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A musicologist's wishlist: some issues, practices and practicalities in musical aspects of language documentation

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1. Introduction

This paper summarises some of the issues that have arisen for me in my collaborations with linguists in documentation of Australian song. It provides pointers for recording techniques and guidelines as to some of the things that musicologists would like to know about musical performance, especially in the case of musical traditions and practices transmitted orally within small language groups (as is typically the case for documentation of musical traditions in endangered languages). For those interested, further information about ethnomusicological methods and practices can be found in several recent volumes (Barz & Cooley, 1997; Myers, 1992; Topp Fargion, 2001).

The benefits for musicologists in working with linguists are clear and well attested in the area in which I work. All the classical music traditions of mainland Australia are based on song, with no purely instrumental music, so comprehensive documentation of these genres inevitably involves addressing both linguistic and musicological domains. Indeed there is a long history of cross-disciplinary collaboration in documentation of Australian song, from E. Harold Davies and Norman B. Tindale in the 1920s (Davies, 1927), through to A.P. Elkin and Trevor Jones (Elkin & Jones, 1958) and Catherine Ellis (Caughy) and T.G.H. Strehlow in the 1950s (Ellis, 1964), and many others since (Clunies Ross & Wild, 1984; Dixon & Koch, 1996; Ellis, Hercus, White, Penny, & Buckley, 1966; Hercus & Koch, 1995; Stokes & Aboriginal advisers, 1981; Turpin & Ross, 2004). In my own work I have collaborated at various times with linguists Jane Simpson, David Nash, Lysbeth Ford, Nicholas Evans, Bruce Birch, Nicholas Reid, Michael Walsh and Joe Blythe as well as with fellow musicologist Allan Marett and various indigenous organisations (Barwick, 2005a; Barwick, Birch, & Williams, 2005; Barwick, Evans, & Birch, 2005; Barwick, Marett, Walsh, Reid, & Ford, 2005; Ford, 2005; Marett & Barwick, 2003; Marett, Barwick, & Ford, 2001; Papulu Apparr-kari Aboriginal Language and Culture Centre & Barwick, 2000).

This paper, intended for an audience of linguists, approaches the question of musical documentation from the perspective of what is needed on a practical level in order for collaboration with a musicologist to be most fruitful. Of course, linguists have their own priorities and methodologies in documentation of endangered languages, but many find themselves recording song and instrumental music as part of a broadly-based linguistic documentation project. Recognising that research funding often precludes having a musicologist tag along in the original fieldwork, this paper provides a checklist of things I would like linguistic researchers to record if the opportunity arises to record songs or instrumental music while you are doing non-musicological fieldwork, especially if you would like a musicologist to help document your

recordings at a later date. Examples taken from my own fieldwork in Australia are intended to provide food for thought, and not to imply that song traditions in other endangered languages are necessarily structured in comparable ways.

2. Why record music?

Recording of musical traditions is often a priority for minority communities wishing to document their heritage. Community desire for musical documentation may be attributable in part to a greater perception of potential for loss in respect to musical repertoires and practices, which typically change faster and more spectacularly than do languages (Barwick, 1991). It is presumably community interests in recording and documenting their music, as much as the musical interests of linguists themselves, that is responsible for the many archival repositories of linguistic documentation that include recordings of song or musical performances. For example, in the large collection of ANU linguist Tom Dutton archived at the Pacific and Regional Archive for Digital Sources in Endangered Cultures (PARADISEC), 51 of his 295 recordings (17%) include song and/or instrumental music. Similarly, 12 of the 14 DoBeS projects that have so far made metadata available via the online browsable corpus hosted by the Max Planck Institute for Psycholinguistics at Nijmegen indicate that they will include song and/or instrumental musical material in their documentation (corpus information for the various teams accessible via the website <http://www.mpi.nl>, data as at 1 August 2005).

