# social research UPDATE

- Cognitive interviewing (CI) is empirically validated as a technique for retrieving accurate and thorough recall
- It enables retrieval not only of events, but also their meaning for interviewees
- It has affinities with qualitative interviewing, whilst enjoying clear criteria of competence

## Cognitive Interviewing as a Research Technique

### P.A.J. Waddington and Ray Bull

Cognitive interviewing (CI) is established as a valid and reliable practical tool for forensic and health purposes, but its utility for the social sciences has yet to be fully exploited. This *Update*, aims to describe and appraise CI as a data-gathering tool and promote its use in the social sciences. We will illustrate the utility of CI by referring to our research on workplace violence (Waddington et al. 2006).

#### Why use CI?

One purpose of interviewing in social science is to obtain *factual* information of events that may be either hidden from view or occur so infrequently as to make direct observation non-viable—a problem particularly acute in criminology, but which occurs in other fields too. In this connection, interviewing techniques must enable valid and reliable recall of experience. CI claims to achieve this: providing descriptions of experience that are more complete and accurate than comparable methods, and less prone to confabulation.

Theoretically, CI is rooted in cognitive psychology (Davies and Thomson 1987; Kohnken et al. 1999; Py et al. 1997; Tulving and Thomson 1973) and rests upon two principal concepts: (i) memory for an event comprises a network of associations and, therefore, there will be several means by which a memory can be cued; and (ii) retrieval from memory will be more effective if at the time of retrieval the context

surrounding the original events can be re-instated (Cutler et al. 1987; Memon and Bull 1991). Remembering some aspects of experience leads, by association, to others, but the sequence cannot be predicted and may appear convoluted to a third party. Cognitive interviewing is designed to facilitate accurate recall.

Empirically, CI has been validated both experimentally and practically. Experimentally, events have been staged, independently recorded, and then witnesses have been interviewed by various methods, including hypnosis, and the accuracy of the resulting accounts have been compared to the recording of the incident. CI emerges as providing more accurate accounts of staged events than alternatives (Kohnken et al. 1999). Forensically, information obtained by CI with witnesses and victims has identified suspects whose guilt has been independently verified by other evidence (e.g., Fisher et al. 1989; George and Clifford 1995; Py et al. 1997). Moreover, the veracity of witness accounts and the means used to achieve them have withstood the searching scrutiny of criminal trials. Although few studies exist of the effectiveness of CI after long delays, an appropriately modified version of the CI was more effective than the 'standard epidemiological interview' in assisting people to correctly recall their usual daily activities from 35 years previously (Fisher et al. 2000). Also, CI has been found to be effective not only with

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'ordinary' adults, but also with interviewees with learning disabilities and with children (R. Milne and Bull 2006).

## What is CI?

CI is an approach, accompanied by a set of discrete techniques, rather than a procedure. It has synergies with unstructured qualitative interviewing. It is crucial to appreciate that there is *no* standardisation, not even standardised prompts or a set of questions that allow open-ended answers. In order for the interviewee to access and retrieve from their memory effectively it is vital that their sequence of recall is not interrupted, e.g. by requests for clarification. One of the most important techniques in CI is that the interviewer remains silent while the interviewee recalls experience. However much an interviewee appears to be drifting into irrelevancies, they should remain uninterrupted.

The interviewee must be encouraged to recall experience unrestrained by the editing normally expected in social conversation. Rapport is essential and the interviewer, therefore, needs to be socially skilled in order to put the interviewee at their ease and give them license to tell their story in detail. The interviewer needs to be very attentive to what the interviewee is saying, scribbling notes of anything that may call for greater elaboration and clarification subsequently. This attentiveness and freedom from interruption seems to encourage interviewees to provide copious detail, apparently serving as affirmation that they are being taken seriously (in our research, incidents lasting minutes were recalled in interviews exceeding an hour).

The main techniques employed to enhance recall is 'context reinstatement', the purpose of which is to return the interviewee in their mind to the context in which the experience occurred. Often this entails no more than asking the interviewee to relax, preferably close their eyes, and recall where and when the incident occurred. They should be invited to recall the scene and in their mind to look around it and note who was present, what they could see, hear, touch and smell. They might be encouraged to remember what had happened immediately prior to the incident. It can be valuable, where appropriate, to ask the interviewee to draw a map of the location and indicate where others were standing, sitting, etc. However it is achieved, it is important to awaken the interviewee's memory of the context and they should be allowed time to do so. The context cues will then assist recall.

The interviewee is then invited to recount their experience in whatever way they choose. Narrative is the most common structure, but some interviewees may begin by recalling the most memorable feature of the experience. Not until the interviewee has *fully* completed this initial recall does the interviewer intervene. There may be elements of the account that fail to connect, e.g. the interviewee has failed to acknowledge that they moved from one location to another, or left unexplained what prompted some specific course of action. The interviewer now invites the interviewee to return to each significant moment in turn, reinstating the context each time (paying as much attention to doing so as they did initially) and invites the interviewee to elaborate.

