Journal of Conservation and Museum Studies 10(1) 2012, 59-63 DOI: http://dx.doi.org/10.5334/jcms.1011209

Preserving the Audio Arts Archive

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In this paper Allison Foster (Rootstein Hopkins Foundation Archive Cataloguer) and Jack Maynard (Rootstein Hopkins Foundation Conservator) discuss the processes and challenges faced by them when cataloguing, digitising and preserving the Audio Arts Archive held at Tate Archive and the future plans and legacy of the project.

Audio Arts was a cassette-based audio magazine, established by William Furlong and Barry Barker in 1973 (figure 1). It sought to document contemporary artistic activity in the form of recorded actuality of artists' voices, generally captured in close proximity to their work. It developed to comprise interviews with artists and curators, commentary by artists on their works, documentation of major international art events, collaborations with artists, sound performances and other sound works.

> Every issue of Audio Arts brings its listeners into direct contact with the artists who are making contemporary art and the critical discourse that surrounds it. (Furlong 2001: 2)

The magazine was in continuous publication for 33 years and ran to 24 volumes of 4 issues each, together with more than 60 supplements. It recognised the potential of the then relatively new audio cassette technology, which enabled the production of the sound magazine at a low cost and allowed for relatively easy international distribution. It arguably represents the most comprehensive and coherently-focused sound archive devoted to art and artists in the world, featuring exclusive contributions from more than 900 individual artists including Joseph Beuys, Ian Breakwell, Tracey Emin and Andy Warhol. [1]

In 2004, Tate Archive acquired the Audio Arts archive, amounting to more than 350 boxes of material relating to the inception, creation and production of the audio magazine. The collection comprises paper records – including correspondence, research files and accounts – rare exhibition catalogues, private view cards, photographs, original audio recordings and production equipment. In 2009, funding was sourced from the Rootstein Hopkins Foundation to create two posts to catalogue and preserve the archive.

The project aims are to catalogue the archive to file or item level where appropriate – paying particular attention to the audio recordings – to digitise the published and unpublished recordings to high resolution WAV format, to preserve the source materials and resultant digital masters and to disseminate the archive via the Tate website and through an Audio Arts conference. The intention is that the Audio Arts material will be re-launched online to allow for new interpretations and responses and to provide unprecedented international access to the material.

Fig. 1: An Audio Arts cassette tape. © William Furlong/ Tate Archive.

The project started in January 2010 when the Audio Arts cataloguer was appointed, Allison Foster, followed six months later by the conservator, Jack Maynard. This gave the cataloguer enough time to arrange the material into series and have a good overview of the project before the digitisation project began (figure 2). The material arrived in the archive in large transit boxes which had been packed by the donor. This was then repackaged by the archivist into acid free boxes and stored in Tate's temperature and humidity-controlled store housed at Tate Britain. After sorting the material the cataloguing of this project was initially centred around the paper files with the material being catalogued to international cataloguing standard ISAD(g).

Following an initial assessment of the audio material it was discovered that the Audio Arts recordings amount to more than 1000 hours on a range of formats including ¼" Tape, Cassette, DAT, CD and Minidisc, each of which presents its own set of unique challenges for the successful capture of the recorded signal. As a result, every asset was assessed to identify and document tape composition, playback speeds, track layouts and deterioration concerns which may affect their playability.

This project has highlighted a couple of generic problems which occur when carrying out work to catalogue and digitise audio archives, and some specific to this archive. As the majority of the original recordings

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Fig. 2: Reels of audio tape in the Tate Archive. © Tate Archive.

Fig. 3: The food dehydrator in the Audio Arts digitisation suite. © Tate Archive.

were made on location with a portable open-reel tape machine and subsequently edited together on a larger studio machine in William Furlong's home studio, their labelling is not always accurate and thus difficult to verify without listening to the recorded content. In addition, the tapes themselves have largely been stored in their original boxes but have gathered dust over the years, many of them showing signs of deterioration with tape pack concerns and broken edits which will need to be repaired.

The DATs (Digital Audio Tapes) present a particularly urgent problem as the format is now virtually obsolete with serviceable machines very difficult to source. These recordings must therefore be seen as a priority in terms of the digitisation work. It is also worth noting that cassette was never viewed as a long-term preservation format and many of those in the Audio Arts collection have degraded over time, leading to audible defects in the replayed signal. Perhaps the most potentially severe of the problems affecting sound archives stored on polyester-based magnetic tape is that of Sticky Shed Syndrome, a condition caused by the deterioration of binders in the tape.

> The problem goes back to the 1970s when most tape manufacturers made an ill-advised decision to change the formulation of the 'binder' used to glue the magnetic tape particles to the plastic base material. Unknowingly, the new formulation attracted moisture, and eventually enough accumulated to make the tape go 'sticky'. (Newton 2011)

In many cases, the resultant stickiness causes fluctuations in the tape speed as the tape sticks to itself, preventing the reels from turning at a consistent speed leading to audible 'wow' effects on the replayed signal. In the worst cases, the oxide itself sheds from the tape during playback causing the tape heads and guides to become clogged, seriously affecting the frequency content of the replayed signal. Once the oxide has been separated from the tape, the content is effectively lost forever and as a result the sound conservator must always be aware that she or he might be playing the tape for the last time.

Fortunately there have been numerous successful examples of 'tape baking' as a method of drying out magnetic tape, driving out moisture and rendering it playable for a finite period of time. Both convection ovens and food dehydrators have achieved favourable results for baking of tape and a successful pilot has been carried out on a sample of the Audio Arts recordings at the Tate Archive using a food dehydrator at 50°C for four hours per tape (figure 3). Sticky Shed Syndrome is associated primarily with back coated tape and, because 76% of the Audio Arts recordings are back coated and showing signs of adhesion, it has been decided that these reels should all be baked prior to capture to minimise the risk of loss of content.

