

# PERFORMATIVITY AND INTERACTIVITY: CONCEPTS FOR FRAMING THE PEDAGOGY OF MAKING

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## ABSTRACT

This paper describes the production of a space for making within the context of undergraduate music training. It outlines attempts to develop an integrated conceptual and pedagogical framework for making electronic music. It maps practical responses to the problems at the centre of the development and delivery of a second-year undergraduate subject in music technology entitled *Machine Musicianship*. Its central conceit is that concepts and problems can be productive and stimulate creativity.

## 1. BACKGROUND

Tertiary music technology education is characterised by a great diversity of pedagogical methods, from theory-first approaches, to creativity and composition-led; from the rapidly disappearing one-on-one, to collaborative, group-based and student-centred models (Brown and Nelson 2014). As an arts practice discipline, music has also been caught up in sector-wide trends towards reduced funding and standards-based assessment practices (Tregear 2014; Morgan 2004).

This paper describes the production of a space for making within the context of undergraduate music training. It outlines attempts to develop an integrated conceptual and pedagogical framework for making electronic music. It maps practical responses to the problems that have arisen during the development and delivery of a second-year undergraduate subject in music technology entitled *Machine Musicianship*.

The problems that define such an undertaking include but are not limited to the following: how to orient students towards an experimental approach to music making where the lines between performer, composer and instrument builder are blurred; how to assess diverse musical outcomes and approaches where the results may not make for pleasant listening; how to encourage risk taking but value skills exploited in presenting work of quality; how to encourage concept driven work that develops the artist's independent voice; how to value contextualisation within broader historical, contemporary, global and local cultural practices; how to express a set of explicit and inclusive musical values that avoid invoking the musical prejudices of assessors and that are not opaque to students.

A response, in part, to these questions in the context of the *Machine Musicianship* subject is encapsulated in the problematic of performativity and interactivity, a pair or series of pre-paradigmatic concepts that are explored, developed and evaluated in the design of the subject's content, delivery and assessment. These problematic<sup>1</sup> concepts are taken up as assessment criteria that are explored in student-centred group learning activities that are intended to provide a demonstrable link between the learning outcomes for the subject, the content of the unit, in particular as stimulus for creative strategies and technical designs, and linked into an assessment framework.

## 2. A CURRICULUM FOR MAKING COMPUTER MUSIC

The subject under discussion is the fourth in a sub-major sequence in sound technologies delivered as part of the Bachelor of Music at Western Sydney University (formerly UWS). Over three successive semesters students are introduced to a range of potentially challenging repertoire from the twentieth and twenty-first centuries. These exemplars are intended to challenge their listening assumptions, open a discussion on the nature of contemporary music, introduce them to canonical works that enable them to engage in an informed way with the discourse of electronic music, and provide them with examples of how the practical topics in music technology that they are being introduced to relate to the practice of composers and performers.

The practical techniques covered in the first two semesters include conventional methods in stereo recording, MIDI sequencing, sound synthesis, and approaches to composition. These techniques are assessed in the context of practical projects framed by mainstream creative tasks such as performance documentation and production, sound design for sonic branding, and production music composition. These musical ideas are accessible to most musicians entering an undergraduate program. However, in what is probably a fairly standard approach to university-based music technology training, during the second semester students are stretched by being forced through assessment task descriptions to engage creatively with the everyday

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<sup>1</sup> The term problematic is borrowed from Gilles Deleuze's reading of Kant in which problematic Ideas provide a "systematic unity" to an enquiry without expecting solutions or answers (Deleuze 1968/1994, pp. 168–169).

sound environment as a source for musical material that they must select, collect and with which they must compose.

The third semester offers an introduction to conventional multi-track studio techniques that allows students to develop skills that many identify as being important to them at the time of enrolment for higher education and that facilitates the development and presentation of their work in composition and performance subjects and enables them to produce a portfolio of recorded work that may be useful in establishing their professional careers. Interestingly, many students choose in this context to develop the more experimental approaches to the use of a broad range of sound material that they have been introduced to in their first year. These approaches could loosely be characterised as soundscape and acousmatic composition.

