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**CHARM symposium 3:
Transfer and the recording as historical document**

20-22 April 2006, Royal Holloway, University of London

This residential symposium, held in the attractive surroundings of Royal Holloway, provided a welcome opportunity to focus on and debate the issues surrounding recordings and their transfers. It was quite a strange experience to leave central London, which was in a wintry and leafless state, to find that the further West I drove, the greener and leafier and more blossom-filled the world became. By the time I reached Egham, I thought I'd taken a wrong turn and ended up at Hampton Court Palace, or in Kew Gardens' tropical greenhouse. Do they pay to get springtime earlier out here?

Fighting through the rainforest jungle that surrounds the quaint music department buildings, I arrived to find a room full of people: this third CHARM symposium had attracted twice as many people as expected, a testament to the current interest in recordings. The list of delegates attested to the breadth and variety of specialities and disciplines represented: musicologists, transfer engineers, record collectors, and music journalists/broadcasters were all gathered together to discuss and debate the trials and tribulations of making and working with recordings. The symposium was organized into interweaving sections of theory and of practice: there were groups of papers by musicologists, discussing the various problems and issues they grapple with when working with transfers, offset by papers given by the transfer engineers who explained what they do when transferring from an original source, and why they make the decisions they do.

The opening paper, by David Breckbill (Doane College, Nebraska), was entitled '*Issues of documentation and experience in re-releasing historical recordings*'. Breckbill discussed what he perceives to be the two main problems researchers encounter when studying early recordings from transfers: inadequate documentation and the difficulty of reconstructing the original listening 'experience'. He was concerned with the *sound* of the original recording, which for the sake of argument he viewed as independent of the work it reflected. For Breckbill the original record is extremely important, as it carries a lot of information that might and often does get lost in the transfer process. He discussed the early twentieth-century practice of releasing discs of segments, comparing the experience of the segment to that of the complete work and linking this to different types of listening and historical concert-going habits. He argued that playing a record could be considered as a performative act itself - a dimension that is lost when people play modern CD compilations. Finally he called for transfer engineers to provide transparent and comprehensive documentation. Breckbill's stirring call to arms was followed by a lively question session (as were all the papers), with much healthy debate and frank exchange of opinions.

Martha Tupinambá de Uihôa (University of Rio de Janeiro) spoke about the early releases of the Brazilian record company Casa Edison (1902-1932). Her work centres on Brazilian popular music, and the research group to which she belongs (Instituto Moreira Salles) is working on a project to digitally transfer these recordings in order

to make them accessible online (www.ims.com.br/ims). Examples of these early releases were played and discussed, with special reference to the switch from oral to aural transmission tendencies at around this time - where popular songs had been transmitted from person to person (oral), recordings became the main means of learning songs (aural).

In *'Love is in the air (ear?): Musical expression and soundscape in the recordings of Grieg's Op.5 No.3: Jeg elsker Dig/Ich liebe dich/I love thee'*, Per Dahl (University of Stavanger) discussed the problems he encountered as a musicologist using records as historical documents. His project involved detecting changes in the interpretation of this song, for which purpose he compiled a chronological discography of the recordings, but found that his sources (transfers of the original recordings) could not be trusted: performances might be incomplete or at the wrong speed, while different transfers of the same original recording varied a great deal. He discussed alternative listening strategies: a musicologist may use a recording as an exemplar of the work (with the score as the point of reference), whereas a record collector compares a given recorded performance to other recordings. He concluded by saying that 'when the pickup [needle] digs into the groove it's not searching for a historical document of a musical work, but for a soundscape to fit the musical expressions of the performer's interpretation.'

Simon Trezise (Trinity College, Dublin) gave a paper entitled *'Emotional and musical responses to mutating sound quality in Vaughan Williams' recording of his Fourth Symphony'*. His main argument was that as listeners we respond to the *sound* of an early recording, and that this sound is largely a result of transfer techniques. He explained that different methods of transfer can affect our perception of a single recorded source in the same way that Herbert von Karajan 'demonstrated to his students that the same tempo (measured metronomically) could be made to sound livelier by changes of accentuation, emphasis etc. without departing from the pulse'. Trezise compared four commercial transfers and his own 'flat' transfer of Vaughan Williams conducting his Fourth Symphony (BBCSO/Vaughan Williams Symphony No. 4. Rec. 11.10.1937. ZEA 5400-II, 5801-II 5802-7. HMV DB3367-3370), and by playing examples from each established that there are significant differences between the sounds of the transfers; he then explained an experiment he carried out with undergraduate students to see how far they were aware of these differences. The questions afterwards reflected the audience's interest in this line of enquiry, and suggestions were offered as to how his experiment could be modified to yield more precise results.

