

Practical Investigation-Case Study Transcript/Analysis

Session 1.

Introduction

This was the beginning of the process of L learning jazz improvisation one-to-one at her house in Sheffield, although she had already participated in the student workshops previously held at Sheffield University Music Department in groups of six to fifteen. This series of lessons continued over a period of five weeks and consisted of @two hourly sessions with a break in between, on one afternoon per week and was recorded on video throughout.

Aims

The main aims of the first session were to:

- ❖ Introduce the research to L and to explain how lessons would work;
- ❖ establish an approximate base line for the learning that followed by seeking an indication of the aural, physical and conceptual skill levels that L had in regard to improvisation;
- ❖ find out what L aspired to do both in the short and long term;
- ❖ endeavour to create an informal, friendly, and psychologically safe environment for her to learn in.

Although L and I had previously worked together informally in several workshop settings, on this occasion there was far greater focus on L's individual skill, abilities and aspirations and from that perspective the situation was quite new. This first session was also intended as introduction to the research and to explain how the work would be organised and structured. In

this regard it was as much about the schematic organisation of the materials as attempting to outline L's internal schema. As on previous occasions, I explained to L the nature of the research and that in this project I would be attempting to monitor the emergence and development of her schema for jazz improvisation. Having thus discussed the aims of the research and what I was looking for, the project and L's perception of it cannot be said to have been objective in any way.

From the start, L was self-conscious in front of the video camera. I offered to switch it off several times, and record the events on mini-disk, but L refused and in fact, the video provided a rich and interesting visual as well as aural record. Throughout this first session, L is aware that I am trying to find out what she knows and a base-line of her current skills in order to have something to measure her learning against over the five weeks and is therefore slightly defensive in spite of my attempts to take pressure off where I can. L seems torn between wanting to do things (for example, singing which she doesn't usually do), because she knows that they might be useful to her musically and not wanting to do them because of previous experiences or perhaps fear of failure. Generally, throughout the series of lessons I intended the work to be collaborative in order to encourage L to be an autonomous learner and for myself as the teacher to be highly responsive to L's suggestions and wishes. Analysing the video however, it became clear that most of the work was in fact teacher led although the decisions made at the start about what L wanted and needed to learn based on her existing skills and understanding, were collaborative in nature. Making L aware of what she needed to address and outlining the elements of the course to be followed may also have assisted L by preparing her mind for what was to follow. From L's own performance of tasks set by me and from verbal indications of her levels of understanding, it becomes obvious to both, what is required over the series of lessons and a framework develops that is also visualised on a mind map. As discussed previously in the methodology chapter, it is impossible to make such research objective in the scientific sense; the

best we can hope for is to be aware of the subjectivity and of how the researcher both as participant and observer affects the situation and the clarity and honesty of what is being analysed and evaluated.

Imitating rhythm exercises (R1)

The aim of these exercises was to see how much rhythm L could remember (in short term memory), initially over two to four bar phrases. The exercise was extended to incorporate off-beat rhythms in 4/4 and others in $\frac{3}{4}$ and $\frac{5}{4}$. The form of the exercises was that I would clap a short rhythm and L would imitate it, beginning simply and extending the complexity of the rhythms where possible until L could no longer remember them correctly.

In the first exercises R11, R12, L imitated correctly the two bar rhythms of simple crotchet and quaver variations all on the beat, and extended to four bars, but struggled with the first offbeat rhythm at R14. The rhythm was a standard Latin phrase, and consisted of crotchet, quaver, five crotchets, quaver, and two crotchets over two bars i.e. there were many notes off the beat. L's imitation of the first bar was correct, but she altered it in the second bar so that the off beats became on beats! This (and further instances explained as we come to them), indicated that L was unfamiliar with off beat rhythms mainly because she had not come across them often in either the classical or folk idioms to which she is accustomed. This first exercise also indicated that L will alter the musical or rhythmic sense of a phrase to be more consistent with her musical understanding, and this happened many times throughout the learning process. This could be viewed as L altering musical phrases to suit the parameters of her current schema largely based on classical and folk idioms. Hearing and imitating the first bar correctly may also show that L remembers the first bar but not the second and fills in an alternative rhythm based on an approximation.

The next rhythm is Monk's *I Mean You* and is a series of on and off beat swung quavers followed by offbeat crotchets, at **R15**. L clapped the first bar back correctly, then added a note between the quaver and crotchet phrases (I think, to make it more logical to her), and approximated the rhythm within a similar contour to the tune itself. The approximation is then repeated the next time round and the rhythm clapped by K is ignored or overridden. L is aware that there is a mismatch between what is being clapped and her version scrunches up her brows and says at **R16**: **'Or something like that!'** L is aware that it is inexact, and so must have the memory of the original phrase also, but has perhaps confused the motor programmes by her initial approximation. It seems that if it is played, the memory of the played version is stronger and overrides the memory of the original heard version. As an already experienced musician, L would use to making up or filling in a gap in a musical phrase that had escaped memory, and rather than play nothing, she makes up something similar. From the schema perspective, L could be said to have remembered the contour of the rhythm approximately and fitted her own rhythmic elements into it. Thus the overall shape is remembered in a general form and the details are slotted in as they are learned. We should also remember that L is operating in a genre that is new to her; she has not listened to much jazz music and her strategy is to fill in elements from the music she already knows. In addition, the rhythms are complex.

On rhythm in general, L is aware that she has a problem with certain types: **R17 L: I think it's reasonable but you know, I bump into the places where I can't do it fairly regularly.** L is also aware of the reason for this; unfamiliarity with off beat rhythms and jazz music **R18**. On the beat rhythms feel 'natural' to her and off the beat ones do not. Interestingly, (and the implications of this flow throughout the research project), L is aware that she has not got the sound of jazz in her head to be able to compare it to what she is playing herself. This is one of the major problems with learning a predominantly aural tradition in a notated, conceptual and

academic way; those latter elements should scaffold and assist what is mostly a listening, absorbing and imitating exercise. The feel of the music cannot be got through any other form than the sound of it and the movement of the body.

R19: ‘When I first started playing around with this (the jazz), I felt that I didn’t have ‘the whatever it was’ in my head that would do it. It was almost that I couldn’t hear it because I wasn’t used to it.’ (L’s emphasis.) Clearly, without hearing the sound and the feel, it is difficult to imitate it in her own improvisation.

As a result of working through the previous exercises, L decides that that wants to work on off-beat rhythms **R18a**. The process of what L wanted to learn was negotiated but within parameters set by me; i.e. she was led by me to suggest working on off beat rhythm because of her difficulty with that particular exercise and because she said she was already aware of the problem and related it to her classical training. I’m uncertain whether as the researcher, I have manipulated this situation or not, perhaps merely set it up so that L draws the conclusions she does. I was not aware, for example that L already felt herself to be unsure of off beat rhythms, although I might have guessed as she was classically trained.

In terms of schema emergence; are we assisting it by creating a framework or by outlining possible elements that need work or by making L aware of what will need work or none of these?

Internal rhythm (R2)

These exercises were based on hearing a pulse in the mind and clapping on various beats of the bar. L slows after my initial counting in but gets in synch with me swiftly because apparently I’m moving in time imperceptibly with my head, chest, hands, toes and breath!

L's internal rhythm (i.e. her ability to keep a pulse going without external stimulus) appeared to be highly variable. There was a slight discrepancy between L and K's clapping in a 4/4 pulse, which did not resolve itself as is usually the case in this particular exercise. Normally, whoever is clapping gets a sense of the collective pulse and alters their own to fit; this did not occur in this instance. Sometimes the gap is as large as half a second (R21).

The same exercise R22 repeated in $\frac{3}{4}$ had similar results; the claps coming together and drifting apart arbitrarily. I was unawares, apparently moving quite visibly and giving up beats with my nose and toes! This makes the discrepancy between the clapping more hard to explain and once I am made aware of this I ask L to do the exercises alone.

L claps a pulse on her own R23 and slows down considerably. In a standard jazz band, the rhythm would be stated by the rhythm section and so internal pulse would not necessarily be a problem. However, L's erratic pulse seems indicative of a variable sense of time that is shown throughout the research. The reason for this maybe her irregular heart beat which we take at this point in the session (R24). To see whether moving the body between beats helps the internal pulse (R25) I asked L to move her arm or hand as if conducting. It doesn't seem to make the pulse more regular or accurate.

Call and Answer Rhythms (R3)

These exercises were intended to find out the kinds of rhythms L might invent in response to a short clapped phrase and the results of the first, in 4/4, (R32) are not at all clear. On some rhythms L's response reflects and extends the original motif and on others she claps something entirely different and as I left the exercise open for L to respond at will, there is no way of telling whether this is significant or not. In $\frac{3}{4}$ (R33) L responds more clearly to the rhythm and either

imitates or extends it simply. From this and further examples, L is happier playing in $\frac{3}{4}$ rather than $\frac{4}{4}$. When we try rhythms in $\frac{5}{4}$ (R34) L responds with similar imitative and extended responses.

Singing (S1)

The aim of this exercise is to extend the exploration of aural memory by adding pitch (and sometimes words) to the exercises. K sings various short phrases of traditional tunes for L to memorise and also a round, before moving onto jazz tunes. The idea, as before was to see how long it takes to memorise; what aspects are remembered and whether the introduction of jazz melodies makes a difference to aural memory.

The first melody is a straightforward, traditional, folk based round. (S12) 'All things shall perish from under the sky'. K sings it to L in four bar sections which L remembers well and then L sings it all through except for the last line which she forgets. We then sing it successfully as a round. The melody is 12 bars long; built of small sections and sequential. It is also in an idiom that L knows well and in $\frac{3}{4}$, her favourite time signature! It is notable that the form of the tune is copied, not the nuances of the voice but rather the bold outline. There are also very slight variations of tempo and intonation; this could be a result of L not normally singing out loud and or slight nervousness at the novelty of the situation. In the next exercise (S13) K sings a phrase and L sings it back, beginning with something fairly straightforward and increasing in complexity. K sings the first phrase of Tallis' Canon which L repeats back and a phrase from 'Oranges and Lemons', the children's rhyme which L sings back, with slightly wider intervals. This is followed by a range of two-bar, smaller and more complex intervals and rhythms (S14) made up by K and imitated by L. Most remain on the beat, and L has no problem with them.

The jazz melodies (S15) begin with K singing the first phrase of *Sister Sadie*, a blues-based Horace Silver tune with imitative two bar call and answer phrases. L repeats it back with the first note on instead of off the beat and with a slight fuzziness of the intervals, but basically rhythmically and melodically correct. The second phrase is similarly repeated without the bent blue note at the end of the phrase. The fourth phrase is completely different to the previous ones and is more complex and here L sings the first quavers backwards, murmurs the triplet rhythm and stops saying: S16 L: 'Oh, er I can't remember the rest of it.' I sing the last complex phrase again slowly and L repeats it back with the long note at the start then going into the second bar, keeps the rhythm but loses the pitches. The combination of rhythmic and melodic complexity is too much for L at this juncture and is indicative of her lack of familiarity with the idiom and specifically how it sounds and works (i.e. call and answer; blues elements and sequences). As with the clapping rhythms at the start, it appears that once part of the phrase is embodied in the muscles, that memory supersedes the purely aural one, even if it is repeated.

We move onto the melody of *I Mean You* by Monk (R17), (having previously clapped the rhythm), which is another tune with sequential elements and call and answering phrases. L gets most of the first phrase on first listening but alters the fifth quaver as if it were a pentatonic scale; in actual fact, the second part of the phrase imitates the first; descending R653, R65R which L makes a R653, 2R6R. This is a logical mistake and an example of the inclusion of melodic elements from previous experience (i.e. the pentatonic scale), rather than listening to the tune being sung. The rest of the tune is sung by K in two bar phrases which L imitates exactly.

The next tune is another by Monk: *Well You Needn't* (S18). It is also based on call and answer phrases and is rhythmically interesting with stops and gaps. K sings the first two bar phrase and L does not quite get the intervals but rather the approximate contour with the penultimate high

note. L is again aware that her version differs from mine (S19) and says 'no' to herself. The implication is that the memory has the original heard version and that it is at variance with the one that L actually executes, i.e. she is comparing her more exact memory to the version she is hearing herself play. Is it then a physical singing problem, or is it that the memory of the original is faint and therefore not vivid enough to reproduce through the body? Or, given that the brain remembers patterns, is it that the brain recognises the mismatch rather than actually remembering the original i.e. it has changed therefore there is something wrong? On the second time through this tune (S20), the actual pitch intervals are fuzzy but the overall rhythmic and melodic contour are right; it is a musical approximation. There is no reaction from L this time, so no indication of whether she feels the phrase is accurate or not.

S21 This time, L repeats back the answering phrase and when K sings the following motif L repeats it back accurately apart from the interval to the high note. L is aware that this is wrong and frowns. The last low phrase of section A is also repeated back accurately with a longer on beat rather than shorter off beat. So at this time the intervals have come more sharply into focus; from fuzzy to clearer. L also alters the rhythm to an on beat where the off beat is misheard or not properly understood by her.

I extend the melodic aural memory exercise into a tune in $\frac{3}{4}$, still clapping to outline the off beats. I sing the first four bars of *Bluesette* by Toots Thielemans; an ascending scale in G starting on D a fifth below. It is sequential but melodically complex and moves quickly through a range of different keys. L has heard this before S22 'I recognise that!' and copies the phrase but with an altered rhythm; perhaps she is remembering the version she already knows. Again we witness the memory recreating something it already has cognisance of, rather than listening to and recreating what is presented to it in the here and now. This is indicative of the anticipatory nature

of schema emergence. At this point we both realise that L learned it in a previous group workshop and so ought to know it well and as this is an exercise in memory and aural learning, we continue with another tune.

S22 K sings the first phrase of *Little Boat* by Jobim, a Latin tune which extends the exercise by adding rhythmic complexity to another sequential melody. I was hoping that L would recognise the sequences and use them to help her remember the melody. The first two bar phrase of alternating root, second, root, third notes is sung back perfectly by L, as is the second phrase although she clearly thinks that the offbeat rhythm is wrong or awkward, because she frowns and looks distressed as she sings it. Again, she is unhappy with the off beat rhythm; it appears to be physically uncomfortable for her. I repeat the whole the rest of the tune which goes through various keys sequentially and then changes in the last five bars and L repeats the phrase back accurately. The clapping between us is out of synch; perhaps two different internal pulses are at work here.

S23 K extends the exercise by asking L to remember four bars at a time, and L responds by altering the rhythm of the third bar and changing a semitone interval; the implication being that L irons out rather than internalises what she sees as problematic, eliminating perhaps unfamiliar elements. It feels as if we are at the limits of L's working aural memory and this is borne out in the next few moments. K sings the following phrase which is identical to the first but in a new key. L puts sections from the second phrase into the first; realises this is not right and screws up her face quite violently over the mismatch. Again, there must be an awareness of the original tune to compare with her version, so what has happened? Is it that when working aural memory is at its limits, the brain starts making things up to fit, or is it lapses of concentration? L keeps the

same general contour, rhythmic emphasis and number of bars in her recreation; so the shape remains in place but the details go fuzzy, which is almost a reversal of the previous process.

S24 K sings the next phrase which is exactly the same, but in a new key and L remembers her previous version then repeats the same section of it over and over; stops, adds an end phrase and smiles, saying 'or something' S25. Again she is aware that something is wrong and there is an increasing confusion between what L remembers and what she hears that she is singing- at this point she has ceased to listen. For the last and different phrase, K sings and L responds with a similar contour anticipating the highest interval and then resolving correctly into the right place. Again the contour and general outline of the rhythm and melody are in place but are an approximation of the original.

The indication from these exercises is that L's aural memory is highly developed and attuned to the music that she is familiar with i.e. classical and folk. Within the new jazz idiom that incorporates unusual rhythms and blues related patterns, L cannot recall phrases over two bars in length. I should mention here that integral to L's understanding of music is the harmonic framework in which the melody sits and this was entirely absent from these exercises. L would probably have been able to deduce it from the more traditional songs but may not have been able to do so with the jazz songs, hence her difficulty. I was not aware of this at the time however.

Despite her initial self-consciousness at singing (she is just unused to singing out loud S26 'I very rarely sing out loud. I'm singing in my head'), L wanted to continue singing during the process of improvisation. S25 'It's really nice just being able to think about, about (*smiles*) the rhythm and the intervals without having to think about what the hell's that arm doing, or those fingers. Although I can feel myself thinking of that at the same time.' (L makes

big inward arm gestures relating to the left and right hand on the bow and the fingerboard.) L obviously appreciates not having to worry about technical aspects although she is imagining the sound and placement of the arm and fingers on the viola anyway; she is unused to singing, so the body is still attuned to the instrument, even when it's not there. L says **S27: 'I use a lot of, you know what I mean, like, imaging but ...'** and I need to clarify with her just what she means by this.

When asked what kind of singing would be most useful to her, L replied that she wanted to sing rhythms more than intervals; **S28 L: 'Yes and the rhythm; singing rhythm.'** K misunderstands what she means by this and L clarifies: **S29 L: 'It's like putting the rhythm into the singing (L moves her torso and arms in a kind of Twist motion) do you know what I mean? So it's singing rhythmically rather than rhythms.'** I suggest that she work on her jazz rhythms using the voice; hoping that this will help.

I'm aware that I'm imposing my view on L that singing is good for developing aural memory and improvisation in general. My view is that singing embodies the music; gives it more definition and coherence and enables it to be more easily transferred to the instrument. L corroborates this view, but might simply be echoing me, because normally she does not sing. Referring to the value of singing she says: **S29a L: Yeah, because I think it makes a real big difference 'cause it's really....** (*L presses her fingers to her temple above the brow tilting her head*) **it lifts, particularly if your starting with a piece of music in dots, it lifts, it turns it into music doesn't it? (Small circular hand movements.) But having got round all the technical stuff that blocks your mind up.** L's view here is that singing gives notated music life by lifting off the page and embodying it and at times the technical elements interfere with musical process.

We continue to discuss aspects of singing and aural memory and when I ask L how many bars she can remember at a time, she is only vaguely aware of what happened although she realises something is wrong. S30 L: **'Now, the first exercise was easy, and the second one.... by the time I'd remembered the first one into the second bit I'm running out of...'** (*Shakes head* no-L is clearly aware that this area needs attention). Slightly later in the same dialogue L rationalises how she tried to remember the tunes: S31 L: **'Whereas at the moment, when I'm remembering, (I was aware of doing it then actually), I'm looking... I'm looking for repetition and I'm looking for big intervals and remembering where they are; and I'm not thinking of the phrasing or the overall shape of it at all, so yes, we need to do some work on that.'** (L's emphasis.) The impression is that the memory is providing anticipatory links or sounds to help L through the exercise which actually interfere with the active process of concentrated listening. For L it's almost as if highly rational and conceptual elements come into play in what ought to be an aural memory to hand (or voice) exercise i.e. imagined intervals translated into physical spaces and executed as sound on the instrument.

Later in the same dialogue K mentions that the tune of Little Boat is sequential and that developing aural memory would allow one to recognise that more easily. L responds: S32 L: **'Yeah, I was doing that to a certain extent but then I was forgetting what the ending was.'** K: **'Yes, well it's all new isn't it; this is just to see what you...'** L: **'But that happens when I'm trying to pick up other things by ear.'** It might seem from this, that L has problems remembering other music; not just that in the less familiar jazz idiom. L remembers the first part quite clearly, tends to forget the endings and then sometimes confuses the two aspects under pressure or over longer time frames like four bars.

L explains her quickness in learning the first round 'All things shall perish from under the sky' when I ask her whether the words helped: S33 L: 'No, it wasn't particularly the words, it was very simple, it was very clichéd it was in the folk idiom that I'm very familiar with (shaking head no).' Perhaps this has as much to do with what L expects to hear as with what she actually hears. L may also be able to imagine the harmony over the simple melody and the harmonic background later proves crucial to her learning a melody. I ask again whether L remembered it because of the words: S34 L: 'I don't think it's words... it was a folk based song and I've been playing an awful lot of folk music; as I say, it was full of the elements of songs that I...I don't have to think about, because I've got the bits- I've got the bricks. I'm never...also, when you're singing jazz in the jazz words you sing, I'm never sure... whether that's words or whether it's just... do you know what I mean? I'm not familiar with doing that either.'

Here L may be describing the schema for folk based music that is so familiar to her that she doesn't even have to think about it. L describes this schema as 'the bricks' i.e. building blocks which you can use to build other forms. I still think the words make a difference in memory because they provide another framework and link to the melody.

L1 Learning a Tune

In this part of the introductory session, I wanted to find out how long it took L to learn a standard tune from being presented with the notes on the page, to internalising and playing the piece from memory. I hoped that this would indicate the nature of L's memory for notated music i.e. would she remember it better from visual notation than from aural means because she was more accustomed to it? So, I asked her how long it would take her to learn a piece of music from notation. She replied that it would take her a week, of practising half an hour a day to learn a 32-48 bar tune thoroughly. (L's perception, from previous experience, persisted even when it was

proven that she could learn a piece within 45 minutes). Next I asked if she had ever learned a piece within a set timeframe.

L12 L: ‘Years ago, before I’d ever played anything from memory and I just couldn’t do it; I got so panicky about it that... So, no, I haven’t. I have learned.... I did learn a really big piece of Bach once, and played it in an exam which was.....but that took weeks, a long time.’ This is L’s perception that it takes her a long time to learn things practising them for a short period everyday for several days. L had only tried a different way once and given it up. Her own experience, based on what she habitually does, suggests that it takes her a while to learn things.

L13 I next try to ascertain how L would go about learning a piece of music to work out whether how it is learned affects how it is remembered and if this in turn affects the emerging schema. I give L an example of a notated jazz standard *Satin Doll* by Duke Ellington and ask how she would go about learning it. **L14 L:** ‘Well, I’d play it erm, with the music to start off quite a lot so that I was.... and I’d play *around* with it; with the bowings, and ornamentation and phrasing, until I felt comfortable with the way I was playing it. I’d do a little bit of analysis on it; I’d be looking particularly at the beginnings and ends of sections and what key they start in and the intervals between the last note and the first.’ L takes a rational approach here; doing some analysis to help her to remember and understand. At this point, L offers to learn it on camera so that I can observe the process as it happens. This is unexpected; I would not have suggested this because of undue pressure but L having opted to do it herself appears to think of it as a challenge. I’m very grateful for the opportunity to observe, and I ask L to talk me through the process to try and illuminate some of the intricacies of what’s happening in the mind, which she does **L15**. Here L realises that she already knows *Satin Doll* which is a

relatively simple tune both harmonically and melodically. Looking through my music I come across *All the Things You Are* by Jerome Kern which is a standard beloved by jazz musicians because of the interplay between the melody and the harmony and the way the harmony moves elegantly through its various keys. It is, however, very hard for a beginner, involving some sequences but much shifting harmony. I give it to L to see what she will make of it and emphasise the point that it doesn't matter how long it takes her to learn it. Given the change of music I suggest that she learns part of it, because she has gone quiet and is now looking very serious.

L16 On the first time through, L plays the tune slowly with vibrato, exactly as written. She notes and says 'ah' towards the end of the middle eight section where the tune resolves into E major and she stops at the last four bars containing a large interval to the highest note of the piece. It later becomes clear that there is a fingering problem here. L is transposing the piece into alto clef as well as reading it so **(L17)** L copies in the flats at the beginning of each line because they are absent from the American copy I have given her. L plays it through a second time from the beginning murmuring 'ah' at the end of the second eight this time. L later suggests **L18** that writing in the flats has made a lot of difference to how she reads it, although she has played the notes correctly throughout from the beginning. **L20** On the third whole run through of reading the music, L is playing quite a bit faster and more fluidly; she smiles at the end of the middle eight and gets the last phrase right.

I ask L to talk me through what she is doing now. **L21 L:** 'I'm trying to imagine the harmony in my head.' and I realise that I have not played the harmony for her up till now. How is she imagining the harmony; from the sound of the melody or extrapolated from the symbols? I think L is imagining the harmony from the sound of the notes because she later remarks that she

doesn't know what all of the symbols mean, and therefore would probably find it difficult to imagine what they sounded like.

L continues; **L22 L:** (frowning) 'because without the harmony, to me it's just a series of unconnected notes'. Here I try to imagine whether this is the same for everyone; I cannot imagine a tune without the harmonic framework in the background. I offer to play the harmony for her as she learns the tune, but she says; **L23 L:** 'Well, I was going to say, the next thing I would probably do was to play it on the piano, to see whether what I've imagined from the symbols here is right.' This is what L would naturally do and yet it is a standard jazz practice to use the piano to understand and learn the harmony and melody. The piano provides a clearly laid out way of picturing the chords and of working out the functional arrangements of them. L obviously does this with other music as well.

L24 L moves to the piano and explains that she doesn't know all the symbols although I didn't really expect her to know them well at all. From the previous workshops, L has written out the symbols and put them on the wall by the piano. **L25** L plays through the chords slowly and haltingly checking the chord chart and saying **L26** 'Is that right?' L is looking both at her hands and at the music i.e. reading the symbol and checking the hands for the pattern and position and must already know the chord tones in concert and enough about the symbols to get through the piece. She is unsure of some of the symbols and laughs at the 'moment divine' chord in the second to last phrase – it should be a B diminished chord but is written as a B minor seventh in that copy and therefore clashes with the melody at that point.

L27 On the second run through at the piano, L repeats the chords and adds the melody; there are a few dissonances between them which she alters by spelling out the chords tones and correcting

them. L continues to struggle with the last chromatic descending chords mainly because they change quickly and B min chord clashes with the melody. At this point I ask L what she has gained from playing the piece at the piano; obviously the patterns of the notes on the piano provide greater clarity for understanding the harmony and it is perhaps easier to see how the melody interlinks with the harmony. **L28 L: Most of it is how I thought, some of it isn't or it's not how I would harmonise it if I was....from what I'd... It's not how I'd harmonised it in my head from what I was playing. Er, some of that I put down... well it's been harmonised in quite a complicated way and I think somebody's just been playing with it for the fun of putting some extra harmonies in. K: Right. L: But yeah, the broad outline of it is how I imagined.'**

This is particularly interesting in that L must have some kind of harmonising schema which does not yet fit the jazz idiom; I'm intrigued to know how she would have harmonised it and now have in my head the image of a quite serious Jerome Kern 'playing' with the harmony. The other possibility of course, is that L has heard this somewhere before and recognises the chord changes. L reiterates: **L29 L: 'It's not how I'd harmonise it in my head from what I was playing.'** Is this imagined from the melody notes or the symbols? Perhaps L imagined the tune harmonised in a folk-based way-I think it unlikely that she would have heard the intricate and sophisticated key changes.

