Methods for Re-imagining Social Tools in New Contexts

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Introduction

Digital exclusion refers to a lack of access to technological facilities, including the blossoming arena of social interaction. People without mobile phones or PCs cannot access email, SMS or social networking websites; this includes many groups, such as the elderly, who can become vulnerable without good social contact. These people could partake in such interactions if we could enable multimodal access to social networks through a wider variety of communication channels (for example, television and telephone).

This report describes how we have used methods from HCI and Social Theory to better understand social technology: this improved understanding helps us more effectively provide social functions via new communication channels.

Experience Deconstruction

Experience Deconstruction is a HCI technique that facilitates an in-depth understanding of a particular interaction or tool (for example, items of social functionality such as 'photo sharing' or 'microblogging'). The deconstruction process, developed by Dix [1], involves teasing apart the strands which make an experience what it is, and which make it 'work'.

Dix used his deconstruction process to translate the physical experience of pulling Christmas crackers onto a website [1]. Rather than trying to directly emulate real crackers, Dix captured aspects of the experience of pulling crackers through deconstruction, and translated those to the medium of the web.

The process is thus:

1) Describe the functionality and the experience of using it

2) List surface elements of the experience (e.g. 'simple' or 'easy')

3) List experienced effects of the experience (e.g. 'anticipation of responses', 'openness' or 'uncertainty')

4) Consider how to translate the surface elements and experienced effects to the new modality

Here, we apply deconstruction to microblogging:

1) Description: Microblogging involves posting succinct text updates, generally limited to around 140 characters.

2) Surface elements:

   - Quick and easy (a text box and a button to post the text).

   - Communicating (one to many)

3) Experienced effects:

   - Reaching out, broadcasting information

   - Presence – consolidate online identity by adding data

   - Openness about current experiences

- Anticipation of responses
- Uncertainty about responses and audience: especially if privacy settings are low, and anyone can access the content.

4) How to translate this material:

Reconstruction would include a very simple design allowing composition and posting of microblogs. It is important to incorporate clarity about the audience, as controlled by privacy settings.

One reconstruction might see the microblogger wearing a t-shirt which incorporates a scrolling text display displaying their most recent post.

Lessons learned: Deconstruction of various aspects of social networking exposed emerging themes: for example, 'communication' or 'sharing of material' were surface elements across various items of functionality.

Re-imagining experiences is far easier having abstracted those experiences: for example, it seems like a very big step to move from 'microblogging' to 'a scrolling display on a t-shirt'. However, the steps from 'microblogging' to 'brief one-to-many communication' to 'a scrolling display' seem much smaller and more logical.

Another facet is the importance of accounting for all aspects of an experience, including the experienced effects. It is straightforward to reason that a novel interface should offer a similar surface design to its web-based equivalent, but it is less easy to account for the emotional implications of a transaction, such as the expectation of replies.

Actor-Network Theory

Actor-Network Theory (ANT) is a sociological approach to understanding social networks. It provides a process-based perspective on interactions between users, and considers how networks form and evolve [2]. ANT models the flow of interactions and processes between 'actors' (which may be people, artefacts, text or graphics).

ANT proposes four 'translation moments':

1. Problematisation: the primary actor becomes interested in an issue, and identifies a possible solution.

2. Interessement: the focal actor convinces other actors that the issue is relevant to them. They consider involvement and possible roles.

3. Enrolment: other actors join the network.

4. Mobilisation: enrolled actors take action to resolve the issue.

Sign-up to social sites can be mapped to these 'translation moments':

1. Problematisation: someone wants to advertise an event, or share photos (maybe from a wedding or of a new baby), or contact people for whom no email address is held.

2. Interesssement: the person contacts friends to let them know the materials (photos, text, event details etc.) are online. Friends weigh up the costs and benefits of joining the social website.

3. Enrolment: friends begin to sign up to the website: the more mutual friends using the website, the greater the benefit of joining.

4. Mobilisation: friends on the website access the shared information.

ANT can also be applied to individual items of functionality, such as photo sharing.

1. Problematisation: unfulfilled desire to share holiday photos with friends.

2. Interessement: focal actor posts images and perhaps notifies friends.

3. Enrolment: friends begin to look at and comment upon the photos, which may raise the profile of these photos.

4. Mobilisation: more comments generate more interest.

ANT appears most relevant when considering social networks in terms of overall growth or particular goals (e.g. campaign groups or event publicity). Modelling individual use may be more difficult, because people use social websites holistically [3], tending to 'hang around' and see what's happening. By contrast, ANT seems suited to modelling people taking actions to solve specific problems.

Conclusions

Our aim is to use these techniques in order to deconstruct a digital experience so that it can be reconstructed into a new digital context, for example, taking the experience offered by a social networking site and reconstructing it using novel pervasive channels.

In parallel to this work, the authors have prototyped a messaging infrastructure which could carry this social data. This system decouples information from its original modality, for example allowing an email to be displayed on a screen, printed or vocalized on a phone.

Our hope is that by re-imagining social systems in this way and building them into a multimodal messaging infrastructure, we could provide the basis for a fully-fledged *Social Fabric* that could improve technology access, and help a wider range of people benefit from social technologies.

References

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