Proceedings of the Electroacoustic Music Studies Network Conference
Meaning and Meaningfulness in Electroacoustic Music, Stockholm, June 2012
www.ems-network.org

The Future of Electroacoustic Pedagogy

James Andean

Centre for Music & Technology, Sibelius Academy,
PL 86, 00251 Helsinki, Finland

jamesandean@gmail.com

Abstract

Today's electroacoustic pedagogues find themselves in a challenging position. What is it, precisely, that we are trying to teach? At first glance, this seems simple enough: the tools, techniques, and tradition of electroacoustic music. Each of these, however, is thoroughly problematic.

Electroacoustic techniques were initially determined to a significant extent by the tools used: What can we do with sound on tape, as voltage, or as ones and zeros? By and large, however, new tools continue to be defined by old restrictions of tape and voltage, and technique is thus guided along a similar path.

Where these techniques continue to be relevant, however, is in questions of language. However, the language of electroacoustic music is part of an endless, mutually-informing cycle between tools, techniques, and language: the tool determines technique; tool and technique outline a range of possibilities, which then determine the language; which then determines the direction for further development of tools and techniques, and so on. Thus, the very languages, structures, vocabularies and genres of electroacoustic music today are, to a very important degree, products of the tools and techniques with which they were made and with whose evolutions they are inextricably entwined.

But, considering our imagined liberation from historical tools, brought on by the supposed freedom of the age of the laptop, do the languages associated with these tools continue to be relevant? Or does the teaching of the language of electroacoustic music amount to no more than a history lesson?

Introduction

Despite the somewhat bombastic title, this paper does not pretend to offer anything particularly revolutionary on the subject of electroacoustic pedagogy; it is simply some thoughts offered as a contribution to the ongoing discussion of the 'what', 'how', and 'why' of teaching electroacoustic music, from someone who has only just begun to face these questions.

Electroacoustic music pedagogy seems to be in a state of crisis, but there's nothing new there: electroacoustic pedagogy seems to be more or less in a constant state of crisis, or at least has seemed so for the last several decades, without the field being any the worse for wear. This is, of course, closely tied-up with the breathtaking speed of recent technological change,

Proceedings of the Electroacoustic Music Studies Network Conference
Meaning and Meaningfulness in Electroacoustic Music, Stockholm, June 2012

www.ems-network.org

development, and evolution; any discipline as closely linked with technology as electroacoustic music is, is undoubtedly going to suffer growing pains from being forced to keep up.

But, *has* it kept up? Has the pedagogy kept up with the technological changes of recent decades? Or, perhaps this is the wrong question – more importantly, perhaps, has electroacoustic pedagogy kept up with the cultural changes and significant paradigm shifts of the last decades, that have resulted from wave after wave of technological shift? Or, broader still, has electroacoustic culture generally kept up with these shifts, or recognized their full relevance and consequences?

A clear perspective on such questions is perhaps unlikely; the cultural metamorphoses we are undergoing, and have been for some time, are significant enough that it will likely require the clarity of hindsight to unravel their full implications. This should not, however, discourage us from trying.

"Electroacoustic"?

Today's electroacoustic pedagogues find themselves in a challenging position. What is it, precisely, that we are trying to teach? At first glance, this seems simple enough: the tools, techniques, and tradition of electroacoustic music.

Every aspect of this, however, is immediately problematic. To begin with, what does the term 'electroacoustic music' *mean* today? As a term, or as a genre, it seems as mysterious and as amorphous as ever, with any possibility of a useful definition as remote as it has ever been. The culprit, once again, seems to be the pace of technological transformation, constantly and radically redrawing the outline of electroacoustic culture, possibly even obscuring or annihilating such an outline altogether.

The irony is that, while for a number of decades evolving technology acted to slowly break down barriers and allow for a gradual unification of electroacoustic culture, it has since moved well past that point to have the opposite effect. Where barriers between electroacoustic cultures were once imposed by segregated and unconnected tools and locales, giving us the significantly differentiated genres of tape music, computer music, electronic music, and so on, increasingly flexible tools made such specialization increasingly unnecessary, offering the promise of unification under a single electroacoustic flag. Rather than stopping here, however, continued technological change, moving ever more rapidly, has since been largely responsible for shattering electroacoustic music into a vast number of microgenres.