L29a L: It's been harmonised in quite a complicated way; I think somebody's just been playing with it. L doesn't believe it was actually written this way by Jerome Kern! The broad outline is how I imagined. Perhaps L imagined something very different in her aural memory and there was a shock when she actually played the chords with the tune at the piano.

At this point I want to know what L has learned of the piece so far, so I ask her to sing what she has remembered. L30 L sings the first section correctly but adds the second section ending; mixing two separate parts and different keys and melding them into one. She says: L31 **'something like that..... I'm getting it mixed up with something else- it's quite similar to another tune I know but I'm not quite sure what.'** Again, L is aware that it's not quite right. What is the brain doing when this happens? Is it filling in a gap with something or miss remembering? It appears crucial to learn something accurately the first time around however slow the process and however long it takes.

I ask L if she can remember any other parts of the tune and she says not, so I ask her to sing me the first section from the music. She says; L32 L: **'I can sing you the whole thing from the music'**. (*Shaking her head no.*) This she does and at the end of the second eight she says; L35: **'That's If I Were a Rich Man' isn't it?'** This is the phrase she remembers from another tune. L slows down to sing the wider intervals in the middle eight and says: L36: **'This is harder'** before singing the last phrase accurately. It is clear that although L can sing the intervals she has to stop and think about them and this is understandable given the short period of time she has had to work on it.

After this sung read through, I again ask L to see what she can remember. She sings the first five bars, stops and says: L37 **'I'm still mixing it up with another tune.'** I encourage her to continue and she starts the second eight in the right place then stops at precisely the same place as before and repeats the notes of the first phrase sequentially without changing them and without the lead into the middle eight. Her aural memory appears to be at its operational limits here, and replacing what should be there with anything it can recall from the tune. L38 L: **'I guess but I don't know.'** So the singing did improve the aural memory a little but not much, and it is a lot to remember in an unfamiliar idiom.

L39 L returns to the viola and plays the tune from the music for the third time, with much greater fluency and confidence. Her strategy at this stage is to read some and then look away from the music or close her eyes. L plays it through for a fourth time L40 stopping at the end of the first eight at the sharp fourth interval which is different from the previous and is altered to fit the change of key in the harmony.

Throughout this stage L is playing smaller sections and by this time L41, she can play the first sixteen bars without the music. She goes on to play even smaller sections and to memorise the middle eight. L plays it all through again stopping at the penultimate high note and repeats this phrase several times altering the fingering L42. I ask her what she is thinking about.

L43 L: 'I'm looking at the last line now and I'm trying to see how it's different from the first line because if I don't know how it's different I'm going to get them mixed up. What happens in the first line is you've got this repeating fourths pattern that suddenly becomes an augmented fourth and this time (the last) going up from an F it's not an augmented fourth up from an F, it's a flattened seventh which also means I've got to change position to fit it in so I'm thinking about fingering as I do this' (*smiles*). L is analysing the tune here and working out the technical problems. I ask whether she would have been able to hear the changes without the music and she replies;

L44 L: Yeh. The first line takes you...miles away from the harmonic centre where it started from, whereas this one's taking you back there- (*L looks back and refers to the music at this point*), hence the lack of augmented fourth. (*L plays the interval*). But as I say there's also a fingering issue, so...'. I then ask whether these structural elements will help L to remember it and she says:

L45 L: ‘Yes I use the fingering to help me remember it and they’ll help each other’. The embodiment of the finger pattern for the particular sound or set of intervals will enable L to remember it better; the schema emerges from bodily movement. It’s like a 3D visual, aural and spatial map overlain or supported by conceptual information to fill out any gaps or reinforce areas and with the various modalities linking and verifying information. The mechanics and layout of the individual instrument also inform the map and assist in its memorisation and the hand is learning to move outside of the guidance of the other modalities within its own proprioceptive and kinaesthetic boundaries.

Having discussed the importance of understanding the structure, L then explains: **L46 L: ‘Yep. *L plays*: but in the end, once you know it, it all just becomes the piece. It’s what you go through as you learn it.’** In other words all these rational strategies are just scaffolding whilst the learning is done; once it is all place it becomes a whole unadorned piece of music existing in time and in the aural imagination in pure sound, without structures or concepts cluttering it up.

Next, L works on the last section **L47** correcting extra notes put in, and missed intervals; she then plays the last twelve bars correctly from start to finish without looking at the music. At this time, the various sections have all been played correctly and without looking at the music. Learning from notation L is managing to remember eight bars or more in succession, whereas aurally, she could manage much less. This indicates that her schema appears inextricably linked to the visual trigger of notated music and therefore her aural memory also. L plays the end section again and adds some beats at bar seven so that the time no longer fits; **L48** yet does not seem to notice. To end this part, L plays from the lead into the middle eight to the end without the music perfectly.

L starts at the beginning again L49 and plays the first sixteen fine; at the start of the middle section she stops and says: L50 L: 'There isn't a repeat though is there in this? No.' L takes it up again from the lead- in bar to the middle eight and plays it all fine and correct to the end. I ask if L has memorised it and suggest accompanying her with the chords which she agrees to do. L51 L: 'Ok-I'll turn the music over so that I can't cheat. I'll do it again before I forget it.' Clearly L has little confidence in her ability to remember it at this stage; from her own description of previous experience, she takes a week to learn things.

L52 L plays the tune once more on her own stopping on bar two and saying 'woops' even though it is correct. Presumably this is a miss-remembering and she continues into the second eight which is fine. The lead into the middle has an added note but resolves in the right place and at the beginning of the last twelve L appears to question the starting note i.e. she becomes aware that it is the same as the one at the end of the middle eight. L plays the last phrase successfully to the end and says: L53 L: 'It's just about there, *(very quietly, so perhaps not entirely secure)*, but it won't be there by after lunch *(gleefully and confidently)* this is why it takes a week'. *(Tilts head and smiles)*. L is almost certain that she will forget it although actually it is there quite accurately after lunch which is a gap of @ 70 minutes. Later in the same dialogue L explains further in answer to my question 'Surely you won't have to start again?' L54 L: 'No, no, no, but *(looking to the right)* unless I do it everyday for a few days, it will....*(shakes head-no-)* do you know what I mean? It's quick to get this far but then *(shakes head-no-and looks down)* you have to keep....' Here L implies that it is only in 'working memory' i.e. not really secure in the long-term. Her previous experience (schema) keeps overriding the present actuality of her having remembered a complex melody (with a go at the harmony) in an unfamiliar idiom.

K now suggests **L55** that we play the tune together and asks L to count it in at a speed that suits her. She actually counts it in far too fast and I don't notice. **L56** The first and second sections are remembered well; the middle goes wrong with the lead into the second phrase at the fifth bar, but although L stops, shakes her head no, and searches, she finds her way back into the last phrase of that section. The last section is fine and all correct, so at this juncture, L can stop or get lost and still find her way back in; therefore the overall contour ought to be in place. The reason for the stops or mistakes is probably that L is at the limits of her aural memory and when she fails to recall a particular section, her memory either jumps in with something else or gets confused between the mismatch of what she remembers and what she plays and stops altogether. This situation is not helped by the fact that L plays the tune too fast and that I do not notice and slow it down. In the second time **L57** with guitar accompaniment, the whole tune is correct and accurate from beginning to end without the music. There is however, the odd approximation of the rhythm creeping in.

E1 Extending work on the melody

L having learned the tune by heart, I wanted to extend the exercise by asking her to play it in different ways and time signatures to see whether she could adapt the tune easily. K begins by demonstrating the jazz feel; swinging the crotchets and adding off beat rhythms in the accompaniment. **E12** This is now the third time with the guitar and L comes in with a 'straight' swing feel although the guitar has a lot of energy. The tune is for a second time all correct. Does hearing the harmony have a positive effect on remembering the tune correctly because the notes are 'in the right place'? L is also adding slides and slurs as well as shortening some notes and lengthening others. Overall L plays with verve and confidence and incorporates the changes without missing a beat, just by focussing on the rhythm and the accompaniment. This indicates that the schema has developed sufficiently for her to adapt the tune and to add small changes.

E14 For the fourth time with the guitar, L alters the rhythmic feel some more and puts in a greater number slides. She is adding notes in the form of turns, also for effect and the tempo is really quite fast now. There is a mistake at the end of the middle section, which L notices and smiles at. At the end of this, I ask L how it felt to improvise a little with the tune itself. **E15 L:** ‘It still feels like I’m thinking a lot about playing it the way it was on the paper because I’ve just learned it.’ To L then, the changes are not big enough and she still feels tied to the notated version; perhaps it takes a while for the visual modality or image to dissolve. I ask what L is ‘seeing in her mind’ while she is playing. **EL16** L is very serious and quiet and says in a clipped way: ‘A combination. The more I play it the more I’m hearing the tune, but I’m still thinking largely intervals and fingers’ (*nods yes*). When asked to expand on this L says she is hearing rather than seeing the intervals **E17**.

K suggests that L plays it in $\frac{3}{4}$ which requires a different rhythmic approach and a general shortening and lightening of phrasing; I slow it down now realising its too fast but also that it will get even faster in $\frac{3}{4}$! **E18** This is the fifth time with the guitar accompaniment and first time in $\frac{3}{4}$. Now that L is concentrating on altering the rhythm, the intonation is less focussed. L comes in with the $\frac{3}{4}$ rhythm and adds some notes and slides. It feels quite jig-like in keeping with her background in the folk idiom. L hits a few extraneous strings but manages well and smiles at the end. The indication here is that L adapts and improvises with the tune itself both easily and naturally; if we tried to programme a machine to do this we would realise just what a feat it is and it must be done by imagining the new form of the tune in relation to the altered accompaniment whilst keeping similar contours and outlines. In this case the tune is compressed and lightened.

E19 During the sixth time with guitar and second in $\frac{3}{4}$ time, L adds more slides; misses a few notes but gets most in and all the structural elements. She loses the big intervals in the last four bars, realises, *tuts* and stops. I ask her how she feels about this changing melody. E20 L thinks and says: 'Fun (*smiles*) changing the time; it's made me play the wrong notes, but I guess that's alright at the moment (*looks down*). If the changes are fast in coming then L tends to focus on one parameter, in this case the rhythm and so the melody and sometimes the intonation is not as accurate. She realises this herself: E21 L: 'Yeh, well it's like I'm paying more attention to the rhythm and (*looks down*) consequently less to wondering what the notes are (*shakes head-no-*) yeah.'

K wants to push L further and see how far she can adapt the tune so she asks her to play it in $\frac{5}{4}$, a time that she is much less familiar with. I sing and play the first few bars to show L how it would go. I'm not sure she can imagine this as clearly as she can in $\frac{3}{4}$. E22 On this seventh time with the guitar, and the first in $\frac{5}{4}$, L begins behind the beat in the first section and out of synch most of the way through; she is confused by it and either before or after the placement of the melody in $\frac{5}{4}$ whichever way she decided to do it. By the last section L is more or less in time in five having got the feel.

The next time through, I sing along to help, because this is hard to ask of a beginner improviser. This is the eighth time we have played the tune together and the second $\frac{5}{4}$ version. E23 The rhythm is much better, although the intonation is slipping and although some phrases are anticipated, the overall contour is sorted out. I say to L that the second time was better and she says: E24 L: 'I'd worked out a system by then.'

Harmonic Background

In this section, I want to find out about L's knowledge of harmony and to extend the improvisation exercises to include the functional harmony of the tune. I begin by telling her the names of the first four chord symbols of *All the Things You Are* and playing them to her. I ask L if she would know what to play over these particular chords and she says: **H1 L: 'Yes. I'd have to think about them, but I would know.'** I then ask L to name some chord notes from the symbol, which she does correctly.

Then I move on to chord families which we had covered previously at a group workshop, but which she had forgotten. This involves understanding relationships between chords which are in the same key. I explain the nature of the first chords of the piece which are Fmin7, Bbmin7, Eb7, and Abmaj7; chords VI, II, V, I in Ab major. L is clearly confused about this and says: **H2 L: I was trying to do it upside down; (laughs) I was trying to start off in the chord that it.... I was trying to be one at the beginning but it isn't is it? Yeah ok.**

L understands this and knows that the next chord is also in Ab- chord IV Db major. I explain that the first five chords are in Ab which changes abruptly to C major for the last three of the first eight; from four flats to none. I play them all through whilst telling her what they are and where they change key. L remembers and correctly predicts the sequence of chords.

For the activity, **H3** I play those eight chords moving through the two keys and L plays long root notes over them to memorise them. This is repeated three times and then L plays the thirds which are in fact the tune itself. To extend the exercise and to make music out of it, I suggest to L **H4** that she could start a motif on the third perhaps with a 3423 pattern and take it through the changes, thereby learning the harmony and creating an understandable melody. L plays the same

motif that I suggested **H5** but extended over two bars and she makes it fit well, by the second time through, essentially adapting the pattern so that it makes cohesive sense. I explain what I meant again, that the motif changes with each chord and L says **H6** that she's forgotten the second chord, which is **Bbmin7**, so that the third is **Db**. So here L altered the motif because she could not think of the second third to start the next motif on.

At this point L looks tired and we break for lunch, which takes approximately 70 minutes.

After the break L decides to play the tune again to see if she has remembered it correctly. **R2** L begins the tune with four crotchets instead of a semi-breve in the first bar missing out the odd crotchet here and there in the next couple of bars. She realises something is not quite right and says: **R3 L: 'I'm trying to play at the wrong time.'** Again, L is aware, but not enough to alter it.

At the second eight **R4** L plays the first eight bars again not changing key and appears not to be aware of the clash of the melody against the harmony. I stop her at the third bar and explain that she is in the wrong key for that point in the tune and she realises: **R5 L: 'Oh I have haven't I?'** L plays the notes and understands what has happened.

The second time through **R6** L plays the same altered rhythm as before and finds the correct notes into the middle eight, although I sing along to make sure. The rest of the tune is correct except the arpeggio into the middle eight where L plays 5, R, 3 instead of 5, R, 5.

The third time **R7** L is more confident and extemporises naturally around the melody repeating the 2-5 interval at the end of the first section. L continues this extemporisation throughout,

repeating the previously altered notes and altered arpeggio into the middle. The last section has as high note condensed into the next so that the emphasis is completely changed and there is still a problem both arriving at and coming down from the highest note; the 'you are, are mine' part. L flinches at this and knows something is wrong; she also plays a little scale I think to work out where she is.

The process appears to be that when the piece is recreated from memory subtle changes are made based on different elements of the melody or a misremembering and these changes are incorporated into the next version. The piece, in this instance, is therefore in a dynamic state, not fixed and being reworked or altered with each performance. For L this seems like a non-conscious process i.e. either she does not notice at all or only sometimes when there is a great incongruence between the actual tune and her version of it.

The tune appears to be learned, at least in short term memory and against L's expectation. We resume the previous exercises on harmony returning to the third of the chord and using it to create a motif.

H7L begins the exercise on the root, moving to the fifth, for the first two chords, ignoring the instructions, then changes to third, imitating the tune. Next, L begins on the third with a falling phrase which lands on the root of the next chord up the octave. L is still not using the third to form a motif but is looking at it sequentially. I ask if she knows where she is in the progression:

H9 L: 'I'm just trying to remember it.' K plays and calls out all the chords again while L plays R3R motifs over all of them. Probably asking her to use the thirds is too hard at this point and she needs to ground herself in the root movements of the progression. The next time around

H10 L is much more confident, uses the thirds and extemporises around the melody. The third time, L plays only thirds but alters the rhythm to a triplet feel.

K: So many of the patterns in improvisation used by beginners are the same-why? For instance, 1-3 and back. Perhaps these are the only intervals that can be remembered and played easily by the beginner who can actually think of and sing much more interesting lines, but is unable to translate them into appropriate hand/body movements.

H11 L now extends her ideas to incorporate 3-4-3 patterns with echoes of the triplets. Some residue of the previous ideas remain and some become fixed into new versions. L is clearly remembering a riff and trying to place it in the next chord, which was the idea of the exercise. In the subsequent times she:

- Goes for wider intervals which she plays in a sequence with an answering phrase;
- Starts on the third; moves to the sixth and adds a falling scale pattern onto the next third of the chord moving to the next melody note, extemporising around it and going up instead of down, as the tune does, ending on an octave;
- Uses double stops effectively by moving one line- repeating the notes and then adding the falling scale to the next chord as previously but almost makes the sequence through the key change;
- On this run through, L starts to experiment with much larger interval playing third to a flat seventh followed by third then to sixths;

- Starts with 3, 32R, 32R, 7R7, which she takes through the sequence, then alters in the C major section. At this stage L can work well within the one key but has difficulties transposing riffs into the new key;
- Begins with the third but forgets the sequential thing and plays a more scalar line that fits well in the first five but comes to a halt in the C major section.

I ask how L feels about the previous work and to explain what she was trying to do and she replies: H12 L: 'Try out different things and see what it sounds like.' This is almost a problem solving approach and in keeping with the rational way that L tends to tackle improvising.

KD: 'Right. What are you thinking of when you're trying things out?' L: 'Well, erm, partially I'm thinking of well, what might go with that note,' K: 'In terms of the chord you mean or in terms of the next note?' L: 'Erm, (*thinks*) I suppose... in terms of the next note and partially I can hear stuff in my head and I'm trying to work out where that is... on the instrument.... because... the chord sequence I know is quite a standard jazz one but its not one that I'm particularly used to, (*smiles*) so I'm hearing things and I'm not immediately finding the right finger for it.' So perhaps L is already able to hear ideas that she may not be able to play technically, hence the 'almost there' feeling to some of the improvisation.

Key Centres

In this section the idea of the harmonic framework is extended to include the key centres underlying the chords, so I suggest to L that she plays within the key of Ab for the first five bars and then in C major for the following three bars, thinking of melody rather than specific chord

tones as we have previously done. This is really to find out whether playing within the key changes the approach of the beginner improviser i.e. what does L do when she isn't using chord tones as guides?

K1 1. L begins in a very wandering way not hitting any particular chord tones but making a reasonable transition to the C major section.

2. L uses the melody notes and the overall melodic contour more, repeating certain intervals.

3. L begins in the lower register and plays a scale based line over the whole eight bars wandering slightly.

4. This time the music is more sequential and reminiscent of the work on thirds followed by a scalar answer phrase that includes crotchet triplets for the first time; so she is still avoiding taking the motif into a new key!

5. L uses a repeated pattern based on third down to seventh (a fourth interval) over all the chords in Ab and which changes in the C major part to a scale-based answering phrase.

6. The improvisation is similar but the key change is clearer.

7. The last time through is similar but with some rhythmic imitation. The feel is one of randomness; L doesn't appear to be determining the sound. Perhaps L is triggering motor patterns for scales rather than hearing a melody.

I ask how L feels about that exercise and she responds that it's easier **K2**, but that: **K3 L: 'Yes, but you don't end up with anything that particularly goes with the chords I suppose.'**

L is aware of the lack of tonal focus in the key centred improvisation; the chord tones provide valuable constraints for the beginner in the form of a harmonic framework around which a solo can be woven. I suggest that L approach the key centre via a chord tone (the third) to orientate

herself K4, and that she swaps between the chord tone framework and the less constrained key centre mode.

L begins to play the same section again in 3/4; the first eight bars comprising of two key changes.

1. **K5** L improvises using the key rather than the chord tones, but using the jazz waltz rhythm; she anticipates the change of key and moves into C major a bar early but strongly. The playing is altogether more confident and strong rhythmically though there is still a slight lack of definition in the scalar melodic lines.
2. L begins on the third, following up with the scalar passage and attempts to alter this through the sequence. The key change to C major is less clear but is stable by the time chord I appears.
3. L begins on the fifth of the chord, moving to the sixth and takes the pattern round the VI, II, V before altering it on the chord I and echoing it slightly in the new key.
4. L uses thirds but on the off-beat to play around the sequence, again dovetailing nicely into the C major section.
5. Here L uses the tune with a jazz waltz rhythm in a light and more staccato extemporisation in the higher register.
6. L plays a similar motif to the very first, starting on the third but with a quaver based answering phrase of greater complexity. She plays this sequentially in the Ab section,

simplifying it into the key change. Essentially she is playing a decorated version of Ab, to G to F (which is the transitional note and in both Dmin7 and G7 before arriving securely and consonantly at E natural in the chord of C. This also mimics the underlying movement and contour of the tune itself, which is interspersed with ascending fourths for greater interest. However, L has got the shape in the improvisation as a fundamental underlying movement that makes harmonic sense and resolves through the key change. It may have taken her the several attempts to reach this point.

7. L starts with an ascending scale in the lower register on the third of the first chord which she doesn't take through the sequence, but ventures through the registers with more ascending scales and misses the key change although nearly resolving by chord I. This is about anticipating the key change; preparing the musical idea and the hands for the different key, which L does successfully several times. If L is exploring new territory however, these structural elements tend to be forgotten or sidelined for a while.
8. L plays third to fifth repeated here (Ab to C), then Eb to G (seventh and ninth of the previous Fmin7 chord) repeated in the same rhythmic pattern (quaver, crotchet, quaver, crotchet), over Bbmin7 i.e. the fourth and the sixth, which sounds lovely and very different. Over the Eb7 chord L plays F to Bb then Eb to G again over Ab major representing this time the fifth and seventh in that chord. Over chord IV in Ab (Db) L anticipates too soon the change of key and plays G to B imagining she's already in the Dmin7-G7 chord bar; hence a clash. L plays next the D to F i.e. fifth and seventh of G7, before resolving on E the third of the C major chord, where L plays 5, 1,5,3,1 arpeggio. This particular improvisation is overall on another level; whether by accident or design is too difficult to tell. The solo has a cohesion and determinacy that is sometimes missing from others. It appears that all

the elements come together in an almost perfect form briefly and then disintegrate again. This may be just how the process works; the good version then becomes the new standard and the player strives to emulate that again, only at the start their control of both the material and their technique is limited. It may also just be a question of concentration; developing it to a high enough and sustained level so that the higher motor and aural/musical processes can work without distraction.

9. L begins this time on the fifth to third to fifth below motif which she then attempts to play round the sequence and stops realising it's probably too hard at this stage (both of her technical ability and because she has already been concentrating hard for a long time). L smiles, re-orientates herself to the sequence and plays a series of arpeggios over the remaining chords in C major.
10. L looks briefly towards the window; her concentration is diminishing and there follows an undefined scalic line. Looking at this, I probably should have been more aware of her energy and concentration levels and interspersed some lower level work for contrast.
11. L returns to the tune playing second to third to fourth motifs over the VI and II and resolving using the line previously described, into C major.
12. L plays root to fourth intervals, perhaps for a contrasting sound so that it's F over Fmin7, Bb over Bbmin7, Eb over Eb7 and Ab over Ab major, before moving to D over the Db chord and coming too soon to the C major playing root G back to D and resolving onto root C in C major. L does not seem to notice the clash of the D natural against the Db

chord, several times. Perhaps she is hearing the key change instead of the actual chord. The anticipation is however excellent and is an indication that the schema is emerging.

13. L plays ♯F C over Fmin7, then C D natural C which clashes with the Db in Bbmin7, followed by Eb Bb over Eb7 then Eb the fifth of Ab, and she alters the second note to Db having realised the previous mistake. Then L plays Db, root of the chord and D natural, G, to C from which L plays an ascending scale up to a high D then C note.

14. Starting from D and moving to note C, the fifth of Fmin7, L moves to Db and further down the Ab scale, in a fairly undefined way both rhythmically and melodically. Throughout L is looking at the viola fingerboard intently and I assume she is searching for visual clues or position changes. On a watching later, L says it was not significant in any way; merely habit. This doesn't make sense because as a classically trained player she would surely be focussing on the music rather than the instrument?

Expressive Parameters

At this stage, (and after a lot of work), I introduce the idea of exploring more expressive approaches to improvisation which emphasise aspects such as mood, dynamics and timbre in conjunction with previous work on chord tones and key centres, or on their own in a freer incarnation. The aim is to provide some parameters or constraints but to keep the theoretical and technical side to a minimum by exploring more intuitive and imaginative methods.

I ask L to improvise over the first chords of All the Things You Are sadly and she decides to continue in $\frac{3}{4}$.

1. **E1 Sadly:** L plays starting on the root of Fmin7 moving to Db in an echo of the tune and answering with a falling scalar passage that resolves uneasily into C major because L is thinking of expressive rather than harmonic parameters. L's playing is more confident, sounds stronger and more expressive with an emphasis on slower phrases, better tone, and overall is more melodic and musical apparently in control. This is perhaps evidence for a complete change of focus in jazz education; the musicality present in the non-harmonic approach. Having said that, we had already focussed on it in previous exercises. Asked to play in this specific way, the whole process is more musical and has more melodic focus.
2. On the second take, L plays a minim crotchet Ab, then three crotchets Ab, G, F, followed by three crotchets Eb to three crotchets Eb, Db, C. L alters the motif to G, A, B, C for the change of key.
3. L plays broadly and stronger in the lower register starting again on the third and playing Ab, Bb, C, the C to Db over the Bbmin7 chord, Db, Bb, over Eb7 and then Bb, Ab, G. The transition to C major is G to B to A to E, all in dotted minims. The abiding impression is one of simplification and more effective musical ideas taken strongly through the chord changes in spite of the focus on expressive parameters.

E2 L stops. L: 'It's too cheerful a tune to play sadly.' Next I ask her to play it madly or crazily.

