

Stop reading for a moment and imagine the last time that you went upstairs... Do you have a picture of the steps ahead of you in your mind, or are you recalling a series of noises, such as doors closing below you and the scuff of your shoes, or the feel of a handrail? In trying to remember, did you stare up and beyond this page, or down and away? How much effort did you give remembering? Did you take a moment to conjure the memory up? That was a moment of evocation and by prolonging this kind of experience a thorough account of the activity can be collected. You will have noticed that the start of your recollection hinged on a specific sensory memory such as smelling polish or seeing the black strip on the edge of each stair. Vermersch calls the search for this trigger 'cherchez la madeleine' (p97, look for the madeleine), out of acknowledgement to Proust's insights in this area.²

So, to summarise, the state of evocation is familiar to most of us, if not from personal experience, then from watching someone else glaze over as they remember something by staring into the space where their mind's eye performs a replay of events.

Once an interviewee is focusing on a previous event in this way as they answer a stream of detailed questions, the kind of account given is qualitatively different from that which one might volunteer on another occasion (see Vermersch 1994, pp176-181 for a summary of the technique's validation). Not only is a fine-grained description of the activity made possible, but the language used to describe it is less tailored for its audience than normal accounts tend to be (Antaki 1988). It is likely to be a description rich in emotional colour and the detail of associations that are not strictly relevant to the action being described. Because the chronology of the event is being relived, rather than just retold, there is little of the post-hoc rationalisation that often accompanies retrospective accounts (Ericsson and Simon, 1984, 2nd edn, 1993). These features can become an additional strength of the method, despite the fact that there is little of the stream of additional and arbitrary details that often accompany retrospective accounts. You will notice that the description is not only detailed but also rich in emotional colour and detail of associations that are not strictly relevant to the action being described.

Then the interviewee is encouraged to think of a particular episode involving the activity under investigation and go into a state of evocation so that the episode can be described in detail. If the episode is part of a series of similar events, then one - the first, the last or the most memorable - is chosen for analysis. The adoption of a single occasion to refer to is essential for evocation. And this ensures that what is described is remembered detail, rather than assumptions drawn from some pre-digested conglomerate of memories which offer no new insights.

The interviewee is helped to recollect a particular episode by sensorial questioning:

Just put yourself back into the situation. Don't tell me a story, just put yourself back into the situation and tell me exactly what you did. Was it morning or afternoon?

It would have been afternoon.

And where were you?

I was in the lab. It was at that terminal there.

And was it a hot afternoon? Was it a cold afternoon?

Um, not so I noticed either way.

(excerpt from RG's account of using a website, 1999)

Certain cues, such as the gaze of the interviewee reveal whether they are in evocation or not. It is helpful if the interviewer does not sit directly opposite the interviewee as this interferes with the ability of the interviewee to stare into space, returning their gaze to the other person and their thoughts to the present. Sometimes evocation is not sustained throughout an interview, but the purpose is to foster an environment where evocation is dominant.

To maintain focus on a single episode, the interviewee is steered away from any generalisations and comments, such as: 'Whenever I...'. If they offer an opinion, it is clarified whether they thought it at the time or are relating it as part of an explanation now - if the latter, it is politely dismissed. The intention is to get an account that, usually chronologically, describes the event as if the interviewee were conducting it again, rather than an account designed for the listener.

Even with the interviewee in a state of evocation, questioning is necessary for guiding the interview. Often, to extract the most relevant information, or just to maintain a flow, prompting is needed. Prompting can take many forms, from echoing, to specifying: 'When you say you did X, what did you do?' to clarifying 'I want to understand. You said X. Have I understood? Was it like this?...'. It does not take the form of a closed or leading question. The interviewer avoids introducing their own presuppositions about the possible form or content: for instance, by using: 'what did you see, or hear, or think, or whatever?' rather than 'what did you see?', acknowledging the huge interpersonal differences in mental processes. Inaccurate assumptions about *how* a person thinks can be more disruptive to the state of evocation than inappropriate assumptions about *what* is being thought. Generally, the style of questioning, in being

returning to later. Generally, some reassurance is necessary if this happens:

the intricacies of their physical behaviour in situations where they do not normally stop to reflect (Vermersch and Maurel 1997). And at the other, it is used to help students understand their own cognitive processes, particularly in remedial teaching situations, and is effective at clearing 'mental blocks'.