Once the interviewee appears to have recalled as much as possible, it may prove expedient to use other techniques to unlock the interviewee's memory. First, it is sometimes useful to reverse the narrative: to ask the interviewee to recall what happened immediately prior to some particularly important moment, e.g. what occurred immediately before an eruption of violence. This inhibits interviewees from skipping over steps in the narrative because they are taken for granted. Secondly, the interviewee may be asked to search their memory from a perspective other than the one they have used so far. In order to reduce the danger of fabrication it is important that, if used, the interviewee should be clearly told that they should only report what they know, and not to invent or fantasize. Whichever technique is used, the most important prelude to each exploration of detail must be to reinstate the context and definitely not to rush the interviewee into providing an account.

The interview may usefully terminate with the interviewer giving their understanding of what the interviewee experienced and

asking the latter to correct and elaborate as appropriate.

## Recording and analysing CI

An audio recording of the interview (accompanied by any sketches or other ancillary material) is essential because of the large amount of data produced by successive iterations of recall.

A simple transcript of the interview is of very limited analytical value, not only because of the layers of elaboration and repetition involved, but also because the idiosyncrasies of recall may disrupt the narrative. In order for the account to be rendered useful, the elements of recall need to be arranged in a narrative or other analytically relevant order, e.g. descriptions of people that may be scattered throughout the interview may usefully be brought together. Whilst authenticity is enhanced by using the words of the interviewee as they recollected features of the experience, it is advisable to distinguish this process from that of the interviewee's recall by producing this reconstructed account in the third person. If, as often happens, the same features are referred to more than once, any disparities or contradictions should be explicitly noted. If possible, this analytical composite should be presented to the interviewee for amendment and endorsement.

## From forensics to research use

This forensically validated approach is applicable to research, especially where the latter focuses upon specific events. Our research on workplace violence sought to discover what police officers, emergency medical staff, social workers and mental health professionals actually experienced (for detailed case studies, see Waddington et al. 2006). Questionnaire surveys showed that workers were more often abused, threatened and intimidated, than physically assaulted (Budd 1999, 2001; Upson 2004). CI enabled us to delve into the minutia of incidents identifying specifically those features that induced fear. Often these were threats and expressions of anger voiced or displayed by others, but it was also related (sometimes exclusively) to the context in which an encounter took place. Appearance was a potent source of threat: those who 'looked the part' needed to do very little in order to frighten; interviewees often recalled the musculature of aggressive young men. Vulnerably was exacerbated by medical staff working in the early hours, or lone social workers visiting clients in their homes. Contrary to the assumptions of many training manuals, prior knowledge of suspects, patients and clients could enhance threat rather than diminish it, lending credibility to any threats.

CI allowed us to compare what interviewees recalled had actually taken place with the threat they felt. Some of those most distressed by incidents had suffered the least overtly threatening circumstances. As qualitative analysis has often discovered, it was the meaning given to incidents by interviewees that proved crucial. Differences reflected interviewees' differing interpretation of the 'moral contract' between themselves and those they dealt with professionally. Emergency medical practitioners were least tolerant of demanding or hostile patients because they saw themselves as helping patients by applying professional knowledge for which patients should feel grateful and comply. Police officers and social workers involved in child protection expected hostility, resentment and suspicion and therefore tolerated obscenities and displays of anger. Mental health professionals were tolerant of aberrant behaviour that could be attributed to the patient's mental health, but not actions that were perceived as wilful, often questioning psychiatric diagnoses in doing so.

## Methodological issues in CI

The elicitation of recall relies upon the social as well as technical skills of the interviewer, e.g. in effectively granting the interviewee license to provide copious detail and in reinstating context (Milne and Bull 1999). How, then, do we establish and authenticate the competence of interviewers? Interviewers can be trained

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using any source of experience that can be independently verified. An obvious expedient is to ask interviewees to watch a video recording of some event, real or fictitious, the content of which is unknown to the trainee interviewer; after a suitable time lapse, the trainee interviewer elicits recall of the video from the interviewee; the elicited recall can then be compared to the video and accuracy assessed.

The second issue is that, like other interviewing methods, CI requires interviewers and interviewees to collaborate actively to produce an account. However, this is no reason to doubt the effectiveness of CI, for its claims of thoroughness, accuracy and non-confabulation rest upon outcome rather than process. What of interviewees who have a vested interest in presenting a particular version of events? Victims and witnesses are not immune to such impulses and CI has survived searching appraisal in such cases. In our research, interviewees freely disclosed racist sentiments, e.g. young, apparently 'streetwise' black men were often regarded as intrinsically intimidating.

All research methods suffer from errors and in addition to errors of recall on the part of the interviewee, in CI errors might arise from the process of reducing the multi-layered interview transcript into a usable composite account. Validity and reliability of the second process can and should be guaranteed through requiring a sample of interviews to be independently reduced to composites and then compared in a process analogous to inter-rater reliability evaluation. This is demanding and time-consuming. The resources needed should not be under-estimated and require adequate funding.

CI has been used so far for recalling specific events, but in principle it should not be restricted to doing so. For instance, it could be used for recalling events that contribute to oral history, personal biography and other similar uses. As with other interviewing techniques, it would need independent corroboration to establish accuracy, thoroughness and lack of confabulation.

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