1. **Madly:** this makes L smile throughout. This version sounds like circus music; for the first bars it is dissonant although using call and answer phrases, and full of chromatic melodic lines. The section going into C uses triplet semi-quavers on an ascending

chromatic scale ending on trilling C note and then a long swooping slide down. it is much livelier and L explores all sorts of effects: slides, chromatic runs, double stops. The music really comes to life now and is very different from those attempts focussing on chordal and key based elements. This musical conception is entirely different; there are only echoes of the previous improvisation and it is indicative of what can be brought forth merely by a conceptual or imaginative idea or feeling. There is also a liveliness that has been absent up until now that has been freed up from the theoretical constraints perhaps.

2. The second version is more tonal and scale based but still has much greater energy than previously and the second part returns to the fast execution of triplet semi-quavers in a chromatic phrase ending on a low trill for contrast.
3. The third version begins with a double stopped semi-quaver triplet motif repeated on the same two notes Ab and C followed by C,D,C quaver, crotchet, dotted crotchet which L then plays sequentially(B and D) and makes a dissonance over the Eb7 to Ab chords. Not sure if this is by design or accident. Then echoing the previous chromatic lines at this point in the sequence, L continues the double stop as a pedal and plays a chromatic line using semi-quaver triplets over the top of it. Thus L combines both the dramatic elements and the new double stopping motif.

I then ask L to do a dancing version.

4. E3 This sounds very much like a folk jig; it is rhythmically lively but melodically wandering and very much out of the jazz tradition and into the straight eight country dancing vibe.

5. The second version is rhythmically more defined and articulated whilst the melody remains a series of scalar meandering lines. The key change is more focussed and clearer.
6. This time the opening is different moving from Ab up to F and using a wider range of intervals with increasing rhythmic confidence.
7. This version is really a repetition of the previous one using more staccato bowing and again focussing well on the rhythm rather than the melody which remains undefined.

I ask L to play a very quiet and gentle improvisation.

8. E4 Gentle: L simplifies her lines and goes back to the thirds repeating the same note at the start and plays a softer and quieter version of the first sad one; i.e. it is cohesive and makes musical sense.
9. The second time L goes into the more wandering scale mode and doesn't really develop, and the third is similar except that in the last bars she plays a repeated more staccato note which is developed strongly in the next version.
10. The fourth time L changes tack and plays staccato and quiet repeated notes Ab to G to F to E; a sort of minimalist version of the previous ones. L is going for contrast here and it is most effective especially as it echoes previous versions but uses new effects.

The next is an angry version.

11. E5 L plays loudly, stridently using double stops and with much greater bow pressure.

The notes are lower in the range, stronger in tone and sometimes harsh in timbre. L:

'I can't remember the chords (smiles)' The melodic line is simplified while she concentrates on the sound and the overall effect is very different again.

12. The next version is similar but in the higher register and using wider intervals in the double stops.

13. The third time L returns to the scale patterns and plays them strongly and stridently.

14. The fourth version is similar and L combines the scalar passages with double stops in the transition and C major section.

I ask L to play the tune again, to see whether it is still in the memory. She decides to play it in $\frac{3}{4}$ and begins sounding confident and strong. L plays the first, second and third eights well and correctly with the long notes missing from the first two bars and the last eight except for the highest note in the last phrase. L fits in all the phrases well in the three time and also manages the speed. There are slides and slurs added and it moves liltily. So, not only has she remembered most the tune with her changes, but can play it easily and with extemporised parts in a different time feel. L however, is not happy and says: T1 L: **'Damn. It still went wrong at the end like it did before.'** K: ;**What do you want to do about that?' L: 'Practice the fingering; that's the mistake.'** The tune had not gone wrong at that point except at the very beginning of the learning process when L was having trouble with the fingering of the high note

and again, the fingering seems key to the memorising of the tune, especially here with a large interval. L. plays the tune again; first section correct with a new rhythmic lilt and stop on the 'winter' bit and a trill on the last note. The second time is also correct with the new rhythmic elements incorporated along with slurs, extemporised notes and the lilting emphasis. The middle is correct and keeps to the style already outlined. The last section is also fine and correct. It has been memorised, and although it alters slightly with each recreation, seems stable enough. I hope this restores L's confidence in her ability to memorise things.

Harmonic Knowledge

This section is to find out the extent of L's harmonic knowledge, and whether we need to work on it as part of future work. She says: **HK1 L (thinks): 'my knowledge of harmony..... is again grounded very much in classical music and/or folk music. I really like harmony; (smiles) I'm very fond of it. I really like rhythm as well, but harmony I'm interested in and jazz harmony I'm very interested in.'** K: 'Right, we'll work on that then.' **HK2 L: 'Yes I think that... thatthat family business I'd forgotten the word for it, sounds good.'** (Chord families related to key centres.) I ask if L wants to work at harmonic knowledge on the piano, especially as she did this herself at the beginning of the lesson. **HK3 L: 'I've been trying to relate.... it's easier on the piano, but I've beensince I don't play the piano in... it's not my instrument sort of thing, I'd rather actually do it directly onto the fiddle, because.... it's also a question of relating the motor stuff to it.'** L has an understanding of what is required here i.e. the theoretical elements have to be translated into motor schemata so that imagined sounds can be played on the instrument. The piano, due to its layout, clarifies the theoretical concepts and can't help the motor skills on the viola.

I ask L what kind of repertoire she wants to work on over the five weeks and we decide that almost any jazz repertoire would be useful. Lastly we look at practice; time, structure and goals.

I ask L what she would like to be able to do at the end of the six weeks. P1 L (*thinks*): 'I think I'd like to....I suppose the one thing is to pick up a new tune like we've done to day and to be able to improvise something that sounds relatively ok with it.' This might be too ambitious but is an excellent and rational goal and one which most jazz musicians would aspire to. K: Ok. L: 'Plus all these other things that we're putting down here (already written on the mind map).' K: Fine.

I ask L what she would like to be able to do in the long term. P2 L (*thinks*): 'More of that and to incorporate the jazz harmonic language into my playing more generally. P3 I keep listening to classical composers who've done that; really surprising ones sometimes. P4 L: Delius does it as well; absolutely pure jazz but no rhythms-isn't that weird?'

L decides she can practice the jazz material for 30 minutes a day and creates her own practice schedule for the week, based on the work in the lesson and what she realises needs more work.

P5 L: 'Well I could.....learn the rest of the thirds and fifths in the rest of it, (we only improvised over the first eight) and I could look at where the sevenths are, and maybe play along with that. I could make myself a practise tape to improvise against that and.... sing it.' (*L writes all this down*).

What does all this tell us about Lindsay's current schemata for jazz improvisation?

- ❖ That L's aural memory is limited by complex rhythms and melodies although is fine on shorter, and more standard on beat music;
- ❖ That L makes up both melody and rhythm where she has forgotten it although both aspects have echoes of the original;
- ❖ That L is aware of these rhythmic shortcomings; have been working on off beat rhythms and wants to do so in the lessons;
- ❖ That L hasn't heard or assimilated much jazz; she doesn't have the sound or feel of it in her head and it doesn't feel natural to her;
- ❖ That L's internal pulse is variable and a bit erratic;
- ❖ Similarly with the melody simpler song like tunes are well remembered and sung by L but jazzier motifs and tunes are more problematic;
- ❖ That memory changes something on one occasion and it then appears to be difficult to alter; why do these things appear arbitrary and relatively permanent?
- ❖ That L is quite rational in her approach to music (she is also a mathematician) and is seeking structure, repetition and thinking about the overall shape of it all.

- ❖ That she needs to improve her aural memory (all these are by her own admission).
- ❖ That it doesn't take L very long (45mins all told) to learn ATTYA from the notation despite her expectation that it would take a week to memorise it properly and really know it.
- ❖ That she was already getting to grips with the chord symbols from a previous workshop and could play the piano using them to understand the sound and structure of the harmony and melody better.
- ❖ Looking at the chords, L is seeking structural, conceptual and aural connections and working out how the melody fits with the harmony.
- ❖ That L cannot imagine a tune on its own without a harmonic background as in ATTYA at the start, when harmony was provided, she imagined her own from the symbols and it didn't match Kern's in places!
- ❖ That the fingering and embodiment of the music helps the memorisation of it; a sound and written note is related to a movement and physical space on the instrument.
- ❖ That L thinks in terms of intervals and fingers alongside the sound, rather than visualising the notation.

- ❖ That L uses a problem solving approach to exploring improvisational strategies and that she uses a combination of the theoretical, the aural and the technical to decide what note or series of notes to play next.
- ❖ That constraints provide a framework for L that is more useful.
- ❖ That exploring expressive parameters is both creative and fruitful for L; she plays much more musically and with melodic focus using these.
- ❖ That L would like to be able to improvise reasonably over any standard and incorporate 'jazz harmonic language' into her playing generally.
- ❖ L has decided for herself that she will practice for 30 minutes minimum each day and will work on the harmony of ATTYA this week, alongside making a practice tape on the piano to play and sing over.

Session 2

This session begins by asking L how she got on the previous week. She says: **R1 L: 'It was a bit of a mixed bag. Last week I was very pleasantly surprised at some of the stuff I did; it was really nice.'** It is almost as if a separate identity is talking; perhaps the conscious mind being surprised by what the non-conscious part can come with.

R2 L: 'and when I tried to do it on Thursday I couldn't, which was really depressing. (*L smiles and laughs though and K assents that this is what happens.*) So I had one of those weekends where I just felt crap about absolutely everything for all sorts for all sorts of

reasons. And I felt this is just too hard-I just can't do it. So.. but I didn't give up; I thought I would broaden the range of what I was listening to see if there were any clues to be found there and I also thought I'd tackle technical things because that seemed like something positive that I could do.' Clearly here L is taking responsibility for her own learning in the light that she was unable to replicate Wednesday's good ideas by herself. She realises that she has to find her own way of learning and that she hasn't got the sound of the jazz properly in her head and needs wider listening to do this. Likewise, her focus on technical aspects is a conscious decision to change that aspect for the better.

L goes on to explain R3 that she listened to some English jazz which she prefers to the American although L describes it as very straight R4. L is also actively seeking jazz violinists to listen to and finds some Jean-Luc Ponty. Here she says: R5 L: 'So, I listened to that and I thought, you know, there's lots of options for what sort of sound to make: there's the following the voice option; then there's the following the tradition of jazz violin playing or there's trying to make something else out of nowhere, which is a bit, I suppose, what the viola is like because nobody else really plays it apart from my mate Eric in America, but I haven't heard him yet. So that was the listening side of things.' So now L is seeking out the music and is thinking about the kind of sound she wants to make as a jazz improviser using the viola and the kind of style that she wants to play in, although she doesn't seem to have found someone to imitate yet.

L goes on to explain what she did for her technique practice. R6 L: 'On the technical side of things; I thought, what seemed to be really good last week was singing that 'do bah do bah' so I practised my chords in 'do bah' bowing and got that a bit more fluid. I mean its jig

bowing; it has its roots in folk music I suppose.' This is a misconception and the jig feel is out of place in a jazz context.

R7 L: 'So I've been doing that and I thought another way of tackling the chords is to treat the fiddle neck like a guitar and instead of trying to figure out the chords wherever they might be, to use a similar fingering for all of them and shift up and down more.' This strategy and visual pattern approach on the fingerboard is interesting and perhaps stems from watching what I was doing on the guitar. It indicates the formation or evolution of the schema for technical parameters; finding an individual way to internalise the physical and conceptual aspects of the chord tones using a logical and consistent fingering pattern. It's probably a good starting point and way of simplifying a complex problem; although at some point the individual intervals would have to be learned as well.

R8 L: 'Which is loads easier because you're using the same finger on the same part of the chord and all you have to remember is whether it's major, minor or seventh.' In other words this changed perspective gives a consistency to the fingering patterns and takes a weight from the technical difficulties.

R9 L: 'It's really hard practising sort of thinking about the feel of what you're doing using the piano; it's ever such a lot easier when you're here.' This is because L hasn't got the sound of the music in her head yet and because I accompany her during the lessons and so the jazz feel is always present, and so it's easier for her to hear. Knowing that it is better to play with someone, L asks her bass playing husband to accompany her. **R10 L:** 'So I've been trying to get Rich to play the guitar on it, but he hasn't really worked out what to do yet either.'

I ask if she has been singing and L starts talking about playing things on the violin! R11 L: 'Yeh. I tried playing things on the violin which is lots lots easier partially because it makes a sound that sounds recognisably jazzy to me and partially because you've got a more easily accessible range of high notes so you're not having to shift to big positions and partially because it's just easier to play. (*L shakes her head no*). The only problem is I have to work out the starting note and every string because I've never studied it, but it's easier playing it because I'm less attached to things on it.' I'm not sure why L is playing the violin, but perhaps the technical problems on it are less acute, it being smaller. As she mentions it also has a recognisable jazz sound from Grappelli et al. She continues to explain this paradoxical relationship with the violin. R12 L: 'I don't know; it strikes me that the viola is harder than the violin and anything you could do on the viola you could do on the violin better. If I was going out playing jazz in public I'd probably take the violin because that's the sound that people expect. I'm not sure they would know the difference. But it's probably worth persevering with trying to get this on the viola because that's what I practice on.' I suggest L stays with the viola because of the beauty of the lower sound and all the possibility for timbral colours which we haven't really explored yet.

To begin the activities, I suggest L plays *ATTYA* and improvises with nothing specific in mind, to find out how it is going.

1. L starts the tune as in the previous weeks with the misremembered four crotchets at the start and in the second eight. The middle is accurate and the last eight contains the same altered rhythm but the intervals are all correct. L is sometimes looking at the fingerboard and sometimes away from it and overall sounds more confident and strong.

2. In the first improvisation L is trying to play sequential motifs and during the second 8 she follows up the previous ideas i.e. she is playing over the full eight or sixteen bar progression, not merely over two or four bars and this is a definite change from the previous lesson in which she focussed on two to four bars. The end of the second phrase is in the wrong key but overall it is making musical sense. She is looking hard at the fingerboard of the viola and playing melodic phrases in a much more simplified and stronger manner. This more cohesive approach indicates that the schema is developing. The last phrase starts on the 3rd of the chord and used melodic elements from the tune, again in a sequential fashion that fits well within the changing chord progression. It seems more controlled and self determined rather than the more random lines that characterised the beginning of the learning process.

2. L speeds up and anticipates slightly but still focuses on the sequential aspects though wandering more this time. The second phrase is similar whilst the middle sounds more thought through. The last section returns to the melody with the very last phrase repeated and an interesting colour tone added.

When I ask L how she feels about the improvising she says: **A2 L: 'Bits of it were nice.'** This implies that she is not really aware of the qualitative change in her playing. I suggest that we play fours i.e. I improvise four bars and then L plays an answering or imitative phrase. I want to see how quickly L can respond to ideas and if she can follow the structure of the tune even when it is broken up. L has to follow the harmony and my improvisation and then respond immediately to it. This is further complicated in this case by the fact that when I am improvising, I'm also not playing the chords.

1. K starts and L plays high arpeggios behind; she is looking intently at the fingerboard. L imitates the phrase. K plays a different line, L continues with the arpeggios. K sings along to the next one and L continues it then gets lost. L loses the sequence then picks it up again, K replies and L plays some nice low notes before losing it again. L plays the middle well and K responds before L ends by playing repeated rhythmic notes. She plays her first triplet figure- is drawn in by the rhythm played by K. This positive response is an indication of schema development which is allowing her to listen to my playing as well as to the progression and coping with her own ideas simultaneously. It means that L is able to move into higher levels of skill albeit briefly because her concentration is not yet sufficiently developed to consistently juggle all the necessary elements. She also accompanies much more rhythmically and is finding her way through the changes well. K sings and L devises a bass line accompaniment which makes more musical sense as well as outlining the harmony better for me. Another significant factor in the developing schema is the way that when L gets lost within the progression, she finds her way back in, usually by stopping and listening or altering the line in situ. This shows that she has the overall framework in her head not just the bars she is working on; in other word she anticipates where the progression is heading and finds her way back in. When players without the schema for the whole tune get lost they have to start from the beginning or from a new section.

2. The next time through L plays triplet crotchets which I answer in the same rhythm and she takes up again developing it further, but gets lost in the middle. She says sorry, laughs and is so much more relaxed about it all. Again there is the awareness that she is lost; that it affects us both because we are linking the four bar phrases, suggesting that she can step outside of the process and evaluate what's happening. K keeps going and L picks it up again. As with all musical performance I emphasise the need to keep it going even if you are lost; it is imperative not to stop and to find a way back in.

Transposing the tune

Next we transpose ATTYA by ear down a tone to start on Emi, and L does this well in the first sixteen bars, perhaps using her strategy of moving her whole hand out of position and imagining frets on the fingerboard (as mentioned previously). Going into the middle, L misses the arpeggio, perhaps because the intervals are bigger; or the hand has to move out of position and the phrase itself is not fully internalised. She then has difficulty in finding the key for the rest of the middle section. Again the implication is that elements are remembered as musical wholes and if the part of that is disrupted or interrupted, then the rest of that section is in disarray. She comes back in at the right place for the last section but misses the highest note, possibly because of the large interval and not having really internalised it sufficiently.

The second time through of transposing the melody by ear down a tone, L relaxes slightly and extemporises around the first section, getting lost in the last phrase of the first eight. I get lost too and this might be the cause; L naturally follows my wrong chords! If so, it suggests a higher order process emerging guided by the ear rather than more conceptual learning. The second eight proceeds well whilst the middle section is problematic with L reaching for and sliding to notes. This could be due to the previous problem or a confusion with conceptual elements. The last section is fine including the interval to the high note which sometimes presents a problem. The grim features have gone and overall L looks more relaxed and happier; she has a tendency, communicated by me probably, to take it all too seriously!

I ask L how she is transposing: T1 K: 'How are you transposing?' L: 'I'm thinking of the tune.' K: 'its contours or its intervals?' L: 'the intervals. It sort of, it goes off the map where (*thinks and looks up*) it's a bit of the tune where it goes into an easy key and now by shifting a semi-tone it goes into difficult keys. So I suppose that bit felt like an anchor

before and now feels like, blimey.' This is interesting; L uses a known territory metaphor of the map and going off it, presumably into uncharted areas. She is also aware that the keys change to difficult ones and perhaps that too holds her back in the middle section. Similarly, she saw the middle eight of the original key as easier than the surrounding harmony and therefore like a safe 'anchor' point within a moving sea of changing sounds. I suggest to L that she doesn't think of the chords or notes conceptually but rather the relationships between them.

T2 L: 'Ok, then let me think through the bit where I keep going wrong. It's G major, so now its F# major.' L is seeing it in terms of keys which I think confuses and conceptualises what should be heard, but perhaps technically she plays in that key with difficulty. K plays and talks her through the transposed chords.

This is the third time through the transposed tune and L improvises. She come adrift in the second section and relates it back to the melody. In the middle section, she simplifies the line somewhat but in the correct keys and then relates the line back to the tune in the last section, wandering slightly out of the key at the end. This is however a very high level skill; improvising by ear whilst transposing what is already a complex tune! L does supremely well at even attempting this at such an early stage.

The second time through the improvisation, L is more confident; she begins with melody notes and then makes imitative phrases as the harmony changes. The middle also works, using some chord tones and in the last section she returns to the melody with a good falling phrase that works well. Using the melody as a reference (initially rather than the chords), seems to work well for L who can reorientate herself by playing the melody at any point in the tune and then

proceeding from there - it provides a simple structural framework without lots of potentially confusing harmonic concepts.

I ask L how she found that particular exercise and she says: **T3 L: 'very confusing at first, then it just seemed to settle down.'** I suggest that L returns to the melody and extemporises around the tune to reorientate herself in the new sonorities, then tries some of the freer approaches we have used in previous weeks.

This time around L plays the tune fairly straight and correctly with a little variation in the middle. The fifth time, she is more confident; improvises well in the first section, and then gets lost in the second one. She uses root notes of the transposed chords in the middle section and then returns in a more syncopated version of the melody for the last section.

K sensing that all is not quite right here suggests a sung version. Of course the conceptual elements in a sung version are non-existent; if only we could transfer this skill to an instrument. L sings very differently from the way she plays; is much more rhythmic and looser. Question: how do you transfer what is in the body (especially what is within the vocal chords) and the aural memory, onto the instrument without overwhelming them with technical parameters?

The looseness and confidence of the singing carries over into the instrumental improvisation for the first section. In the second eight, she loses touch but finds it again by the middle is in the harmony but a touch folksy and flowery and the C section begins vaguely but ends on some interesting extensions. L begins another chorus with more interesting imitative motifs; loses and finds her place in the second 8 and uses some nice call and answering phrases. The last section is made up of longer phrases still mostly in the right key.

I ask L what she feels about her playing now. T4 L: 'There are places where it really goes and other places where I completely lose it. But when I lose it, it's like there are places I can catch up with it, just about.' Again there is a sense of the bigger picture forming and the overall knowledge of the piece providing a framework for finding a way through it over time. L is also aware, as before, of when it works, and when it doesn't although still not quite in control of the process. When the improvisation works it's almost arbitrary from the student's perspective and outside the conscious will of the improviser. This is perhaps indicative of the non-conscious self-organisation of the schema which is at work behind the scenes directing the fingers and establishing neural links between hands (or other parts of the body) and aural centres (particularly aural memory).

L improvises in the transposed key again. The effects of the singing appear to have worn off; perhaps L is thinking again about the keys. The first sixteen bars are not working; the middle is better and in the last section L refers to the tune. Again this lapse of form seems normal perhaps due to flagging concentration levels or the nature of the process of learning with its various stops, starts and plateaus. It is clear that the schema at this juncture is essentially unstable; sometimes the playing is good, sometimes not, but not in the control of the player and there is a lack of consistency indicative of new skill learning and the early formation of the schema.

In the next chorus L focuses on one note and the first section is clearer. The second 8 is more wandering but consonant and in the middle, for the first time, L experiments with big intervals and doesn't quite make it (no matter). In the last section she returns to the tune like a safety device! At this point I realise belatedly that perhaps the technical difficulties of the transposition are too much for a beginner and need much more time to sort out. I ask L whether she wants to continue in the new key or to revert to the original one and she wants to go back.

So, we return to the Ab version and the question is, whether the improvisation is any better for the transposing by ear exercise. Overall L sounds more coherent; the middle section is more adventurous as she uses a wider range of notes but the last eight wanders; it sounds as if she is re-orientating herself in the original key.

The next time around, some ideas come together, some not. In the middle L plays a good riff and imitates it and in the last section, she plays a wrong reference to the tune before finding her way back in at the very end. On the 11th time of this tune, L explores rhythmic variations in a new way and plays low staccato notes which sound more in control and determined by herself, rather than arbitrary or random aggregations. She works through the middle and ends in a similar style keeping the mood throughout again, and suggesting that she is in conscious control of the music being played. I'm not sure whether this is the schema allowing the conscious mind to impose itself on the evolving skill process, or the will imposing itself on the schema, but either way, it appears to work better. It could also be the mind and body relaxing and letting go i.e. a complete lack of will or desire to control the music enabling the schema to go to work translating sound to movement and feeding back without emotive verbal interventions from the conscious mind.

I ask L how she feels her playing went. T5 K: 'Ok, how was that?' L: 'A big feeling of relief.' K: 'Did it confuse you?' L: 'No, it's amazing.' K: 'Relief –is that key?' L: 'My fingers knew where to go in that one.'

This response seems to endorse the view that letting the fingers go (out of conscious control) and the schema organise the movement is a key element in successful improvisation and we perhaps inhibit this process with the will, conscious tinkering and conceptual thinking. Just relaxing or feeling relieved seemed to unlock more improvisational ideas and when this happens the player,

counter intuitively, sounds more in control; as if they have more conscious input into the process, which is the opposite of what is taking place. The notion of the fingers knowing where to go is also telling; a glimpse of the physicality of the learning process where the fingers move in space to find the imagined sounds. The motor schemata are essential to this and much of the practise involves this spatial awareness guided by changing aural imagination and feedback of the actual music produced. Traditionally, those beginner improvisers who transcribed solos learned the intervals on the instrument by memorising a fixed recorded solo in small chunks and gradually improving speed, technique and aural ability to play the whole thing along with the soloist. They were copying the musical ideas instead of creating them and by this means also absorbed and assimilated the jazz style of the period. By the end of this process or many similar exercises, the player could feel for and find a whole range of jazz related intervals and phrases by ear and having developed that facility, and having the sound of the music embedded in their aural memory, they went on to develop their own ideas and move away from the close imitation. It is probably more difficult to make up ideas as well as implement them at the beginning but seems more natural somehow and everything played is individual, if sometimes a bit mundane; the main problem for the beginner improviser is hearing something that sounds like jazz.

ST1 For a change of pace and music, we decide to play *St. Thomas* by Sonny Rollins, which is a short and simple calypso melody in the key of C major. This is in complete contrast to *All the Things You Are*, both in terms of melody and harmony and provides a dynamic and unusual rhythmic jumping off point for the improvisation. L already knows this tune from a previous workshop, so doesn't need to learn it. This exercise represents a break from more concentrated work, whilst still involving improvising.

1. L plays the melody with good rhythmic style and sense x 2.

2. Extemporises round the melody using the same and similar rhythms.
3. This version is a more confident mix of improvising using the rhythmic background and extemporising over the melody.
4. L plays nice staccato rhythms in keeping with the style and in a different way to previous versions.

ST2 K: 'Shall we try it in a different key? Ab?'

1. L comes straight in with the right note in the new key and plays the tune perfectly.
2. Very confident playing using the same rhythmic elements and sounding in control; as if she is determining the flow of the music better. As she gets more confident, she tends to anticipate the beat too much and comes in early.
3. When L moves away from simpler ideas, the music loses its direction and cohesion.

I ask L how she found the exercise and she replies that it was easy ST3, because she knows it and it is a 'better' and simple tune. Perhaps she relates to it more easily because it has its roots in traditional calypso, a more folk orientated idiom than Jerome Kern's light operatic/American musical tradition in *All the Things You Are*.

ST4 I ask L to play the tune in G major now and she goes straight into G in a good rhythmical way using thirds, but gets the second part (B) wrong. L plays it through three times brightly; using the tune as a basis, getting slightly ahead in the second chorus and using similar rhythms to the tune in the third. As L gets more confident, she tends to rush and easily gets a bar ahead, without I think, realising it. This might be all about the schema again and how knowing the tune better leads to greater predictability and anticipation from the improviser. It seems that here, the anticipation and the willingness to play something appropriate to the changing chord, overrides the listening feedback which should be hearing the mistake; there are clashes between the anticipated and actual tonalities and harmonies.

