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“At the Chalkface: Using Aspects of Roger Doyle’s Works to Introduce Electroacoustic Music to Secondary School Music Students”

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# **At the Chalkface: Using aspects of Roger Doyle's works to introduce electroacoustic music to secondary school music students**

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## **Introduction**

Secondary school teachers are obliged to measure the educational content of each classroom session and to register learning outcomes. By working in a constructivist learning environment (Jonassen, 1999) they build on their students' existing knowledge and by reflecting on the unfolding events (Schon, 1983) and tweaking their lesson plans, they enable their students to make progress. In seeking an approach for dealing with electroacoustic music at secondary school level, music teachers have several choices. They might (a) implement a version of the *Intention-Reception* project (Landy, 1994; Weale, 2006) or (b) attempt spectromorphological analysis of sound objects (Smalley, 1986) or (c) venture into the composition of musique concrète using the *Music of Sound* tutorial (Higgins & Jennings, 2006). Although these methods produce positive outcomes in certain learning situations, however, they may not address the practical requirements of the non research-based, timetable-driven classroom. My short scoping study arises from the following questions. (a) By what means can I present an electroacoustic work to young music students when the composer's intentions are not clear? (b) How can I avoid musical analysis that is grounded in technical terminology and computer jargon? (c) To what extent can composition of musique concrète lead to a better understanding of the established oeuvre if my novice composers have no basic understanding of electroacoustic music in the first place?

## **Key Findings**

- The type (including the length) of works chosen for study determines the level of interest achieved.
- Learning can occur even during a relatively short time-span of a few classroom sessions.
- Visual aids enable young students to discuss some electroacoustic music.
- Much scaffolding is needed to allow access to abstract works.
- The music of a local, living composer can act as a springboard for the study of electroacoustic music in general.

## **Aims of the research**

My two-fold aim was (a) to familiarise my students with the music of Roger Doyle, the "godfather of Irish electronic music" and (b) to introduce them to concepts associated with electroacoustic music.

## **Methodology and Methods**

Electroacoustic music is not on the obligatory secondary school music curriculum in Ireland, so I worked with a group of fifteen- and sixteen-year old Transition Year<sup>1</sup> students who participated in a "Doyle Week". This consisted of five forty-minute classes. Ten extracts from Doyle's oeuvre were chosen as the basis for exploration. We focused on sounds (instrumental, non-instrumental and vocal), structures (events, repetition of ideas, development of ideas), spaces (foreground, background, distant sounds, left and right channels) and societies (title, 'programme', language) because

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<sup>1</sup> Transition Year is a sort of a gap year between Junior and Senior Cycles in Ireland. It occurs in the fourth year of secondary education. It is not exam-driven, therefore class activities are less restricted than in any other year.

these areas embrace Doyle's timbral choices, unifying devices, humorous juxtapositions and programmatic titles. During each of the five class periods the participants worked in pairs at computers, playing and examining two pieces in an audio editor. Students made notes on screenshot printouts of mono and stereo waveforms. They were asked to note the timing of events and to write down if they heard a recurring or altered motif. They were encouraged to ask questions, comment on the works and to discuss them with each other. They listened to the two works again at home using a CD-ROM that I had devised. This contained interactive screen captures of the works, images related to the works and explanations of relevant vocabulary.

### **Rationale for choosing the ten works**

For *Beautiful Day*, a 30" track from *Babel*, Doyle had simply recorded and edited the sound of somebody going up and down a stairs saying the words "beautiful day". We compared this with the better-known song of the same name by U2 and decided that the name of a work does not always elucidate its meaning. The waveform for *Beautiful Day* (Fig. 1), draws attention to the structure of the piece. The title is partially whispered during its final moments.



**Figure 1 Beautiful Day**

On the other hand, the title, *The Idea and its Shadow*, accurately predicts what the listener will hear. The spoken text is accompanied by tonal sounds that echo the speaker's lilting Northern Irish accent. The following extract from the text appears on the CD-ROM:

"...The idea of the shadow is quite an interesting one because at a certain point in the day a shadow will more or less exactly replicate the size and shape of the original object. But all the rest of the time the shadow was either smaller or constricted or longer and thinner or it's going through a perpetual state of variation..."