There are other reasons for linguists to pay attention to song. Songs may embody or refer to domains of specialist cultural knowledge that may otherwise escape the attention of a linguist: for example, one song from a Warlpiri women's *yawulyu* song series I recorded in 1997 and translated with David Nash and Jane Simpson turned out to refer to now-discontinued practices of locating and gathering *ngurlu* grass-seed food species by observation of the behaviour of a small black ant *parnkiji*, which collects the seeds and drags them back to its nest, from where women used to collect them (example from 'Yawulyu ngurlu, at Jiparanpa', recorded at Alekarenge 19 August 1997, Barwick DT97/5, deposited at AIATSIS as part of sound collection Barwick_L01). The subject matter of songs may also present instances of unusual or rarely-attested linguistic forms: for example, the frequency of first- and second-person references in Iwaidja *jurtbirrk* love songs has provided rare instances of Iwaidja verbal prefixes (Barwick, Evans et al., 2005). In Australian songs, there are many reported instances of songs containing more than one language, using esoteric or even archaic language, or specialist song vocabulary (Dixon, 1980).

Many linguists report that community research collaborators enjoy song documentation work, and providing communities with well-documented CDs of their music is a good way for researchers to fulfil their ethical commitments to communities by returning materials (Barwick, 2003b; Barwick, Birch et al., 2005; Marett & Barwick, 1993; Marett et al., 2001; Papulu Apparr-kari Aboriginal Language and Culture Centre & Barwick, 2000; Turpin & Ross, 2004).

3. Recording wishlist

Linguists are already trained to make good audiovisual documentation for research, and many of the requirements for well-modulated recordings with good descriptive and technical metadata will apply to both domains (Barwick, 2003a). However, there are some specific features of your audiovisual recordings that can make them vastly more re-usable both for musicological analysis and for a pleasurable listening experience. Some of these requests require slightly more expensive field recording gear, but these can have benefits for ease of listening and transcription for your linguistics work as well.

- 3.1. **Use a good stereo microphone.** Mono is not good enough for most musical performance. Stereo enables the listener to distinguish between different performers and hence transcribe musical parts more accurately (you may find this helps with recordings of multiparty conversations, too). By a 'good' microphone, I mean one that has a frequency response to at least 20khz (the upper range of human hearing, and where a lot of the high harmonics that give an instrument or voice its character reside). Nearly all cheap microphones are targeted at the intelligibility of the spoken voice (Stevens, 1998; Sundberg, 1987) and can only record in the frequency range 5-15khz. The frequency response of your microphone will be written up in its specification sheet. Furthermore, cheap microphones typically have very poor internal components and record a lot of hiss and background noise in addition to the data you want. Spending extra money on a good quality microphone, preferably with XLR connectors rather than a stereo minijack connector, is a cost that will be recouped many times over in the savings to your time from working with the nice clear recordings it will produce. There is good advice available on the web to help you choose a good microphone for fieldwork (Kolovos, 2004; Nathan, 2004).
- 3.2. **Place the microphone well.** If there is a group performance make sure you set the appropriate angle of the microphone sound capture. If there is a singer make sure the microphone is close enough to pick up the words of the song. Keep especially loud instruments behind a directional microphone (I do this with didjeridu in some song recordings). It is best to get to know your microphone well and experiment with placement and settings before you have to make an important recording (Kolovos, 2004; Topp Fargion, 2001).
- 3.3. **Turn off automatic volume control (AVC) if possible.** Unfortunately many cheap recording devices do not allow you this option. The difficulty with using AVC for music recording is that AVC will not allow you to maintain consistency in the dynamic levels and timbral quality of the component parts. For example, if your piece starts off with a quiet voice or instrument, AVC will boost

its volume levels (and the background noise) to the maximum allowable, but as soon as a noisy instrument comes in, the levels of your quiet instrument will drop very quickly, making it difficult to focus on that part for transcription. If your recordings are ever mastered for production as a professional quality CD publication or for use in a film soundtrack, it will be very difficult for the sound engineer to compensate for the variations in levels created by AVC.

