

Recording Technologies and the Interview in Sociology, 1920-2000

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In her overview of the history of the interview, Jennifer Platt has observed that: "... research on the consequences for practice of changing techniques and technologies for the recording of free answers is strikingly absent" (2002, 41)¹. In recent years there has been a growing interest in the sociology of science in the role of tools, devices and apparatus in the production of scientific knowledge (see, e.g. Latour, 1987; Clarke and Fujimura, 1992). By contrast, and as Platt's observation might suggest, the role of equipment in the social sciences has been less well studied (though see Draaisma and de Rijcke, 2001; Mangabeira, 1999). The lack of attention paid to the devices used by social scientists in part probably reflects the relative importance of the laboratory in the natural sciences compared to the social sciences. However, studies of research tools might also have been inhibited in the social sciences, as they were in the natural sciences, by their association with the craft aspects of science, an area of scientific practice traditionally accorded low status (Ravetz, 1971). This might be particularly so in the qualitative tradition in social science where researchers have often learned their craft in apprentice-like relations with a more experienced mentor. Such relations have sometimes encouraged 'sink-or-swim' approaches to research training (Jackson, 1990) or incorporated heroic conceptions of practice which emphasise performative virtuosity (see, e.g., Mills, 1959), either of which might encourage a structured disinterest in 'merely' technical matters. This article offers a largely descriptive account of some of the recording practices associated with unstructured interviewing in social research. While questionnaires, schedules, survey blanks and the like are, of course, recording devices, the technologies associated with the historical development of the survey are not discussed at any length. A detailed discussion can be found in Converse (1987). In addition, only the recording of what is *said* in interviews will be considered. No attention will be paid to methods for recording observational data, or the use of video recording technologies.

Manual recording

By the early 1920s, the interview in a recognisably modern form, both structured and unstructured, had become established as a data collection method in sociology. Researchers carrying out unstructured interviews often relied on what was known at the time as the 'verbatim interview' (Burgess, 1928; Cavan, 1929). This term does not imply, as it might today, that the record of the interview contains a complete and more or less faithful rendering of what was said. It represented instead an attempt to obtain as nearly as possible a "report of the interview, in anecdotal form, including gestures, facial expressions, questions, and remarks of the interviewer" (Cavan, 1929, 107). In other words, although condensed and selective, the record of the interview had a

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naturalistic character in which its original sequence was preserved, the dynamics of the interview were noted, and those words uttered by the respondent that were judged significant were recorded in as faithful a way as possible. To do this, researchers relied on reconstructing the interview from memory after the event, unobtrusively jotted notes, or the use of standard or private shorthands (Bennett, 1981; Platt, 1976). It is not clear how such practices or the skills associated with them were distributed. Kluckhohn's (1945) call for researchers to learn speedwriting as an aid to interviewing suggests that the more detailed recording methods were not common. Nevertheless, when real-time recording of interviews first became possible, comparisons of written notes and interview transcripts suggested that the former could be broadly accurate, though vulnerable always to the possible omission of potentially important information (Rogers, 1942).

An alternative to recording the interview oneself was to devolve the responsibility onto someone else, a practice that seems to have been fairly common in the early Chicago tradition. As Platt has noted, the extent to which the Chicagoans gathered first hand data has been exaggerated by some later writers. In the 1920s at least, data collected at first hand often came from the records of social work agencies. Data were then presented in ways which suggest that it was "regarded as relatively unimportant who obtained the material, whether it was originally written or oral, and whether it reported specific instances or generalizations" (Platt, 1994, 69). Social workers in the 1920s were examining in a relatively sophisticated way, issues such as interview dynamics, interviewer characteristics, how interviews might best be observed and recorded, experiments in data display, and the functions of various phases of the interview (see, e.g., Cavan, 1929). As such they tended to be regarded as experts and innovators in relation to interviewing.