There is a short dialogue **ST5** between L and myself over the relative merits of learning to improvise over easy or difficult chord progressions, and L says of *All the Things You Are*: **ST5**
L: 'Well it's pushing the limits of what I can do- it's better for learning. It throws you in the deep end really.'

Although it was definitely too hard for a beginner, L did manage to both learn the tune quickly and improvise over the first section with confidence. I'm uncertain whether it is better to learn difficult tunes first or not; people gain great confidence in a simple tune after they've struggled with the complex. It could also be that the more basic skills are assimilated whilst coming to terms with the difficult aspects- and they are already present in the schema which is organising itself for a more complex tune.

To assist the transference of her improvisational skills to other tunes and to introduce different types of melodic phrasing, for example, call and answer, I suggest L plays *Don't Get Around Much Anymore* by Duke Ellington. The aim is to enrich and develop the emerging schema by

presenting a variety of improvisational settings or problems if you like. L already partially knows this tune and we decide to work on it aurally.

K and L play the tune together with L picking up parts of the melody that she is unsure of along the way, whilst K sings the tune and accompanies. K sings the middle section again slowly; L listens then plays along. In the last section, despite it being the same as the first, she mishears the descending riff, 'Been invited on dates' -E, D, C, G, A, B. Perhaps she doesn't recognise it as the same motif or perhaps it's a lapse of concentration.

I ask L if she knows the words and I sing them to her, again hoping to aid her complete memorisation of the tune and to give her more of an idea of the swung jazz feel. I sing while L smiles at the lyrics; actually it doesn't sound too bad! Then I explain the pattern of the chords using the C Major chord family and the cycle of fifths dominant sevenths; A7, D7, G7. I got through the middle section also although it is slightly more complex and changes key to F for contrast. I suggest that L plays the tune and then we play some improvised call and answer phrase based on it.

1. **DG1** L plays the tune correctly, all except the last phrase in the middle eight.
2. L repeats the tune all through accurately up the octave, which is excellent practice indicating that the schema is developing well and that the hand position is immaterial in this instance.
3. L attempts to improvise playing repeated notes and then stops: I have forgotten to shout out the chords!

4. L sounds consistent and responds to the chords immediately as I shout them out. She goes right through the tune playing 1, 3, 5 chord tones, and then stops at the second four of the middle eight because of all the changing chords. I explain that she will have to devise something that fits over the whole phrase because swiftly moving through changing chords will produce something mechanical.
5. L repeats the middle section again slower going through all the chords in turn and playing arpeggios. Going into the last section she makes a nice phrase up and then returns to arpeggios.
6. More slowly, I play the chords again and call them out as I do. **L: 'Is there a Bb in there? K: Yeah I'm using it as a passing chord between the C major 7 and the A7.'** Again L is hearing more and accurately; she is becoming more aware of the sounds of the chords she is improvising over and working out what they are.
7. Starting again, L plays a lovely ascending phrase over the first chords and K repeats it to reiterate that the simplicity works well, whilst still shouting out the chords. L is trying to use something that fits the whole of the beginning section. The first section is well put together using a mix of arpeggios and long notes; the middle is more problematic and L is thrown by the quick changing sequence.

L plays the tune again and I suggest some extemporisation:

1. **DG2** L plays the tune again a little slower extemporising in the last section.

2. L finds her way through the A section without the chords being shouted out and using a lot of roots and thirds. The middle is well remembered and she outlines the chords, and then gets lost before returning to the last eight well.

3. L stops, comes in late then catches up well, repeating root notes and following the changing chords nicely. In the last eight she plays a simple imitative phrase that works well.

I ask L how she is finding it and she says: **DG3 L: 'its ok, the relationship (between chords?) is similar to how it was before.'** There are some similarities in the chord families and in the progression and it is interesting that L is recognising them and hopefully transferring the knowledge.

After the lunch break I ask L to listen to *Allegresse* by Maria Schneider, a thirteen minute jazz orchestra composition with a view to finding out what she can hear in a new jazz piece; structurally, compositionally, improvisation wise, timbrally and so on. It is also to check on aural memory. L listens and writes mind map style on a large sheet of A3.

I ask her whether she likes the music; it is modern, harmonically shifting and complex jazz with a subtle melody. **A1 L: Hm.** L is very unsure, but doesn't like to say. What is it about pleasing the teacher even when adults are involved? I ask next what L feels when listening to it: **A2 L: 'It ended up feeling very sort of wistful; it started off quite sort of quirky and a bit disjointed like when you've got new clothes on and they're a bit stiff.'** **K: 'Is that because you're not used to listening to this kind of music?'** **A3 L: 'No, it had that feel in the**

rhythm; the phrases would stop you're not expecting them to stop. It was all not quite what you'd expect.'

This idea of what one expects from a completely new piece of music is interesting. L mentioned in the very first session how the harmony of *ATTYA* was not what she had expected; in other words she had made up other harmony in her head before she heard the Jerome Kern version. In this case it would be impossible for her to accurately predict where the tune was going but she still must have tried! What does this tell us about her schema? Has she a fairly predictable sense of harmony or melodic line from her classical and folk roots and is she attempting to put this into place as the music unfolds? If so, why- is it because this music differs from much of her previous experience? Why would it attempt to impose a predictable structure on a piece that it doesn't know?

K explains that Maria Schneider wrote the piece in response to a hang gliding trip in Rio and that for her it had a wonderful dancing, floating quality (perhaps induced by that image).A4 L: 'I really liked the way it changed at certain points; it went very neatly from one thing to another. I suppose it was similar to a lot of your stuff we heard yesterday; she uses a lot of sustained brass chords and when the solos came in there was a range of different accompanying things going on, sometimes with the piano, and sometimes not. There was also a little motif of a big crescendo on the cymbal which happened right at the beginning and that got picked up later on by everybody, so the brass chords built on that crescendo.' I'm not sure what to say about this; L's first impressions of the piece are rather vague and oversimplified. The texture and pace of the piece did change often.

L doesn't hear the presence of the tune in the first listening, although it is a tuneful piece with a distinctly recognisable melody. A5 L: 'Yeah, cos there's no tune. There was a recognisable

part at the end of it, but it wasn't a tune.' I ask L what she thought the instrumentation was: A6 L: 'Yes, roughly, a trumpet, a sax, a piano, a bass player. I thought I heard plucked strings somewhere in the middle, so there might have been a guitar. And then there was a trombone and I don't know, so maybe one or two others.' It is in fact a nineteen piece big band expanded to include French horns, guitar and separate percussion. The instrumentation also includes doubling instruments where the sax players also play flute or clarinet at times.

I ask L to listen again for structural elements and she says: A7 L: 'I've got all the structural stuff down. The short disjointed bit at the beginning gets smoother, then there was a variation on that and the brass stopped playing continuous chords and they became chopped off; truncated. Then it all built back up together again and reaching a climax which then fell down.' The building metaphors are rife here; edifices of music constructed and falling down again.

L: 'And then there was almost like a pause, it certainly got much quieter and these cymbal crescendos came back and I thought it was a solo coming back, but it was another minute before it came in. But then at that moment when the solo started there was a very dramatic change of texture to something quite different to what had been before. During the trumpet solo which started quite slowly, the texture was empty; there was a lot of space and later on it got faster. I don't know whether the tempo got faster or whether people were putting more notes into each beat; it certainly got busier. Then the brass came back in and there was a lot of sustained chords and the trumpet was still soloing and then the trumpet goes up high and then turns into a sax and then there's another big change where again the brass dropped out and the piano came in with quite a Latin feel and the drums changed the beat there as well. So then that solo started fairly laid back and then picked up

or double the notes per beat or whatever and the brass came back in and there was various give and take between sections and then it finished.' There is a vague and generalised feel to this description, of shapes and textures that change and then stabilise. We should remember that L is unused to listening to jazz in this way although she should be more au fait with the structure and analysis of large scale classical pieces. She seems to hear it in big, fairly unconnected chunks at this stage.

As the piece begins for the second time, I ask L what the time feel is and she says: L8 L: 'It keeps changing (it does not –it's in 11/8) it is a recognisable tune with a Latin feel.' So on this second listening L realises that there is a tune and that the time feel is complex. The music continues and L says: L9 L: 'It sounds like a harp.' K: 'It's a guitar.' L: 'It's in eleven.' I ask whether L heard anything different in the second listening and she replies: L10 L: 'No, I could hear the guitar; I could only pick it out for a couple of seconds the first time round. Its funny how different things sound the second time round isn't it? I got more sucked into it that last time and wrote less things. The tune at the beginning (*recognises it*) is very up and downy and sort of keeps jumping and does reappear- it feels like a chorus. I was listening to the brass and trying to work out how many there were.'

I ask L if she would like to do some more playing and she agrees, the listening has provided a good interlude and contrasted activity. I decide on a Thelonius Monk tune *I Mean You*, for contrast and more melodic and rhythmic complexity in the melody. It is also a specifically modern jazz piece in a different style. I teach it to L aurally once more to improve memory.

I sing the first phrase and ask L to sing to it back to me; it is a falling pentatonic riff R, 6, 5, 3, R, 6, 5, R8. *Da be da be da be de bop*. L sings the first note too long noticing the longer offbeat, the

contour and sound is there but slight inaccuracies are present. We change the key because the range of the correct key is too low for L. We begin again and L repeats the phrase but alters the laid back off beat swing rhythm to a syncopated ragtime feel. K sorts out the last phrase with L and then explains the first phrase again. K sings it all through from start to finish with L joining in where she can. K sings it three times and each successive time L improves memory of the tune. The sticking point is the middle 8 with its big intervals. We sing it slowly and outline the notes on the guitar at the same time. L seems to have got it vocally. Then we look at the harmony and I explain it goes from F to Db7. IM1 L: 'its Brahms isn't it?' K: 'No its Monk!' K plays the chords off the beat to accentuate the melodic rhythmic effects. L sings and is initially all over the place. Second A section is better, middle needs more work and we repeat it slowly again.

K: 'Try it again from the top...' L gets some of it, but I think she's losing concentration now- it's a long time to keep going! K goes through each section again L still tries to make the jazz feel into some kind of jig and doesn't move to the music- I think this is the problem. Next, L tries to play it on the viola. Finding the notes slowly and clipping the rhythm L plays the first and second sections fine and stops at the middle. K plays the middle again which L repeats twice more and appears to have got. L is looking intently at the fingerboard and feeling for the notes. Teaching the melodies aurally is so good for the jazz! K: 'Coming into the middle, you came in a bit too soon.'

L tries again, holding the first note too long and coming into the middle too soon, which she realises and delays. Then she comes in at the right place but forgets the next part of the tune. This is fatigue setting in and I should have stopped the lesson at this point. I tell L that she has added a note: K: 'You've added note at the end of the first phrase.'. (Why?) IM2 L: 'Yes, I

have, you're right-it's a thinking note.' I need to clarify this with L, but assume that it means that she has added a note so that the melody, which is unusual and unpredictable rhythmically, makes more sense to her. Perhaps also she can make the rhythm work better with the extra note. K explains again that the first note only comes in a beat before i.e. 123 ba. L asks if it comes in on the fourth beat, then I count and she sings it again. K counts 1234 123 and L comes in right. **K: 'That's right.'** L plays the first and second sections well and then comes in too early in the middle. L realises this and stops herself to find the right place, looking intently at her hand on the viola fingerboard. The next time right through is also a bit wobbly- K is still singing along with the tune.

I ask if L has got it yet. **IM3 L: 'Yeah except the beginnings of lines – I'm still playing them all in the wrong places.'** I suggest that we sing and clap it once more to try and internalise it in the muscles. L sings it up the octave with K clapping on the off beat and singing along. L still puts in the 'thinking note'. What is this? She misses the second entry and fear she might now have learned this wrongly. L also alters the rhythm slightly and adds notes. It's almost as if she approximates the rhythms singing them as she hears them going from the general to the specific as Sudnow implies. L anticipates the middle section again, checks herself and then proceeds coming in late in the last section also. L returns to the viola and this time adds the note; K counts her into her entries; overall L plays better, smoother, faster. L misses entry into the middle and there are small inaccuracies and inaccurate intonation.

Next time, L finds her starting note by playing a scale up to it. The first phrase is fine, the second is wrong K adapts her rhythm and counts her into the middle but she doesn't make it or the last section either. K keeps singing the tune and plays through the middle again slowly. The next few repetitions are the same mixture of some correct and incorrect phrases.

After several more attempts L says: **IM5 L: 'This is where having the music in front of you makes it a lot easier actually.'** K feels as if she's missed the point entirely after all we're doing jazz here and its not only too easy to read the music (as she is accustomed to) but not developing any of the feeling and finding kinaesthetic elements so vital to improvising. Training people to listen properly and transfer what they have hear rather than what they have seen onto the instrument is the key aspect and learning tunes in that way is a first step towards it. **K: 'I don't know, because Monk's music is all about rhythmic placement; it needs to be in your head and while some of it you can get from reading, but ultimately you'd have to learn it by ear anyway.'** **IM6 L: 'Well, you'd read it and memorise and learn it the same way as I'm memorising it now and you're having to play it lots of times.'** **K: 'That's ok.'** To read it and memorise it really is not the same process as feeling for the spaces of the intervals - the visual to motor link is not what we're after; it's the aural to motor and it doesn't matter how long it takes to make this happen. Reading music is not the same as internalising it. I continue to justify using aural methods over reading.

IM7 K: 'I think its better and part of the research is to see whether learning by ear is better. I think it's better to learn by ear because although it takes longer and it appears to be more difficult, you are actually learning a lot more elements at the same time.' L is remembering the tune aurally; finding the intervals on the instrument and listening intently to the sounds.

IM8 L: 'Yes, you're getting the feel at the same time. I've just been transcribing someone in an interview who was saying exactly the same thing about folk tunes; "I always learn them off the records" he was saying; "I'll look up the music afterwards if there are any

notes I'm not sure about, but I always learn it from the record first." If I learn it off the music, I don't know how it goes is basically what he was saying.'

L plays the tune again and the first and second phrases are fine. The middle is wrong, and she recognises this and stops. K: (counts again) 'You're a beat ahead of me.' K sings the first section going into the middle and L repeats this another couple of times sometimes correct sometimes not. In between L loses the triplet feel of the middle section. Again I think we've been going on too long and the mistakes are a result of fatigue. She continues another couple of times and sounds more or less ok if lacking in swing feel.

K decides to move on to the harmony and goes through the chords aurally while L plays up and down the arpeggios. She takes on a 'hoe down' feel placing it immediately and firmly in the folk idiom from which it never returns. When we get to the II, V, I section at the end of the first phrase L recognises it and says: **IM9 L: 'Cliché that bit; that pattern keeps cropping up in quite a lot of things.'** This recognition indicates the developing schema and an understanding that this pattern is one of the recurring elements in the jazz standard and therefore transferable to similar situations.

K describes the chord progression in the middle section Eb7-F-Db7-C7 and then explains that the last eight is the same as the first.

L says of the piece: **L10 L: 'This one's got a complicated tune and easy chords.'** This is L's perception that the tune, in fact it is relatively simple with many repeating motifs and a call and answer form- it's the placement of the rhythm that is more difficult and the strength of the off beat feel. L's classical and folk schemata are just not attuned to this. We argue mildly about whether it is complicated or not with me remaining unconvinced that it is.

I ask L to play the tune and then the chord tones another time.

1. L plays the tune well but arhythmically with me singing and counting her into the middle sections.

2. I call out the chords for her to improvise over and she carries on playing the tune again, staring intently at the fingerboard and her fingers.

3. Then she plays the tune a third time, slightly looser; rushing the middle triplets and suddenly delaying the phrases in the last section.

4. She starts to improvise the next time around playing roots as K shouts out the chords, then arpeggios. The folksy almost hoe down feel is entrenched; the tune must remind her of a folk dance.

5. The next time around the improvising is clearly focusing on a series of American reel type phrases which she remembers better with each repetition. Perhaps this is due to the F chord moving to the Db7 which is reminiscent of folk progressions or the fact that there are series of dominant chords. Either way the jazz is gone with the feel. There are lots of slides and imitation of the initial phrases all in the folk idiom.

6. The next time through, L uses part of the melody but still in the folk style managing to sound quaint and almost rag like; a sort of hybrid syncopation perhaps from the Appalachians in the 20's Cajun meets Joplin.

L hasn't realised that the jazz feel has gone because she has focussed on remembering the melody and chord tones, so I suggest ways that she might use the rhythm of the tune for her improvisation and give her the notated copy so that she can learn it from that during the week.

The session ends there.

What does this session tell us about L's evolving schema and learning process?

- L is taking responsibility for her own learning by listening to jazz violinists and thinking about the style she wants to play in and the kind of sound she wants to make.
- Practising swing feel and various technical items.
- She understands the need to play with other particularly to get the jazz feel.
- L is beginning to improvise in eight-sixteen bar lengths rather than going from chord to chord indicating that the schema is developing allow longer phrases to be imagined and played.
- L is unaware of her progress implying that the schema development is unconscious.
- Whilst playing 'fours' with K it is clear that L is responding immediately and accurately to ideas showing improvement in aural memory and the ability to imitate and develop ideas not initiated by herself.
- L also accompanies K with a walking bass line and orientate herself within the progression whilst swapping four bar ideas.
- Transposing ATTYA is problematic once the wholeness of the fingering system breaks down and L begins to think about theoretical elements like new keys and chord tones.

- L follows my wrong chords by ear, again indicating higher order aural processes at work.
- L also improvises in the new key presumably having abstracted the salient elements and relationships by working on the original key.
- Once the piece is transposed back into the original key ('a relief' to L), she is more adventurous and allows her fingers to go where they will because they know the key.
- St Thomas provides a contrast and rhythmic change but because it is simpler L anticipates the chord changes without noticing the dissonance between chord and melodic line in the wrong key! This is another instance of anticipation over-riding the actuality of the present aural environment.

Session 3

K has given L a questionnaire at the start of the session because we are approximately half way through the series of six and an evaluation is in order.

K: 'How do you feel about what you've learned so far?' Q1 L: *(Thinks)* 'Yeah its funny answering a questionnaire like this in words *(means spoken rather than written)*. Ok, yeah it feels like it's coming together quite nicely. Do I want to review my goals? *(Thinks)* I think they might have been a bit ambitious *(laughs)* but no I'm not going to review them, let's leave them being ambitious. What have I learned this week in practice? How to play *(looks up and to the right)* oh what's the name of it, that piece, 'I Mean You'. Not only have I taught myself to play it, I've taught my daughter and my husband.' L's perception is that her improvisation is coming together and she's involving the family to help her. Teaching the activity always helps the assimilation and understanding. K: 'This is a good thing.'

Q2 L: 'It was quite a good thing and we sang it at my daughter's open evening 'cause we'd just been singing it all the way there. Anyway, yeah, and we sang it to the ducks when we went out for a walk on Saturday morning.' K: So you taught it to them aurally? Q3 L: (*Looks up*) I taught Richard it quite explicitly the same way that you've been teaching me because I thought it would be quite good if he learned it, and I know that it's a good way of learning for me to teach it to somebody else. But my daughter just, I was practising and she just came down and joined in. As a teacher L is aware of the usefulness of teaching to aid her own understanding and improve her memory.

Q4 L: So what have I learned this week in practice- well I've learned quite a bit about that song, 'I Mean You' which is the one I was mainly concentrating on and was the one I was having problems with. I was losing the beat in the first part of it – I knew I was, I was counting the first beat of the bar on one of the off beats, for half of it, which is why I kept miscounting entries, so cleared that up and yeah (*shrugs*) I've learned the harmony (*frowns*) I think, reasonably well. I'd like to spend a bit more time on it I think though (*looks down*). So it helped L to have the music and to clarify the positioning of the notes, which she worked on through the intervening week.

Q5 L: How do I feel about my improvisation- it's certainly loosening up? Q6 L: Yeah, em still tricky when I'm not sure where the harmony is going. But I've been improvising on other things besides the songs that you've been giving me and that's coming on well. I've also been doing a lot of making and remaking chops tapes so I've been having to play lots of chords off the chord sheet on the piano and that's got quite fluent as well because it's a tangent really. What do I want to focus on in the next three weeks? (*Thinks*) Probably the rhythm, I think. What have I been listening to- been listening to Thelonius Monk all week,

and the plan was to listen to *(thinks)* Annie what's her name on the trumpet, Whitehead next.

Q5 K: Are you singing during your practice? L: Yes and quite a lot of the rest of the time as well. I find that very useful. Q6 (L doesn't state the next question, but I assume it's to do with understanding) L: Feels like it's *(hesitates)* getting there now, understanding, I still think there's a lot I don't understand but it's almost like beginning... I'm feeling like I'm standing back a bit now *(makes a broad circular gesture of the right hand and arm)* and seeing how things fit together. Rather than being right in the middle and thinking 'oh my god what's the next chord and how on earth did it get there'. What is the thing I most enjoy about improvising- when I do something I don't expect *(laughs)*. Q7 L: Yeah, something really nice sounding comes out that you didn't plan or when you get an idea a sort of technical idea for something and you think you'll give it a go but it sounds quite different from what you thought it was going to *(shrugs)* and that can be nice. Em, been listening to lots of sax players as well.

Q8 L: Yeah but listening to the way they put em, *(thinks)* the way they put improvisation- sort of like string the notes together-interesting. What have I found most enjoyable about the lessons- *(thinks)* I'll say, the whole things been pleasant and ..*(shaking her head no whilst smiling)*. I ask L what she has most enjoyed and has been most useful to her and she replies that it is the singing Q9. Q10 L: I don't know *(looks up and to the right)*. I think the singing has been good because you made me do it. I've been told over the years many times it's a good idea to sing pieces and I haven't. I did try a bit. My classical teacher used to say to sing pieces and quite often the pieces were just completely outside my range and I couldn't or she'd say sing this phrase to me, you'll get the phrasing, and I'd sing it and she'd say 'oh you're no good you're singing like a folk singer' *(right hand held up straight and palm*

outwards). Well, of course if that's the music you're playing, then you'll phrase it like that; that's the way you're used to doing it. So then she said you can't get your viola phrasing from the way you sing 'cause you're phrasing it wrong when you sing. So that was that. So it's been really nice just singing it and using that, (*swirly hand gestures with both hands*) as a way of a way of doing stuff. But, as far as the connection between it, (*rubs her eye*) I think it's just habit actually, I think...it's the same as (*stops, thinks, and hesitates*) you're... (*big open arm flurrying gestures both hands*) expanding that thing of hearing something in your head and being able to play it, and that connection just comes with doing it a lot doesn't it?

Q11 K: Yeah, I think what happens is your musical imagination develops and it's a bit like, well it's not quite the same because we're not talking about meaning, but it's a bit like when you understand in a foreign language, long before you can actually speak or construct a sentence, you can actually attune yourself and hear; you can more or less understand what people are saying to you. It's that kind of process. Q12 L: It's when you stop again listening to the individual words and you start listening to the sense of the whole thing together, isn't it, because you don't understand all the words. I think this is the feeling of the schema developing; the gestalt feeling of understanding the whole, which might disintegrate again if you begin to analyse or break it down into say, chord patterns.

We play *I Mean You* again and L comes in at the right place and is slightly startled to hear me wait for the first off beat. There are little inaccuracies in the riff the first time which are gone in the second section and overall, L plays with more confidence. In the contrasting middle section L's entry is correct, as are all the triplets and the last section of the tune also. My only criticism is the jaunty and somewhat rigid dotted quaver rhythm; all jazz feel is absent. L is very pleased to be getting this right. Next time she plays it down the octave, again with more confidence and

strength. The schema enables this extension of a skill. This learning has used a mixture of aural and notated elements to inform the schema and now is remembered by heart and with increasing confidence.

I ask L how she learned the tune the previous week, whether she built on the aural work of the lesson or started again with the notated music. **Q13 L: Oh, I had a look at the music and thought it was completely impossible (*looks up, thinks*) em, to work it out off that.** This is quite an odd response from a reading player, perhaps because we had focussed so much on a purely aural approach, the reading became what it actually is in reality, incongruous and a very different process altogether. **And then I thought well, it'll help to know the chords, so then I did the piano tape (chops tape with the chords and the metronome keeping time) and then I sang it and sang it and sang it with the piano tape.** This is a new approach for L and a mixture of a conceptual reading style and aurally based singing. Perhaps this accounts for her confidence in playing the tune.

K: Right ok and then when you came to play it on the viola after you'd sung it; did you get it straight away from the singing to the viola? Q14 L: Yes, except I was... (*stops, looks up to the left*) a mistake crept in that was a fingering mistake (*smiles*) which was (*plays it fifth note of the first riff*) to stick the second finger in just there. L had in fact played this mistake from the beginning and had only just become aware of it, presumably as she referred to the music at the piano. **K: Yes, it sounds like a folky thing that doesn't it? Q15 L: Yeah but it also, as you go down the strings you're almost repeating a pattern.** (L's highly rational nature is indicated here; she expects that the pattern is repeated but it is not; her rational expectation alters the notes to fit.) **So I was exactly repeating a pattern and that's where...K: So you learned it again in conjunction with the harmonic structure. L: Yes.**

I ask L how she then approached the improvisation and she replied Q16 that she had not done as much work on that, but had done some singing and felt she needed more time. L says that she spent an evening working on the chords with Richard Q17. I ask L to improvise freely as I play the chords, to see what comes into her head. L is unsure whether she knows the chords well enough for that Q18 so I suggest she sings a couple of choruses to remind herself of them. I also suggest that she uses the energy of the original tune to give the improvising 'a bit of a kick' Q19.

L counts in and goes through each arpeggio in turn, ascending each time. L shouts out the chords at K's behest; repeats the patterns and then goes into the middle section prematurely. Q20

L: I don't know what that one is (last bar of the middle). L looks at the music to check. The third time, she uses the first phrase of the tune before returning to the arpeggios again but links them with a phrase. The jig stuff is gone! L plays in a much more thoughtful and simpler way with more musical ideas. She is consciously trying to link, imitate and extend melodic fragments and when she gets a good one, she repeats it.