The technique's value to the HCI community is suggested in this range of applications. Since HCI researchers are concerned to understand the use of technologies, and regularly use qualitative research methods to do so, an additional technique that investigates how tasks are conducted will be welcome. The advantage interviewing has always offered over straight observation is that something of users' thoughts can be gleaned to explain why certain actions have been taken. This is true whether the issue is the usability of a product or the interpretability of an icon; however, the more that design acceptability hinges on cognitive or social factors, the more that interviewing comes into its own.

Collecting concurrent verbal protocols is a common form of information gathering, which, in conjunction with a record of what the user is undertaking, can be used to offer insight into internal processes. However, users cannot be expected to give a very detailed account or answer probing questions in this context and simultaneously maintain coherence in carrying out the task that they are attempting to comment on. Therefore this kind of account may not be as thorough as the researcher wishes, or, alternatively, may be prone to distortion.³

On the other hand, as mentioned above, it is well recognised that interviews which take place away from the task being discussed are prone to faulty recollection. One approach to overcoming this has been to show users a video recording of their behaviour and ask them to annotate this with a recollection of their thoughts. The explicitation technique can be used in conjunction with this or instead of it. Both approaches have their merits: showing the video may ensure that a chronologically accurate account is produced, but it may also generate a new set of thoughts that interfere with recalling the original performance of the task. A decision on whether to use video will hinge on which kind of details are important. Traditionally, the only prompt has been the interviewer, attempting to keep the integrity of the original experience. But, if the subsequent analysis is handled in terms of extracting typical behaviour, then the influence of the video as a further stimulus will be insignificant.

³ Ericsson and Simon (1984, 2nd edn,1993) assert that 'talk aloud' does not interfere with a person's ability to conduct a task so long as there are no additional stipulations that direct the user away from the task. The giving of a detailed account can be seen to direct the user away from the primary task to the performance of a secondary one: account giving.

To conclude, the technique can be used to effect in a range of information gathering contexts relevant to HCI researchers. Its usefulness is determined by the study undertaken and the kind of analysis that is to be conducted on the accounts gathered, rather than by particulars of the task conducted. The technique will offer the most value to an interviewer who seeks considerable depth for purposes of exploration. Others may consider the granularity and quality of detail unnecessary.

The following study required thorough accounts: no detail was considered incidental to the questions being asked. It is a study of how a group of people responded to carrying out different kinds of task on the Web. Because it was concerned with user perceptions, we were seeking to collect accounts that had not been heavily rationalised in view of subsequent experiences. But, we were also seeking sufficient detail to make the technique of concurrent protocol collection inappropriate.

The Study

When the Web first became a medium of information transmission, much work was conducted into how people interacted with it, yet, despite considerable changes in the use to which websites are now put, there has been little new definition of the interactions taking place. The study described below was conducted to explore how the increasing use of dynamic pages – and with them, forms for inputting users' requirements – has affected the interactions taking place, and the appropriate design models for developing sites. Therefore, the study (Light and Wakeman, forthcoming) looked at how people respond to entering text into interactive components on websites, such as comment boxes, search fields and order forms.

Vermersch's explicitation technique was used in the study, because we wanted to know:

- What thoughts went through the mind of the users as they approached and started the task of entering text into websites?
- How did these thoughts compare with their thoughts when using other parts of the site?

Since thoughts can only be accessed in mediated form, in the study the thinking under investigation was construed as a series of mental activities stimulated by - but not necessarily directly related to - the experiences users had with websites. It was decided to collect users' accounts of the thinking they did during the period of conducting the task, whether it was closely associated or not with the task of using the website. These accounts would then be analysed to reveal interviewee's interpretations of the activities they had been involved with: moving round the site, reading and entering text.