Burgess (1928) commended the verbatim interview to social workers as a device which would allow casework interview data to be used subsequently for the purposes of sociological research. In his view the verbatim form posed few additional burdens on caseworkers, and was a method of recording that served their own purposes well. Being relatively free of meanings imposed by the caseworker, it was, however, also capable of being reinterpreted by the sociologist in the light of theoretical concerns that might be remote from the original interests of client and caseworker. Perhaps understandably social workers were not entirely happy about the prospect of becoming recording instruments for sociologists. As a number of commentators pointed out in response to Burgess (see, e.g. Bruno, 1929), in the verbatim interview the person recording the interview still had to make judgements about what was significant and important. There was no guarantee what was recorded was free of influence from the context of the interview, the vividness of what was said, or the characteristics of the interviewer. Moreover, verbatim recording took time, energy and skill but the resources needed for support or for training were not available. In the event, it is unclear how far social casework interviewing and its recording methods had a decisive influence on sociological research practice. (It has been argued that the development of casework methods helped to cement a professional identity among social workers that increasingly distanced them from even reform-minded sociologists [Carey, 1975; Lubove, 1965].)

In much of the writing associated with the Chicago School the term 'interview' is scarcely differentiated from the term 'life history.' The life history was a form of autobiography usually written by a research subject. Like more modern versions of the unstructured interview, it involved a degree of sustained interaction between the

researcher and research participant, was relatively unstructured in form, and focused largely on subjective elements of the interviewee's life. This last aspect reflected the importance to early writers in the Chicago tradition of the concept of 'personality' (something overshadowed by the attention later writers have paid to the work of George Herbert Mead). Influenced by the work of W. I. Thomas, personality was viewed as a collection of a more or less stable set of attitudes and motivations which existed in a dynamic relationship to the social situations individuals experienced through the life course. It was the understanding of this relationship that gave the life history its subjective, retrospective and longitudinal character.

To 'secure' the life history, as it was termed, the subject had to be selected, motivated, and instructed in what was required. In Krueger's (1925) work, for example, the life history is seen as something of a confessional exercise². Indeed, there seems to have been an assumption that the life history had a cathartic function. As a result, it might be appropriate for the researcher to seek out subjects who had strongly held views or were in situations likely to prompt forthright expression of their inner feelings. Within this context an interview was used "to promote rapport, to secure willingness and a desire to write, and to set the situation in which under proper conditions catharsis can take place" (Krueger, 1925, 297). The writing of the life history itself usually began with a stimulus, often a schedule of questions, usually of a broad and general kind, setting out the kind of the information sought by the researcher. In fact, Krueger explicitly advised against allowing subjects to tell their own story during the interview. Instead, "... the questions and general conversation of the investigator should be directed towards securing a catharsis of the emotional fixation" (1925, 293). Once this was done it was assumed that the life history material would flow rapidly as the subject began to write.

From the point of view of data recording, the interview in the context of the life history became in effect a stimulus briefing, the work of recording belongs to the subject. Over time, however, the relative weight of the interview and the written production of the life history changed. The interview element of the process became more important, and its function shifted. The interview became not just a vehicle for initiating and motivating the research subject but also served as a means to elaborate and expand the written material. From the mid-1920s to the early 1940s Clifford Shaw and his associates at the Institute for Juvenile Research in Chicago collected hundreds of life histories of people, mostly juveniles³, in contact with the criminal justice system (Bennett, 1981, 227). The standard procedure involved obtaining by means of an initial interview a list in chronological order of major events in the research subject's life. This was then used as a guide to the writing of the subject's "own story", the elaboration of which was accomplished through further interviews (Shaw, 1930, 22). Of most significance in the present context is the fact that the interview was recorded by a stenographer who was hidden behind a screen (Smith, 1928). This was done, according to Shaw (1930, 22) so that:

² On continuities between confessional and interview practices, see e.g. Foucault (1977). Many of the 'desensitising' and 'dejeopardising' techniques used by social scientists today for asking sensitive questions were codified in the sixteenth and seventeenth centuries in 'penitentials', manuals used to train priests to hear confessions (Lee, 1993).

³ How far the shift in practice was an adaptation to work with less literate populations is difficult to say.

... the story is recorded in the exact language of the interviewee. Thus the record of the interview is not only complete, but its objectivity is preserved. A translation of the story into the language of the interviewer would, in most cases, greatly alter the original meaning.

