Collaboration and Coordination in the Creation of New Music

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Abstract

Christopher Redgate is developing a new oboe for the 21st century and is working with composers to develop new music for the instrument. This article addresses the early stages of his collaboration with Sam Hayden. It demonstrates some of the coordination problems at the inception of a project that includes an instrument with a long history. The article sets out some of the ongoing concerns in documenting this work, arguing that the oboe itself is one of the principle forces shaping a collaboration that is future-focused.

Some research pursues trajectories designed to have impact on timescales that outrun an individual researcher’s lifetime. One famous case – the ‘Pitch drop experiment’ [1] – demonstrates the fluidity of a material commonly conceived as sluggish, even if there have been only eight drops since the experiment began in 1927. Its title paradoxically puns the word ‘pitch’, describing the design of the experimental architecture itself – which suspends a funnel of the liquid at the apex, or pitch, of a tripod – and also the experiment’s mechanics (the ‘pitch’ may be said to measure ‘the distance between any two successive identical parts in a series’ [2]). It is appropriate that an experiment started in the same year as the publication of Fillia’s futurist ‘Sensualità Mechanica’ [3] should seem to reveal matter’s quickness. The experiment continues alongside other long-running experiments, such as the Clarendon Dry Pile, the bells of which have been resounding since 1840, struck by a small metal sphere oscillating at a frequency (or pitch) of approximately 2 Hz [4].

Such experiments are ongoing, and therefore look forward in anticipation of results that will emerge from future analysis, and it is the longevity of the process itself that is most striking, since each phase of the experiment is less impressive than either its history or its projected continuation. These experiments are guaranteed their place in display cases (in Brisbane, Australia and Oxford, England, respectively) due to the tension between the novelty of their setups (however old fashioned they now seem) and those setups’ durability.

The to-ing and fro-ing that these experiments convey is also present in the work that characterizes musical instrument design, particularly when that involves an instrument with a long history and that is being used at the forefront of new music in a new collaborative architecture.

At present, Christopher Redgate is developing a new form for the oboe. He is working with the manufacturer Howarth of London to invent new keywords and this is honing new techniques for playing the instrument; he is also securing the continuation of the oboe’s lineage by innovating in response to the oboe’s repertoire, rather than abandoning the instrument’s defining features. More particularly, he is developing the English, thumb-plate oboe, which first deviated from other European models when Apollon Marie Rose Baret established his career in London in the 1840s and 1850s, performing at the Royal Italian Opera (now Covent Garden) and teaching at the Royal Academy of Music, the same institution within which Redgate’s research is taking place.

My project, documenting Redgate’s changes to oboe design, speeds through the oboe’s history by tracing significant points in the evolution of present oboes (which are not uniform) and slows down the ideas about the current uses made of the oboe by writing about collaborations between Redgate and several composers, as they are undertaken [5]. The oboe’s history is recovered by all the composers with whom he is working, since they are all aware of many already-composed works for the oboe and they all pick up aspects of those compositions in their current work. Focusing on the current uses of the oboe’s anachronisms aims to enliven the oboe itself, in collaboration with Redgate as the instrument’s performer. Similarly, his innovations extend from the capabilities of the ‘standard oboe’.

Redgate’s changes to the oboe’s mechanism are, at a local level, already in operation, since he has a version of the new oboe model, and he is working with composers to make the most of the alterations that he has made. The composers are all keen to write for the new instrument and to extend their previous work with Redgate and his previous oboes. The composers involved – including Richard Barrett, Sam Hayden (the composer on whom this article will linger), Brian Feneyhough, Michael Finnissy, Dorothy Ker, Roger Redgate and Edwin Roxburgh – all write notated scores that are designed to be performed beyond the life of a specific player, and most have publishers whose financial viability relies on at least some works entering ‘the repertoire’ and being performed beyond the initial collaboration. If the works being composed are playable only on the ‘Redgate Model’, then this model will need to become widely used. Similarly, the list of composers is prestigious enough that their already secure position in a canon of composers helps to ensure that the new oboe will gain currency. A similar situation has existed for new techniques that necessarily accompany a new oboe: Mozart was not the first composer to write a ‘top F’ [6], nevertheless it is his quartet that is remembered as securing that pitch as the upper reach of the (mostly unmechanized) instrument, standardizing the pitch’s use.

Redgate’s current technological work includes new techniques and mechanical advances. The composers, such as Sam Hayden, are pushing the boundaries of what constitutes standard practice. For Redgate, working with Hayden pushes him to come up with new ways of playing the oboe, and for Hayden, working with Redgate raises new compositional possibilities. But this collaboration also includes things beyond a composer and a performer, most obviously an oboe and a laptop [7]. The oboe’s new capabilities are largely undocumented, and the composer is taking part in the taxonomic task through the composition process, with the score, performances, recordings and other outcomes documenting some of what is possible.