Clearly, the study required a fine degree of granularity in the accounts of people's thinking if it was to yield any useful data for comparison within and across interviews. As touched on earlier, in pilot studies, this demand was shown to pose problems in collecting the accounts concurrently with use of the websites, as the thoroughness of describing the thoughts and feelings users were engaged in distracted them from the task that was being conducted. It was decided that a retrospective method for gathering accounts of the task would be needed.

However, as mentioned, retrospective accounts are prone to poor and inaccurate recall of detail and post-hoc rationalisations. We decided to use the explicitation interviewing technique, since it appeared to offer a way of collecting considerable detail retrospectively while partially overcoming the problems associated with this.

Its adoption immediately exposed a new methodological issue. In some pilot studies, a common task was set for interviewees so that experimental conditions would enable direct comparisons to be made between accounts. But the unusual quantity and quality of the information gathered using the explicitation
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Interviewees undergoing interviews about completed tasks do occasionally refer to the effect of the task or the task set-up on their performance, but, by and large, they screen this kind of comment out as part of colluding in the experiment, unless specifically asked about it.⁵ While they might offer the judgement made in point 6, there are many reasons why most people do not raise points 1-5 in the course of an ordinary interview about 'looking' behaviour. Whether dismissed on appearance during the task, or in the following interview

of fleeting thoughts, which are not usually recalled at all. The rest of this paper will give further examples of the outcomes of using the technique, drawn from the actual study conducted.

Study methodology

20 Web users were interviewed, being asked to describe as fully as possible the last occasion upon which they had visited a website and, through the course of their visit, entered any text. Interviews lasted on average just more than half an hour and dealt with between a minute and 10 minutes of behaviour and thoughts. They were recorded in audio only. This provided 12 hours of material for transcription and analysis.

Analysis was concerned with variations within accounts and patterns between accounts. We looked for signs of relationships. These did not have to be straightforward statements from interviewees. In fact, interviewees had been given no idea which details were of interest, so that their accounts would not be

English speakers, whereas a majority of users - and many surveys - are US based.

Sample findings

In general, the interviews showed:

- that users responded differently at the point where they began to enter text into websites from behaviour with other parts of the site, and
- that there were generalisable patterns between accounts about where changes in perception occurred.

There was an awareness of the interface:

Yes. Ok. Uh, as I recall there was a big blob of colour in the middle. Uh, I can't remember what was underneath, but the pointer changed to a hand, yeah, and so I didn't bother reading the rest at the bottom.

(excerpt from AC's account of using a website, 1999)

but interestingly - in terms of what was being explored - there was also evidence that people started to think beyond the interface when they began to prepare text for entry:

Any images come to mind?

... Kind of designers, designers, a group, I don't know why. It's more a sense of people having designed that.. Yeh, I had, no, I had. I had more this impression of bizarre, this stuff, it's not done well: this box comes too late. And then something like, how would ____

(excerpt from LB's account of entering financial details into a booking form on a website, 1999)

There were also explanations of feelings:

Yeah, and you get back stuff giving you a booking reference and a telephone number and a place to ring if things aren't going well and a suggestion that you print out the page with your itinerary on it and

behaviour even when they are not sure of who or what they are interacting with.

There has been little work on Web users' perceptions of text entry mechanisms and the study referred to here is far from exhaustive. But, it is hoped that the findings might encourage designers to experiment with making explicit the metaphor of communication in building functionality into sites, seeing the solicitation of information as an 'invitation' to interact. Producers might also consider how they phrase and present their 'invitations' for maximum effect, both in terms of persuasiveness and in carving an identity. For more discussion of the implications of these findings in design terms, the reader is referred to the paper devoted to this study (Light and Wakeman, forthcoming).

Conclusion

The result of using this method was that considerable useful information could be elicited during interviews - down to the most incidental details of how the interviewee received impressions - about any aspect of the process under review. No particular effort on the part of the interviewee to remember was required, but a willingness to follow the interviewer and answer questions did show itself to be a prerequisite - hence the need for the contract at the start, and the occasional need to renew it.

From the description of the study above, it is obvious that additional insight was gained by collecting accounts from users in this way. It was possible to identify

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