Shaw who had been a parole officer might well have been familiar with the use of stenography by court reporters, but it is clear that by the early 1930s, stenographic recording of interviews, if not common, was far from being a novelty. The method was used, for example, by Herbert Blumer in his (1933) empirical study reported in the book *Movies and Conduct*. One of the so-called 'Payne Fund Studies' on the effects of motion pictures on young people, the research used a variety of methods including the use of autobiographies (mostly supplied by university and college students), questionnaires, and informal observation. In addition, a proportion of those who had returned autobiographies were interviewed at length about their experiences. A full record of the interview was taken by a stenographer. The subject knew that the interview was being recorded in this way, but the stenographer was placed behind the interviewee and, therefore, out of sight. No fixed question format was followed; "the line of inquiry was allowed to develop in accordance with the nature of the responses of the subject" (1933, 9), but interviewers talked about their own experiences as a way of encouraging the interviewee to talk.

Blumer apparently turned to interviewing because autobiographies yielded relatively little information about how films affected sexual attitudes and behaviour, a topic of considerable interest to the study's funders (Jowett et al., 1996). Transcripts of the interviews apparently do not survive. A parallel Payne Fund supported study by Paul Cressey, which formed part of the Frederic Thrasher's large scale Boys' Club project, remained unfinished. Only appearing in print some sixty years later, the draft of Cressey's final report contains both summaries of interview dictated after their completion, and transcripts of stenographically recorded interviews. (See Jowett et al., 1996, Part II.) The rather terse and staccato answers recorded suggest that stenographers summarised responses rather than recording them verbatim. One can also note, however, that the brevity of responses probably also reflects a style of interviewing focused on factual matters and relatively unconcerned with eliciting any great degree of psychological depth.

Stenographic recording continued to be used throughout the 1930s and into the 1940s. (See, e.g. Lind, 1936; Franz, 1942; Merton et al., 1956, 140.) This reflects limitations in the technology available in the 1920s and 30s for recording interviews. If first hand data were to be collected, then a 'fieldwork of the office' was required. Research populations needed either to be 'corralled' to use Frederic Thrasher's (1928) phrase, or to be already captive in some sense, literally so in the case of prisoners⁴, effectively so in the case of parolees or students. Constrained by the difficulties involved researchers like Thrasher (1928) seem to have gone to extraordinary lengths to obtain interviews which could be recorded in detail. Thrasher became steadily acquainted with a group of boys by making passing comments to them when he met them on the street, by providing small favours, and by hiring boys to run errands. Trust having been established Thrasher suggested to the boys that they form a club. He then invited

⁴ Prisoners were, of course, also attractive subjects for life history research because they had so much time on their hands and autobiographical writing was a useful distraction to them.

them to his apartment to meet his wife and to establish the club. Under the guise of creating the club roster, Thrasher conducted what he calls a 'collective interview.' He asked each boy in turn a few general questions, the answers to which were recorded directly on a typewriter. Subsequent interviews were used to determine future activities for the club in a way which gave Thrasher an opportunity to observe the boys and elicit information on their interests. Whitley (1931), one of Thrasher's colleagues on the Boys' Club study⁵, also recorded interviews directly onto a typewriter, telling respondents that he wished to work in boys' clubs and needed to know how boys thought. Not only do ethical difficulties arise in such cases from the blurring of roles, the techniques used to gain the confidence of boys would hardly be acceptable today given current concerns about child protection.

Phonographic recording

Whitley (1931) experimented, rather unsuccessfully it seems, with recording interviews using an 'ediphone', an early form of business dictating machine based on the phonograph. Such devices were apparently known to sociologists in Chicago. According to Vivian Palmer (1928) such devices might have uses in methodological research on the interview but were of little use in routine interview practice. This was a rather sound judgement, because for a long period the technical limitations of phonographic recording made it unsuitable for recording interviews.

The phonograph is generally considered to have been invented by Thomas Edison in 1877. It used a stylus moving on a wax surface to record sound waves. Although the phonograph eventually became the basis for a mass entertainment industry, devices to record sound on wax cylinders and discs were originally seen as business tools intended to replace human stenographers for taking dictation in business settings (Morton, 2000). Although a number of famous writers including Mark Twain and Leon Trotsky are known to have used early forms of dictation technology, Morton argues that in the business environment dictation machines were never as successful in the early part of the twentieth century as were office machines such as typewriters. This was partly because of technical inadequacies but also due to consumer resistance on the part of business executives which, as Morton points out, were rooted in power, gender and status issues.

