Measuring fun in the home

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Conventional measures of usability generally assume a task of some kind. One can then measure time to completion, errors, learning and so on. However, much of what we do in the home in purely for enjoyment. What is the task of watching the TV and what would an error look like? Is a game that can be learned faster than another better? Nevertheless, we may still want to construct prototypes and compare them in experiments for their ability to support enjoyment.

In the studies that motivated this talk [1, 2], we wished to compare the social affordances of different displays that might be used when people get together to share photographs. Are people likely to have a more enjoyable experience if control is equally distributed by giving everyone a remote control, for example? In order to make these experiments as natural as possible, they were conducted using groups of three friends who knew each other well. They were viewing their own photos, including photos of events they had all experienced and they were sharing the photos in the York Responsive Home, a laboratory set up to provide a home-like environment in a three-bedroom bungalow on the university campus.

The most common way of measuring enjoyment is with a post-experience questionnaire. However, Lindley and Monk [2] suggest that post-experience questionnaires are a form of 'recounting' [3] rather than an indication of unfolding experience. That is, responses to these questionnaires, while being based on the memory of the experience, are conditioned by who is asking the question and why. What is needed is a direct measure of enjoyment that does not interrupt the experience and does not depend on memory. Work by Monk and Reed [4] identified a phenomenon they term conversational flow. Their Conversational Analysis of transcripts of recreational telephone conferences involving five or more participants yielded the following definition.

"Flow is spontaneous, relaxed, inclusive and flowing. It is composed of small turn utterances in close succession (latched talk), sometimes overlapping, but when this happens there is no competition. Everybody gets to take part. Topics are light and topic change occurs easily. There are no awkward silences."

Similar characterisations of enjoyable conversation have been noted by Edelesky [5] and Goffman [6]. What it suggests is that group behaviour may be taken as an indicator of positive user experience. This measurement model is expressed as a hypothetical causative path diagram in Figure 1. In this model, social affordances encourage certain sorts of individual behaviour as well as certain emergent group behaviours. For example, Lindley and Monk [2] suggest a measure of the equality of a conversation as an indicator of enjoyment. This is because there is a tight feedback loop between such emergent measures of group behaviour, the unfolding experience of individual participants and their behaviour. Post experience questionnaires on the other hand measure something else, termed here recounted experience.

The talk will describe some of the measures we have used, including: equality, freedom, number of turns and turn overlap. These are all derived from analyses of speech in video records using The Observer®. In addition it will make a case for the validity and reliability of these measures.

References

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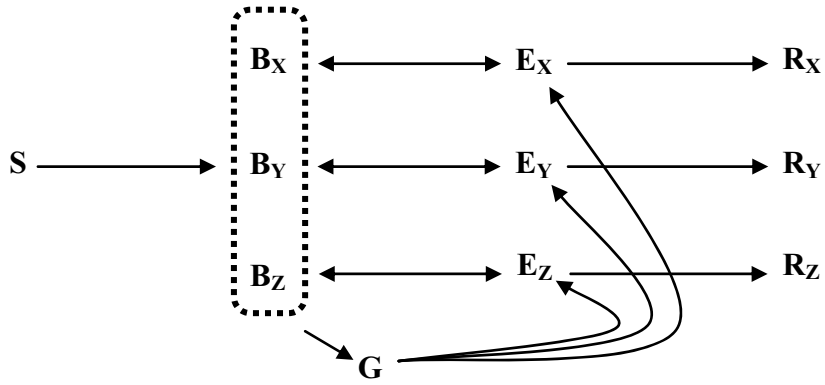

***Figure 1**. Causative model showing links between environment, behaviour and experience. S = social affordances of technology and physical context; B_i = behaviour of individual i; G = group behaviour (e.g., conversational equality); E_i = unfolding experience of individual i; R_i = recounted experience of individual i (e.g., rating of felt fun).*