K: Ok I want you to close your eyes. How are you doing on the chordal front? Q21 **L:** Ok I'm... it just needs more practice, I'm getting stuck with me thirds, *(smiles)* I'm not too sure whether they're major or minor. **K:** Ok the first one is F major, second one major, third one major the only minor one is the Gmi7. Q22 **L:** That's not a problem; it's the Db7 that's awkward because it's a long way away from F, but never mind. So it's a special fingering problem rather than a theoretical one of major or minor thirds.

1. L begins again after thinking a little. This time she uses the rhythm of the tune which makes it a little bit disjointed. L is jumping octaves but she develops the improvisation more musically

the second time around. She uses the tune going to the middle and extends the melody, then repeats the first idea using the tune rhythm again; she has remembered it and extends it slightly.

2. The next time, she uses a different theme across both chords and links it with a chromatic run. She imitates and extends it using a good rhythm during the second pass. It is slightly more uncertain and meandering in the middle section but the last eight is more rhythmically confident and stronger using a simpler and repeated melodic riff. At this point K asks her to close her eyes.

3. L uses the end riff to begin this time and is slightly wobbly to start with the themes wandering more and moving in a stepwise scalar motion, but at the end of the second eight she plays a wide and high interval. It appears as if she is taking a bit of a risk and trying things out. She also uses the pentatonic intervals from the tune and more examples of crotchet triplets especially in the middle. In the last section L imitates the tune and plays a faster triplet quaver run before landing on a distinct colour tone of the seventh which she plays for a while.

The skill is still unstable and can be thrown by small things but L is already confident enough to take risks by experimenting with bigger intervals and sounds and trying out different chord tones and rhythmic elements. The question of whether there is any difference when she closes her eyes is hard to tell, but she appears to take more chances without the visual modality keeping her hand correctly in place on the fingerboard according to the chord progression. Without her eyes, she can concentrate purely on aural to hand messages and imagine a more varied set of sounds. There's a better overall shape to things and more contrast in places.

I ask L whether closing her eyes made a difference. She replies: Q23 L: Lots. K: Yes, why? Q24 L: Dunno, it suddenly all... weird. K: No, were you looking at your hands before? L: No, I was looking out of the window. (*Well, sometimes*). K: Right, so what did you do differently when you had your eyes closed? Q25 L: When I had my eyes closed there was a picture of what was going on (*smiles*). K: What kind of picture? Q26 L: Erm, (*looks up*) cor it was really weird, I never play with my eyes shut you know. Erm, perhaps I ought to. K: (*very gently and softly*) It's just an experiment. L: Yeah (*smiles, looks outwards and forwards into the distance*). K: You don't have to do any of it.

Q27 L: What happened was, (*keeps looking outwards and forwards*) it focuses you much more on the sound and takes you away from being who you are standing here and all of a sudden the sound sounded like somebody else (*shrugs and smiles*) that was really weird. K: That's because you're not used to listening to yourself at that level, eh? L: Probably yeh (*looks upwards*) erm. K: What do you mean it sounded like somebody else? Q28 L: It sounded really good; (*smiles*) I was amazed. K: It always sounds good; I've been listening to the videos, it always sounds good right. Q29 L: (*laughing*) yeah, (*nods no*) but you know what I mean, it doesn't usually sound good to me while I'm playing it. K: Why is that? Q30 L: I don't know. Anyway, (*shrugs*) it removed it form the sort of here and now and it also meant that (*stops, looks left*) yes there was a picture in my head of the relationships between the notes, I can't explain it really (*shakes her head no*).

K: Was it like a sheet of music? Q31 L: No, it was nothing like a sheet of music; it was like a three dimensional or more than three dimensional thing with some sort of strings stuck in the middle. K: These strings? (*The viola.*) Q32 L: Yeah or like an abstraction of those strings.

K: Right, so it's like the relationship between notes or chord tones? Q33 L: (*thinks-looks ahead and up to the left*) I think between notes but it's alright because the background and the harmony is there now, I can think about the notes, you know what I mean? I can think of the notes in relation to whatever, yeah. K: See what you see or feel this time-see if it's any different. L: Ok. (*Deep sigh, murmurs something inaudibly*). Q34 K: Did it give you a shock? Q35 L: Yeah (*laughs*) - it won't be anywhere near as good as that again. K: No, no. What do you mean? Q36 L: That sometimes that sort of thing happens and you can't capture it. K: You don't want to capture anything do you? L: I know you don't but... Q37 K: The whole point is that we're not capturing; what we're doing is trying to set up with the improvisation a feeling and a way of playing that allows you to play what you feel (want); you're not trying to hold things in; you're trying to put yourself into a situation where things can flow out, in a way that you want them to. You're not trying to say: 'oh I got it right that time I'll try and repeat that again'.

Q38 L: Yeah but you see, your (meaning my) past history comes along and sort of catches you round the neck doesn't it, because I've always used in the (*looking upwards and forwards*) in, in (*turns away to the left, hesitates*), the context of the band we've had for the past five years and I think in the context of previous bands some years back, I've used improvisation as a way of generating material, but then when I've got material that I like, then exactly I do catch it, because it's necessary for it to be formalised and fairly reliable.

K: Yes, but that's like a compositional process.

Q39 L: Yes, and that's what I've used it for over the years and if I've not captured it in memory I've captured it on tape exactly the same as if I was writing stuff; that's how I've done it. Erm (*thinks*) so that's one piece of baggage that you have. It's interesting. But

about the shutting your eyes things, I did Alexander technique for years and they always said don't shut your eyes; don't go into yourself, always stay present, so it just becomes a habit; that's what you do, so that's why I don't play with my eyes shut and then we played with a violinist who was always really out of time because she couldn't see, you know in situations where you can't hear the people you're playing with and you've got to rely on visual clues; she'd go off on one and closed her eyes and be like miles behind everybody so, *(shrugs)* it's history.

Q40 K: I'm not advocating it as a thing that you do all the time, I'm just seeing whether it makes a difference to the quality of your playing or to your perception of it or whether by shutting out one sense you focus more fully on the sound and whether the sound then becomes more important and therefore more..Q41 L: It made me want to play much more gently actually. K: Gently? Q42 L: Yeah not gent... that's the wrong word erm, *(thinks)* I suppose it made me pay more attention to the sound that was coming out, to the shaping of each individual note. So, gently maybe is the right word. K: There was a change in the quality; a difference. L: Hm. Ok. *(Sounds unconvinced.)*

I think this dialogue speaks for itself; I am trying to ascertain why closing her eyes made a difference to L's perception of what was happening and what she 'saw' in her imagination whilst she was doing that. How much L has been influenced by my ideas is hard to tell, although she is completely aware of them because I explained the aims of the research and refer back to it at intervals. It's almost as if L closing her eyes disconnected her self-consciousness so that she heard herself as if she were listening to someone else; perhaps in a more objective way. The visual modality grounds you in the present situation; your identity is bound up within a visual context in which you are present mind and body. Closing the eyes removes that. When L

listened with her eyes closed, what she heard sounded good; she says **Q28 I was amazed**. I try to reassure her that nothing has changed from my perspective; she always sounds good. This is not quite honest but the problem with teaching adults is that they usually have the model of a perfect sound or solo in their head and compare where they are with that when really they are just beginning. It's not that it is easier to learn as a child (although it may be quicker) it's that children are not so perfectionist about trying things or taking risks; they have no perfect model and therefore no expectations of how it will take or when it will sound 'good'. So here we find out, not unexpectedly, that L doesn't generally like what she plays. Does this negativity inhibit the learning process? Does it help to enjoy and like what we are playing or is this just a by product? Many of the great jazz improvisers had extraordinarily high standards and expectations of their playing that were entirely different from those of their listeners and audience. Dizzy Gillespie for example, stated in an interview towards the end of his life, that he could only recall having played what he considered to be a good improvised solo once.

L couldn't say why it didn't sound good to her, but that closing her eyes **Q30 'removed it from the sort of here and now and that yes, there was a picture in my head of the relationships between the notes. I can't explain it really.'** This is clearly an intangible and elusive image and we are lucky that L got a glimpse of it.

As to what 'it' was, L describes it as a three dimensional or more 'thing' **Q31** with an abstraction of the viola strings in the middle of it. It would be marvellous to imagine this as a visual image of the schema but there is no reason to suppose that it has such a thing and is more likely to be L's imaginative response to my ideas and attempts to get her to verbalise things that may not be truly verbalisable or communicable. The relationship part between the notes is however interesting because that is how Schmidt (1977) sees the schema working, and this is how

information and understanding become transferable; the relationships between movements or elements are memorised, not their actuality. I had not mentioned this aspect at all to L and so this is more objective and indicates that Schmidt's theory may have a humanly definable form, which can indeed be visualised and imagined. L sees the relationship between the notes overlaid against a background of harmonic knowledge that she has gained over the past weeks.

I can see, in the lesson, that L is slightly disturbed by the experience, I guess because it is so different from the one she had just minutes before; it appears that she is plunged into a new conscious state by a very simple action. L says she is shocked by it but adds: **Q35 L: Yeah** (laughs) - **it won't be anywhere near as good as that again.** So she feels that the moment won't happen again, that it was a one off. I answer that it cannot happen again; (nothing is replicable except by machines) and neither is it desirable that it does so. The aim of learning to improvise is to put yourself in a psychological and physical space so that imagined ideas can occur.

L goes on to explain that she has previously used improvisation to generate ideas that she 'captures' (by either memorising or recording and transcribing), which then become fixed. She still appears to have this idea in mind and indeed it is borne out by her approach to improvising in which she tries to remember and perfect an idea or phrase over several choruses. This is part of the beginners process; that of faintly hearing a good idea and attempting to bring it to fruition bit by bit, over successive choruses; like pulling definition into an out of focus picture.

The second aspect L mentions is the prohibition of shutting her eyes that she has learned from Alexander technique teachers. I'm not sure why they have suggested this, or what difference it would make to the good use of the body whilst playing an instrument.

The final interesting thing L mentions is that closing her eyes made her pay more attention to the sound and although this is obvious, beginner improvisers concentrate so hard on 'getting the notes right', that sound and timbre is virtually forgotten and yet is a paramount importance. Focussing on the shaping and quality of each individual note seems a good exercise in itself.

L begins to improvise over the same piece again saying **Q43 L: I'll just try starting somewhere else.** She plays again with her eyes closed and begins in a strikingly different manner, unfettered from the arpeggios and perhaps from the chord tones altogether. L uses a much simpler approach altogether and appears more controlled. L uses the triplets but in a quite unformulaic way and seems to be following a tune, and not imitating riffs or phrases. **K: Try playing the tune again now, and following on the improvisation from that. How did it feel this time? Q44 L: Not as stunning as last time obviously 'cause it's not so much of a shock and I was like thinking that time rather than focus on the fifth of the chord I'd focus on the third, so it was a bit of an experiment rather than... so it didn't come together in the same way.** In this instance L has added some conceptual information and so perhaps the feeling of pure sound and form is not as striking. She was also expecting it because of her previous experience. I need to ascertain whether I can detect any qualitative difference in the improvisation when L has her eyes closed and between the first and second instances.

[Later in the session L remarks about the experience again, it clearly made a great impression.

Q51 L: Ok. That shutting your eyes was just stunning and the most staggering thing about it was just, as I say, I suddenly heard myself like I was listening to somebody else and it sounded like somebody who knew what they were doing and it was like *(makes a wide eyed and shocked facial expression to convey the surprise of the feeling)*. **K: So there's a lot of things in the way basically, a lot of things in the way, voices in the head saying 'oh I don't**

like the sound of this' or whatever. L: Yes, yes, it was really odd. Q52 K: Do you have a voice, a judging voice saying this sounds good or this doesn't sound good. L: Not constantly no. K: Just tell me what you said before about the space. Q53 L: Yeh (*smiles*) I was really surprised 'cause when I shut my eyes there was this enormous space (*makes an open round gesture of the arm and hand*) inside my head and I was really amazed that there was all that space there and there was all the time and space in the world just to put it together and make it happen. Then when I shut my eyes a second time and I had spent a lot of time playing around the fifths the first time and I'd not really meant to but that was how it came out. The next time I thought I'd play around in the thirds and then the space in my head had shrunk back to being sort of viola neck size with a few fingers flying around.

K: Yes, so what we should try and work on is creating the space again, so that you feel like you've got the musical space to play what you want. L: (*smiling*) What an amazing feeling to have that huge great thing just in (*points to her head*).

Returning to the lesson in the original time frame, I again try to extend the exercise to include the tune as well as the improvisation. K: Play the tune closing your eyes and then go into an improvisation closing your eyes. Maybe try to go into without any preconceptions but again what ever happens try to keep the energy of the tune going. I am trying to get L back into her previous frame of mind by relying on sound rather than concept, probably foolishly! L has a rational turn of mind being a mathematician and she uses this from long habit and like scaffolding.

1. L plays the tune at a medium tempo, well and correctly all through. Singing it all week and teaching it to the others has internalised it properly, although the feel is still too tight.

2. The improvisation begins with the energy of the tune and the same starting note and rhythmic impetus, using crotchet triplets and it continues in a similar feel consistent with itself, but slightly wandering through the harmony. L repeats a lot of the notes and keeps the energy up-phrasing a similar way to the original tune.
3. The second time though the first section, she contrasts the theme and quietens the rhythm somewhat and in the middle section she plays a self contained musical phrase leaving a space and then answers it imitating and extending it slightly. She returns to the themes of the tune for the final section, going up the octaves at the finish.
4. The next time she starts in a lower register with a different idea, and seems to be taking more time over the phrasing. L develops the low note theme and an off beat rhythm; the jig ending keeps coming in at the ends of phrases as a holistic finishing, indicating that she has a (probably unconscious) musical sense of the completeness of ideas, even if they sound clichéd. In other words there is the internalised notion that musical phrases resolve and finish over eight and four bar time spans; there is an emerging sense of the wholeness of the ideas. The lower broader sounding notes continue and at the end of the second phrase she uses the octave leaps again. At the moment L's improvisation seems to be a mixture of partially remembered and extended ideas that she returns to in the A sections and experimenting at other times and in the B section. This time in the B section L plays a high note mirroring the tune and leading into a complete musical phrase which she extends and imitates in the second part adding a chromatic run. In the third section she introduces a shorter newer idea which she develops rhythmically.

5. The next time round L starts low and plays broader longer notes sticking to similar notes and altering the rhythm. In the middle she uses more staccato phrases again which make musical sense on their own there is less meandering and more purpose.

I ask L how she is doing and she says good twice even when I ask for elaboration. I suggest we look at *I Mean You* using scales as we did in *All the Things You Are*, and so go through the key centres with L Q46. I suggest L moves from F major to Gb thinking of the Db7 as chord five and she is unsure about this, having been predominantly focussed on the individual chord. Q47 K: **For your D you're only on it for two beats and you could be in G. Going into the middle eight you're in Ab (both play it) back to F. Then you're in Gb for two bars and then back to F. So just in swung quavers play what scales you can remember starting on the chord note to orientate yourself.**

L: Ok (very quietly) K: **You count me in.** L plays jaunty dotted quavers, no swing feel through the first scales, getting some correct and experimenting with others; she plays them quite straight. Gets more of a grip on them the second time and experiments again, repeating notes and intervals she likes. She keeps it going more or less continuously.

I ask L to close her eyes and repeat the exercise Q48 and she sounds looser with the rhythm, more relaxed and confident. L is smiling at the mistakes, an indication that things aren't too serious and has a little difficulty getting through the middle. Q49 K: **I want you to improvise a line; don't take your bow off the whole time; in other words play quavers and keep something going the whole time. Don't think about the rhythm just think about a continuous scalar line.** This is an exercise from Howard Roberts intended to assist in the creation of a cohesive melodic line without any reliance on rhythmic elements. I was interested to see if it made a difference to L's approach and/or improvised lines. L: Ok. L has her eyes

open and the rigid feel of the music returns along with a slightly unfocussed and wandering musical line. L plays a triplet feel in the middle to start with and then returns back to the quavers. She then plays a scale pattern at the start of the next time through and several repetitive figures as well as a bit of a wander through the keys not particularly landing on any salient chord tones. L plays a recurring rhythmic figure in the second A section and in the last section she is adding the arpeggios.

I ask L how that exercise felt to her. Q48 L: That explains something I've always wondered about. K: What's that? Q49 L: That is how, when people are playing millions of notes a second and the harmony is changing an awful lot, they pick notes which aren't in the chord, but goes and that's how you do it isn't it? Yes. K: You do it by landing on a strong chord tone at an appropriate time. Q50 L: Yeah but you can land on, this is what I'm saying, when people land on what is not a strong chord tone and I always pondered how they did it. But they can land on one that's not a strong chord tone and shoot off (*swooping downward hand gesture*) into a right scale and it sound cool. Thank you; that's puzzled me for years that! (*Laughs*). And it's also interesting when you take a little group of notes and they keep changing slightly; I like playing around that (*L plays semi-tone and tone intervals*). I'm not exactly sure what L is saying here because, to make musical sense within a tonal context, there has to be resolution within a key centre at various points in an improvised solo. However, landing on and playing the appropriate scale may or may not be sufficient to make this work. I think what L means is that there is a lot of leeway in the process; that you can play more or less within the key and the tonal centre will still be clear. I guess that L has been thinking about how the flow and fluency of an improvised solo develops and also listening to solos that aren't necessarily always consonant or deliberately outlining chord tones, whilst still making musical sense.

I try to extend the exercise by including the various intervals within the scale starting with the thirds, to give L an idea of the possibilities of their use for improvisation. **K: Right, just as an exercise try doing the scales again and try doing them up in thirds as far as you can go. So you're starting here** (K plays and sings the scale in thirds in small motifs and in swung quavers). L plays the thirds but still in jig rather than swing feel, going up each of the chords in turn missing some and making some. The second time she starts on the lower strings down the octave for practice.

We try the next exercise using fourths again to stretch the musical imagination and also the technique at the same time. I suggest also using fourths to make a motif through the changes in the same way we did with *ATTYA*. L tries this for a little while and stops, saying that she will have to practice it. As a final task before the break for lunch I ask L to do some improvised singing (having first sung the tune), with her eyes closed without thinking of anything in particular i.e. just refocusing on the sound and the musical imagination.

L comes in a bit sharp and shrill but the tune is there and in time and with a much better rhythmic swinging feel; L is moving with more fluidity to the rhythm. The singing is more adventurous than the playing with exploration of wider intervals and nice development of phrases and remembered lines repeated at the end. The second chorus is different again and uses different motifs; it also uses call and answer phrase but sounds strangely twentyish. Perhaps it's the syncopated feel. L loses it a bit towards the end, but finds her way back. I ask L how she felt about that and she replies: **Q52 L: Difficult to disassociate it from what I played earlier because I've got ideas now and I'm singing them** (*laughs*). **K: So you're actually singing ideas that you were playing?** **Q53 L: Yes and I'm thinking well, I could develop that and how am I going to play it. It can be, feel like, you get a couple of ideas and then you want to**

explore them and then you feel really stuck with it and you need to go away and do something else.

We have a brief dialogue about getting bored with ideas and about how fluency develops; also about jazz feel and L says: **Q54 L: I can also relate that to the way you play which also sounds really jazzy but it's not immediately obvious what it is that you're are doing that gives it that feel you know?** The whole question of jazz feel is difficult to explain and intangible to describe; the only way is to internalise it through listening, singing back and moving the body.

Break for lunch.

After lunch we return to *ATTYA* to monitor progress; to keep it going in L's memory and to see whether anything new has been transferred from other standards and approaches. L plays the tune adding a bit of extemporisation here and then and losing completely the long notes of the opening which she has done since the earlier sessions. This indicates that L hasn't used the music for this otherwise she would have noticed the difference. L also hasn't heard the tune in any other form; neither does she know the words. All of these elements would have kept her from making the original error. L plays the tune well and confidently, not looking at her hands until the ending.

1. In the first chorus L extemporises around the tune a little but mainly plays the tune again.
2. Then she tries some scale patterns and immediately looks at her hands, working out the patterns by ear and eye in terms of what she knows already about scales. L starts each scale on the root of the chord.

3. In the 3rd chorus L still focuses on scales but makes them more staccato and adds a dotted quaver rhythm repeating each scale tone twice and continuing the pattern throughout the tune until the last four.
4. For the fourth time, L changes tack by adding slurs but still trying to fit a motif to the changing chords for practice. She does this throughout again looking intently at the neck of the viola to work out the right notes; the notes that fit.
5. This time L experiments with the rhythm, playing triplet figures still with a scale approach. She imitates a motif in the middle but it wanders a bit and she stops in the last section before finding her way back in.

L thinks that the exercise went well but that she has still messed up a couple of bars referring to the descending chromatic passing chords of the final section. This is understandable because of the complexity and fast changing nature of them. It always takes a while for a beginner to work out a whole phrase that will work over all of them rather than a fragmentary chord by chord approach.

For the next exercise, I ask L to sing a couple of choruses, again to see how far she's come and to compare with earlier and later versions. I suggest L closes her eyes if she feels like it.

1. L starts to sing the tune repeating the first notes and adding a few do be does. The feel is not really jazz and a bit straight sounding with some inaccurate intonation.

2. On the second chorus L begins with a falling motif that is real music and is imitated in the next phrase and as this point she has her eyes closed. Then she opens them for the middle and the focus is gone and wandering again, although again it makes musical sense and the phrasing is good. K lands on a wrong chord. **K: Sorry I'm closing my eyes and playing the wrong bloody chord!** Both laugh. L keeps returning to the tune as a familiar point with the eyes open the quality changes slightly. In the last eight she introduces some rhythmic variations which work, the changes of key can be problematic. L is looking out the window. In the third chorus L begins with a falling scale going down low, which she imitates and leads into the middle eight where she loses it and finds it hard to get back. L simplifies it greatly in the last eight.

I ask L how she feels about that. **AT1 L: That's interesting 'cause that's easier now on the fiddle (*raises her left playing hand*) 'cause if I do get lost, I've got....the fingering anchors you down back to where.... you know what I mean? (*Smiles*).** So now it is easier for L on the viola because she has the fingering as well as the aural and conceptual frameworks to guide her. L goes on to elaborate on this feeling of the improvisation now being easier on the instrument rather than the voice for a more familiar tune.

AT2 L: I sometimes..... because I've done a lot of practice of jumping around on the fiddle and not a lot of practice of jumping around in the voice, it can be actually easier because I know yes, I've got the motor pattern there. AT3 L: But there was one thing in the middle of that where I suddenly heard in my head this note (*hands on hips looking and facing down*) that just like didn't go with anything that I'd ... it was a big jump away from what I'd been doing and didn't fit (*left hand raised and palm away to the shoulder*) but it plonked itself there as being the next good note to sing. AT4 L: And I sang it and it worked and then because I was thinking 'wow it worked' then the whole next two bars just completely fell

over on their end (*smiles*) and I thought that was really funny. This is very common; to be consciously aware of a good or unusual phrase, recognise it in the flow of an improvised line, and then completely lose track of several bars in the process.

At this point I seek to explore the timbral and expressive possibilities some more, given that L now has greater background knowledge of the harmony. I ask L to play it in a certain kind of mood so that I will recognise what it is (which is a bit of a tall order). I ask her to create the mood not only with the notes but with gesture and timbre; to work on the communicative performance of it as well as the mechanics of it. L decides on solemnity as a mood for ATTYA and we discuss how she will create it, by slow tempo, long and maybe low notes, and differing types of vibrato. L says **AT5 L: We have to imagine ourselves into a solemn place.** L suggests Manchester Town Hall inaugurations ceremony. **AT6 L: Yeah. Constrained goes with solemn in my head; uncomfortable clothes; tight shoes.** **AT7 L: Slow and uncomfortable, now that puts a whole different slant on it doesn't it? (*Smiles*) It's musically uncomfortable**

L is thinking and counts in slowly then starts to play slowly and broadly on the low strings with the tune adding small extemporisations. In the second eight L improvises a slow and solemn long note phrase using mainly crotchets and minims and uses the tune to set her off in the last eight, continuing the theme and feeling- low, long broad. Good solemn feeling communicated well; a complete change of vibe and feel at will; the odd wrong note but the overall feel was sombre, dark and gloomy.

L decides to play frivolously for the next time and to change the time to 5/4. Again, we discuss the kind of timbral and expressive qualities a frivolous piece might have. L suggests: **AT8 L:**

Short notes with gaps in between them; more of them; grace notes. Also notes in the higher register and more off the beat with 'little slides' AT9. We decide to play each bar for five beats rather than one bar of three and one of two which I suggest is jauntier but harder! K counts in and L begins in a 'Take Five' motif but unusually. There's probably too many parameters to think of at once here; the time, the rhythm and the feeling of frivolity. L plays one bar and stops she's thinking of the one bar of three, one bar of two version. **AT10 L: I'm sorry I'm thinking about the quick version.**

1. We start again; L has got the feeling of 5/4 with the Take Five rhythm but is losing the notes. She pulls it together better in the next few bars, sounds much more confident and even manages a few frivolous slides and pull offs, especially at the end of the phrase with the two C major chords. Going back into the minor section L continues confidently and adds grace notes and turns which she imitates and repeats into the middle section. In the last section L expands and widens the intervals whilst still keeping with the Take Five rhythm, and sounding confident.

2. The second time through L is using and experimenting with the larger intervals whilst keep the rhythmic aspects fairly constant. I suspect it would be too hard at this juncture to shift the rhythm as well; one thing at a time is best. The phrases make musical sense and she begins to add triplets to vary the rhythm. She manages the falling chromatic chords at the end, realises she has done so, smiles at me and immediately gets lost!

