The Alpha Ubtech: A Wasteful Beauty

The Alpha Ubtech is a humanoid robot designed for entertainment purposes. It has approximate human body structures such as limbs and joints. It is compatible with iOS, Android, and PC via Bluetooth connection (Amazon, n.d.). After downloading the free Ubtech app, users can operate the robot from their mobile devices. The Alpha Ubtech can perform exercise moves, and play songs or audio books. Additionally, users can learn how to program the robot to follow their commands from the Ubtech website. The Alpha Ubtech robot is very beautiful. It has a very clear layout of the functions and it gives efficient feedback when it is in operation. Also, the design of the app is very neat and learnable. However, it does not meet users' expectations of an android because of its limited functions. It fails on utility, accessibility, constraints, and safety.

The Alpha Ubtech has an *anthropomorphic* shape (Fox, 2017), consisting of a humanlike head, a body, and arms and legs, although its joints are unrealistically exposed. The majority of the Alpha Ubtech is white, and the rest is black. According to the *effect of color*, black and white are very classy colors, associated with status and beauty (Fox, 2017). It was very appealing to people when they see it for the first time. The appearance of the Alpha Ubtech also demonstrates the *aesthetic-usability effect*, which means people are more likely to accept a product when it looks beautiful regardless of its actual performance (Sonderegger & Sauer, 2010). What is more, the movement of the robot is very admirable. It can move flexibly with different angles, and perform exercise demonstrations vividly. However, its movement is too flexible and over exaggerated; its body falls backward and goes down like a snake. This part makes it fall under the *uncanny valley*

(Fox, 2017) because it looks weird and a little bit creepy.

The Alpha Ubtech robot ranks high on *feedback*: it informs its users about its current status (Fox, 2017). When it is connected to the Ubtech app via Bluetooth successfully, the robot emits bright and cheerful sounds as well as colorful and shining lights. When it is controlled to move, it makes squeaky sound and shining light for each movement too. Moreover, the accompanying app achieves an good job on *visibility*, which means its functions are very clear on its layout and users can tell how to operate it without any instruction (Butler, Holden, & Lidwell, 2015). The app keeps the *functional consistency* for the interface designs: it uses standardizing iconic representations for tasks across applications to reduce frustration of technology and increase accessibility for users (Gurak, 2003). For example, the app's directional pad which consists of four arrows pointing up, down, left, and right is like the one on our laptop keyboard. Also, this consistency not only appears on the app but also on the design of the robot. The switch buttons, plug slots, and the speaker are all very common designs fitting people's *mental models* that offer cues for users to start manipulating them properly and immediately (Butler, Holden, & Lidwell, 2015).

However, these are the only advantages of the Alpha Ubtech. This product does not have *utility*, which refers to that a good product should provide a wide range of functions to satisfy users' needs (Preece, Rogers, & Sharp, 2015). The Ubtech company states that the Alpha robot can perform yoga demonstrations, exercise tutorials, and audio book readings; yet, these functions are very limited considering its high cost (Amazon, n.d.). Although users are encouraged to program their own robot movements using GUI interface on the Ubtech website, it does not allow

accessibility for all users because not everyone has the technical knowledge to create their own programs (Butler, Holden, & Lidwell, 2015). Furthermore, it fails to meet users' expectations. According to the *expectation effect*, users assume certain behaviors or functions of the product when it offers certain cues (Fox, 2017). When my group members and I first saw the product, we expected it could be manipulated through voice control because it looks like an interactive artificial intelligence. However, after a couple attempts to speak to it, we did not obtain any reaction from it. This *false affordance* that was perceived but did not actually exist (Fox, 2017) was very frustrating and disappointing.

Another noticeable disadvantage is its lack of *constraints*, which are the additional features to prevent users from making mistakes (Preece, Rogers, & Sharp, 2015). As mentioned above, the Alpha Ubtech is abnormally flexible and it always falls backward unexpectedly. Once it was standing on the table while my group was trying to learn the app, it suddenly fell and knocked on the table heavily. Disappointingly, it did not stand back up by itself, nor was there an option in the app to make it stand up again.

What is more, *safety* is another big issue of this product: it fails to protect users physically and from misuse (Fox,2017). The joints of the Alpha Ubtech were dramatically exposed, and the connections between joints are not seamlessly conjunct - there are gaps that are big enough to stick a finger in. During our experiment with the robot, it was unlikely to prevent us from being nipped by the gaps. It causes an even more severe safety issue for younger users, whom are the targeted users for the Ubtech company.

To conclude, I think the Alpha Ubtech should not be released as an entertaining toy in the first place. People might purchase this product for its beauty and anthropomorphic appearance because its black and white colors do bring people pleasure visually. Also, both the robot and the app display a very high level of visibility, which makes the functions very clear and easy to pick up once the users start operating it. Further, it offers good feedback when users give it any instructions via the app. However, it is not safe as a toy for kids to play with. The gaps between joints are too big and they could pinch users' fingers easily. The product does not provide any constraints to help prevent users from being nipped, nor to prevent the robot from falling by itself precipitously. In addition, the Alpha Robot does not offer efficient functions to satisfy users' expectations and needs; it can only do some simple performances like the push-up, which is not so unique. If users want more functions, they are required to design on the Ubtech website by themselves, which is not accessible to people who do not know how to program. For future improvement, the safety issue could be solved by covering up the joints. Alternatively, the company could create more functions and features for the robot so that it would not be so limited to play with. Overall, the Alpha Ubtech is a completely wasteful investment and it is not a great value for its price.

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