

Fuzzy Logic, Lucid Dreaming

for didgeridoo and chamber orchestra

(From notes to the album *Fuzzy Logic, Lucid Dreaming: wind concertos by Neil Buckland*:)

Whether music is dreamed up beforehand and written down to play later or improvised on the spur of the moment, it is the fuzzy logic of the subconscious mind that creates the aural patterns we hear, and a process closely akin to lucid dreaming that brings them to conscious awareness. This piece is a musical dialogue in which vastly different approaches to the creation of music come together and then find their way through tensions and differences to harmony (if not to complete agreement).

(From the score of *Fuzzy Logic, Lucid Dreaming*:)

Preface

Fuzzy logic, lucid dreaming – these terms seem to be both internally contradictory and diametrically opposed to each other. Yet both tell us a great deal about the workings of the human mind and the process of artistic creation – particularly of music.

Fuzzy logic is a mathematical concept developed to account for the limitations of ordinary or classical logic, the logic that says that questions have only two possible answers: true or false, yes or no, on or off, 1 or 0. Classical logic has been of great benefit to humanity and is the basis of many of the scientific and technological advances of the last two millennia. However, there are many aspects of the real world where simple either/or answers do not apply. Fuzzy logic allows for answers that are neither completely true nor completely false, and has proved invaluable in fields such as artificial intelligence, early prediction of earthquakes, computer recognition of handwriting, etc.

Interestingly, in psychology the black-and-white, all-or-nothing thinking of classical logic is often regarded as irrational and unhelpful. Recent research suggests that our brains use fuzzy logic far more often, and that it is heavily involved in everyday decision-making, intuitions, "gut feelings" – and artistic creation.

Lucid dreaming is the phenomenon of being aware *that* we are dreaming *while* we are dreaming – i.e. we are conscious that we are dreaming, implying that we are simultaneously conscious and unconscious! Artistic creation, including musical composition, involves becoming conscious of contents constructed in the subconscious mind (ideas, narratives, melodies, images etc.), and in this respect is a process closely akin to lucid dreaming.

This composition, *Fuzzy Logic, Lucid Dreaming*, began with reflections on the parallel paradoxes of these two concepts and their possible application to music. The combination here of standard orchestral instruments with the didgeridoo might at first sight seem to be a simple juxtaposition of logical thinking (the classical logic of European musical structures and instruments) and intuition (the fuzzy logic of indigenous music and the didgeridoo, with its connection with nature, myth, and the earth). But fuzzy logic has been heavily involved in the creation of what the orchestra does here too, and the lucid dreaming process of musical creation is common to both parties, the main difference being that the orchestra's music has been dreamed up beforehand and written down to play later, while the didgeridoo imagines its music on the spur of the moment. In reality there is fuzziness and logic, lucidity and dreaming, in the music and the minds of all cultures and people.

My aim in this piece has been to open up a musical dialogue, an exchange of ideas, in which neither party loses its cultural identity and each gives a respectful hearing to the other – even if, on occasion, they disagree. There is also another element to this dialogue. Entering at a time when the orchestral instruments have wandered off to harmonically distant realms of intellectual speculation, the didgeridoo brings them back to earth: it grounds them, centres them, pulls them back to reality. This grounding function is not just musical or tonal but works on a deeper, symbolic level as well. In Aboriginal culture the didgeridoo is said to be "the sound of Mother Earth" and to have healing powers: "the sound transfers peaceful vibrations that penetrate the mind and create inner spiritual oneness in an individual or group¹." Could there be potential here for healing the split between head and heart, mind and nature, that is so characteristic of Western intellectual culture?

¹ Mandawuy Yunupingu, 'YIDAKI: A Foreword', in *The Didjeridu – from Arnhem Land to Internet*, ed. Karl Neuenfeldt, Sydney 1997, p. viii; also at <http://www.didjeridu.com/wickedsticks/voices/foreword.htm>

To represent this metaphorical and tonal grounding function graphically, I have written the didgeridoo part at the bottom of the score rather than with the other woodwinds, and given its playing instructions in a different font, avoiding as far as possible the technical terms commonly used in orchestral scores. (For more on the didgeridoo part see Performance Notes below.)

A note on the word "dreaming": in Australian Aboriginal culture this word of course has special significance. However, I am using the word here purely in its normal English sense, and do not intend a reference to the Dreaming ("Dreamtime") or any other aspect of Aboriginal culture.

On the other hand, I do not believe that our ordinary, everynight dreams (let alone lucid dreams) are just throwaway nonsense or a kind of cerebral housekeeping, as some people claim; they come from somewhere deep in us and often tell stories with the resonance of myth. In performing *Lucid Dreaming* there should therefore still be at least a little of the feeling of heightened significance that the word "dreaming" has in aboriginal spirituality.

Performance Notes

For practical reasons and because of its musical and symbolic role in this piece, the didgeridoo must have a fundamental pitch of D, as notated. This enables a free exchange of views with the orchestra that is able to find its way through differences and disagreements to harmony, both literal and metaphorical (though not necessarily total agreement, as their differences over the root of the final chord suggest). Its possession of this note also gives power to the didgeridoo, enabling it to exert its grounding function, its gravitational pull back to the centre.

I have notated the didgeridoo part as a simple drone on the fundamental or with basic rhythmic patterns around which the player is expected to improvise. Verbal guidelines are given in regard to expression, mood, etc., but the choice as to how to realise these and what techniques and sounds to use is left to the player.

Movement II is an unaccompanied didgeridoo solo. Here the improvisation is completely free and the only instruction is that the player should play in as lively, animated and jubilant a manner as possible, giving free rein to the imagination. The music should be like a joyful dance or celebration; the player may add clapsticks or other percussion here if desired, and may even physically dance if able.

In the third movement, *Lucid Dreaming*, by contrast, the didgeridoo should play softly, gently and unobtrusively. The main activity here is in the upper parts; the didgeridoo is a still, calm presence, never drawing attention to itself but continuing to exert its grounding function, ultimately drawing the other instruments back to itself. Here the overtones and other sounds commonly used in didgeridoo playing should only be added to the drone occasionally, they should be gentle and unobtrusive, and should only be played in bars where the woodwinds play (i.e. bars 15, 18, 32, 35, 45, 48, etc. – these locations are indicated in the didgeridoo part).

Neil Buckland

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Instrumentation

Flute (doubling Piccolo)
Oboe
Clarinet in Bb (doubling Bass Clarinet)
Bassoon
Strings
Didgeridoo (D fundamental)

Duration: ca. 22 - 23 mins

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