Attempts to sell commercial dictation equipment often appealed to the principles of Scientific Management and was represented as a way of consolidating secretarial work into typing pools in the name of business efficiency. Managers, however, disliked the machines because having one's own secretary was a sign of status, and because the machines themselves were far from easy to use. To record speech it was necessary to shout down a speaking tube. This had to be done at a speed and a level which caused the machine's stylus to vibrate at the right speed, and was difficult to do without training and practice (Morton, 2000, 86-7). People felt somewhat embarrassed talking to the machine in this way and frequently disliked hearing the sound of their own voice. The experiences of folklorists and musicologists who experimented with early wax-based dictation equipment suggested it was hardly

⁵ Jowett et al. (1996) observe that the Boys' Club study seems to have been signally ill-fated. Whitley committed suicide. Thrasher suffered a nervous breakdown, while both Cressey and his wife underwent serious surgery (botched in the case of Mrs Cressey) and subsequent severe illness. Interpersonal relations on the project also appear to have been somewhat fraught.

suitable for use under field conditions. The wax melted in hot weather or became too hard for the stylus to cut a groove when it was cold (Morton, 2000, 146).

Only for a brief period, from the early 1940s until the advent of the tape recorder in the early 1950s, did phonographic methods appear to offer a viable technology for recording. Their successful use is associated with an important and influential figure in psychology, Carl Rogers. Early in his career Rogers had come to the view that a full verbatim record of therapy sessions would be valuable. An early experiment with phonographic recording in 1938 was unsuccessful. In the early 1940s, however, Rogers returned to the issue again at the urging of Bernard Conver, one of his graduate students at Ohio State University. Conver, who was an amateur radio and electronics enthusiast, obtained and set up equipment that proved, within limits, to be successful for recording lengthy, unstructured therapeutic interviews (Kirschenbaum, 1979, 130). Relatively inexpensive phonographic recording units had become available in the US around this time (Conver, 1942a). These comprised a microphone and amplifier connected to an electrically-driven constant speed turntable. As well as a playback arm, the turntable had a recording arm with a steel stylus which, taking a signal from the microphone via the amplifier, cut grooves in an acetate disc. The 10 inch (25.4cm) records cut in this way could be replayed at 78 rpm on a standard electrical phonograph. Since each disc could hold only about four-and-a-half minutes of recorded sound, a second turntable and a switching device was used so that, as one disc became full, a fresh disc could be switched into use. With practice, it was possible to switch back and forth between turntables, accumulating discs until the interview had been recorded *in toto*. A transcribing device was also constructed which connected the playback arm of the phonograph to a foot pedal. This allowed a typist to raise and lower the arm at will so that a sentence could be listened to over and over again (Conver, 1942b).

In 1942 Rogers was invited by Rensis Likert the Director of the Division of Program Surveys, a research unit in the US Department of Agriculture, to train interviewers in nondirective techniques (Rogers, 1945; Converse, 1987). Interviewers were sent on an intensive week-long course during which the interviews they conducted were phonographically recorded, and the recordings discussed. This work had an influence on sociology in a variety of ways. As Converse (1987, 478) notes, Rogers did not have much day-to-day involvement in the interviewer training project. Much of the detailed work was undertaken by his colleague Charles Cannell. Cannell eventually joined the Division of Program Surveys, where he later became field director, and subsequently went on to a distinguished career as a survey researcher. In the context of wartime, work on non-directive interviewing was deemed to be important because it was thought to be potentially useful to the study of morale (see, e.g. Shils, 1941). Rogers eventually contributed an article on non-directive interviewing to the *American Journal of Sociology* (Rogers, 1945). It is quite clear that this work had a decisive influence, for example, on Merton and Kendall's development of the focused interview.