- 3.4. **Set levels carefully.** Of course turning off AVC puts the onus back on you, the recordist, to set the audio levels of the recording. The ideal is to set the levels for the maximum sound you are likely to experience. This can of course be hard to predict in advance, but ask your performance group to do their loudest piece for you as a practice at the beginning of the session so that you can set the input levels. The best field recording devices have separate level control for right and left channels, so that you can balance the relative volume of the two tracks. Play back this test recording if possible, to make sure that your recording sounds as expected. If you are recording direct to a digital format you may have to be quite conservative in setting your levels, because an overmodulated digital recording produces irremediable clipping (showing up as a squared-off top of the waveform in your digital audio editing programme). Not only does this look bad but it sounds terrible, and it can't be fixed very effectively without expensive equipment. On the other hand recording at a very low level has the effect of increasing the ratio of background noise in your recording, so it will sound fuzzier even if you boost the levels later, and will thus be harder to transcribe. Once you have set the recording levels to a happy medium, leave them alone as much as possible, but keep an eye on the meter to make sure that all is ok.
- 3.5. **Monitor through headphones while recording.** So long as it's not going to cause too much social disruption, it is best to monitor through headphones while the music recording is being made, so that you are listening to the what is actually being recorded rather than to the live performance. This will enable you to be aware of any extraneous noise that is creeping into your recording: for example, a loose microphone connection, or a child or animal out of your line of sight getting between the sound source and the microphone.
- 3.6. **Record at the highest quality your recording device will allow.** If recording digitally, use at least 16-bit 44.1khz uncompressed audio settings (many digital video cameras have a setting to switch between 8- and 16-bit sound, for example). Prefer 24-bit digital recording if it is available (this produces a greater dynamic range). Do not use long play settings, or any compressed formats (like minidisk or mp3). If you are recording to audio-cassette use good quality mastering cassettes (but not metal cassettes because they are adversely affected

by humidity). If you are one of the tiny minority still using a quarter-inch reel-to-reel tape recorder, set it for the highest speed allowed by the machine. Once again, any added expense and inconvenience of going for the best quality available will be repaid by the pleasure of your later listening experience.

- 3.7. **If video recording, include the whole group in your frame if possible** and film the recording space. This helps to document who is doing what in an ensemble performance.
- 3.8. **Use close shots judiciously.** It's good to have some close-ups, especially if there is particularly interesting technique in playing instruments, and it is often a good idea to include at least one close-up of each participant, for later documentation purposes. Sometimes a closeup on the mouth of the singer may assist in later text transcription, since language is often less clearly enunciated in song (Sundberg, 1987).

4. Song text documentation wishlist

- 4.1. **Take time and care.** Song texts may be short but they are often tricky. As previously mentioned, song is often less clearly enunciated than speech. There may be regular phonetic changes to sung language to increase or obscure its intelligibility (Hercus & Koch, 1995; Strehlow, 1971) and a range of other specific features of song language have been documented by linguists and musicologists (Dixon, 1980; Marett, 2000; Marett & Barwick, 2003).
- 4.2. **Work with a group.** When your recording is especially difficult to transcribe or explain, it may be beneficial to work with a group of people. In Australia I have frequently made recordings that the performers themselves were unable to explain fully: for example, one Yawulyu mungamunga song I recorded from Warumungu women in 1996 contained the name of a deceased owner of the ceremony, which the present owner and song leader was not able to speak aloud because it made her too sorry (Papulu Apparr-kari Aboriginal Language and Culture Centre & Barwick, 2000). In this case she directed me to someone else who would be able to say the name of the person.

- 4.3. **Listen for any differences between sung and spoken song text.** Apart from the phonetic differences I have already mentioned, it is not unusual for there to be differences between song texts as uttered in the song performance and the set forms used for spoken explanations or glosses. For example, in one Batjamalh song from Belyuen, the sung form regularly omitted the final verb, which was required for grammatical sense in the spoken form of the text (Marett et al., 2001). Similarly, in Murrinh-patha songs I am currently studying in the Northern Territory community of Wadeye, spoken forms of the song text almost invariably omit the meaningless final syllable 'ya', which is always present when the song is sung (Barwick, Marett et al., 2005). Another feature of song texts that is frequently omitted in spoken forms is repetition pattern: for example, a song text regularly sung with the repetition pattern AABCC may be spoken as simply ABC. This pattern may be needed for your transcription and analysis.
- 4.4. **Record stories and explanations about songs.** Musicologists are usually interested in gaining as much insight as possible into the social world within which songs and music have been created. It may be that particular musical features are associated with a particular social meaning: for example, in the Iwaidja *jurrbirrk* repertory, there is a clear correlation between composers and melodic mode (Barwick, Evans et al., 2005). Without documentation of contextual information about song creation, this significant correlation would have been impossible to establish. Of course, recording stories and explanations about songs will also be useful for linguistic documentation purposes and as a community resource.
- 4.5. **Discuss ownership and any restrictions of knowledge about song texts.** Researchers have an ethical responsibility to acknowledge the moral and legal rights of song owners under both traditional and international law, and to align our research and archiving methodologies to support and not interfere with traditional means of knowledge maintenance and transmission (Seeger, 1992, 2001). For these reasons it is important to record information as to who has rights and interests in songs, preferably before making the recording. In some Australian song traditions, only the song owner or ceremonial leader has the authority to explain a song, although others may well be entitled to sing it and to have a say in whether or not it is documented (Ellis & Barwick, 1988). Taking advice from the singers on these matters is likely to provide some lively conversations, as well as helping you to manage your data and any future publication of it appropriately.