The symposium seemed to have been cunningly planned to encourage people to interact and attend as many sessions as possible. This was achieved by having only one stream of sessions, by making dinner an inclusive affair for non-residential and residential delegates alike (which meant that people kept talking over their suppers), and the scheduling of a late-night discussion session. The first evening's midnight feast was on the menu as *Special session on comparing transfers*. It was a wonderful grown boys' 'show and tell': four eminent transfer engineers (Ted Kendall, Mark Obert-Thorn, Roger Beardsley and Ward Marston) had been given the very same 78 recording (David Devries, 'Réverie de Georges Brown' (Boieldieu, *La Dame blanche*), with orchestra, Parlophone R 20069, matrix XXP 6659-ii (1928)), and asked to produce a transfer of it. They now played their transfer and explained how they arrived at their 'interpretations'. This was somewhat reminiscent of what an old gramophone concert might have been like, down to the applause after each record! It was an extremely interesting and thought-provoking experiment (not to mention

amusing and entertaining), and certainly raised much hot debate, albeit jovial and animated even given the differing ideas. Oddly enough, the transfer engineers stuck together and held very much the same opinions about what they set out to achieve when making a transfer, describing their aim as to be true to the original performance. By contrast the musicologists argued on the one hand for more 'fidelity' to the original experience of listening to a 78, and on the other for much more thorough documentation of what was done in the transfer process and why. One thing that certainly could not be ignored was the level of knowledge and expertise on all sorts of aspects of recordings contained in that one room that evening--and the debate continued in the pub afterwards!

The second day began with an elaboration of the previous evening's experiment: The four transfer engineers each gave a talk about their respective approaches to transferring discs, and their varying degrees of intervention. In *'Remastering Made Easy'*, Ted Kendall described how he goes about making a transfer: he believes that students of performance practice need to understand the principles of remastering since this is the gateway through which they will experience most historic recordings. His philosophy is based on recreating the sound of the original performance: he sees himself as separated from the performer by a barrage of interference which ranges from the original microphone pickups to the cutting of the master, the pressing of the disc, and the deterioration of that disc, as well as the playback equipment through which the music is heard today. He aims to filter out as much of this 'noise' as possible, and explained the three steps on the way to this: capture, restoration, and 'beauty treatment': 'capture' is about getting the signal from the disc to a digital storage medium with as little loss of information as possible (by using the correct needle, for example), while 'restoration' involves fixing deterministic problems arising from the media (clicks and crackles), and 'beauty treatment' is the finishing touches such as equalization and hiss reduction (for which purpose he, and the others, sang the praises of CEDAR technology).

Mark Obert-Thorn's paper, entitled *'Transfer fundamentals'*, identified the main factors of a successful transfer, such as good source materials, cleaning, centring, selection of stylus, pitching and playback speed, equalization, side joins and noise reduction). He showed pictures of his studio setup, as well as (very helpfully) playing examples of each stage of the transfer process, in order to illustrate the effect that each stage of intervention has on the original source. He noted that he would approach a transfer differently depending on whether it was for archival purposes or for commercial release. Some of the points which stood out were the importance of the playback equipment and speakers you use when making a transfer, the fact that you should let your ears be your guide when fine-tuning the sound, and that transferring is an art as well as a science: you need a degree of musicianship in order to 'collaborate' with the artist on the record.

Roger Beardsley didn't bring pictures, but had planned audience participation – there wasn't a dull moment at this conference! He began with an analogy, comparing transfer engineers to art restorers – their job is to clean the object in order to let the original colours shine through. So in the case of a recording transfer he wants to get as close as possible to the sound of the original live performance. The audience participation began when he played us a disc of Bud Flanagan (of Dad's Army fame), in a 'good' original recording and a 'bad' one – but he didn't say which was which. The audience were asked to mark the first one out of 10, and it rated quite high (with a few exceptions). The exceptions obviously knew better, because the second example was the 'good' one, clean and bright and clear. Beardsley's point was that 'old

recordings do not need to sound bad': he puts bad transfer quality down to 'poor replay' and 'ignorant operatives'. He doesn't, however, believe that a 'good' transfer necessarily entails a high level of intervention: if you get the playback levels right, then very little equalizing is needed and the results can be very good indeed. He concluded his paper by playing what was nearly a world premiere of Francesco Tamagno (Verdi's choice of tenor) singing Otello in 1903, and it did indeed sound very good!