3. For the third time L is experimenting with a new motif and moving higher up the fiddle. She is also putting in extra rhythmic notes. The second section wanders a bit and loses focus. L looks and plays confidently; moving to the rhythmic impetus of the five rhythm and she keeps going; if she wanders or loses track of where she is, she finds her way back in even in 5/4 which is a

further indication that the schema is developing nicely. Going into the middle section she begins on an unusual chord tone for her; an F# in an Amin7 chord and you can see her visibly gauging the effect of this long note, liking it and moving up to the A and back before moving down to the E and landing on the D. These are not basic chord tones and may represent either a mistake that has worked well or a genuine development in aural memory experimenting with more colourful chord tones. It resolves onto a 3rd a strong chord tone to make a cohesive little motif and L glances over to me, perhaps to see if I've noticed the change. She follows this with a bridging scalar passage around the G chords in slurred quavers and continues with the quavers then playing strongly amidst the odd wrong note. Into the last section she also continues the quavers strongly and confidently although the effect is slightly wandering and unresolved, because the cohesion of the call and answering simple phrases is gone. Towards the end of the last section leading into the falling chromatic chords she plays a chromatic ascending line which incorporates all of the difficult end chords and which she plays with panache. L finishes slightly before me having got a little out of synch with the five rhythm.

L: Ha! She laughs. This is definitely improvising of a more sophisticated and adventurous nature, some of which comes off and some doesn't but except where L loses concentration and the line wanders, she's trying all sorts of different things and moving away from the basic chord tone. I also feel L is attempting much longer phrase over sequences of chords rather than thinking of individual ones and these longer phrases are much more interesting and complex. **K: Yeah, that's really good. It's completely contrasted really isn't it? You were getting into that weren't you? AT11 L: Yeah (still laughing and smiling).** I think it comes as a surprise to L when she plays something new or plays in a new way; it's as if she's on the cusp of being able to control it but not quite, so things come out almost of their own volition. 'In a sense, the performer is played by the music.' Pressing (1996:139) and in a sense the schema is organising

the music in improvising so that the body moves to make it with the barest control of the novice performer.

K: Would you like to do that the fast way or the same way again? AT12 L: (laughs again, thinks) erm (laughs) I don't know. It's amazing what you can find that sort of fits, isn't it?

Its here I think that L begins to realise the possibilities and how liberating the whole process can become once the various schemata are in place. **K: Yeah, the world's your oyster really; it's for you to decide.** AT13 **L: So getting lost turned out to be quite creative because you just carry on with what you're doing and you get back, sooner or later. Another turning point in which L realises that mistakes are going to happen; you just have to find your way back in. There is a certain relaxing in her stance and attitude; some lessening of the anxiety and seriousness of it all.**

K: The thing to do is stop and listen; find out where you are, reorientate yourself, carry on. Or pick it up at the next cadence point.

The exercise is extended to include one bar of three and one of two, which speeds up the changing chords dramatically and I thin represents quite a challenge. L counts me in at the same tempo as before but the chords are moving faster. She comes adrift right at the start; K stops and we start again.

1. L begins again with the Take Five rhythm and a very simple motif but she gets round the speeded sequence. It is as if she is able to predict to some extent and she is confident in the developing line; she also plays a bridging motif into the second section, which is also fine. The middle is there just and going into the last section, L gets lost, stops and finds her way back

before ending up slightly adrift and ending in the right place which produces a smile and a look at me.

2. She continues the last motif into the next chorus of the tune with great confidence; her body moves in time with confidence and the strength of the bowing is firm and decisive even in wrong notes and is still smiling at the return. She continues with the motif into the second section and adds a little rhythmic variation which she repeats again, making it into a trill in the final bar before the middle again glancing at me. Straight into the middle she develops a cohesive phrase which she tries to imitate and answer before clearly indicating the change of key into the last section in which she plays variations of the first motif, that wander slightly but find a way through the falling chromatic chords, before she ends with a smile on a staccato note, looking at me. **K: (laughing) it's very good; it kind of makes you move it along a bit. It is a bit quick really.**

Next L decides to play in a dancing mood, like a waltz. We discuss how she should create this.

AT14 L: It's going to be more flowing. It also will sound warmer and more legato. I ask L to close her eyes this time.

1. L counts in using the starting notes of the piece to get her going; the improvisation wanders slightly at this point though the $\frac{3}{4}$ time is well established. L mainly uses crotchets and tries to keep the line moving. Going into the middle she repeats two notes and keeps a similar rhythm but overall it lacks the power and focus of the previous versions. Perhaps L is suffering from fatigue. Going into the last section L starts to vary the rhythm ending with a series of long notes.

2. L begins the next chorus much more confidently and focused on playing a motif that she imitates and plays strongly whilst smiling and moving to the music. L continues this idea using

root to minor thirds and by the middle is beginning to add the dancing quality she mentioned at the start; a lilting rhythm which she uses in different ways through to the end. L also keeps landing on a seventh or another non chord tone, holding it a while and then resolving it to a strong chord tone.

3. The next chorus begins in a similar way and wanders slightly before L changes tack and plays a rhythmic motif in the middle eight. There are echoes of this rhythm in the last section on different motifs.

I ask L how she felt about that and she replies: **AT15 L: It was ok (*not laughing and not really convinced*)**. **K: what were you thinking?** **AT16 L: Erm, what was I thinking there; I was trying to simplify things and make it sound more tuneful.** L later says that she was thinking of 'people going round in circles in long swishy dresses' **AT17, I was also thinking of that.** L sets the mood at wistful for the next version. She thinks that this will involve: **AT18 L: (*Thinks*) softer...longer notes.... ones that fall of the end, you know how conversations sort of tail off.** I ask if she has a particular sound in her head and she says: **AT19 L: I don't know, yes it's the same as yours.** I'm not sure what is meant by this; perhaps some shared meaning of what wistful might sound like in a musical context. You could say that much of pianist Bill Evans ballad and medium standard playing has a wistful quality especially something like *Waltz for Debby*; the feeling definitely exists in jazz.

L continues to play in $\frac{3}{4}$ and ignores my suggestion of trying $\frac{7}{4}$ i.e. one bar of three one bar of four.

1. L starts and I think she is in a different key; she frowning and trying to find her way; the mood is subdued and perhaps wistful. L uses a half timed motif from the tune in the middle and is lost

in the final section attempting to play a long slow phrase over a number of chords on the extensions.

2. The second chorus is better and stronger, making more musical sense, sounding wistful and using that ascending chromatic run at the end of the last section to cover all of the falling chords.

3. The third chorus is more coherent again with a definite melody which L develops and alters in the second eight using falling arpeggios. Going into the middle she continues to develop the melody using slight variations in a folky vein losing it in the last four. L tries for wider higher intervals in the last section again as a continuation of the improvised tune.

4. The next chorus is altered again with a rhythmic motif but retaining the wistful feel with parts of 'My Favourite Things' in which L refers to at the end of the practice.

AT20 L: (*Plays My Favourite Things- the first bars*) **I kept wanting to do that.** (*Smiles*). I sing the tune of *My Favourite Things* to the chords of *ATTYA* to see if/how they might fit. There is a long tradition of quoting tunes in the jazz tradition and many melodies work over very different chord progressions. **K:** (*sings it to the chords of ATTYA.*) **It's far out that. You see it still works 'cause you're following a line.** Here I'm trying to explain that because the melodic line is coherent and well known, the audience will hear it despite some clashes with the harmonic background or even some altered notes. Art Pepper in a very wistful version of Harold Arlen's *Somewhere Over the Rainbow*, changes a crucial melody note in the third bar flattening the seventh to fit with a jazzier chord underneath, which works well. L is intrigued by the ideas of playing a different melody line.

AT21 L: Does it actually fit? AT22 K: Well you see, your mind hears a line even if there's some rather odd extensions; it'll work as long as it resolves onto something. K continues to sing it altering it here and there to fit. L is listening and smiling.

We continue the exercise of using mood and timbral effects and L wants to do some pizzicato. She suggests it can be a really driving effect as well as a gently rhythmic one AT23. L says she wants to create a rainy moody and we return to the 4/4 tempo.

1. L begins a pizzicato chorus which sounds different and appears to be using new ideas and more off beat rhythms.
2. In the second chorus she explores the higher range and octaves and she also begins imitating her own ideas. L keeps in the high register before falling into the lower notes in the last eight.
3. In the third chorus L is more confident and is doing double stops and more flowing phrases. Most of the ideas follow on from each other although the last section is a bit lost and losing concentration.
4. The fourth chorus is again more explorative and thoughtful L is staring intently at the fingerboard and again using the high notes. An imitation is being used in the consecutive falling chords and call and answer phrases. Altogether L plays a melodic line that is very musical and cohesive with a few lapses of concentration causing drifting and loss of focus.

Each of these expressive/mood based exercise create very different sounds and approaches to the improvisation leading me to believe that a very fruitful practice could be derived from long-term work in this area. We discuss the ways that pizzicato could be used for contrast in a solo, and L says: **AT24 L: Yeah and there's also there's a big difference between** (plays strong pizzicato octaves in the low register) **and widdling around up high.** L spots a good timbral and textural difference in sounds here that she could use to good effect.

I suggest we do a dramatic tango version next and discuss with L what effects and sounds she might incorporate into it. After slides and squeaks, I suggest using percussive effects on the wood of the instrument for rhythmic emphasis and give a demonstration. I count and L listens for a while to internalise the rhythm (looking up and straight ahead).

1. L comes in towards the end of the first eight, very strongly and broadly giving it the full dramatic quality particularly in the rhythm. Nice long spaces between phrases and most making musical sense. The last eight falls apart a bit but L is clearly is exploring the rhythm.

2. For the second time L is using grace notes, is rhythmically strong and experimenting with high notes. She makes percussive string sounds and uses pizzicato along with the odd slide which tends to compromise the overall musicality. The intonation is also slightly inaccurate but L responds well to the accompaniment and the stops played by K. L tries to imitate phrases through the changing key centres with varying degrees of success and she also experiments with the rhythm in the last eight looking at the fingerboard.

3. This time K changes the rhythm and L is responding with differing rhythm and again lots of appropriate stops between cohesive and logical phrase. The first part of the middle eight is

particularly good and well put together. The end falls off a bit perhaps because of the falling chromatic chords or because the concentration has gone by then.

5. This time L plays good imitative short phrases; carried into the middle eight and varied slightly plus the use of a few tango clichés which K picks up and the L develops and this is lively and interesting. Then, L loses it again, stops at the end but puts in little motifs.

We agree that changing the rhythm and altering the emphasis of the beat brings out very different things in the improvisation. I suggest we try a bolero rhythm next (three crotchets, quaver, crotchet, quaver). L, thinking about how the process of improvisation might work says: **AT25 L: It feels a bit like when you're sight –reading; you're always... you're where you are and you're in front as well, and you're remembering where you've been.** L elaborates on this, trying to get a sense of how it is to be present yet anticipating and listening to what's past at the same time. **AT26 L: It's like you're time is wrapped together isn't it because in the present there's the future and the past all at once, and there has to be otherwise it doesn't stick together.** **At27 L: and you've got to co-ordinate your arms and fingers. Which ends up being the easiest thing in the end; isn't that weird?**

K: in the end it's just a schema like everything else; your fingers are practising what it feels like to play those intervals and eventually it becomes so that they actually know where they're going. In response to the aural imagination and memory of the recent musical past.

I begin to play the bolero rhythm and L listens and waits for a while, until she has the rhythm, counting visibly and moving her head not quite in time. She comes in briefly in the second eight

and stops again, singing along. I suggest she listens for a whole chorus and sings along as she likes.

1. L begins to sing in the middle eight a little tentatively and in the last eight her open mouth turns into a yawn; this is again, probably too long a session.

2. L begins to play on the second chorus imitating the three crotchets, quaver, two crotchets, quaver, bolero rhythm but having trouble with the melodic elements. Melody is drifting but gets better in the second eight and continues through the middle. The last eight seems reactive again; changing in response to individual chords.

3. The second chorus stumbles a little, but also the chords and therefore key centres are moving faster and changing quicker. L pulls it together through the second eight and into the middle with greater flow fluency and cohesion.

4. The third chorus begins with an imitative idea that L continues through the second eight and contrasts during middle. The last section is also better and more confident. Basically at this stage the pattern appears to be that L takes the first eight to prepare; gets some good ideas through the second eight and the middle and loses focus slight in the last section because of the complexity of the falling chromatic chords or because the concentration is not sufficiently developed for the whole thirty two bar solo.

5. The fourth time is more confident and in control from the start; again L appears to be deciding what to play rather than drifting in the notes and the music makes sense with phrases following on from one another. L is looking down at the fingerboard and then looking up and losing her

orientation when she does; especially when the keys change. She also laughs at different places when she's added a note or has surprised herself, implying that these notes sometimes come from nowhere and are not expected. At the end she also laughs.

I ask how she found the exercise and she says: **AT28 L: It kind of wanted to jump around and that was harder. (As if it has a life of its own.) And I think I played a scale that was like.... that was completely not western but it had the right number of notes to span the interval and fit the rhythm (laughs).**

As a final exercise I play *ATTYA* in a Latin rhythm and the mood L wants to create she says, is smoochy. K starts to play *ATTYA* with a Latin feel and L rocks and moves and begins to sing quietly and tentatively and comes in during the second chorus with a legato solo slightly unfocused to begin with, and continuing that way. The second chorus is similar with many repeating notes, little rhythmic interest and a drifting scalar melodic line. This improves in the last eight where it begins to find its feet. L plays in the lower register and is not looking at the fingerboard very much (enough?). This last chorus is stronger in tone and with more melodic ideas although many repeated notes still. I think she might be tired. Then she stops.

L: Run out of ideas.

What does this session tell us about L's emerging schema for improvisation?

- **Learn is learning aurally and also singing as part of her regular practice, implying that these elements are now more important to her.**

- L has an increasing sense of different elements of the skill fitting together and of ‘understanding’ event if all of the specific knowledge required for improvisation is not entirely in place.
- Closing her eyes has a deep effect on L’s perception of the process of improvisation allowing her to feel more space and time in which to improvise and to have some objectivity about the music produced.
- At this point it is easier for L to improvise on the instrument rather than the using the voice because the memory of the finger movements on the neck of the viola is acting as another framework for improvisational process. So various elements alter in importance or usefulness as the schema develops; the whole process is dynamic.

Session 4.

By way of introduction I ask L what she has done over the previous week with regard to the improvisation work. L describes an exercise that her folk viola teacher had suggested to her which was related to last week’s work on creating and communicating a mood, except in this instance, it was using a written piece. L describes what happens and how she felt.

C1 L: Yesterday I went to see Gina for a folk music lesson and she suggested... we were looking at playing slow airs which tend to be very sad. We were looking at one that was written by Carolan when he was an old man when he was blind and he was going deaf and he was nearly dead. So looking at ways of putting some of that into the performance of this thing; so Gina suggested that I made a visual image of something really sad in my mind; so I did and I put myself on a beach on the West coast of Skye post nuclear holocaust which is my worst nightmare and has been for a long time; standing on this beach being the last

fiddler on earth. And it was really powerful in terms of that it made me feel quite upset and carried on making me feel quite upset for several hours afterwards but I played this thing again (the Carolan air) and reduced Gina to tears which also really surprised me. And I was talking to her afterwards and said that it felt very scary and she said 'oh don't be scared of it, go and try it again'. So I thought about this on the way home and I thought yes, ok if I pull on the nasty experiences of my life, it's not as if they're going to happen again; it's just that I can tap into that emotion. So I came home and tried tapping into some other stuff, not so much abstract image..... it wasn't abstract (*rubs hers head*) as I say it was a nightmare but...

I suggest that L could also tap into some positive feelings as well, like happiness and she said:
C2 L: I haven't tried that yet. I tapped into....'cause you know, I suppose being happy isn't scary, but I tried tapping into some of the other stuff that was pretty scary (*laughs*). And then found yes, after the initial shock it was quite ok to tap into it and to get out of it fairly quick so that's what I did yesterday and that seemed quite a It wasn't jazz but in the context of putting emotion and expression into playing, it seemed very effective. L goes on to say that she had in mind to try a similar process with the improvisation in this session. This creation of a powerful mental image accompanied with a feeling, is like an extension of the expressive work that we did on a more superficial level last week; tapping into an emotional well spring is something that Berliner's interviewee's mention.

C3 K: So you've moved on from feeling a mood, which I thought was quite effective last week... L: Yes it's just a way of focusing that isn't it? L then describes what she has done during the rest of the week by way of a progress report and an indicator of how she feels. C4 L: What have I done? (*Thinks*) I've been.... On the technical end of things I've been exploring

F# minor and Gb major and the confusion that I have in my mind about the overlap between them. So I've been playing in F# quite a lot and trying to name the notes to myself both in F# and Gb and also the related chords and the modes that go with it, because I get very confused because I can never determine which it is out of the two. So I'm thinking two things at once which doesn't work very well. I don't think there are any other keys that have that problem for me. I mean obviously the easy ones you play more than the others but this is a case of ambiguity and as I say I'm thinking two things in my head at once. Not much helped by the fact that when you play them there are two starting point positions for them which doesn't make things easier. It is interesting that L often focuses her practice on technical aspects that aid her conceptual and technical prowess, rather than the more intangible improvisation process. This is partly due I think, to her rational nature.

I ask if L has practiced the modal scales and also scales in thirds, fourths and fifths, as I suggested, and if so, whether it was useful. I understand that L hadn't really practised them in this broken down way before and that it wasn't really part of the classical approach to scales. C5

L: But that's obviously good (*to practice the scales that way*) rather than... because what I had been doing for the past few months is to pick a scale each day; going up the scale, so you only get to F# once every few weeks.

L says that she played along with her taped chords (chops tapes) of *I Mean You*, *All the Things You Are*, and *St. Thomas* and described how she practised them: C6 L: I found myself doing each chops one probably three or four times actually because it's too short to do everything I want to do just on the one take, but playing the tune in different ways and then sometimes doing improvisation and sometimes revising the chord bit, particularly the chord bits where I'm not sure. It appears that L is taking a strategic approach and focussing on one aspect

each time. L had also been out to listen to a live gig of trombonist Annie Whitehead which she enjoyed but remarked that the rhythm section sounded very rocky.

I ask whether L had any breakthroughs or illuminations and she replies: **C7 L:** It just feels like it's carried on. I'd..... em yeah I think in past weeks I've got annoyed because I haven't managed to get everything what I considered to be right so I just thought sod it, I'll just carry on and do what I do and it'll get there sooner or later. L seems to be taking a much more relaxed approach and is now more aware that the process of learning to improvise is going to take some time. L says that she has also been looking at diminished chords; there is one in **ATTYA: C8 L:** Yeah and there's a couple in St. Thomas as well and that led me into looking at the way the notes change; you get a line out of the thirds or the fifths or whatever that's quite interesting as well; notes that stay the same and notes that change. L works these things out for herself and they all aid her understanding and technique. I ask if L has been doing any singing and she says not. I introduce a new tune intending again to learn it aurally and to try and judge L's assimilation and understanding in the context of previous work: **C8 K:** This is *La Fiesta* by Chick Corea; it's an old tune and the chord progression goes like this and its *pasa doble* so basically the chord progression all the way through is: (*plays the chords*). There is a bit in the middle that alters completely which we can go through if you like, but basically the blowing changes are like that. The idea is with this to focus on rhythm. So the first phrase is this: *plays the first eight bars.* I play it to L first in two bar sections **C9 L:** (recognising the tune). I think we did do this last year. **K:** Ok how much do you want of it? (*Plays two bars*). **L:** Ok that'll do. Hang on. (*L searches for the first note*). **K:** starting on an E (and sings it). L plays the first lead in and bar. **K:** That's it; so this is the first bar and a half right? (*Plays it again.*) L repeats the phrase with K.

K: Then it goes to D. (*plays the next two bars*). L plays this and then the first bars leading into it. K plays the next part of the phrase twice which L copies but not quite accurately and repeats the last bars again. K sings them again slowly and L says right and copies the phrase again. **K:** Right ok?

L: Uh huh. **K:** So the first phrase is: plays and sings along to all eight bars. L joins in and gets some of smiling at the wrong bits. Repeats with K and nearly gets all of it, just anticipating the rhythm at the end of the phrase. K sings and plays back those bars with emphasis on the correct rhythm and L plays them back correctly. **K:** Ok. K plays the same phrase but with emphasis on the first quaver of every other bar. L copies and misses the end part. Repeats again with K and is more or less ok but still anticipating the end beats and without the emphasis. **K:** then it repeats. Both play it again together twice. **K:** so it that secure?

L: Just about. So the long notes are the G and the A aren't they? I think this is crucial about the way L learns; she conceptualises rather than hears where the changes are and I think this is because she has learned from written music; she is seeing and looking at the fingerboard to find the intervals rather than hearing and feeling for them because previously her motor triggers have been visual. L plays it with K again and it is fine. **C10 K:** Got it? **L:** I've got it except I don't know where the first beat of the bar is (*smiles*). Is this because L is visualising notated music or because she wants to know how the phrases relate? **K:** Right, so you've got a lead in of plays the first three quavers and they come after the second beat. So the first beat of the bar is: K sings it and counts the beats with her fingers so that L can see them emphasising the first beat of every other bar. **Alright?** **L:** ish (*laughs*). K sings it again slower and with the strong rhythmic emphasis and moving the hand and head (I should have got her to sing it; I'm not sure why she isn't doing that naturally.) **L:** Ok, I'll walk the dog with it tonight (*laughs*).

K: It's funny that it comes in on the first beat (*sings it again and counts in for L to join in*). L plays watching me intently and again mostly ok. **K:** Yep a bit stronger on those notes... stronger on the first beats so you go long short. (*Sings again and moves along.*) If you wanted an image for this one, this is definitely; you know straightforward Spanish, bullfighting, dramatic, strong, masculine, I think although something else might come to you. Think Spanish red, gold maybe. K counts it in again and L plays adding the odd extra note here and there and elongating the rhythm of some of them. This is also forming a pattern similar to the memorising of *ATTYA*; when L is not too sure she imagines her own tune rather than listening, and makes up notes. I'm not sure if this is the same if she has learned the tune from music. Again I think it is to do with aural motor triggers and the aural imagination taking control. K is moving in time to the music and with the rhythmic emphasis; L is not. **C11 K: Ok is it there? L: (looking too serious) just about yes.**

K: Ok again. Twice through and then we'll go onto the next bit which is very similar. L plays still adding the note in the first phrase. Second time also but mostly fine; L begins to move with the music. **K:** Alright the next bit is the same again so after you go (*sings the second phrase*). The second time through you're only playing the D bit once, alright and then it is actually different notes. So let me play that for you again. (*Sings and plays it very slowly and breaks it down into fragments.*) L copies, getting some of it. Repeats with K and is fine. K plays the next two bars and then L repeats in stages and plays it over until she's got it. K puts it all back together again. L listens and moves to. Repeats with K slowly and gets all but the last bars. Again, not quite right and has another go with K. **K: Again? L: yes.** Both play it again with L elongating a couple of notes not looking at the viola fingerboard but staring intently at me. **K: Again? L: Yeah, it's the long notes this time. K: They aren't actually long notes; there is**

actually a break between them but the ones you emphasise is the C and there's an F isn't there? So its: plays the phrase outlining the difference and spelling out the notes.

L: Do it together again. Both play again and L is looking ahead and then at me. During the repeat she begins to look at the fingerboard and seems a lot surer in the first bars then looks at me and begins to lose track, although it turns out to be a minor blip. I suggest that L sings what she can remember of it so far and she declines and I wonder again why she doesn't want to sing. L and K play it through from the beginning. L is looking at me –perhaps my hands or my body movement and confuses the first and second phrases. She is aware of this and smiles. In the second phrase she is more or less ok but tentative and not confident. Again after glimpsing her hands, she looks away wither at me or into the distance. L and KD play the whole two phrases again. L hesitates at the same part but gets through then stumbles at the same place in the second phrase. At this point L herself suggests that she sing it and does so with more confidence getting the first phrase right. In the second phrase she hesitates at the same place as she plays it – the fourth bar where it changes from the first phrase.

C12 K: Yes, second time through (*sings the problematic bars*) you're going back to a C aren't you? L sings with K the particular phrase and then the whole thing again. L gets the last bars of the first phrase wrong and still has problems with the last bars of the second phrase. Both sing the phrase again; L comes in slightly after the beat, gets the fourth bar ok and misses the fifth. The second phrase is better with the correct notes at the fourth bar and just a bit wide on the intonation at the fifth and sixth bars. The next time round K continues to sing with L but puts the chords in instead of playing the melody. L seems fine with this; just a slight blip on the fifth bar and the same place in the second phrase with a few wide intervals. L seems to have learned it with the mistake or not to anticipate the change each time whilst most of both phrases are learned

accurately. This corroborates the idea that the schema organises itself and at a certain point within a given time frame will not respond to information to change it; L isn't listening or cannot take in the change of notes in the different phrases. It just seems a bit loose; not quite on the ball; not quite there.

L thinks at this point that she's getting there and suggests an extension: **C13 L: Its ok it's coming. (L returns to the viola). Let's try it an octave higher.** It's good that L wants to experiment for herself with the tune from both the aural and the technical parameters- so let's see what happens here. L plays the tune up the octave and the first phrase is ok. The second phrase is ok up to the fifth bar where she gets out of synch with the tune and the chords but ends on the right notes. Both play the tune again and K sings; L is sounding much more confident and clear in the higher register. She's also moving to the off beats and so the music feels better and just plays a wrong note at the end of the first phrase. The second phrase goes wrong at the same place again, only more so. L decides to focus on that part of the tune.

Both play again but K counts it in much slower. L stumbles at the sixth bar and plays it on its own by herself; then goes through it again several times with K. Plays the whole of the second phrase on her own but stops at the fifth bar and says no. **C14 K: Are you doing the first bit or the second bit? L: I don't know... I don't now where I am now.** Both play the second part of the tune again slower and L adds a note in bar 3, halts and finds her way back in. She is looking extremely serious and misses the notes at the sixth bar again. **L: And again.** Both play again and L loses the tune at the fourth bar and at the sixth bar. She plays it on her own and gets it right. **C15 K: That's it; that's it.** L knows that she hasn't got it right from her facial expressions and tuts and so forth but the schema either has not formed or is wrong and she almost has to wait until it responds or changes itself. There is also the problem of the changes and similarities

between the first and second phrases and perhaps confusion as to which pattern is place where in time. It will be interesting to see whether L remembers the first phrase having memorised the second. She plays it again correctly with K and then repeats it again correctly.