This is by no means automatically a weakness; it can instead be proposed as a source of diversity, and proof of a rich and vibrant culture. However, it certainly doesn't make our task easier as pedagogues to have to teach a genre that we are unable to precisely or concisely define or delimit. Instead we are left in a vague territory, somehow involved with the use of electricity for musical purposes, in an age in which there are ever fewer musical practices that don't for example rely on software at some point in the chain. The situation isn't made any clearer through the use of other equally vague and unknowable categories, such as 'music technology' for example – a mysterious term as applicable to a piano as it is to a laptop.

But, we will return to our original statement regarding the tools, techniques, and tradition of electroacoustic music, by considering the teaching of tools.

Proceedings of the Electroacoustic Music Studies Network Conference
Meaning and Meaningfulness in Electroacoustic Music, Stockholm, June 2012
www.ems-network.org

Tools

In decades past, one only had access to the tools of electroacoustic music in the studio, access to which was generally of extremely limited duration. As a result, one spent one's class and studio time learning the use of the tools, and the basic methods and techniques. Today, however, interested students have ready access to even the most powerful tools on their laptops, and have potentially been toying with them in their spare time for years before ever arriving in a university classroom or studio. Many of the basic traditional tools of electroacoustic music are now freely available to even very young children on their portable gaming devices or mobile phones; children sometimes as young as five or six are quickly fluent in basic electroacoustic transformations and possibilities through the use of play-oriented sound apps. As a result, the classroom environment need no longer be used simply as a workshop for learning the tools, although of course many questions of good studio practice still need to be taught and passed on to students.

Techniques

Next let's move on to the teaching of techniques, which are equally problematic. Electroacoustic techniques are initially determined to a significant extent by the tools used: What can we do with sound on tape? What can we do with sound once it is converted into a voltage? Or once it is converted into ones and zeros?

It is, of course, tempting to say that these questions have disappeared, but in reality it is primarily that the last of these three has absorbed the other two, due to its ever-increasing speed, power, and most of all, convenience.

By and large, however, new digital tools continue to be unnecessarily defined and limited by old restrictions of tape and voltage, and technique is thus guided along a similar path. We find software with montage paradigms wholly defined by archaic techniques of tape editing, and approaches to electronic composition still focused on methods once defined by the electronic circuitry with which it was produced. We are all aware, I think, that the tool you use guides, and sometimes even defines, the way you work, and therefore these are not issues that should be taken lightly. Software that mimics older tools in many ways makes it easier to carry traditional electroacoustic techniques forward, but it also nearly guarantees that we will simultaneously and unnecessarily import a huge number of limitations and restrictions in method, in vocabulary, in technique, and so on, just at a moment when the lifting of such limitations becomes possible, and potential avenues to new approaches open up to us.

Our priority, in effect, should not be to ensure the successful carrying forward of prior methods. The road to fresh artistic creation from our students is found by keeping open all the possible doors to change, development, new methods and new ideas. Stubbornly clinging to older paradigms of tool and technique has the capacity to keep those doors closed. So does a focus on the teaching of electroacoustic tools in general, as existing tools necessarily carry with them the biases and preconceptions of their makers.

I am not, however, suggesting that we should simply halt the teaching of electroacoustic tools and techniques. These continue to be relevant, but I would argue that, rather than being themselves valuable goals of educational pursuit, they are instead important in helping to provide a better understanding of electroacoustic language, which is, I believe, a critical cornerstone of electroacoustic education.

Proceedings of the Electroacoustic Music Studies Network Conference
Meaning and Meaningfulness in Electroacoustic Music, Stockholm, June 2012
www.ems-network.org

Language

The language of electroacoustic music – its vocabulary, how it is structured – is a constant evolution which cannot be understood without knowing its roots and its main branches. To compose electroacoustic music today, it is extremely useful to have a thorough understanding of the primary styles and genres to date, their materials, and their formal and structural mechanisms.

However, the language of electroacoustic music did not emerge fully formed from the void; it is part of an endless, mutually-informing cycle between tools, techniques, and language: the tool determines technique; tool and technique outline a range of possibilities, which then determine the language; which then determines the direction for further development of tools and techniques, and so on, in a cycle that is constantly feeding back in relations between all three terms. Thus, the languages, structures, vocabularies and genres of electroacoustic music today are, to a very important degree, products of the tools and techniques with which they were made, and with whose evolutions they are inextricably entwined.