At this point, prompted by a question from Timothy Day, a short discussion began about the historical veracity or 'authenticity' of a cleaned-up transfer. Day's point was that we shouldn't want to tidy the recording up so much, as the people listening to the disc at the time would have had inferior playback equipment to today's, and so would therefore have heard a certain amount of pops, crackles and hissing. The discussion turned to an issue which had been popping up ever since Breckbill's paper: which source are we trying to recreate, the performance or the record? Advocates of the latter argued that it is surely unhistorical to 'improve' the recording beyond its original capabilities, and anyhow, the recording session would not have felt like a proper live performance to the performer, so the situation that the engineers are trying to recreate (the 'performance') never really existed. This argument resurfaced on the final day of the symposium.

Ward Marston began his talk, *'The challenges and the joys of remastering acoustic recordings'*, by stating that all the engineers present are trying to 'get the performance to shine thorough – they're trying to get the record out of the way'. He then explained the distinction between electrical and acoustic recording as he sees it: with electrical recordings, our greatest tools are our ears, but with acoustic recordings our greatest tool is our imagination, as we need to be able to extrapolate what it would have sounded like. He used as an example a recording of his own voice, made using acoustic techniques, and invited us to compare it with his live voice: he felt it was a striking likeness, but with an unflattering accentuation of the negative aspects of his voice (hoarseness and a lack of bass). He then asked us to use our imaginations in listening to a 1965 cylinder of Birgit Nilsson, and found that the accentuation of negative features was similar but that it was still recognizably her. There followed many examples (including a cylinder of Tennyson reciting his own poetry from 1890): Marston concluded by asking us not to expect too much of acoustic recordings, but not to expect too little either.

The afternoon session propelled us from the gas-lit twilight of the late nineteenth century into the bright laser beam of the twenty-first. This was achieved by John McBride (University of Southampton), whose topic was *'Non-contact surface scanning systems for the retrieval and protection of archived sound recordings'*. McBride's research group is developing a system for measuring and mapping the surface of a cylinder or disc without touching it, using methods of optical metrology and pattern recognition. The digitally-captured 3D map can then be 'replayed' by means of a 'virtual stylus', which can be directed to the least worn areas of the groove.

This technology offers the promise of accessing damaged recordings as well as archiving them. While McBride's demonstrations were impressive, the research is still in its early stages, and the process is highly computation-intensive: finding ways of reducing processing times is a research priority. The project excited much interest, especially from the transfer engineers, one of whose main problems, it becomes clear, is dealing with damaged sources.

In her paper '*Listening to historical and modern recordings: the effects of age and recorded version on the perception of performance*', Renee Timmers (University of Nijmegen) presented the results of an experiment she undertook, in collaboration with Daniel Leech-Wilkinson, at the end of her 18-month period as a Research Fellow at CHARM. She investigated whether the 'old-fashioned' impression we get when listening to older recordings derives from the style of performance, or from the age as perceived because of pops, clicks, and surface hiss. She devised an experiment based on recordings of Schubert's *Die junge Nonne* from 1907 to 1977, creating two copies of each: one 'clean' and one 'dirty', the latter involving surface noise being added to modern recordings. Recordings were played in a randomised order, and subjects were asked to judge qualities such as age, quality, affect, dynamics, tension, clarity, valence, and activity. In Timmers' words 'the results differentiate between perceived dimensions of performances that are and are not affected by the age and version of a recording': both recording date and version (clean/dirty) had a significant effect in perceived age, clarity, and quality.

This second day of the conference had been packed full of interesting and challenging papers, and George Brock-Nannestad (Denmark) was the final runner in this marathon-like relay race. In his paper entitled '*Using recordings for documenting performance*' he navigated us through his thoughts on what should be considered when using recordings as documents of past performances, displaying vast knowledge and extensive research in many fields. His topics ranged from the chain of processes involved when creating a recording to 'how academic work in the field had coped before now', with excursions along the way to physiology, psychoacoustics, and the properties of the various technologies used to capture preserve and playback a performance. Even data concerning daily variation in the strength of electricity supplies found their way into the presentation.