C16 L: Yes... all the way through and I bet I've forgotten the first bit now. Against her predictions L plays the first phrase with more confidence and with only a slight fault at the sixth bar; the second phrase is fine. L plays the tune again and missing notes at the fourth bar but finds her way back in; the second phrase is fine apart from the sixth bar. The last time L plays the first phrase fine and second phrase correctly also. On the repeat it's the same with a little made up motif at the end of the second phrase. We go on to learn some more of the tune which consists mainly of clichéd Spanish tinged long note phrases which are easily memorable. K sings and plays the next phrase and L copies and finds the bigger interval to F imitating the rest of the phrase. L repeats and nearly gets it; again K is singing and playing and L is missing the rhythm. Then she plays it up the octave while K plays the chords again being a bit loose on the rhythm, but has the most of the melody missing the large interval. I suggest L plays both parts of the tune together from the top, which she agrees to.

L plays it from the beginning much faster and more confidently with strength in the rhythm whilst getting both phrases right. Then onto the new phrase which she plays well in the low register and with broad confident bowing.

C17 K: Ok. The next bit of the tune is this: sings and plays the next phrase and repeats it. L plays along feeling her way getting first the intervals and then rhythm. K returns to the chords and sings while L plays the tune which is a bit loose on the rhythm. K moves on a bit too fast here: **The next bit goes:** sings the triplet figure with quite wide intervals. K sings and says the

notes separately. K sings it accompanying herself on the guitar and L joins in singing she repeats this several times. L plays and after three or four times nearly gets it. K sings it again slower and L joins in repeating several times. I show L the complimentary bass line on root, octave, and fifth. The chord progression is very simple and is repeated until the more complex last section which also changes key. For this session we stay with the simplified progression which is: E7, two bars, F7, two bars, G7, one bar, F7 one bar, E7 two bars.

1. L plays the tune with first phrase and second phrases correct and moves into the next section strongly with no help from me, just the accompanying chords. The third section is also good, just the timing of the triplet figure is a bit wrong but right on the second run through.

2. L plays the beginning again but out of synch with the chords: K changes the chords to accommodate. The next phrases are right and correct going into the second section and the last one including the triplet section –just a slight anticipation which is gone on the repeat. L sounds strong and confident and rhythmically sound.

3. L begins the tune again up the octave in the right place and begins a little extemporisation but loses it on the second part of the second phrase (*eight*) L: **Bugger** (*smiles*).

4. L repeats the first part again to correct it I think, and this time gets it almost right. L gets into the turn and is going well although she has stopped extemporising but begins to change a few notes elongating phrases and adding more turns. In the last section L is losing it a bit rhythmically on the triplets.

5. The next time round L uses the first quavers of the tune on each bar to begin the extemporisation/improvisation and then changes octaves and experiments with different melody notes whilst keeping the same rhythm.

6. Next she uses double stops and again the same rhythm following the chord changes on the roots and fifths, looking intently at the fingerboard. Then she stops playing and listens, presumably thinking about what to do next. She searches for a note in the middle register and begins to make a much more complex melody of her own, using elements of the original tune and imitating motifs across the chord changes. She returns again to this use of the first motif of the tune and develops it moving across chords.

This is something that has occurred a lot; the perfecting of a good idea over a few choruses. The first playing is accidental or exploratory and the good idea is recognised and then remembered. The next time around it is played again and imitated over the chords or developed in another way, and this process is almost compositional, but there is a sense of unfinished business with it; the idea didn't quite come off the first time and so needs returning to.

L is looking almost exclusively at the fingerboard of the viola perhaps searching for patterns or for visual clues in transferring motifs across chord changes, then she returns to the simplicity of the roots on long notes, looking up this time.

7. Next L tries a new approach making up another motif and taking it for a walk across the chords which is not based on the roots. As if to reiterate the change from roots, the next pattern is fifth up to root repeated and imitated again, with L watching the fingerboard before a return to the double stops but on fifth root rather than vice versa and altering on the way up.

8. In the next bars L uses the turn from the second section of the tune and takes it around the chords, extemporising and altering its shape and rhythm as she goes and she perfects and shortens the turn in the next chorus again turning the initial slightly rough version into something more polished and cohesive. K follows her shortening of the phrase and puts stops between the chords with percussive sounds. L puts the shorter turns in again slightly out of synch but listening.

9. Then L changes the motif (still using the stops), to one of repeated octaves. She watches the fingerboard and is much more in time. Then she returns to the original motif and experiments with stops, gaps and octaves before trying something new which is in between and creates a new melody. She abandons developing this and goes to double stops on root and fifth, initially using a similar rhythm but extending it to add more notes and she repeats this adding high notes.

10. This time L tries a more scale approach using the quaver, crotchet, crotchet, quaver, three quaver pattern staring at the fingerboard, and this drifts a bit although it is a new idea. The second attempt at this is more focussed and musical and sounding Moorish rather than Spanish, illustrating the previous observation that ideas are tried in a first outline form and then improved upon and clarified perhaps towards the original intention.

11. L returns to the fifth octave pattern looking at the fingerboard and then tries something new, going down to the lower register in a broad melody whilst the chords move upwards. She is attempting to emulate the last section of the tune and does so the next time around following the contours; so L moves from a rough shape and overall idea to focus on specific notes and cohesive ideas. This is a bit like conversation only at the second attempt there is more clarity. The question is whether the intention is the second perfected idea or whether that arises from a

more accidental overall shape. Another new idea comes to the fore beginning in the lower register and rising scalically with the chords; still L looks at the fingerboard and hand. Then she returns to the fifth up to root motif and develops it into a flow of constant quavers and tries to double it up again accelerating the speed but stops and laughs.

12. L takes the viola away from her neck and looks up as if deciding what to play next. Starting in the low register on the next chorus L uses the *pasa doble* rhythm and plays an ascending scale adding double stops in the next chorus. She adapts this as L play stops making the sound and bow strokes more percussive and adding double stops later and then turning to the low note roots of the double stops she plays them for a chorus developing the motif into rising octaves for variation. It is as I thought; playing the same progression over and over leads to a drawing out of the individual's musical resources. L doesn't play the same ideas for very long before varying or experimenting with them. After this last idea she stops of her own accord. L doesn't say anything illuminating about what she's done, just that it was ok.

Break for lunch

C18 After lunch I ask L to deliberately put spaces into her improvising by playing four bars and leaving four bars gap, in order to see if making spaces affects the quality of the improvisation or the perceptions of the improviser, and if so, how. In other words, I ask L to ignore the impulse to play something all the time.

1. L begins to play the tune of *All the Things You Are*, adding the notes as before and playing strongly, confidently and well with all the right notes, occasionally looking at the fingerboard of the viola. Into the first chorus she begins with the tune, develops a motif around it, then after

the eight bar break comes in with the same part of the tune but sounds in the wrong key although she's definitely imitating the initial motif and ends up in right place at the end of the second eight. Again she imitates her initial rhythm and goes into the last eight developing it.

2. In the second chorus L begins on the third of the chord in a higher register and plays a descending scale pattern over the first four bars and after a four bar break she imitates it perfectly over the different chords and I'm not sure whether she's thinking: 'start on the third of the new chord and remember the falling scale' or whether she can hear it aurally as a sequence of notes. Into the middle she changes the phrase by starting on the third but going up, then descending and playing a repeated quaver pattern third to root: can she remember it? Last section she plays something different again but around the thirds and roots and keeping to the rhythm that she played and in the last four she imitates these ideas in the right key but in a higher register.

3. In the third chorus L tries out a new idea a little tentatively in crotchets- root, sixth, fifth, third, which she imitates and then alters after the four bars in the changed key again, either by conceptual or aural triggers. She is looking intently at the fingerboard. In the middle she attempts to imitate the idea again but the changing harmony is probably too much of a challenge at this stage; to predict the change of interval shape just needs more experience. Then L waits and listens, smiling, maybe realising the motif is too complex to imitate easily and comes in with the same intervals in the last four bars when the key shifting has stabilised back to the tonic (the original key).

4. L plays a new motif (seventh to root repeated and resolved to a seventh in the new chord) at the start of the next chorus imitating it through the chords and smiling at a little ornament that

she adds. In the second eight she imitates the rhythm and ornament but not the melody. Is this rational and planned approach using space worthwhile? Does it help to provide cohesion and to generate new ideas? In the middle, L plays a contrasted though related idea and ornament on the seventh with confidence, clearly knowing where she is both in terms of harmony and melody and this is imitated tentatively in the next four bars, although some of the previous confidence is gone; she doesn't know where she is here. In the last section she plays something different again but with echoes of the first motif and looking up now and again from the fingerboard and losing the focus of the idea. It's as if the consciousness tunes in for a while; pulls it together and then fades out leaving a bit of a shambles or it could be the schema that does this by collecting relevant information from all of the parameters, then taking the focus away from conscious concentration while it organises itself. L looks at me and stops of her own accord.

K: Ok, how did you feel about that? L: (thinks) It feels a bit the same as playing it slowly.

K: Right, so does it tend to relax you and give you a bit of space? L: It gives you thinking time yeah (shaking her head no). K: and is it useful; can you come back in at the place you think you are? L: Yes, I can follow it. (This is a good sign.) I ask L to surprise me by focussing on dramatic entrances and exits and by using echoes of previous ideas as a way of creating cohesion. The aim is to make musical ideas distinctive enough to be memorable both to the improviser and the audience. We decide on a jaunty mood for the next version of the tune. I reiterate the idea of leaving gaps between the ideas but not necessarily of four bars length.

C19 1. L begins with a slide which is imitated in the next phrase and developed successfully through the second section. After a four bar wait at the middle L plays a contrasted idea, accelerating slightly and smiling. She continues with the last idea during the final section of the

tune extending it a little and misses the chromatic chords and comes in with the repeated triplet figure before ending on a drifting melody.

2. L begins with a three crotchet triplet figure on root, root, root, major third, fifth, M third, root, giving the start a bitonal feel with the major and minor thirds clashing but also working somehow! L almost looks as if she is going to repeat this across the keys but plays a different and non-imitative phrase. In the second section L tries the major arpeggio without the repeated root notes over minor chords again and it works and I'm not sure if this is conceptual or aural: I'll ask her. L waits for four bars and comes in in the middle starting on a strong low note, moving to an octave and climbing up a scale from the low note. This phrase ends on the fifth in a nice musical way. L plays a variation on this in the higher register which is an echo rather than an imitation, and this is followed by a long note and a falling phrase, which returns to another long note and then stops. The last section with the quickly changing chromatic chords is always hard for L at this stage and she resolves onto a chord tone at the finish, looking quizzical.

K: Tell me what you think about that? C20 L: Yeah I'm trying things that aren't working at the moment. L perception has changed and she feels her ideas aren't coming across; why is that?

C21 L: Well you said try and make it dramatic so I was thinking one way of one way of making it dramatic is to make it louder or to make a high note first and drop it and that seemed alright or to repeat the note. K: Well that's ok, just try them. At what point are they not working? When you've played them or at the beginning or what? C21 L: Well you said try and make it dramatic so I was thinking one way of one way of making it dramatic is to make it louder or to make a high note first and drop it and that seemed alright or to repeat the note. K: that (*sings accelerated repeated note*) worked alright. C22 L: take it off

the beat and repeat it is probably better. Then I thought I'd try discord and that just sounds like you've hit the wrong note. L is stretching the boundaries by trying new intervals and sounds; some work some don't but she is aware of how they sound. **K:** Well it depends how you do it; lots of jazz musicians hit a wrong note and then go on hitting it (as if they meant to arrive on it)!

C23 L: But sometimes in the tune you can have that (plays a semitone on the piano) and it can sound absolutely great but come in on it at the beginning of a phrase and it doesn't sound absolutely great; it sounds like you've bugged it up. So that obviously needs some leading up to rather than just plonking there. What is happening here? Is L realising that you have to prepare the listener for discords within a consonantly harmonic context? Or is she beginning to think about how discords could be used? We have focussed predominantly on chord tones and making 'nice' music and discords can add edge and interest. I reiterate the need to play memorable and distinctive phrases. **C24 L:** I don't know I'm just trying to think of other ways of being dramatic. (Thinks) There's volume, there's being very definite about things.... L is thinking rationally here about ways in which she could be dramatic; in a way I just want her to play with more resolutely and with a stronger sense of musical outline. **K:** There's timbral effects of all kinds.**C25 L:** There's various violinisty flourished things. Many of which don't work in keys with flats in. (Thinks again.) Again, L brings her rational nature to bear on the problem; how could she make her improvisation sound more dramatic? **K:** just think about the element of surprise; the sound of surprise. **L:** Ok. I tell L that it doesn't matter whether the ideas are good or bad at this stage; that the whole idea is to experiment and keep trying things out. The conscious voice of judgement is not useful or helpful.

C26 1. L begins in a striking fashion with tremolo tune notes on the fourth intervals, playing strong and loud. She adds double stops to the same notes, whilst smiling and noting my reaction which I cannot see in the mirror but presumably is positive and encouraging. This is a new departure and consciously executed. At the end of the first phrase she adds a few low notes and I say, 'yes that's great' and she's smiling broadly now. In the second section L continues with the same theme but adds some slides, wider intervals and more double stops generating energy and dramatic mood. Then L turns to pizzicato and plays at first wild and then more focussed wide intervals from low to high contrasted with a new bowed melody before returning to the first idea for the last section. This time she varies it so that it doesn't quite follow the tune; adding slides and sort of bowed pull-offs.

2. The next time L makes the notes shorter and more percussive following my stops on the guitar and keeping to the lower register. She also adds small tremolo motifs for surprise and in the gaps. L plays a single note here and there and then stops. In the middle it loses focus and L plays a long sliding phrase, pausing to wait for the last section. At which point L begins a new idea in the high register which has cohesion and echoes the first idea and adds double stops.

3. For the next chorus, L shortens the phrase but makes it flow a little more, then she pauses and plays some pizzicato lines again responding to my bass-line and rhythmic elements. In the middle she comes up with an interesting double stopped triplet idea with some notes changing; some remaining the same which I follow and is echoed in the higher register later in the phrase. Then she experiments for a while with placing these double stopped repeated figures across the phrase; pauses and returns to a low repeated note again crossing beats and standard phrases listening for the effect.

4. In the next chorus, L plays even fewer notes, followed by a longish phrase of wide intervals and octaves in a different key but with its own internal logic. In the next phrase L develops the idea in a higher register and it continues, descending into a beautiful musical phrase before she loses track and does not resolve at the end of the phrase. This is also characteristic of L's improvising at this point; she doesn't hear the necessity of resolving towards the ends of phrases or sections and this gives an unfinished and wandering quality to the music; as if something is left in mid-air. Going into the middle L plays a nice flowing descending romantic phrase and follows it with echoes of the earlier shorter repeated note sections.

5. In the next chorus L plays repeated sixths and then explores wider intervals the rhythm of which K follows, leaving gaps and ending the first section on a rising motif. L waits at the start of the second section and develops the initial theme a little more still using the quaver, crotchet; crotchet, quaver, (repeated) then two quaver and stop rhythm. She pauses at the beginning of the middle and imitates the motif placing odd notes towards the end of the section and during the last part continues with this placing and some repeating of individual notes which resemble notes of the tune and following the falling chromatic chords in the last bars.

K: what I'd like to do now is play two bars of the melody and then improvise for two bars and then play four bars of the melody and then improvise for four bars. This exercise is intended to use the contour of the melody as a framework for the improvisation and also to encourage the student to think of two-four bar answering phrases.

L begins with the tune and we realise that two bars is too short and change it to four bars. This works although the improvisation seem unrelated to the previous bars of the tune and L forgets

to keep going back to the tune and continues the improvisation making me think that the exercise is too contrived.

The second time through L half plays half extemporises the first bars of the tune and replies with a sort of wandering phrase that almost fits and answers the second part of the melody with a sweet little phrase of jaunty lightness. The second phrase melody is answered with a low note phrase of similar contour to the actual melody at that point but differing slightly; in other words the unplayed part of the tune is providing the source for the improvisation. Going into the middle L the tune is followed by an unfocused melodic line which neither follows the tune at this point nor answers the previous contour. The last section answers the phrase and then returns to melody notes. As an exercise, this doesn't really work; it seems too contrived, but may just need more practice. L explains why it doesn't quite work for her. **K: Ok, how does that make you feel? C27 L: Sometimes it's quite hard to find the tune again. K: It constrains you? C28 L: You have to do the folk music improvising thing with that and keep the tune going in your head when you're not playing it. Is this what they do in folk music circles? If so, how then do they manage to have two streams of music going through their heads at the same time?**

L begins again with the four bars of the tune and then a phrase that goes up the octave and descends scale wise ending on the root which sounds odd in the C major seventh chord. Into the second section and L responds to the melody with an extemporisation around the actual melody at that part of the tune and because of this phrase misses the opening to the tune in the middle; plays an arpeggio figure ending on a root and loses track of where she is and says 'I've forgotten how the tune goes' and smiles and we stop. The tune, like a scale is remembered in a whole sequence, so, playing parts of the tune with gaps is probably a useful exercise for training the aural imagination.

I suggest that L plays four bars of the tune, then pauses and improvises a phrase before returning to the tune wherever it is at that point.

1. L begins again playing the first four bars and coming in with an extemporisation of the tune at that point in the last bars of the second eight. In the middle eight L plays the tune, pauses and then returns in the last section beginning on a repeating tune note and improvising an answering phrase. L takes this into the next key and attempts to play it through the falling chromatic chords before using roots and fifths instead.

2. The second time begins with tune and L plays something new in response. In the middle she uses rising fifths to create a melody which is also new and in the last section L starts with the tune and then adds a final phrase unrelated to it.

3. By the next chorus L has abandoned the melody and is playing small phrases with gaps between which seem unrelated. She returns to the tune in the middle and follows this with a contrasted and wandering phrase. L has now closed her eyes and the music initially sounds reactive to the changing chords; it is moving scale wise and arbitrarily up and down appearing to have lost focus. L has stopped playing the melody altogether but is putting in the spaces. The middle echoes that of the previous chorus using the same intervals but accelerated. From this it is clear that distinctive and musical phrases appear to be remembered better and over longer time periods, just as Bernstein proposed with movement; good and correct movements are remembered whereas incorrect or badly organised ones are not. The next phrase imitates the same motif in the lower register and the last section is characterised with low repeated notes that rise through the chromatic chords and finishes in a haphazard way.

4. The next chorus begins with a new motif of a falling arpeggio figure that is continued in a similar answering phrase and developed to become more complex. In the second section L is still leaving space, closing her eyes and not using the tune. The middle is a variation on the first idea with large intervals and an angular approach and the last section is somewhat different with the placing of odd notes and sounding undetermined and reactive.

5. In the next chorus the themes are shorter and more fragmentary, leading to some brief double stopping. The last section begins on a tune note and again is made up of short fragments and statements.

6. The next chorus begins with acceleration and repetition of the previous small figures and which is then developed in the low register. The effect is of a long line of notes being played but without focus and any feel. Elements of this line are taken further in the middle and the last section alters the theme slightly and returns to the low register.

7. Chorus seven begins with the same low note repeated and altered rhythmically and the notes are altered to fit the chords but keep this mood. The same theme is carried on and used on different notes as the chords change and also in the middle in a higher register in a little musical motif which L imitates and answers. The final section is characterised by a resumption of the low repeated note taken through the chords as they change and making good musical sense.

8. L Changes the time to $\frac{3}{4}$; K follows and the new figure is continued and embellished with an octave at the start of the next chorus given extra life with a change of rhythmic emphasis and a kind of Scarlatti arpeggio development which L laughs at. In the second section L creates this kind of classical dance mood with the emphasis on a triplet figure. This is continued and works well and musically I think because L is more comfortable in $\frac{3}{4}$. Somehow the music is alive

here and L is moving to it; it's almost as if the swing feel is alien to her and the lilting waltz more natural. The jazz feel has gone but the improvising is fine, more consistent with L trying out previous ideas to see if they work; remembering the early motifs and either embellishing them or developing the ideas.

9. The next chorus loses its rhythmic grace as L tries to broaden and vary the melody using the higher register and it takes on a meandering quality again remaining unresolved at the various phrase ends. In the middle L creates a good new idea with both melodic and rhythmic interest across the registers using octaves which almost but not quite develops in the second half of the middle eight. Again there is a sense of the contour and rhythm being almost there with the overall shape in place but fuzzy; just a little behind or lacking in focus. This meandering continues to the last bars and then comes together in a strong motif. K then comes back in with the 4/4 time feel and L opens her eyes and stops.

I ask L how she got on: **C29 L: (*thinks*) yeah, again it's like..... yeah I got warmed up when I stopped thinking about what the chords were then all of a sudden I could play; it's strange isn't it? K: Was that with the eyes closed? C30 L: It got better with the eyes closed. K: You should have a sense of where they are now (*the chords*) without worrying about... I know it's got difficulties that instrument; physical difficulties but you should be hearing the chords as a back drop. C31 L: Yes and there's also a structure of notes that as I say I know I can fall onto if I get completely lost. Are these chord tones or melody notes or something else?**

For the next exercise, I ask L to think about density and sparseness of notes within a phrase and consciously use more or fewer notes to experiment with the effect. I also ask her to experiment

with phrase length and to create a mood at the same time, which she decides, will be a dance, using the waltz rhythm. The mood is intended to be delicate and wistful.

1. L begins with a sparse version of the tune and an extemporised flourish towards the end of the first eight carried over into the second eight with just one melody note. There is continued sparseness and pauses in this section. In the middle L plays a contrasted phrase of long notes ending with a slow trill and into the last section the phrase meanders into a falling figure.

2. The next chorus opens with a high note motif still in the same slow broad style into which L places a more angular quaver passage as a contrast density. The falling melody in the second eight imitates that of the first but starts on a higher note and with a change of timbre to thin sound. L also adds a descending slide and some vibrato which is imitated nicely in the middle and developed with more notes at the last section.

3. L starts again in the high register with a falling scale pattern and added turns leading to a pause and a further imitation in the new key of the second eight. The rhythm is copied into the middle and some octaves added for variation before moving into the last section and less density of long notes and ending on repeated triplets.

4. At the start of the next chorus, L and K go into a six feel briefly but go back to 4/4 for the end of the first eight. L experiments with fragments of phrases and single notes across the changing chords. In the middle she plays double stops using a similar approach before playing a slurred triplet feel ascending scale at the start of the last section which she imitates in an answering phrase and then breaks into fragments but keeps the same notes through the changing chord and stops before the end.

5. L leads into the next chorus with a flowing phrase and contrasts it with a series of sparse single note interjections some off and some on the beat. The second eight is begun in a similar way with a meandering slurred scale pattern and then a pause into the middle after which L plays pizzicato in a triplet feel adding double stops towards the end of it. In the last section L continues to use pizzicato and imitates the first scale ideas returning to rhythmic and repeated notes at the end.

6. L continues with the pizzicato in the new chorus and plays a more flowing melody that she contrasts with a sparse section of single notes and octaves. In the middle she plays a repeated single low note strongly and staying with the plucking, she mixes dense and sparse motifs.

7. In the next chorus L plays pizzicato intermittent high notes and goes back to the bow in second eight with a grace note to chord tone motif finishing in a different key at the end of it. She develops this a little and then plays a scale pattern although none of it is particularly interesting perhaps because fatigue has set in. The last section has a new motif which is not imitated and ends with single notes placed in gaps. Then she stops.

K: And was it any use? **C32 L:** Yes I think so (*looks unconvinced and has gone all quiet*). It is unclear from this response whether the exercise was of any use; I'm not sure of the value of the imposition of rational concepts on such an intuitive process. All of the exercises do however alter what Lindsay does and do present more possibilities within the improvisation process. L comes back a little later and says: **C33 L:** What was more interesting is when you said wait for every third of fourth idea because then your brain chucks out loads of ideas; it's surprising how many there are. How is the one that is eventually played chosen? I think the idea here was not to play the first or easiest thing that springs to mind, but to actually give

yourself the time to formulate something different or new. L mentions going for the safe option several times even though a beginner may be forced into that by lack of aural memory or technique. As L mentions above, even at this early stage, the brain creates many alternative ideas for the same progression. There appear to be lots of options; it is a matter of choosing a good one and then being able to play it. **K: The first impulse you see is to fill the space. C34 L: and once you've started it you've got to carry on haven't you?** There is still an idea here that the music is controlling the individual; that it has its own impetus. 'In a sense, the performer is played by the music.' (Pressing 1996:139) To what extent is that true? How far does the performer follow the intrinsic form and logic of the musical phrase? How much control do we really have? **K: You don't have to play anything at all; you can let a chorus go by actually until you get something in your head. Some players like Monk made a spectacularly brilliant use of space and silence. C35 L: and a lot of the fiddlers you listen to never use any.**

1. L begins again by playing the tune and then launching into a meandering scale passage which does not resolve at the end of the phrase. In the second eight she begins with a short motif of mid to low notes and then takes up the wandering line again. The middle is more convincing with a call and answer phrase beginning on a repeated note, whilst the ending is more of the same with a few breaks but mostly sounding reactive. This is not meant to be negative but merely describing how it hasn't quite come together today.

2. In the next chorus, L begins in the low register and meanders around ending on a high fifth interval which she uses to start a falling phrase that ends on the seventh unresolved. The middle is made up of slurred scales with a mix of consonant and dissonant notes arbitrarily and this continues into the last sections where the hint a good phrase emerges.

3. The next chorus begins with a series of two note forms with gaps and imitative rhythms over a range of notes and registers. The second phase is similar in character whilst the middle uses a melody note to create a melody line again almost with focus and then in answer a falling phrase with chromatic passing notes. The last section has echoes of the tune and varies the rhythm.

4. The next chorus starts with a cohesive motif which is imitated though the second section with long notes. Most of the gaps, spaces and changes of rhythm are gone. The same kind of approach to the melodic line prevails in the middle before at the last eight L adds some jaunty phrases between the long notes and ends well.

K: Ok how did that feel? **C35 L:** More coherent. I ask again whether the deliberate use of space within the solo has helped with the overall conception of it. **C36 L:** *(thinks)* it makes it a lot easier because it gives you that time to stop and think. It is important to remember how the beginner improviser feels the pressure of time and the need to play something quickly over the changing chord; the exercise might be useful in that respect. **C37 L:** It sort of gives you room.....I don't know ...It just gives you thinking space I suppose. This idea of having space to think and stretch out in is a good one psychologically and should be developed. **C38 L:** But it's also if you have to go somewhere fast onto the next note, you go somewhere safe nine times out of ten, so it gives you more room to do things that are less safe. So early on L is aware of playing safe in her improvisation.