Magnetic recording

Chapoulie (1987, 270) argues that a change in research practice in sociology can be seen after the Second World War:

Instead of briefly summarizing fieldnotes and remarks gathered by interviewing, or even simply referring to these data, many ... accounts cited them word for word, which forced researchers to construct finer

categories of analysis and to explain their interpretations of remarks and behavior in more detail.

This shift probably occurred independently of technological development. One can note, for example, that Howard Becker's early post-war studies undertaken without real-time recording⁶ well illustrate Chapoulie's point in comparison with pre-war and earlier Chicago models. The tradition of participant observation which grew up in sociology after the Second World War was clearly influenced by Malinowski's reorientation of fieldwork practice in anthropology. This moved fieldwork away from a 'verandah model' (Wax and Cassell, 1979) which utilised professional informants towards what Sanjek (1990) calls 'situated listening', the detailed contemporaneous recording of everyday life. The influence of psychology on interview practice was also felt. Rogers has already been mentioned. Roethlisberger and Dickson (1939) cited Piaget as an influence on the interview methods they developed for their widely-read Hawthorne study. Some sociologists who had undergone psychoanalysis were influenced by Freud's ideas and methods (Dollard, 1937), which in any case had a wider cultural significance at the time. As Madge observes " ... it came to be taken almost for granted that some form of psychoanalytic penetration into the near unconscious was the proper method of handling difficult affect-laden topics" (1963, 534). This pointed towards a conception of the interview which saw it in terms of depth, coverage and revelatory potential, and emphasised the tactics needed by interviewers if they were to elicit appropriate material.

In the same period many professions and disciplines began to use tape recorders. Some psychiatrists began, for example, to record consultations (Bucher et al., 1956), and market researchers soon began to explore the possibilities created by recording (see e.g. Bevis, 1950). Magnetic recording was invented by the Danish engineer Valdemar Poulsen towards the end of the 19th century. Wire recorders were available in the United States for a limited period in the early part of the twentieth century (Morton, 2000, 77; Clark and Nielson, 1999). Technical and commercial problems forced discontinuation of production soon after the First World War (although wire recorders did become available again for a time in the 1940s). German engineers in the 1930s and 40s experimented with the development of sound recording technology involving the layering of magnetic particles onto a tape backing, a technique that produced greater sound quality. It was only after the Second World War with the transfer of particulate tape media technology to the United States that tape recorders became widely available, targeted largely at a market made up of hobbyists and musicians (Gooch, 1999; Morton, 2000).

A free-text search of JStor suggests that tape recorders first began to be mentioned in the journal literature in sociology around 1951 (see e.g. Moos and Koslin, 1951; Powell et al. 1951; Eitzen, 1952). Eliot Freidson (personal communication) recalls using a magnetic wire recorder to record discussions with children for both his masters and doctoral theses. The fieldwork for the former was carried out early in 1949, and for the latter in 1951. Freidson remembers that the use of a recorder was sufficiently novel for people to joke with him about its use. Sometime towards the end of 1951 Howard Becker began recording a series of life history interviews with 'Janet Clark', a heroin addict, as part of a study of drug addicts conducted under the auspices

⁶ Howard Becker, personal communication.

of the Institute for Juvenile Research and directed by Clifford Shaw and Solomon Korbin (Bennett, 1981)⁷.

By the mid-1950s Bucher et al. (1956a) could report on an extensive evaluation of the use of tape recorders conducted as part of a NORC study in which 1000 non-directive interviews were carried out, 700 of which were tape recorded. Bucher et al. concluded that respondents were not resistant to use of the machines, and that there appeared to be little difference in the nature of the responses between the tape-recorded and non-tape-recorded interviews they conducted. The tape recorder seemed to have few negative effects on rapport. Indeed by obviating the need to take notes, it allowed interaction in the interview to retain a more natural character. In addition, tape-recording eliminated the conscious or unconscious bias associated with note taking. On the negative side, tape-recording involved a considerable capital cost and the demands of transcription were substantial in terms of time, money and delay to the analysis.