The laptop is crucial to Hayden’s work in various ways. For example, he is using the laptop as an instrument in the compositional process to produce pitch fields according to ‘controlled random algorithmic processes’ that he has written [8]. This process is improvisatory, with Hayden choosing from the material produced according to his musical tastes. This is, of course, a non-linear process, given that Hayden wrote the algorithms to achieve certain results and that he is altering the algorithms’ output throughout the process. Nevertheless, it is the artificiality of the software, however aestheticized that artificiality becomes, that is a tool for composition. This process produces material that is distinct from the oboe’s ‘acoustically-derived’...
spectra, which take the form of multiphonics – specifically those that are unique to the new oboe, and which have been documented by Redgate and subsequently analysed by Hayden. Significantly, the pitch content of multiphonics has not directed oboe design at any stage, and therefore is a prime example of a noninstrumental aspect of the oboe’s development.

Hayden is also using the laptop and its software (in this case, IRCAM’s OpenMusic) as a way of transforming the ‘given’ multiphonic spectra that the oboe produces. These acoustically-derived spectra can be used to filter the computer-generated spectra, or the two can be combined to form new spectra. In both cases new amalgams are formed.

In their second meeting in the development of the composition, Redgate responded to Hayden’s improvisatory demonstration of algorithmically-derived spectra by improvising multiphonics that contained similar non-tempered intervals. Given that oboe design has aimed to make the instrument ever more ‘in-tune’, the ability of Redgate and his oboe to produce multiphonics so similar to the algorithmically-derived spectra demonstrates how little the oboe’s design has restricted its possibilities, especially when performed by someone as virtuosic as Redgate. It also calls into further question notions of artificiality mobilised in the meeting. The oboe’s flexibility derives from its complexity, its multifaceted capabilities tied only loosely to the intentions of its designers, and in this case scarcely at all; Redgate utilises this complexity through his skill as a performer to reassemble Hayden’s separation of ‘acoustic’ and ‘algorithmic’. Such a move brings together the performer, his oboe, the composer, and his laptop.

The collaboration between Redgate and Hayden demonstrates a way of working through some old assemblages, especially those that have brought together the composer and their score separately from the performer and their instrument. For example, Hayden states that his methods usually begin with a tension between ideas that ‘start with the instrument’ and those that ‘start in a very theoretical way and then gradually go from this [software-based way of working]’. Although these two approaches are distinct, they are only fully in opposition if either: the oboe is considered as an intermediary (an ‘instrument’) in a performance of a composer-derived idea that is itself considered to be, in some sense, organic; or if the oboe is also a mediator (a ‘noninstrumental’ thing), which theoretical work inevitably fails to master. Both discourses run uncomfortably close to the oboe’s nineteenth-century designation as pastoral [9]. But reading Hayden’s comments in opposition downplays the importance of, for example, the word ‘start’ and the way that it ruffles, leaps and overthrows the divergence of the two approaches. Indeed, to focus on this opposition loses sight of the bulk of their meeting, which is mostly improvisatory, and at this stage directed towards the oboe and to finding and documenting new possibilities rather than to a concert performance or notated score.

That is, Hayden’s comments go to the coordination problems of working with Redgate and his oboe, and they refer to a process that begins in medias res and remains heterogeneous, rather than a process aimed at achieving anything essential [10]. With Redgate demonstrating so many pitch possibilities the problem for Hayden is pragmatic: how can a pitch gamut for a composition be limited? This problem is, for Hayden, a distributed one: ‘In this piece in particular, because it’s around this new instrument [...] I want that [oboe] to become part of the process.’

The limits are being defined: by algorithms and the machinery that renders them audible; Hayden’s aims for the piece, the possibilities that Redgate demonstrates; and the oboe’s shifting capabilities. The oboe itself is also a complex site of keywork, made of wood carved into shapes repeated with differences by centuries of manufacturers, changed byoboists and manufacturers according to the demands of its repertoire and the possibilities of its materials, and sounded by performers whose technique has developed in association with others over long periods of time. Redgate, like manyoboists before him, is working with a manufacturer to direct design to make the performance of existing repertoire less difficult.

Changes to the oboe are also directed towards unknown and unconceived music. To direct these speculative paths he is working with composers to open up new sonic resources and collaborative possibilities through the discovery and documentation of the oboe in improvisatory meetings alike, noting its shifting form, some elements of which become notated in printed scores. The coordination problem, then, extends beyond such as is needed for a specific piece (still untitled, and still a work in progress). It also extends from a specific composition (including the collaboration by which it is composed), contributing to speculative directions for further innovation in oboe construction.

More than just composer/performer encounters, this collaboration looks to the future and the past. The former in the changes in the oboe’s capabilities, the latter through the explanations that Redgate frequently gives about how the oboe – and his technique – works. This research includes (financially as well as collaboratively) Hayden as one of several composers. The coordination problems are mobilised in the connections that both Hayden and Redgate make to past repertoire and earlier ways of working. They are also problems that are being reformed through speculative instrument design and techniques for working based on fluid innovations.

References and Notes
7. These remarks are made from my observation of a meeting that took place on 5 August 2011 between Sam Hayden and Christopher Redgate. All quotes are from this meeting.
8. Hayden: ‘prototypes, of course’.