Again, the dinner tables were hives of animated and interesting discussion: so many approaches and results had been expounded over the day that everyone seemed interested in debating where along the spectrum they stood. The post-dinner session on this evening was given by Tully Potter (Classic Record Collector): '*Dubs and flubs: transfers I have known*'. He began by describing his excitement at the sound of a 78, explaining that he is disappointed with many CD transfers as in his opinion they don't show performers at their best. He said that the record industry has managed to convince people that the public will not put up with surface noise, but he personally *likes* it... and many in the audience seemed inclined to agree! He proceeded to play some of his favourite and most hated recordings (suggesting at one point that the CDs released by a certain company make 'very good frisbees'). He then called for producers to be more careful to avoid the 'chronological syndrome', the 'encyclopaedic approach' and the 'stamp-collecting syndrome'.

Day three of the conference opened with Michael Gray (Voice of America Library and Audio Services) giving us a peek '*Behind the Studio Doors*'. He showed rarely-seen and very interesting photographs of historical recording conditions, explained the technicalities of recording (grooves, microphones, studio acoustic conditions), and explained the intricacies of recording sheets and session diagrams.

The final presentation was given by Peter Adamson (University of St Andrews) and Peter Craven (Algol Applications Ltd), and was entitled '*Crackling good stuff: changing expectations*'. Craven began by describing their transfer ideology: they are hi-fi enthusiasts, nobody is paying them to do transfers, so they 'can leave on as much crackle as they want!' He showed their flowchart for variable levels of intervention

(depending on the purpose of the transfer, from archival to commercial), giving rise to four different versions, and explained that they believe in documenting everything that goes on in the transfer process. Adamson then presented several very enlightening examples of various 'bad' transfers, explaining why and how they had suffered such a fate. He argued that many people no longer believe that old recordings are necessarily faulty (crackle does not necessarily equal 'faulty'): we are changing our minds about what we want to hear.

This third CHARM Symposium culminated in an open discussion; this was good planning as so many issues had been raised and contrasting opinions expressed, and most people seemed to be eager to have their say. Eric Clarke chaired, and gave David Breckbill the floor to make an opening comment. Breckbill began by saying that 78s ARE a great listening experience: over the past few days not only Potter but even Marston and Obert-Thorn had said there's nothing like listening to a 78. Breckbill then outlined some thoughts he had had since giving his paper on the first day: 'nobody has ever heard a recording that is unmediated', for wherever you place yourself in the intervention spectrum you are involved in an act of 'interpretation'. He said that in the end this was an impenetrable exercise, that trying to find out what the performance was *really* like was equal to trying to discover what Jesus *really* said. He therefore concluded that the only reliable guide in the future (as now) will be the primary source.

The floor was then opened to all for questions and comment, which revolved largely around the question of which source we're trying to recreate. George Brock-Nannestad read a passage from an old letter saying that the tenor Campagnola was a 'real peach' on his recordings, but lacking in live performance: therefore if you really wanted to get back to the performer (or the performance) you would have to make him sound *worse* in order to be authentic! Clarke then drew an analogy: if black and white film contained the information to re-create colour photos from them, would you want to do it? Social historians would say no, keep it in black and white; transfer engineers would say yes, because it brings the original back to life. Sean Davies argued that the original source is not the recording as circulated, but the master disc; Tim Day responded that the master is not the source material if you're studying cultural history, because people at the time listened to the *record*.

At this point George Brock-Nannestad took it upon himself to question CHARM's name (Centre for the Historical Analysis of *Recorded Music*): should it really be called CHARP (Recorded *Performance*), he asked, or just CHAR (*Recordings*)? As Director of CHARM (*sic*), Nicholas Cook responded to this by saying that trying to decide on 'the' primary source, or 'the' purpose of CHARM, is 'equally wrong-headed: the field of study includes recordings both as evidence of performance practices and as cultural artefacts in their own right'. In his opinion (and many in the room probably agreed), the primary source depends on what you want to find out—and if you're interested in cultural history, every single pressing and transfer is a primary source! He concluded that for all of these reasons CHARM is the right name; it takes in all of these things – and besides, you can't better the acronym!

This was a perfect note on which to end the symposium, and we were invited to continue the discussion on the mus-perf-rec discussion list (<http://www.jiscmail.ac.uk/archives/mus-perf-rec.html>). This was a highly thought-provoking and successful symposium: it was enjoyable, everyone seemed to enter into the spirit of it, there was much rich debate, and a lively sense of camaraderie. And I'm sure we're all looking forward to the next one.