For a time after their introduction the portability of tape recorders remained constrained by their bulk and by their dependence on mains level voltage (Bevis, 1950; Bucher et al. 1956b). With battery operation and transistorisation these constraints began to disappear. Tape recorders were one of the first non-military devices to use of transistors “because manufacturers believed that enthusiasts and professionals would embrace the lightweight, battery-operated designs that transistorization made possible” (Morton, 2000, 149). For a time a constraint on size, and therefore portability, remained the width of the reels needed to hold the tape. This constraint began to disappear in 1965 when Phillips introduced the audio cassette. Initially, the lower tape speed of cassette recorders meant that sound quality was inferior to that of reel-to-reel machines. For professional users, especially, this initially offset the gain in portability produced by the new format. By the late 1970s, however, improved sound quality and further miniaturisation saw a shift in favour of the cassette recorder⁸. Perhaps epitomised by the Walkman introduced (originally as a playback-only machine) by Sony in 1979, the era of the pocket tape recorder had arrived.

The impact of sound recording

One interesting feature of the tape recorder in sociology is that within the qualitative research tradition it does not seem to have needed much legitimisation. Indeed by the 1970s, if Platt’s (1976) experience of interviewing other social scientists is any guide, there seems to have been a general expectation that anyone carrying out depth interviews would be well advised to use a tape recorder. Compare, by contrast, the efforts that visual sociologists have had to make to gain acceptance for photographic data. (See, e.g., Prosser, 1998.) In psychology, it is tempting, for example, to apply to the use Rogers made of what he called ‘electrical recordings’ the kind of analysis

⁷ The circumstances surrounding publication of a book based on Clark’s life history is complicated and contentious. For a reconstruction of events, see Bennett (1981).

⁸ According to John Southall, Information and Processing Manager at Qualidata, the UK’s qualitative data archive, who was kind enough to consult their collections, “Most of the interviews that are on reel-to-reel tape are clustered in the early seventies with a definite dropping off in the early 1980s. However there were still some collections being created on reel-to-reel as late as 1996.

Wilma Mangabeira has made of the couch in psychoanalysis. Mangabeira (1999) argues that, although the couch is not much mentioned in the psychoanalytic literature, the social meanings which surround it mark it out as a symbolic device for distinguishing practitioners of Freud's method from competitors, doubters and apostates. Conceivably, Rogers used the ability to produce detailed transcripts of interviews in the same way. Yet it would be difficult to apply this kind of analysis to the adoption of the tape recorder by sociologists. Recording of interviews appears to have been accepted in a rather matter-of-fact way. Putting this differently, the tape recorder rather quickly became a 'black box' in Latour's (1987) sense of the term, a device interposed within a sequence of research operations, the inner workings and operation of which are treated in a taken-for-granted manner. (The reference to black boxing here is of course ironic. The tape recorder, as we have just seen, itself very quickly became a black box in a literal sense.)

A number of writers have pointed to the growing ubiquity of the interview as a data collection method within qualitative research⁹ (Gubrium and Holstein, 2001; Atkinson and Silverman, 1997). How far is the widespread use of tape recorders implicated in this trend? By and large, use of the tape recorder does not violate wider assumptions qualitative researchers make about the character and purpose of interviews. Perhaps because the wider cultural meanings of the cassette recorder are seen to do, for example, with entertainment, recording does not carry connotations of scientism or technicism. (Such connotations have formed part of the debate about the adoption of computer software for qualitative data analysis.) More critically, one can also note that modern consumer electronics embody, not only in their design but in their marketing, notions of 'simplicity'. In sociology there is relatively little discussion of technical issues to do with recording quality. (This stands in some contrast to the situation in oral history, say, where researchers must be mindful of the needs of sound archivists.) The 'parables' one does find in the literature about, for example, data loss arising from inattention to issues of recording quality (Patton, 1980) or a lack of analytic foresight in interviewing studies (Kvale, 1996; Fielding and Lee, 1998), suggest that the recording of interviews is sometimes treated in a rather unreflexive way.