In fact, if we consider some of the primary tools, techniques, and languages, this interdependence becomes very quickly apparent. It is difficult to imagine adequately teaching a given tool, technique, or language, without a thorough account of at least one or two items from each of the other two categories. For example, it is largely pointless to consider *elektronische Musik* without simultaneously considering certain forms of synthesis, or to teach *musique concrète* without some familiarity with basic editing techniques.

The reverse, however, is more pointless still: full and detailed instruction in the use of a tool cannot in and of itself be called electroacoustic pedagogy. For example, one comes no nearer to understanding aleatoric music or the relevance of Cage's 'Williams Mix' by learning to cut and splice tape.

At times, this relationship between tool, technique and language is so closely symbiotic that it becomes difficult to determine where one ends and another begins. It is also interesting to note situations in which a technique is so closely connected with a particular language that one cannot imagine its use elsewhere without significantly altering its identity. For example, 'granulation' is inextricably linked with stochastic methods, while 'shuffling' is common as a tool of *musique concrète* and acousmatic music; yet, despite in principle being very similar techniques, their intimate association with extremely divergent languages leads to such dramatic differences in the details of their use that it becomes difficult to claim them as one and the same method.

But, to return to our argument. Let us imagine for a moment that we have in fact become liberated from historical tools, thanks to the supposed freedom of the age of the laptop. In this case, do the languages associated with these previous tools continue to be relevant? Or does the teaching of the languages of electroacoustic music amount to no more than a history lesson?

On the contrary, the teaching of the languages of electroacoustic music – past and present – remains critical, but perhaps less in order that these languages can be continued and maintained, but rather, primarily to provide a critical understanding of context. It is important for a student to recognize the precedents of their current work, to avoid, for example, constantly reinventing the wheel, unknowingly creating 'new' electroacoustic methods and languages which are, in fact, simply restatements of older paradigms using more recent tools

Proceedings of the Electroacoustic Music Studies Network Conference
Meaning and Meaningfulness in Electroacoustic Music, Stockholm, June 2012
www.ems-network.org

or otherwise adjusted contexts. One could facetiously propose here that students must know electroacoustic languages not in order to know how to compose, but rather to know what not to compose.

However, in all seriousness, we are not here trying to imply an insistence on constant compositional innovation or creative revolution, but simply on the need for students to have some idea where their work resides in the broader electroacoustic context. Students need the ability to reference past and existing electroacoustic languages, to move fluently and knowingly between and within these languages when necessary or desirable, and, perhaps most importantly, when and how to leave them behind.

Moving Forward

To remain relevant, however, electroacoustic music pedagogy needs to provide more than just history's lessons on 'what to avoid' and a general sense of context. Instead we must seek to foster and nurture a musical culture which is relevant to today's conditions, today's tools, and today's cultural reality. Institutional contexts are perhaps losing some of their potency, as knowledge and resources become more widely accessible; electroacoustic creation has moved out of the studios, and into our bedrooms, our studies, even into our parks, our backyards, our sidewalks – pretty much anywhere. And electroacoustic reception changes just as quickly as the practice of its creation: out of the concert hall, and into our headphones, at a time when most of the corpus of electroacoustic music can be handily contained in one's pocket, and when musical genres bubble up and burst forth from the dams that once kept them separate, reaching listeners and audiences with much less regard for prior constrictions of culture, transmission and distribution. Technology, for both creation and reception, moves ever more rapidly towards the small-scale, the portable, and the personal. Such trends in both creation and reception to some extent call into question the role of institutional learning contexts, at least as traditionally conceived.

One possible answer here is to concentrate on precisely the kind of larger-scale resources which are not within the means of the average individual – for example, the power of large-scale loudspeaker arrangements, larger-scale studio work, the community experience of the concert context, and so on – in order to deliberately position institutional electroacoustic learning as a welcome counterbalance to general trends. On the other hand, there is also the risk that too great a focus here may prove somewhat alienating, lending fuel to cries that electroacoustic music institutions are somehow out of touch, which could become a factor in the slow erosion of electroacoustic music as a viable culture. In which case electroacoustic pedagogy has everything to gain by highlighting and embracing personal experience, and personal creation – the private, the portable, the mobile, and the immediate.

Perhaps this, then, offers the strongest choice of direction for electroacoustic pedagogy: to understand, accept, encourage, and even emphasize new contexts and new paradigms in both creation and reception. Personal expression, personal reception, personal experience; smaller-scale creation, and smaller-scale listening... Electroacoustic pedagogy must therefore break out of the studios and out of the concert halls, while nevertheless maintaining these as vibrant alternatives.