

Andrew Brooks

Week 4

Robotic Pets in the Lives of Preschool Children

This article raises some good points but overall I found it unconvincing. The central thesis is that children treat robotic pets differently from inanimate pet-representations, and that since a robotic pet is an impoverished representation of a real pet, this could cause their moral development to suffer. The difference in treatment stems from the observations that while the children's evaluations of the two artifacts were not different, the children's behavior was different. A lot of this can be explained by the simple fact that **the AIBO moves**. The researchers claim that the behavioral results indicate that the children treat AIBO "as if" it were a real dog to a greater extent than the stuffed dog, but this is not supported by the evaluation data. Just because the children's play is different, as should be expected in playing with a device that can move by itself versus one that cannot, can not necessarily be extrapolated to a fundamentally different mental model of the toy. It may be the case, but this paper does not demonstrate it in any convincing fashion.

Technology and Human Vulnerability

While typically hyperbolic (e.g. vastly overestimating the ability to computationally estimate a person's emotional state) the central thesis of this piece, that technology changes the way people feel about themselves, is very relevant to relational machine design. It is of critical importance that a relational machine invest the human in the process of interacting with it. Turkle brings up a well-known point in toy selection, that children tend to get bored more quickly with toys that have "canned" routines, such as robotic pets -- the less the child is able to exercise his or her own fantasies, to become part of the interaction, the less the longevity of the item in the child's play routines. Similarly, assistive technology must be aware of the way it will make its user feel about themselves. The goal must be to empower the person to do things that they could not do before, not to feel dependent on an uncaring machine.

Assistive Robotics and an Ecology of Elders Living Independently in Their Homes

This article is an excellent survey of what is important to consider when designing assistive technology such as robotics to be placed in the homes of old people. As such it concentrates primarily on how old people live their home lives, the things that are important to them, and their reactions to various technologies. The notion of an ecology is a balance between the interactions of an elder with products, people and environments in their lives. One thing that is clearly very important is the nature of status. Status for elder people provides a link to their younger life and provides them with a sense of accomplishment, so it is important that an assistive technology reinforce that status rather than make the person feel dependent or having lower status, or it will not be used or

appreciated. A relational machine destined for an elder should be designed with emphasis on preserving the elder's personal identity and dignity; it should not try to overtly change their self-image but rather should be designed to show that it respects them for who they already are. The article concludes with design guidelines and an ecological design process for robotic products, which is equally applicable to the design of other relational systems.