
The most recent work in this line of investigation is a solo cello piece called *Invisibility* which also acts as a study piece for an orchestral work (*Pearl, Ochre Hair String*) that I'm currently writing. One of things I wanted to explore in this piece for 'cello was to work with an interactivity at the material level of the instrument – that is, the strings, their resonance properties and how the strings are set into motion or stopped. Firstly, I retuned the strings so rather than having the fairly even spread of tension achieved in standard tuning (C-G-D-A), each string is retuned at a different level of tension, each string has a different kind of 'give’ or resistance. The tuning is B (the lowest string dropped by a semitone), F (the next string lowered by a tone), the third string stays the same at D and the highest string is radically detuned down to Dsharp.

As well as these different tensions held in the strings, I employ two types of bows to activate the strings – a normal bow and then a second bow which I call a 'guiro’ bow after the serrated South American percussion instrument. The bow hair is wrapped around the wood to give an alternating hair and wood playing surface. The two bows bring different weights and qualities of greater or lesser friction into the equation of how the instrument is sounded.

From the player's point of view, how it 'feels' under the fingers is quite different – there is more variation than usual – places of resistance or flow that need to be navigated when playing the music. This physical set-up foregrounds the material or physical aspect of the cello – a more interactive playing surface is created where the 'cello is not just an instrument that is somehow passively acted upon but it has torque, it has lines of forces that directs how it is to be played. In a real sense, the 'cello also plays the musician and it governs the shaping of the music sounds in a very direct way.

The *Invisibility* of the title of the piece is not about silence, for the work is full of sounds. Rather, as in Grosz' and Deleuze's conception, I'm working with an idea of the invisible or latent forces of the physical set-up of the instrument. What emerges as the instrument is sounded in various increasingly rhythmicised ways, is a landscape of unpredictable nicks and ruptures as different layers of action - speed, tension, pressure of the bows, of the strings - flow across each other. The composition also works with magnifications of the level of these disruptions by intensifying various paradoxical combinations - eg: playing a string at a non-harmonic node so that the string vibrates in highly complex ways. The string doesn't settle in any one vibrational zone but flicks or flickers (shimmers) between states so that what results is an unpredictable array of different noises and harmonics.

The two kinds of bow used in the piece offer different possibilities of friction, for instance, the stop/start structure of the serrated bow adds an uneven granular layer of articulation over every sound. Like the cross-hatched designs or dotting effects of Aboriginal art, the bow creates a highly mobile sonic surface through which you can hear the outlines of other kinds of movements and shapes. Moving rapidly between places of relative stability and instability in terms of how the cello is sounded, the piece shows up patterns of contraction and expansion, accumulation and dissipation, aligning with forces that are at work within the instrument-performer complex.

*Liza Lim*  
(aus: Vortrag an der Universität Huddersfield am 3. November 2009)