Indeed, it is possible to wonder if the physical form of audio tape shapes the relationship sociologists have to their data. Jean Jackson (1990) argues that among anthropologists a mystique surrounds fieldnotes, the primary method of recording data in anthropology. This mystique, she suggests, manifests itself through protectiveness towards notes, through a reverential attitude towards them, and in tales, sometimes real, sometimes apocryphal, about their loss through fire or disaster. Stories about the loss of audiotaped data circulate on the Internet among qualitative researchers. Perhaps because tapes involve little of the tactility associated with note-

⁹ Claims to the ubiquity of the interview, even within social science, are possibly overblown. The suggestion that something like 90% of studies (presumably in sociology) are based on interviews (Gubrium and Holstein, 2002) is misleading. Traced back, they originate in a small number of studies from the 1960s based on a restricted range of journals. One of these studies (Brown and Gilmartin, 1969) has been consistently misrepresented in later writing, apparently through a failure to consult the original source. The view that social scientists rely too heavily on the interview as a research method is, of course, not a new one (Webb et al. 1966; Phillips, 1971).

taking and can be easily duplicated as a protection against loss, audiotaping does not seem to attract the kind of emotional engagement Jackson identifies for fieldnotes.

Platt (2002) speculates that a tendency to investigate sensitive topics has probably been facilitated by the availability of high quality, portable tape recorders. Broadly speaking, researchers address sensitive topics in two ways (Lee, 1993). On the one hand, the topic can be desensitised. It can be treated, in other words, in ways that do not threaten the respondent's composure, self-interest, or self-conception. Alternatively, the topic can be 'dejeopardised', by adopting strategies which break the link between what is disclosed and the identity of the discloser. The small size and unobtrusive character of modern tape recorders probably serves to desensitise the interview experience. To the extent that desensitising procedures yield information potentially detrimental to the respondent, use of a tape-recorder can provide a source of jeopardy to the respondent (Lee, 1993). It is true that, except in highly conflictual or repressive situations, few social groups seem routinely hostile to being recorded. Nevertheless, it seems likely that there is a hierarchy of suspicion. Those of higher status or in positions of power typically have greater awareness about speaking on and off the record. Quite how far this has generated systematic patterns of disclosure bias in particular fields is difficult to assess.

That fears about the reactivity of tape recording have also apparently diminished suggests it might be possible to look at the issue of unobtrusiveness another way. There has been a growing desire in recent years to give voice—sometimes literally—to those, such as women and members of minority groups, that social science has traditionally excluded, silenced or marginalised (Denzin, 1989; Stanley, 1993; Atkinson, 1999). This has encouraged, among other things, a revival of interest in the use of personal documents (Stanley, 1993), but has also made central to qualitative research the exploration of "elicited personal narratives" (Mishler, 1986, 77). Some writers have speculated that such developments form part of a cultural shift towards 'the interview society' (Atkinson and Silverman, 1997; Silverman, 1997). Within the interview society, according to Silverman, the self is seen as "a proper object of narration" (1997, 248), the interview is a common and widely accepted method of obtaining personal information especially within professional-client relationships, and the existence of mass media technologies makes possible a blurring of the boundaries between public and private. Atkinson and Silverman argue that qualitative research, even in some of its more radical and alternative manifestations, shows a "stubbornly persistent Romantic impulse" (1997, 305) to view the confessional elicitation of personal experience as a source of authenticity. The ability to capture data in real time and unobtrusively, at the very least, does not challenge this assumption. Indeed, by allowing the spontaneous and naturalistic character of the interview to be preserved, tape recording seems to promise that the revelation of the self can be obtained in an unproblematic way. In general, anthropologists have been more critical of this assumption than sociologists. Writers like Sanjek (1990) see the tape-recorded interview as involving a dominant, largely Western form of interaction. Viewed in this way, over-reliance on the interview potentially excludes dialogic forms found in other cultures which might equally well serve as a basis for fieldwork relations.

Within the qualitative tradition there is a sense in which the tape recorder is seen not as a device for recording sound, but for producing text. This has been fuelled by a number of developments. One is the growing popularity of computer software packages for qualitative data analysis (Fielding and Lee, 1998). At least in their earliest incarnations, packages required data in the form of raw text. Another is a

trend in which the process of analysis is seen not to be detached from the transcription of recorded speech in the sense that what is available for transcription and what is left out reflect underlying analytic assumptions (Riessman, 1993). The availability of transcribed recorded speech has also made it possible for researchers to commit themselves to processes of member check validation which involve the feeding back of transcripts to research participants so that they can enter a view concerning the adequacy of the researcher's interpretations¹⁰. One wonders if any of these developments would have made as much headway as they have in the absence of portable tape recorders.

