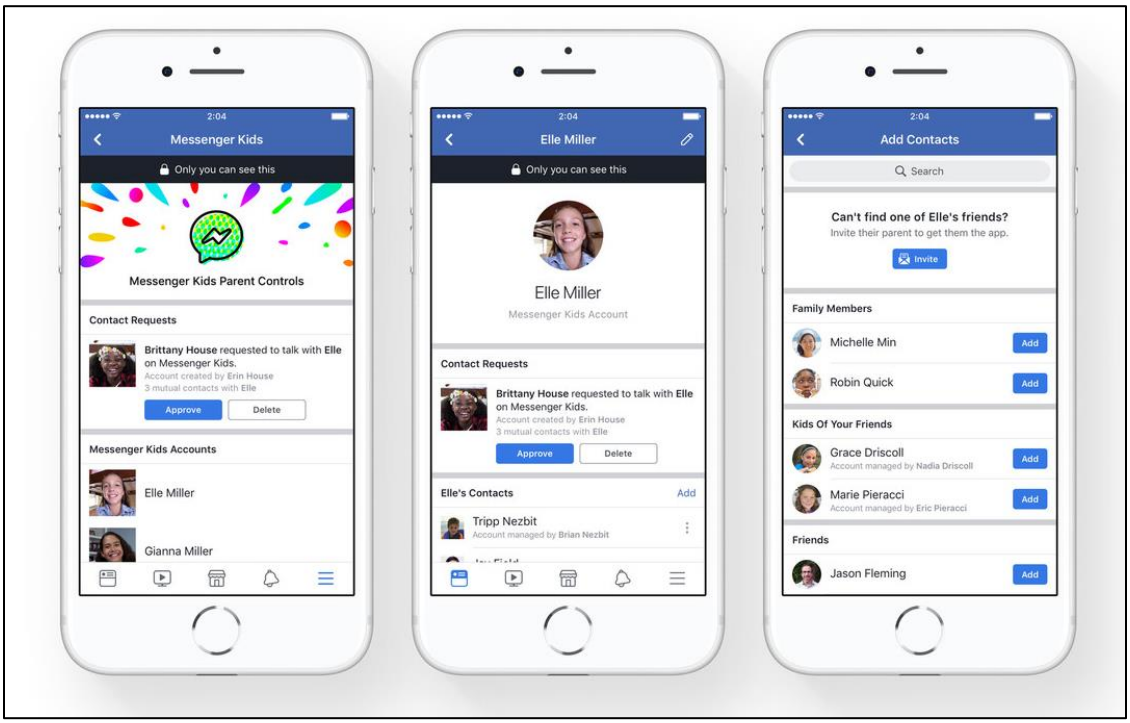
One thing worthy of mention is that users will get the same response no matter they use polite command or direct command to Alexa. But the instruction chooses to show users the latter. In the early childhood education, children learn how to interact with people or machine from their parents or from instruction, which can become a life-long habit (Livingstone, 2012, p. 166).

Once children form a perception that smart speakers can be treated without respect, it is hard for them to alter their behaviors when the technology is highly developed that equal

relationship between human and artificial intelligence needs to be created. Therefore, even it is the early development age of the voice devices, UX designers should care about how to educate children to be polite when they interact with machines. Simply just changing the instruction may make a difference for the future.

3. Behavioral designers should think about the influence of the product function on children's personality development.

According to Erikson's developmental stage theory, children will form world values including trust, confident, self-cognition and so on while growing up. Children find answers to the first four Eriksonian questions through their communication, interaction, and life experience. More and more technology devices and produces have been developing children-oriented skills, which provides paths for children to find the answers.



Targeting at children at age of 6 to 12, Messenger Kids, a children version of Messenger created by Facebook, aims to create a safe online communication environment for children and parents. In the teen ages, children tend to ask themselves "Am I good at something?", and measure themselves against their peers (Evans, 2017). In a social media environment, this kind of competition can easily get amplified among children at 6 to 12. If children overuse or rely on social media at an early age where they are supposed to more engage with face to face interactions, they are more likely to have addiction issues when they enter adulthood.

However, the UX design on Messenger Kids does a good job in dealing with social media issues for children. For example, in this app, parents control the contact list of their children. Only get

approval from parents can children add their friends on Messenger Kids. Also, parents can set use restrictions in bedtime or homework time. Compared with adult version, Messenger Kids remove news feed, like button, and advertisements function in the app. This can not only provide a clean and safe communication environment for children, but also help children prepare for social media use, and they will have better adaptation when they grow up.

Why Ethical Design matters?

Sustainable development for business

From the examples above, we can notice that the unethical design won't have an immediate negative impact on users. But, if a meme wants to survive in the human network, it should bring positive values that give users motivation to share it with others in an attempt to build their social capital.

Unethical designs leave a potential risk on sustainable development for business in a long run. When the young users grow up to the main force of consumption, the awkward adult jokes or the unbalanced human-machine relationship could prevent them from spreading the smart speaker to others, even to next generation, because it cannot represent a meaningful value for users. Eventually, smart speakers could die in the bottleneck.

Long-term influence on users

UX design not just to design a product, is to design a human behavior. The behavior can go through our lifespan once set up in childhood, and may go beyond to next generation. A single function or a small change could lead children to treat people differently, and could also let children rethink about social media use.

Ethical design provides better human-centered experience to children. This positive experience brings users back to engage the meme over an extended period of time. In other words, UX designers are designing future for our children and for human beings as a whole.

Reference

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