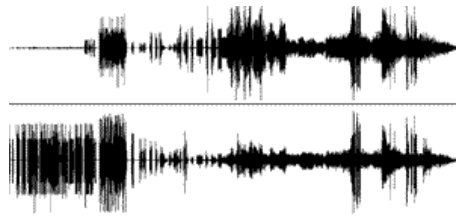
The clipped enunciation of the words is reflected in the waveform which grows wider in the middle during the merging of the idea and its shadow (Fig. 2). At that juncture the accompaniment becomes louder than the speaker. The notion of foreground and background musical material was revealed in this piece.



**Figure 2 The Idea and its Shadow**

*Under the Green Time* demonstrates how a sound-producing device other than a musical instrument (in this instance, a typewriter) can provide a rich resource of new timbres. The evocative accompaniment balances the meandering melody played on the Irish traditional instrument, the uilleann pipes. We found the structure difficult to detect visually in the waveform and Doyle's intention is not made clear in the title. This made us depend on our ears rather than our eyes and forced us to focus on developing motives and recurring ideas.

When listening to *The Iron Language Alphabet*, students were asked to mark on their printout waveform where they heard examples of decrescendo, 'Morse code', rhythmic figures, tonal references, polyphony, atmospheric drone, panning, repetition, glissandi, silence, creaking and outbursts. This time a stereo waveform was used to draw their attention to the sounds emanating from the left and right speakers (Fig. 3). The role of space had now become a musical element in our analysis.



**Figure 3 The Iron Language Alphabet**

Both *Charlotte Corday* and *The Lament of Louis XVI* invoke the mood of the French Revolution and invite the listener to examine structure and societies as musical concepts. In an effort to encourage critical listening, I asked the students to select sections of the works on the audio editor that they considered to be superfluous. They expressed a dislike for some of the repeated motives in *The Lament of Louis XVI* that “did not go anywhere”.

Although atmospheric, the initial appeal of the whale sounds heard in *Yunnus* also dissipated due to the “constant repetition” and “lack of contrast”.

We listened to another work built around spoken text. In *What's so Good about Kilkenny?* a radio interview with a drug addict has an eerie quality. The students said that it “creeped them out” and this may well have been Doyle’s aim! *The Stairwell* and *Mr Brady's Room* are examples of how Doyle creates aural connections between the different ‘rooms’ in his Tower of Babel. The sound of someone practising the piano in one ‘room’ can be heard in the background in other ‘rooms’.

### **Main research findings**

The discussions during the “Doyle Week”, as well as the participants’ written notes and post-project interviews, led to the following observations:

- The visual scaffolding afforded by an audio editor facilitated discussion of electroacoustic pieces. Students felt empowered by being able to physically interact with the music.
- It was possible to find a way ‘in’ to some of these works by concentrating on sounds, structure, spaces and societies. The listeners had a focus.
- A CD-ROM supplied extra information and encouraged multiple hearings, independence and reinforcement of ideas. Students were motivated to examine different areas of the pieces at their leisure and this stimulated some cross-curricular research.
- Abstract works required more scaffolding than programmatic pieces. Without an insight from the composer, the students did not notice subtle nuances or slight variations in motives. They soon became bored with these pieces.
- Doyle’s music provided a stimulating introduction to electroacoustic music. Students will hopefully be able to recognise some of his compositional devices in the works of other composers.

### **Conclusions and implications for practice**

My aim of acquainting my students with some of the Roger Doyle’s music was achieved. This group of students were able to find connections in his Babel pieces, agreed that he was interested in language, noticed some of his humorous touches and pointed out some of his Irish-isms. When asked how they would approach other electroacoustic pieces they suggested dividing the work into sections, giving timings in minutes and seconds, describing the events that occur in each section, pinpointing the most intense section, identifying the sounds, noticing where silence is used, picking out features that unify the piece, looking for examples of contrast, seeing how he develops the material, trying to discover

the composer's intention and feeling if the pace was suitable. Works that lasted longer than ten minutes were considered to be difficult. Further research in the area of aesthetic decision-making (Barrett, 1998), consensual assessment (Amabile, 1996; Hickey, 2001) and creative composing (Burnard, 2007) with students who have participated in the "Doyle Week" would test further the impact of this project on the students' listening abilities in the area of electroacoustic music.

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