5. Other documentation wishlist

- 5.1. **Collect musical terminology.** How do people classify and talk about songs and music? What are the names for musical instruments (if any)? Is there specialised vocabulary for describing music itself or its performance? One example from my own work with the linguist Lysbeth Ford is the specialised vocabulary for describing clapstick tempo used by Marri Ngarr performers of didjeridu-accompanied Lirrga songs from northwestern Australia. In this repertory songs are grouped into named rhythmic modes aligned with corresponding dance steps. There are two fast modes, both called *titir tarsi verri* 'clapsticks rough step': in one, termed *tjitjuk-tjitjuk* 'four,' two pairs of interlocking clapsticks are used by the singers, one pair beating at double the rate of the other (the fastest at approximately 260 beats per minute). In the second *tarsi verri* mode, called simply *pitpit* 'fast', both pairs of clapsticks beat in unison at approximately 130 beats per minute (the same rate as the slower pair in the *tjitjuk-tjitjuk* mode). Other special vocabulary distinguishes the two *kiyirri* 'slow' rhythmic modes (Barwick, 2005a; Ford, 2005).
- 5.2. **Discuss musical taxonomies.** How are song/music repertories related to each other and to social organisation? Is there a correspondence between song repertories and linguistic or social groups? In my work with Bruce Birch and Nicholas Evans on music in the community of Minjilang, it has become apparent that each language group maintains at least one repertory of song, even when those languages have ceased to be spoken. Song series reflect the classification of languages and people as belonging to coastal (*ldalha* 'saltwater') or inland (*wardiyat* 'stone country') groups. *Ldalha* 'saltwater' song series are named for various species associated with saltwater country, such as *kalajbari* (frigate bird), while *wardiyat* 'stone country' songs are typically named for the *mimih* spirits that inhabit the cracks in the rocks of the Arnhem Land plateau (Barwick, Evans et al., 2005).
- 5.3. **Discuss song creation and inheritance.** Where do songs and/or music come from, and how are they passed on? In many instances in Aboriginal Australia, song creation is attributed to spirit beings or ghosts of deceased relatives who visit the composer while asleep to teach them the song. Allan Marett has discussed how song origin is reflected in the the Batjamalh song texts in the *wangga* repertory of the singer Tommy Barrantjap. The words of the songs frequently quote the statements made by the song-giving beings 'I'm going to sit down and sing a song; now you sing it' (Marett, 2000). When I first recorded Warumungu women's *yawulyu mungamunga* songs in the mid-1990s, I assumed that like many other Central Australian songs I had worked on, their origins would be shrouded in mystery, having been passed down over many generations. Nevertheless, I asked where the songs had

come from, and was rather surprised to learn that most songs had been created in the 1930s by the mother and aunt of one of the present-day singers, and that new songs had been added to the repertory in quite recent times by the current song leader. Indeed, the performers felt that documentation of the line of transmission of the songs through several changes of ceremonial leader was one of the most important elements that should be included in the published CD booklet (Barwick, 2005b; Papulu Apparr-kari Aboriginal Language and Culture Centre & Barwick, 2000).

- 5.4. **Pay attention to the relationship between music and movement.** It is very common for song to be associated with ritual enactment and/or dance, and in many languages a single word is used to denote song, dance and associated ceremony and body decoration (such as the Pitjantjatjara word *inma*) (Barwick, 2000). Clearly video recordings are better than audio recordings for documenting such relationships. Eliciting conversations or descriptions of dance and movement by showing video recordings or photographs of performances can provide important insights for documentation of song.

6. Conclusion

I hope that this discussion has given some insight into the sorts of questions that interest this musicologist, as well as practical pointers towards assembling documentation of the music performances that are likely to be recorded in the course of linguistic documentation projects. Finally, I would like to encourage linguistic researchers to find real live musicologists with which to discuss their projects, and perhaps to initiate future collaborations.

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