

## Pointing



A while back our usually comatose cat suddenly started chasing a piece of Lego about the floor. 'Look at the cat' I shouted to 10 month old Keiran and pointed at the cuffling animal. Keiran responded with a leisurely gaze at my outstretched hand and didn't notice the cat at all.

Now at 13 months he is starting to get the hang of pointing, and his struggle has made me realise what a complex activity pointing actually is. He has also started pointing at things himself, mainly because I immediately react by naming the thing that he is pointing to. All of a sudden he can interrogate the world of objects he is living in. Sometimes when he is outside in the pram he will point with both hands at the same time for emphasis, 'power pointing'. This whole pointing and interrogation idea reminds me of my own first contact with 'Balloon help' on the Macintosh. The freedom of being able to lazily swish the pointer around the screen and have the system declare what things were.

Coupled with Keiran's pointing is a new found interest in pushing buttons. (there is also a recent habit of trying to jam things that aren't videos into the video recorder but that's not particularly relevant here). There seems to be some connection between pointing and pushing buttons. For starters the act of pointing and pressing buttons demands the same action with the hand, but then so does scratching your ear, so it's probably not very signifi-

cant. However there are functional parallels, pointing is indicating something to a third party so that the party can take action in some way, when Keiran points the third party is me naming something, when I point in the bakers the third party is the baker getting bread rolls. Pressing buttons is the same thing but the third party is not the parent or the baker. Instead it is the technology with which the button is associated, and the user is not implicitly saying 'explain this thing' or 'get this thing' but 'carry out the action associated with this thing'. The fact that the user has to physically press something is only a restriction in the technology, sometime in the future I am certain that interaction with lights and other household systems will just involve pointing to them from a distance. Needles to say young children will have a field day with such systems!

Our other child Morgan (4) is also learning about pointing, but not pointing in the real world, but about virtual pointing with the computer and the mouse (a term she finds very amusing). When she asks if she can play with the computer my question of 'Do you want to draw pictures or spell words?' is often answered with 'No, I just want to click on things'. She actually enjoys just playing around with the windows based operating system. It is a good indication of the 'naturalness' of current computer interfaces that Morgan's learning of virtual pointing was accomplished in minutes, what she now enjoys doing is practising and using the skill. In fact the only glitch in learning was up and down confusions while talking about the actions themselves mainly because of the separation of tool (mouse) and feedback (on screen cursor) and the fact that the 2D horizontal motion of the mouse is mapped onto the 2D vertical movement of the cursor. Left and right are no problem but telling Morgan to move the mouse up did indeed result in her lifting the mouse from the mouse mat. I was mixing the tool and

feedback co-ordinates, 'move the cursor up' or 'move the mouse away from you' would have been better.

Funnily enough they are not just busy with pointing in the two different worlds but they are also involved in other activities. Keiran is now staggering about the real environment picking things up and putting them down in different places, and last week I silently peeped over Morgan's shoulder to see what her 'just clicking on things' was all about. She had opened some random directory and was fastidiously moving all the icons one by one from the left side of the window to the right side. Did this mean that the organisational chaos wrought by the kids in the real world would soon be matched by organisational chaos in my digital world? Let's hope that I can at least write an article about the ensuing problems.

*Lon Barfield  
General Design Internet Solutions  
Kruislaan 419, 1098 VA Amsterdam,  
The Netherlands  
Tel.: +31 20 663 7769  
Fax: +31 20 668 1468  
Web: [www.design.nl](http://www.design.nl)*