Throughout this process several forms of scaffolding (Sawyer 2006, p. 11) or staging (Collins 2006, p. 52) are taking place. Firstly, techniques, terminology and listening strategies advance hand-in-hand, each building on the other and enabling greater technical facility and access to effective methods of discourse and creativity. Secondly, the criteria that are offered to assist students to target their effort and by which students are assessed are introduced in stages in order to set standards and expectations that progress throughout the subjects. Criteria are aligned explicitly with assessment task descriptions and learning outcomes for the subjects. At first year level students are introduced to simple objective measures of audio production quality and the listening skills associated with their aural identification and description; the need for organised and systematic presentation of materials; academic referencing standards to encourage reading, listening and attribution; the development and expression of coherent conceptual frameworks for creative work; and a concern for musical form. These criteria and associated standards descriptions start with simple values and build and integrate as students progress through the curriculum.

This approach is not novel and has become best practice in higher education (Morgan 2004; O'Donovan, Price, and Rust 2004). The criterion and standards based assessment approach has been evaluated within the context of the curriculum described above (Blom, Stevenson, and Encarnacao 2015). As noted in that evaluation, many students use this scaffolding to target their efforts but many choose to ignore the institutional context of their learning. Many students aim just *to get through* while balancing the demands of earning an income and maintaining themselves and their families.

### 3. SUBVERTING THE ASSESSMENT FRAMEWORK

In an effort to achieve some of the pedagogical objectives outlined earlier the criterion and standards-based approach is somewhat subverted at the point that students reach the fourth semester. These pedagogical

objectives include the production of a space for making within the context of undergraduate music training; orienting students towards an experimental approach to music making where the lines between performer, composer and instrument builder are blurred; encouraging risk taking; encouraging concept driven work that develops the artist's independent voice; and valuing contextualisation within broader historical, contemporary, global and local cultural practices. To achieve these objectives the learning environment is designed to develop what is known in the educational literature as *a community of practice* (Collins 2006, p. 51). This community shares a common set of goals including passing the subject and making music. Learning activities are structured so that students are thrown together to share and facilitate each other's learning. Social media is employed to stimulate an authentic sense of community and the normalisation of the learning experience<sup>1</sup>.

The software tools employed in the subject present a problem and a challenge to this community. The media-programming environment Max/MSP (now simply Max 7) is alien, in some ways archaic and is difficult to learn. It harks back to a time when computer musicians had to build their own tools. It does encourage music making outside of the conventional musical paradigms. In truth however, new tools often appearing on tablet computing platforms are rapidly subverting these paradigms. In addition to allowing students to participate at some level in this subversion, the use of a patching environment is intended to develop some form of digital literacy (Jenkins 2009) without the need to write code. To this end it encourages systematic and programmatic logic, and a non-linear approach to music production.

A difficult and unaccommodating software environment is not the only problem that binds this community of practice. In addition to giving an introduction to music programming in the patcher environment, the subject aims to provide a conceptual understanding of interactive or responsive sound works, a practical understanding of performance interfaces for digital instruments and an ability to design, plan, realise and assess substantial creative projects. Problems proliferate and become a normalised part of work with music technology. A conceptual problematic defined by two key problems is embedded at the heart of the subject and expressed within the assessment rubric through which students must attempt to gauge their own progress and by which their assessors must evaluate their achievement. The two concepts of *performativity* and *interactivity* are explored throughout the subject and are tested for their ability to stimulate and produce new and interesting solutions in the form of creative works.

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<sup>1</sup> In the last two years 98% of students enrolled are active users of facebook, whereas usage of the University's learning management system is limited. facebook usage has waxed and waned over the years.

#### 4. WHAT IS PERFORMATIVITY?

The concept of performativity comes from the philosophy of language (Austin 1962, Searle 1979) and has since been adopted in a range of critical and cultural theory (Butler 1997). In the philosophy of language a performative utterance is one that brings a state of affairs into existence. This usually relies on an institutional context. Examples include the recitation of marriage vows and a proclamation by an authorized celebrant that produce a marriage in the act of speaking. Performativity links performance with creation, a concept not unknown the world of music, particularly in improvised performance. An improvisation is a unique instance of a musical work. Even in scored music a performance can be considered as an ontologically distinct token of a particular musical type that is brought into existence by its rendition in performance (Wollheim 1980; Wetzel 2011).