Finally, one can note that, as Rogers (1945) predicted, the ability to record the interview aided research on the interview itself. Some of the work associated with the recent 'cognitive turn' in questionnaire design (see e.g. Sudman et al., 1996) depends on detailed analysis of recorded interviews. More widely, however, just as the split-sample became a vehicle for studying question effects or mode effects, the tape recorder provided an ear onto that part of the survey process which most resisted standardisation, the behaviour of the interviewer, and the interview as a social situation (Fowler and Mangione, 1990).

Conclusion

Technology marches on. Depth interviewing and focus groups are increasingly conducted online (Mann and Stewart, 2000). Analogue tape recorders are being replaced by digital audio and video devices. Since transcription is a major bottleneck in qualitative research many researchers have been intrigued by the possibilities of using voice recognition technology for transcription purposes. (For a review, see Anderson, 1998.) While the field is developing rapidly, automated transcription has remained elusive. The technology is still constrained by the need to train the software to recognise the user's voice, the absence of speaker-independence, and levels of accuracy that require a good deal of post-processing of the text still inhibit the use of this technology. An alternative strategy that has begun to emerge is to record the interview directly in a digital format onto a portable computer or digital recorder, and to analyse the resulting computer file directly without transcription. (For an overview, see Maloney and Paolisso, 2001.) Neither of these approaches has reached breakthrough status.

Looking back to the past rather than forward to the future, it is tempting to speculate on what might have happened had the tape recorder not been invented, or if its commercial or technical development had been stunted (as was the case with the wire recorder in the early part of the twentieth century). Perhaps the survey would have become altogether more dominant in postwar American sociology than was actually the case. One might, too, have seen more use of semi-structured questionnaire methods and continued to see office-based interviewing of bureaucratically processed populations. The qualitative tradition in sociology might have become more explicitly identified with participant observation than with depth interviewing, perhaps reshaping the boundary between sociology and anthropology.

¹⁰ On contingent factors in the reception of research methods, see Platt (1996). For an ethnomethodological account of the tape-to-transcript process, see Ashmore and Reed, 2000.

Whatever might have been, the account given above is a largely descriptive one. It is possible to gain some insight into the backstage processes associated with contemporary developments through, for example, the analysis of newsgroup data. For earlier periods, one has to rely on the journal literature, which typically excludes that which, in the present context, is most useful, details of the processes involved in producing a particular research output. As a result, the kind of ‘articulation work’ Clarke and Fujimura (1992) describe as an indispensable aspect of scientific practice is obscured from view. It is difficult, in other words to see how all of the material, social and cultural elements in a research situation are pulled together in the search for a desired outcome. For the recording of interview material only a sketch is possible.

Surrounding the interview itself as a social encounter, four wider contingencies can be identified: the motivation of the participants, the co-ordination of the encounter in time and space, the deployment of technical as well as interactional skills, and the representation of the material produced in the interview. At different stages, and depending on the recording technology available, each of these aspects came to play a greater or lesser role. Early on, the need to persuade subjects or proxies, such as caseworkers, to do the work of recording made the interview an adjunct to other things, and, conceivably, stunted the development of interview methods at least within the Chicago tradition. Later on, interviews depended on the ability of researchers to marshal resources, including human resources such as stenographers and research subjects themselves, in ways that restricted the scope and range of the interview as a research tool. Meeting the technical challenges produced by sound recording depended for a time on the ability and skill of people like Bernard Conner to craft passable solutions based on materials to hand, a need that vanished as easily utilisable recording tools became commercially available. With the advent of the pocket tape recorder each of the foregoing elements became less salient, even if they did not disappear altogether. What was brought to the fore instead were the exigencies of representing recorded material in a form suitable for subsequent analysis, for example, through the use of transcription conventions or the input of transcribed text into software packages. The history of recording technologies and the interview in sociology between 1920 and the present is not, therefore, simply a history of technological development. It is an account of the way sociologists have, wittingly or unwittingly, shaped the skills and resources available to them to construct the interview as a research method.

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