Schema development

- **L is using recorded backing tracks which suggests that she wants to play over longer time frames and the whole progression in a flow.**

- It is also clear that L is perfecting an idea over several choruses which means that she can both remember the initial idea and develop it suggesting an improvement in aural memory.

Session 5.

At the start of the session I ask L what she has done the previous week and how she feels she is progressing.

F1 L: it's the 14th November- I can remember (*laughs*). How have I been getting on this week? Well, while I've been here I've been getting on really well. I've been really enjoying it and I feel like I know that things are coming together a bit now. Although the beginning of that wretched Fiesta tune was driving me nuts because the two parts were so similar that I kept getting them mixed up, but I think I've sorted that out now. I spent.... the trouble with this week was that I was in London for three or four days so it was days that didn't get any practice done, but while I've been here, as I say, it's been going well. So actually out of the six days between lessons L was only practicing for two; it will be interesting to see whether this affects her progress or not.

F2 L: But it was nice to meet a jazz viola player in London and to be able to talk to him about it. I've been doing a lot of playing things in different positions like reworking the tunes in different positions and working all the scales in all the different positions which suddenly made lots of technical things tie together. I thought: what a great way of practising them; why didn't I think of this before? Because I remember five or six years ago having kittens about what was the right fingering for any particular scale and of

course, there isn't a right fingering ; there's wherever you happen to be when you want to play it. Is this a schema development; the broadening of the view for scales in which any one can be played from any note, anywhere, rather than as a discreet pattern and position? This helps the improvisational process by allowing the student to play their musical ideas wherever they happen to be on the instrument at that moment, rather than moving to a particular position in order to play a scale or pattern.

F3 So been doing that; been doing some improvising with my tape. I always seem to do less of that; I get sucked into whatever technical thing crops up during the week, but that's been going ok as well. It makes me realise how many ideas you're feeding me when you're playing the guitar though. L focuses on technical elements because it's easier for her without an accompanist and because she has a rational frame of mind which seeks to seeks to sort out and understand the technical and conceptual aspects.

I ask L whether she had any highlights during the week.F4 L: Well, there was definitely an ah ha moment with the scales as I've just said; I suddenly thought well any scale that, you know, I pick a scale for today's practice and I've been doing all the hard ones as you suggested and then just going through five or six different positions and playing it in each of those positions. You realise that you use some of them an awful lot and some of them not very much at all because they're awkward anyway. As you said about chord positions; you're stretching your hand in ways that you wouldn't normally because in a classical piece you tend to finger it in the easiest way and then keep playing it like that. This is about moving away from the learned, internalised pattern and seeing a bigger and more flexible picture.

K: And you've been doing them in thirds and fourths and fifths? **F5 L:** Yeah. Both separately and with the chords and the ones that I hadn't done before are pretty ropey so I've spent a lot of time doing that and I've also been doing the diminished and the half diminished and trying to get a bit more fluent in those 'cause a couple of weeks ago I was having to look them up to see what they were. I did a bit of playing on the violin just to sort of spread the boundaries.

K: How was that? **F6 L:** Well, as I've got more... that's got harder now, it used to be easier. As L gets more used to the physical spaces and intervals on the viola, the violin being smaller, now presents more problems. It is interesting that these things are not quickly or automatically adapted to; the schema is too new for this, and it relates directly to the physical space and sound of intervals on the instrument. **K:** Because you're getting more used to that (*the viola*); the pitch and the spatial stuff.

F7 L: But it's interesting, again it just makes you think about the tunes in a slightly different way so it's quite good to play them on the violin and see what you can do on that, and it's so much easier to go up high. I've been trying to put harmonics into things just because it sounds nice and having listened to some of these CD's it's an effect that people use quite often and it's easy so it's a good effect that. The physicality of the instrument has an effect on the music even if it's of a similar kind like viola and violin. Presumably I can hear and play higher notes on the violin and the thinner, higher sound will also affect what is heard in aural memory and subsequently played. The relationship between what the instrument does and what kinds of sounds and ideas the player comes to hear, is an interesting one. **K:** Yes, it gives you the space; it actually provides the space for you because actually the space it always there. **F6 L:** but you don't always see it. More listening is needed I think, so that the student can hear the progression over the 32 bars and come in at any point having imagined an idea.

The main purpose of this session is to review work done so far and evaluate progress where possible. We begin with *La Fiesta*, to be played and improvised on in a lively mood. The chords for improvisation are E-F-G7-F-E are eight bars in length and move fast through the sequence in a *pasa doble* rhythm.

F7 1.L counts in the tune herself at @120 which is faster than before and plays it with energy in the high register with slight inaccuracies in the first eight but fully correct in the second. The next section is extemporised with the rhythm in the lower register and played more broadly for contrast, but the notes are there and again in the next section notes are added but all in keeping with the overall mood.

(2) L returns to the first part of the tune accelerating slightly and has learned the first section wrongly, repeating it as before rather than missing or adding notes arbitrarily and then repeats the first part again through lack of concentration and misses the last notes. **L: Ah bugger!** She then plays the next section slightly behind the beat up the octave this time and continues in the high register for the repeats some of the intonation is a bit dodgy.

(3) At the third time through L goes back to the tune; getting faster and no improvisation.

(4) The next time round L plays a similar rhythm but uses double stops based on the roots of the chords;

(5) she then moves into a single line scale passage with turns added and in the subsequent chorus

(6) L adds Arabic or perhaps Kletzmer scale tones and then moves

(7) into the low register for repeated root to fifth motif. Staying on the lower notes

(8) L proceeds to play a series of ascending scales in to the high register and

(9) imitates the previous motif but descending repeated root to fifths using high notes.

On the next choruses (10, 11, 12) the music is similar, involving the Kletzmer scales and the quaver, crotchet, quaver, crotchet, crotchet, crotchet, crotchet rhythm. It sounds Moorish not jazzy and in fact there are no swung quavers or other jazzy rhythmic elements. I would think that most of this comes from the band and music that L is used to playing and placed into this context where it fits.

In the next choruses (13) L returns to the tune at the beginning and looks at the fingerboard and hands again and either misses the melody or improvises around it in the second half; the tempo may now be too fast.

(14) Then a more complex Arabic scale based line appears with imitation before L

(15) descends to the low notes and swiftly into the high register for contrast. There is no space left between phrases but lots of larger intervals including octaves and turns.

(16) The next chorus begins with an imitated motif which develops and is cohesive followed by a less focussed first descending and

(17) then rising scale-based line and the next chorus brings a new motif in the high register which is repeated over the chords.

(18) Then L returns to the low notes and a revolving turning scale motif for four choruses (19, 20, 21, and 22). Interestingly all these phrases resolve onto the root at the end of the chord progression.

L plays (23) low note double stops in the same rhythm then moves onto pizzicato (24) staying with the double stops and slightly behind the sequence.

The overall impression is one of experimentation and of being more confident with the material. This is because the chord progression is very much simpler and more repetitive than anything played so far, and the rhythmic impetus of the tune provides all kinds of inventive ideas for the improvising. In general L thinks about contrasting and altering ideas rather than simply playing the same or similar ideas; she is aware of the need to develop and change ideas and does so both in response to the specific exercises and on her own, as indicated here.

F8 L now accompanies and K improvises. L plays the bass line and K improvises and sings along. L then changes to double stops which she varies between low and high strings and roots and fifths; L watches and listens. I suggest we take a chorus each and swap the accompanying.

1. L begins by playing the tune and K copies the tune likewise;

2. L swaps quickly to the bass line and in her second chorus (watching the fingerboard) plays a scalic passage with following the rhythm of the first part of the tune. K tries to follow this using the same format.

4. In her third chorus L plays with the ornaments and makes up a good musical phrase using imitation and rhythmic elements of the tune. L copies my last phrase imitating it in the next bar then changing it again and I take it a stage further, imitated next time round by L plays a sequenced triplet figure throughout the phrase. She is definitely listening and responding to my playing and the focus on one chorus makes the improvisation a lot more interesting.

5. K copies L's triplet phrase and L loses it for a couple of bars before playing a quaver bases rising which K responds to starting on L's finishing note and playing octaves on the quaver, crotchet, crotchet, quaver rhythm to which L smiles and copies using a variation on the double stops.

6. K does another variation on the octave motif singing along and L responds with one of her Kletzmer tunes; melodic and scalic whilst KD returns to the big intervals and L plays with extemporising round the early part of the tune and taking the motif through the sequence. K plays one note rhythmically with turns in between which catches L's attention and she in turn imitates it and adds more linking scale passages.

7. K revisits the slower parts of the tune and adds more ornaments with sustained notes in between, which L emulates using double stopped and sustained thirds again, copied by K on the guitar and further developed by L.

8. The next time, L plays the same rhythm but using longer high notes with less percussion and some slides and K adds the slides which L takes up adding harmonics and squeaky high notes and which K responds to by playing very high repeated notes that gradually descend through the sequence.
9. L plays a melodic and scalar passage and K plays a rhythmic bass line on the guitar whilst L uses her double stops and then plays an arpeggio figure 1, 3, 5,6,1,6,5,3,1 through the chords, which K imitates and sings to.
10. L plays another scalar thing and K follows with a two note falling motif off the beat and through the changes. L emulates the rhythmic emphasis of this but with different scale wise notes and K plays a fast 3,5,1,3,5,1,3,5,1,3,5,1 triplet pattern across the chords.
11. L imitates it at half the tempo and K copies it back and then plays her Arabic motif 1, 2, 4, #4, 4, 2, 1 through the changes which K copies, and L imitates in the low register;
12. K responds with low percussive note and L's reply is more of the same (staring intently at the fingerboard).
13. K plays a variation on the bass line with a different rhythmic emphasis and L plays some roots and fifths in the low register but descending and moving lower; a new variation, which K answers adding more notes but keeping it low.

14. Starting with the ornament L plays an ascending melodic line and K plays something different using the original rhythm and a quaver figure and taking it through the sequence; L imitates this rhythm using her own pitches;
15. K plays another rhythmic bass line figure and L responds with a low register melody: K plays a figure based on thirds and sequenced; L imitates the rhythm with her own melody;
16. K plays a low note pentatonic and fourths motif; L imitates and alters elements of previous motif almost taking it through the changes. For L this appears characteristic; she is unable to take the motif through the changes all the time but sometimes manages it and this is why the improvisation lacks focus for some of the time.
17. K copies this last motif in pitch and rhythm and L responds by creating a scalar melody;
K returns to the rhythmic elements and repeated notes;
18. L uses pizzicato rhythmically and place the motif (1, 2, 1, 7, 1) across the sequence well;
K matches the timbre and rhythm and adds a couple of notes;
19. L stays with the pizzicato and also makes the line more complex taking it into the higher register. K begins with the sequenced motif then plays strings of descending chromatic notes; L does her own thing with the plucked notes and it makes musical sense as a melodic line;

20. K echoes a previous motif with thirds and pentatonic elements; L plays a wholly new motif 7, 7, 5, 7, 1, 5, 1 (down the octave) on the pattern of quaver, crotchet, crotchet, quaver, three crotchets and takes it through the sequence starting on the seventh, which is most effective and full of life.

21. K imitates and elaborates on this motif and L smiles at this before playing (still pizzicato) a falling scale pattern fitted across the sequence and resolving well at the end of the phrase; K imitate the rhythm and feel and makes it a whole tone descending scale ending on a harmonic and L laughs and stops playing.

The overall feeling of this session is of great progress: L is more creative thinking of one chorus at a time; there is generally more energy and more instances of the improvisation coming together well over the eight bar sequence. In addition L is actively imitating, copying and responding to elements played by me in exact forms or as answering phrases; i.e. she can respond quickly to what she hears now. The other difference between this and the first choruses on her own are the new ideas that are generated; there is much less recurrence of the Kletzmer ideas and more rhythmic energy.

Both are laughing K: Right; some of that came off and some of it didn't! How do you feel about that? F9 L: That's good. K: Did you enjoy that? L: Yeah. K: How do you feel about that from last week; what's the difference? F10 L: *(thinks)* It feels more... solid...K: *(jumping in again)* it feels more confident. F11 L: Yes and it's sort of ... it's flowing. K: What are you thinking of? F12 L: *(thinks)* Erm....what am I thinking of? K: Anything in particular? F13 L: Not really, I did a couple of times get either an idea or pick up something from what you were doing. This is interesting because L appeared to have been

imitating my ideas from the start, not every now and then. Perhaps it means that the schema is developing outside of the conscious mind; L is just responding to it and only aware of specific elements when that fails or maybe when concentration is missing. Also because she had to respond quickly within the eight bars, this may have given L much less time to consciously think of strategies and just listen and respond with a general idea in mind unfolding as it is played.

I ask L to sing some choruses for me to see whether or indeed if they are very different from the instrumental versions.

L starts to sing the melody; stops and says **F13 'Sorry I've got that wrong; I'll try that again.'**

L starts again; it feels a little stiff but she sings the tune right through adding the notes that she plays and making contrasts of dynamics here and there but sounding rather harsh. Then she starts with the beginning of the tune again before embarking on the improvisation which takes the form of a descending melodic line that doesn't resolve.

In the second improvised chorus L sings a phrase that answers and is similar to the first chorus, without the previous focus and leads to an unresolved ending on a discordant note. I think this is unintentional. In the third chorus I realise that L is trying to sing the #4 interval which she begins on and so is attempting more colour tones. She falls back on the Kletzmer music ideas remaining unfocussed in the improvisation. The rhythmic emphasis is also gone and again the impression is of the schema tuned out or at least not influencing the outcome; its as if the previous ideas never occurred or as if the body/mind was briefly organised to a new level and then just relaxes into the old ways again because the feeling and skills are not stabilised. All of this is in keeping with Bernstein's ideas on the learning of motor skill in which the novice skill can become disorganised at the slightest provocation or merely with fatigue. The emphasis in

L's improvisation changes slightly as I play basslines and in the third chorus of this she alters the rhythm and produces succinct phrases across the chords.

K: Ok, how do you feel about that? F14 L: It was harder at first because the tune's like it's in my fingers now. The tune and perhaps some of the harmonic framework are 'in my fingers now'; actually embodied, making it more difficult for the similar intervals to be physically created in the vocal chords. **F15 L: and once the tune's in your fingers you don't have to think about it any more.** This is obviously so, except that with the improvising all the potential movements have to be in the fingers also, not just the relatively fixed parameters of a tune. It's the potential movements relating to all of the potential intervals (learned through a range of different tunes), that takes the schema time to organise; there are so many variables including timbral ones.

F16 I ask L to sing and play at the same time to note the effect. L begins to play the tune and sing along accelerating slightly but playing with more gusto if sliding a bit. Voice and playing are in sync and then she plays the tune again and sings along with it a second time, then goes into the solo in quite a jerky Kletzmer mode; playing meandering scale based phrase to the quaver, crotchet, crotchet, quaver, three quavers rhythm without much feel or focus. Then L plays fifths to octaves in a contrasting rhythm still singing along with it, in a more rhythmic and percussive way which she develops in a second chorus before returning to a chorus with echoes of the previous one but once again lacking in direction. The next chorus is similar and there follows one built on the ornament which is almost taken through the changes and this is answered by a descending phrase 1, 5, 1, (down the octave) 1(up the octave) which is coherent and has focus. L then plays the double stops with same rhythm twice and then stops.

K: How was that? F17 L: that was surprisingly easy. K: Does it help? F18 L: Yeah, yeah, I didn't think I could do it. It was weird because I've tried singing and playing before and if you're doing some very simple playing, it's quite easy, but I've always tried singing and playing two different things; I have tried it in the past because I thought it would be a useful thing for me to do. K: To sing something and to accompany yourself? F19 L: Yes and it's very hard to tune your voice into your separate note whereas it's remarkably easy to tune your voice into the viola as long as they're doing the same thing. Yes, it was pleasant. K: Try it again, and try and lead it from the voice. F20 L: I was and I was also.... it frees.....it takes all that thinking about what your fingers are doing away because you're actually focusing on the voice. Well, you're focusing on the what note and how it's going to be; on the sound of it rather than the technical problems and I was thinking, I'm not sure if I can just like... it's weird isn't it? Doing jumps and things and just making them bigger and bigger and still seeing if I could sing them so I was testing myself out. This is fascinating; the relationship between voice, hands and aural imagination and which part is doing what. L's perception is that the improvisation is better with the voice which I'm not sure is true but she seems more confident doing it this way. L also says that she focuses on the sound of the voice and the note rather than any technical element although it is clear from her own description of the process that sometimes the fingers rather than the voice lead or at least appear to.

In the next part of the session we play '*I Mean You*.'

1. L plays and sings along also with K singing '*I Mean You*' slightly out of time in the first chorus but all correct in the second. As L goes into the middle all is well with the tune and out into the last eight. Overall the rhythm is still a bit straight an unjazzy; not a swung quaver in sight.

2. The second time round L plays the first eight and fills in the gap at the end with a crotchet triplet figure; a sort of contraction of the first motif, which works well. In the second eight L just plays the tune straight and going into the middle she repeats the first note of the phrase several times extemporising with the rhythm, then plays the tune straight until the last notes of the middle section where she adds a passing phrase and then comes in late with the tune.
3. Going into the next chorus, the music has a down-home country feel to it and again I think this is a reference to folk music in L's former life! It just doesn't sound like jazz and revolves around the 1, 3, 5, 6, 1 motif and variations played very straight and folksy. The following phrase of the first eight is chromatic and L uses triplet based scale patterns. Going into the second eight, L starts to sing along and to develop some of the previous motifs by doubling them up whilst keeping the triplet feel going. The middle continues this theme and the last eight is even more rigorously jiggy sounding very twenties.
4. In the next chorus, L is very confidently going from low to high notes with more space and more variation in the rhythm and is sounding much more interesting. In the second section she develops this idea returning to the crotchet triplets and into the middle she uses of mixture of both ideas following with a variation on the first themes in the middle eight.
5. The next chorus begins in a similar way with low notes, stops, small slurred rhythmic motifs and repeated figures; L has stopped singing at this point. K asks L to keep playing

and stops playing the chords, replacing it with a contrapuntal line with L playing alongside. This was done primarily to see if L could hold her own and hear the harmony without it being actually stated and whilst I was playing at the same time. This she does well and sings along playing the themes from previous choruses.

6. The time is not rock solid but acceptable and the next chorus contains similar elements including many 2, 1, and 3, 1, motifs on semi-quaver to quaver rhythms.
7. In the next chorus L plays low register double stops in jig like figures and sometimes triplets with the odd effective stop which she continues throughout, varying the notes within the stop. As K resumes playing the chords and L adds more 'down home' time touches, staying in the low registers.
8. In the next chorus, K plays only off the beat bass notes which L emulates and uses to place odd double stops and short notes.
9. In the next chorus L plays long high notes first, then a shorter variation with the triplets and going into the middle there are more triplets and echoes of previous motifs; she keeps returning to the 6, 5, short motif.

K: How did you find that? L: It was fun. K: How was it different when you sang and when you didn't? F20 L: It wasn't a huge amount; the voice got me going but then I wanted to play in parts of the instrument that my voice wouldn't stretch to. Again, there's an interesting mismatch between the capabilities of the voice and technique on the instrument. K: So it might be an idea to do some singing and playing in the practice: I think you tend to

get more adventurous ideas when you're not bounded by the instrument. F21 L: So those two things need to mesh together which is very much how it felt it was doing; it was good.

K: I think singing makes it stronger because vocalising secures the melody somehow. F22

L: It makes it erm, (it sounds stupid but) more melodious doesn't it? Singing does seem to help the melodic content of the improvised line, perhaps because the voice is used to singing songs.

The next part of the lesson focuses on learning basslines as a further tool to develop improvisation. I have written out a simple bass for L to play on *All the Things You Are*, with a view to L making up her own. It is based on 1231, 1351, 1357 etc. and L is reading it in bass clef. K explains the rationale behind it i.e. very basic with the odd colour tone and the falling scale at the high point of the first phrase so that the idea is to play solid chord tones until they are under the fingers and in the aural imagination and then to add notes and extemporise. I also explain the notion of guide tones to L, in which a line of chord tones, the thirds of the chords for example, is written out to provide a consonant framework. Guide tones are also useful in finding alternative harmonic lines and contours and to experiment with the sound of different extensions, for example, a whole line of #9 chords.

1. L starts to play the tune as she has learned it, with the many notes at the beginning and sings along in medium tempo remembering it to the end. L begins the improvisation with confidence with triplet figures following the chords well; the root to third repeated figure crops up and the rhythm remains a little jerky, but L knows where she is and takes the melodic line through the changes. She goes into the middle in similar vein and then plays a whole tone phrase in the second part of it. The last eight is unfocussed but following the chord progression with a wandering melody strongly played, which L sings along to.

2. The next chorus has more flow, musicality and cohesion and the second eight is an imitation and extension of the first motif using repeated triplets that leads nicely into the middle which begins on a repeated note of the tune and an answering phrase. In the last eight L is lost at the beginning but finds her way back in before the end.

3. Then L plays the basslines in a folky or straight way but all correct and the second time gives more rhythmic emphasis and extends the range getting lost occasionally but finding her way in again swiftly; a sure sign that she has the overall framework in the head. The third time she repeats the same pattern and is looking at the fingerboard all the time but is more confident and doing all from memory.

I suggest extending the bass line idea to include her own lines, and she replies; **F23 L: Well, I tried doing the (*sings*) 1235 motif there and I tried, I was doing some.... You don't get to do the interesting bits of the chords either do you? F24 L: You get a bit stuck in the bottom end.** I explain that the idea of the exercise is to ground the harmony using basic chord tones and that once these are thoroughly in place, you can be much more creative with the line. I give L some manuscript paper and ask her to write a line of guide tones to find out whether this will help her. L explains that she thinks of bass line first when writing. **F25 L: (*thoughtful*) Yeh, I think in basslines; in the days I was writing quite a lot of pop songs I always wrote the bass line first and it's split into people that come up with that and people who come up with the melody, don't they?**

1. L begins with the 1235 motif in jig feel with a four crotchet quaver crotchet quaver crotchet crotchet rhythm. This is repeated until the middle where in the G major section L plays a

descending scale quaver passage that fits well with the overall phrasing. She is looking intently at the fingerboard. Coming out of the quaver passage L gets lost going into the new key but arrives at the major chord and reorientate herself back into Ab for the last eight. This follows a similar pattern, but L plays a descending chromatic line at the fourth bar of this last section either by design or accident and then a mixture of the original motif, some long notes and the odd arpeggio.

2. The second play through begins in the same way – its almost as if these elements are learned and fixed before they are able to be unlearned or developed. There is much more variation in the range of the line through the first eight this time before L returns to the established motif perhaps as a guide continues with the same motif adding slight variations of rhythm and articulation, ending the phrase in a new and cohesive way on an ascending figure higher in the range. Going into the middle the motif is followed by a chromatic descending crotchet triplet figure that has not appeared before and L realising it sounds good, looks at me to see if/how I react and smiles, before continuing using a non-motivic fifth-root phrase through the rest of the middle eight that she extends to fit. In the last section she begins again with the initial motif in a higher register and then develops it using chromatic passing notes for colour which she remembers and repeats before playing root third motifs over the quick changing chromatic chords and then reversing them on the low notes to finish the phrase, using octaves.

3. The third time through L begins with a new motif root, fifth, octave and descending scale, which she tries to repeat in the next phrase and nearly does, but plays the last part of the phase instead, then plays a variation on it in first a low and then a high register. The sense of it and the intervals are remembered even if the exact sequence is not. In the next section, L remembers the motif exactly but again doesn't seem to be able to fit it in time to the next chords; paraphrases it

and plays the second half of it i.e. the descending scale. The next phrase is root fourth- a sort of echo of the first motif which L resolves into the middle eight using fifth to octave intervals. The middle begins with the previous 1235 motif repeated twice with the same rhythm before moving into a chromatic descending scale in crotchet triplets, playing some long low notes into the next phrase and then back into the old motif. In the last section L plays a variation on the same motif condensing it and then playing recreations and echoes of the first root, fifth octave motif over the descending chord progression.

The fourth time, L begins with a continuation of a falling scale pattern from the previous take, then repeats the root-fifth notes, continuing with another falling scale going into the low register and ending the phrase with the root-fifth motif repeated-i.e. the first part of the root-fifth octave motif cut down. L returns to the 1235 run for stability (I think) in the second section in the low register and then continues the motif up the scale and into the higher register and plays scalewise up and down until the end of the phrase which she ends 1351371 on the arpeggio and with octaves. Into the middle L plays rising sixth intervals again, a new departure, then 53653 which sounds good and unclichéé then 13171 and down the arpeggio followed by a less focussed passage but comprising fifths and clearly echoing earlier ideas. In the last section L returns to the sixth rather than the fifth with a new motif; a combination of a repeated sixth and falling scale pattern similar to the fifth motif and she attempts to play it over the next changing chord, nearly making it, then halts over the falling chromatic chords because the motif is too hard to play over or immediately alter to fit; there is a slight hesitancy. L stops then and plays fifths where she can over the complex and quick changing progression altering the articulation and landing on a low root note.

On the fifth take, L plays repeated roots with (quaver rest, crotchet, crotchet, quaver crotchet rhythm,) across the chord changes interspersed with a falling scale passage, alternating the roots with sixths in the second part of the first section and changing registers. In the second section L plays a falling motif in the low register and tries to play it over the next chord change, and alters it to the root-fifth pattern, doesn't follow it up and plays a fifth and then a seventh. The middle begins with one reference to the 1235 motif leading to a 1353 and a falling scale pattern over the G major chord, then a 1353 pattern and similar answer to the previous phrase over the E major chord. In to the last section L plays a root, fifth, third, root pattern using dotted crotchet, crotchet quaver crotchet rhythm which she repeats over the II and V chords, loses on the I and catches again on the IV and plays over the falling chromatic chords, altering registers where necessary and adding links if the motif is missed; a classic 'making it fit' strategy.