How then does performativity become a problem in electronic music performance? Electronic sound reproduction replaces the necessity for performance in the presentation of music. This challenge to the notion of electronic concert music was realized by the pioneers of electronic music in the middle of the twentieth century who sought a means to integrate some element of performance in the presentation of their music (Manning 2003). An aspect of musical authenticity is related to the production of sounds in real-time and this issue affects audience reaction to the performances of DJs as much as it does those engaged in experimental electronic music (Auslander 1999; Moore 2002, Emmerson 2007). One of the aims of new musical interfaces is to enable expressive and visually engaging musical performances (Paine 2015) that retain some of the embodied aspects of traditional instrumental performance.

Each compositional or performance strategy might be situated somewhere along a continuum of performativity where at one end is located the playback of fixed works and at the other are located works generated by real-time synthesis with continuous parametric control over the production of sound. An analysis of performativity in electronic music would likely reveal a great variety of approaches that would not sit easily on a single dimension. For example, real-time synthesis can be expressive and nuanced on a micro-scale, whereas interaction can produce variable structures on a larger scale. Highly engaging and successful musical works can easily combine more-or-less fixed sequences of material that are augmented by dynamic and expressive performance gestures on a limited range of vocal, instrumental or ornamental resources. There are no simple rules for performativity, however it is an easily understood value linked to the concept of authenticity and a useful way of problematizing electroacoustic music performance and stimulating creative design responses to the development of performance interfaces.

Performativity is expressed as an evaluative criterion with the subject documentation with the use of descriptive text associated with standards of

performance. This text includes the following elements from poor performance to outstanding:

- Does not engage with the patcher environment as a performance or composition tool
- Mainly pre-recorded material and playback.
- Relies heavily on preproduction, or, comprises large blocks of pre-made material.
- Good balance between preproduction and real-time structuring on macro and micro scale.
- Most sound material or structures created in performance, strong link between performance gestures and sonic material.
- Highly nuanced technique and expressive performance.
- Unique realization created in the moment.

#### 5. WHAT IS INTERACTIVITY?

Interactivity describes a situation where two elements within a system respond to each other in more-or-less predictable ways. Artist and academic Garth Paine (2002) surveys a number of models of interactivity relevant to experimental musical practice. He initially discounts merely responsive systems such as DVD player which responds to a button press. Citing Todd Winkler he introduces a three level model of interactivity:

- The conductor model in which a central musical intelligence commands a group of responsive performers coordinated by a score.
- The quartet model in which each player responds to the others, moment to moment with a form of organised but distributed musical intelligence that is coordinated by a score. Control can be subtly shifted from one player to another.
- The improvisation model in which the musical structure and be modified within an agreed framework and control is deliberately passed from one member to another.

Another model is that of the conversation in which each party responds to the less predictable contributions of the other with more-or-less spontaneous, novel and engaging results. As we can see interactivity and performativity are closely related concepts. They are both tied up with agency and novelty. Interactivity may be associated with stochastic algorithmic processes, with aspects of artificial intelligence, or with physical interfaces that present a wide range of control possibilities.

Interactivity is expressed as an evaluative criterion within the subject documentation with the use of descriptive text associated with its own standards of performance. This text includes the following elements from poor performance to outstanding:

- “Press to start” where no machine agency is present.

- Simple control systems inhibit expressive potential or variation in performance or limited machine agency.
- Adequate control and interaction or well developed algorithmic complexity.
- Effective interaction with performance system or sophisticated algorithmic material.
- Novel performance interface, interaction with sonic material or audience.
- Outstanding integration of acoustic and electronic elements.
- Advanced and expressive performance system.

## 6. CONCLUSIONS

The concepts of interactivity and performativity are debated by students and found to be unstable and problematic. They challenge students as composers and performers and stimulate creative responses to the challenge of developing novel musical responses in the context of exploring new software. Situating these concepts within the assessment framework opens the possibility or necessity of negotiation or demonstrating a claim for the validity of their own solutions to the assessment task requirements. This potentially shifts the authority from the assessor to the student and enhances their agency in their own learning and creativity. Of course many students prefer to ignore the institutional context and focus on their personal interests and needs, or find the notion of unresolved problems unsettling, but for some the challenge of new tools and new concepts is highly productive. This approach is intended to realize the ways in which concepts can produce a space for creativity and making.

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