"But of course your little box can't see what I'm doing, can it?"

Tom Lean, Project Interviewer, National Life Stories

An Oral History of British Science aims to record the stories of scientists, engineers and others involved with British science and technology. As well as a planned 200 life story audio recordings, the project is also gathering a number of shorter, supplementary video interviews. At first glance, simply adding moving pictures to sound does not seem much of an innovation: the movie industry have been doing it routinely since the 1920s after all. But in fact, video presents a range of challenges and opportunities for oral history, and some fundamental differences from the practice of recording someone's life story in their own words alone. For **An Oral History of British Science**, video is only supplementing rather than replacing audio, and so our key question has been, just what can we add to an audio life story with a video?

An Extra Dimension

People do not just communicate with words, but with their body language too. Facial expressions can add weight to emotional statements, hand gestures convey energy, eyes move as interviewees think back to the past, or fix on me to answer my questions in the present. As interviewer I am in the privileged position of seeing all this non-verbal communication first-hand. I get a personal insight into my interviewee that does not carry through onto the audio recording, even though my relationship with the interviewee is partly built on these visual cues. Video brings an extra dimension to oral history because it allows us the possibility of recording these details and storing a deeper impression of the individual.

When dealing with a complex subject like science or engineering, the video interview has particular attractions. Often interviewees need to describe how things fit together or move, such as the trajectory of a rocket or how data flows inside a computer. As they do so, hand movements and gestures reinforce words, conveying speed, scale, movement, interaction and 'would you mind explaining what you did with your hands there' doesn't quite cover it. In any case, visual memories can be amongst the most striking parts of any interview. Descriptions of people, instrument readouts, items of equipment, layouts of laboratories and research establishments, remind us that there is a rich visual culture to science that it might just be possible to capture on video. One of our concerns for the science project has been how to record the scientist in this context, and video presents us with a powerful tool to help us do this in ways far beyond filming a studio-based 'talking head'.

So we have begun to take interviewees back to places where they worked, creating a powerful contrast between their own memories of the site and how it stands now. Consider how different today's engineer's office is from its 1950s equivalent, with its large skylight windows, drawing boards and mechanical desk calculators. Recording interviewees in their physical context not only supplements the audio interview with a visual element, but also graphically illustrates change. We have also asked interviewees to demonstrate the use of instruments they used in their work, recreating the practice of science and capturing some of the tacit knowledge engrained in their use of instruments. As my own part of the project is mainly concerned with applied scientists and engineers, one of the most successful aspects has been recording interviewees with technologies that they helped to create. Recording inventor and invention in this way allows forbiddingly complicated items to be explained in simple terms with the added help of visuals, and for the technology to act as a prop in the telling of an interviewee's story.

Camera: Matt Casswell

Still from the video: Ray Bird with the HEC computer, 2010.

HEC1

Our first video interview was with Dr Raymond Bird and HEC1, the computer he built in the early 1950s after accepting an intriguing offer from the British Tabulating Machine Company to work on 'counting with valves'. At the time computers were mainly experimental machines, 'electronic brains', restricted to university laboratories and complex mathematics. Ray's task was to create one suitable for commercial customers' business operations. With guidance from Andrew Donald Booth at Birkbeck College, Ray developed the Hollerith Electronic Computer (HEC), which entered production and soon became the most popular machine in 1950s Britain, introducing many companies to electronic computing for the first time. As luck would have it, Ray's prototype HEC1 computer still exists in a Birmingham Museum store, and Ray was delighted to take part in a video interview.

As my first taste of video interviewing, I was struck by how much of a different exercise video was compared to sound recordings. The audio interview is a conversation between interviewer and interviewee about their life. It is essentially an unplanned extended chat in which the recording equipment

Ray Bird with a HEC computer at the Business Efficiency Exhibition, 1953.

eventually drifts into the background and both parties get to know each other and build up a rapport. The essential cosiness of this arrangement is a little disrupted by the appearance of the other people needed to record a video, the need to direct the action more toward the headline issues and the rather more intrusive nature of the video camera. It was no longer a personal chat between Ray and myself, but something rather more public for both of us.

There are certainly more things to worry about than in a regular audio interview. Finding a bit of peace and quiet outside the safe confines of an interviewee's home can be tricky, and there are lighting, space for equipment, and camera angles to consider. Even with careful planning there is always the unexpected – I don't think any of us anticipated that our video shoot would be disturbed by the arrival of a grizzly bear and a hammerhead shark, which were being deposited in the stores nearby.

The benefits more than outweighed the changing circumstances. Although we discussed HEC1 at length in Ray's original interview, having the machine actually there suggested new questions and allowed Ray to explain this complex mass of electronic valves and wires in new ways. With Ray's explanations, HEC1 turned from an arcane collection of vintage electronic components, whose form gave away nothing of its function, into a machine whose purpose and inner working were clear. With a sweep of the hand and a bit of pointing Ray explained how data flowed around HEC1, what the different parts of the machine did, the intricacies of how it all fitted together, and how one would use it. But it was Ray, rather than HEC1, who was really the centre of our attention. The computer was a useful prop for Ray to tell a chapter of his own life story and as he explained it, we got a fuller, more expressive sense of Ray himself than sound alone could convey.

What are we trying to achieve here?

Despite appearances to the contrary, we are not trying to create a television documentary. For **An Oral History of British Science** video is intended as a visual supplement to the longer audio recording. It is there to record a person, not only in their own words, but with their expressions, gestures and mannerisms too, a fuller expression of the individual. That video interviews can add visual explanation of complex subjects and add perspective on historical scientific places, is a great added bonus. With these benefits it seems natural to ask why we do not video life story interviews in their entirety? Quite apart from the extra resources and complexities this would consume, the life story interview is based on talking to the interviewer, not talking to the camera. The vital relationship between interviewer and interviewee seems altered by the presence of the camera's eye and the wider audience it implies. This is not to say that life story video interviews are impossible, just that they would be different. For the science project the supplementary video approach adds an extra dimension without taking anything away from the life story recording – it is the best of both worlds.

While we've done a little editing of the end results, to insert close ups of details for instance, the end result is neither as polished or as contrived as a documentary. As Ray commented on seeing the end result of his day in front of the camera, 'When I watched the film it was a bit rougher than I was expecting, but for all that, I thought you captured the real me.' Personally, I'm rather happy with that.

On location: cameraman Matt Casswell with Tom Lean and Ray Bird.

Photo: Tilly Blyth