Recordings on magnetic tape can be arranged in a range of ways including full-track mono, where the signal occupies almost the entire width of the tape, to half-track or quarter-track layouts in either mono or stereo. A range of tape speeds are also possible and unless the track layout and speed are clearly indicated, the only way to find out is to replay the tape and monitor the output. Unfortunately, the bulk of the Audio Arts tape recordings have not been labelled to indicate track formation or playback speed and to complicate matters further, there are cases (particularly with the original unpublished recordings) where the tape changes speed mid-reel. This allowed Furlong to increase the maximum recordable duration 'on-the-fly' but presents considerable problems for the sound archivist. There are also numerous occasions where tape stock was re-used creating incomplete fragments of material which will also need to be identified.

Another major issue affecting the successful cataloguing, digitisation and preservation of the Audio Arts recordings is the difficulty in identifying content. Contradictory labelling on tape reels and boxes or indecipherable handwritten descriptions offer no alternative but to audition

Fig. 4: A collection of Audio Arts inlays cassettes. © William Furlong/Tate Archive.

the material. The fact that artists were often included in more than one issue of the magazine adds to the challenge of identifying specific recordings, particularly where dates and locations are missing.

The audio digitisation work is being carried out in-house using a dedicated audio digitisation facility which was also funded by the project and built specifically for the Audio Arts collection. Each physical asset, whether a cassette, DAT or reel of tape, is assigned a unique barcode which is fixed to both the recorded media itself and also to its box or container. This then forms a unique id which is recorded in the archive database (CALM) and forms part of the filename of the digitised file. This enables the linking of the physical object to its digital counterpart, and makes retrieval of either the digital file or the physical object possible. Because it also links the recording to its container, and the metadata it contains, this approach is particularly important due to the fact that many of the recordings contain content which is difficult to identify or verify. The recordings are then digitised by being played back on fully refurbished Revox tape machines (supplied by the manufacturer appointed service company in the UK, Thear Technology Ltd) to ensure optimum signal retrieval at the point of digitisation. The analogue to digital conversion is processed by an RME Fireface 400 soundcard and the audio editing and BWF metadata creation is carried out using Steinberg Wavelab 7 and BWF MetaEdit software. The digitisation work is being carried out with reference to the audio preservation recommendations outlined in IASA TC-03 (2005).

The long term preservation of the digitised files falls under the defined remit of Tate's Digital Preservation and Continuity policy and a suitable Digital Asset Management system is being developed for the storage, retrieval, management and preservation of these assets, while the preservation of the original audio reels follows best practice guidelines with the material being housed in a secure, environmentally controlled archive storeroom.

In terms of cataloguing, the Audio Arts project has presented some unique challenges. The collection is unusual in that it contains both the business papers of a successful magazine as well as many of the elements found in personal papers, such as correspondence, personal accounts and ephemera. This diversity is reflected in the way the material has been arranged. With business records, one usually expects there to be some pre-arranged filing system in which all items are placed; however, due to the very nature of this entire project, the records have been arranged in the way that one would expect to find personal papers. This has resulted in quite a large scale resorting task in order to make the material accessible. After discussions with the donor, it was agreed that where possible the original order of the material would be preserved. However in some cases, such as the audio recordings, the order in which they were found has been changed to reflect the way in which the recordings were published to enable easier searching of the records.

Fortunately we are in an unusual position in dealing with this archive because William Furlong and his wife, Violet, are both available to assist us in identifying recordings and sorting the material. We also have access to a catalogue, produced and published by the Furlongs, as a guide to the collection of audio publications, which has enabled us to identify material and arrange and assess the audio recordings quicker. This is an invaluable resource when trying to identify and catalogue the audio recordings, since it contains a detailed breakdown of contributors, descriptions and dates.

One of the project's aims has led us to try and amalgamate various different forms of information so that they can then be displayed on the web – including the archive catalogue database, the magazine catalogue (as mentioned above) and the cassette inlays.

It was decided early on in the project that the original catalogue should be digitised and made available to researchers in its entirety – therefore saving time since the information wouldn't then have to be duplicated in the archive catalogue. This information would then be in electronic form in both the online archive catalogue as a pdf and on the planned Audio Arts website. Furthermore the cassette inlay cards have also been digitised as they contain important descriptive information (figure 4). Therefore the planned website will need to display the information from three different types of documents: the entire archive catalogue, which will list all of the audio recordings to item level; the digitised magazine catalogue from the archive; and the contextual information from the cassette inlays. All of this information will be keyword searchable so as to enable direct searching of items, as well as browsable chronologically and indexed by contributor's name. It will also be linked to the audio files, which will be presented in mp3 format for online streaming, accompanied with detailed indexing information to identify the start points of component sections within each file, thereby allowing users to access desired materials with greater precision.

The Audio Arts project is due to finish in summer 2012, culminating with a conference to be held at Tate Britain and the launch of the complete published magazine together with selected highlights in digital form via the Tate website. It is hoped that with the republication of this material on the web Audio Arts will find a new generation of readers/listeners. In addition the potential research value of this material is immense. Not only does it outline the development of contemporary art both nationally and internationally, but also covers a host of other related issues such as social history and critical theory. By placing the Audio Arts archive on the web we will make the material accessible at the touch of a button opening up the collection to art historians, art students and the general public alike.

Notes

1 Some of these interviews will be accessible via the new Tate website.

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