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Floris Schuiling (Utrecht University) and Emily Payne (University of Leeds)

The Textility of Marking: Performers' Annotations as Indicators of the Creative Process in Performance

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Abstract

Musicology's performative turn was formulated in opposition to the disciplinary dominance of music notation in favour of a focus on the creativity of performers. However, scores are a central part of many musicians' creative work, and a complete conception of creativity in performance should take this centrality into account. This article investigates performers' uses of notation, particularly annotation, in both composed and improvised musical practices. Using observational methods, we examine how performers engage with their notations and how this engagement resonates in their creative processes. By approaching the score as a concrete material object rather than a representation of an abstract structure, we move beyond a paradigm that opposes notated permanence to performed and/or improvised transience. Drawing on anthropological work on artistic production, creativity, and improvisation, we propose an understanding of (an)notation as integral to the forms of imagination, creativity, knowledge, interaction, and even improvisation that occur in music-making.

One of the most important developments in current musicology has been a disciplinary turn towards performance as the defining element of music. There is a growing body of research investigating the multi-layered forms of social and distributed creativity inherent in the practical processes of making music.[1] Moreover, more than just a change of subject, this turn

[1] See, for example, the activities of the AHRC Centre for Musical Performance as Creative Practice; Georgina Born, 'On Musical Mediation: Ontology, Technology and Creativity', *twentieth-century music*, 2 (2005), 7–36; Eric Clarke, Mark Doffman, and Liza Lim, 'Distributed Creativity and Ecological Dynamics: A Case Study of Liza Lim's *Tongue of the Invisible*', *Music and Letters*, 94 (2013), 628–663; Eric Clarke, Mark Doffman, and Renee Timmers, 'Creativity, Collaboration and Development in Jeremy Thurlow's *Ouija* for Peter Sheppard Skærved', *Journal of the Royal Musical Association*, 141 (2016), 113–165; Nicholas Cook, *Beyond the Score: Music as Performance* (New York, NY, and Oxford, 2013); Keith Sawyer and Stacy DeZutter, 'Distributed

towards performance has involved a rethinking of some of the fundamental assumptions of the discipline. Crucial to this shift has been the deconstruction of the notion of the musical 'work' and the questioning of the centrality of notation in musicology.[2] Georgina Born summarizes this work-centred approach succinctly: 'The ontology of the musical work envisions a hierarchical assemblage: the composer-hero stands over the interpreter, conductor over instrumentalist, interpreter over listener, just as the work ideal authorizes and supervises the score, which supervises performance, which supervises reception.'[3] Although musical notation may be seen to fulfil both a descriptive and a prescriptive function,[4] it is the former function—in Nicholas Cook's words, the 'ocularcentric identification of the score with what the music is'[5]—that has dominated discourse and practice.

These developments have been vital in dislodging some stubborn preconceptions in the study of music. However, they raise questions about what the role of notation in such a performance-based musicology might be. For many musicians, notation is an important aspect of their creative practice, but it is difficult to address its function because the traditional concept of notation is methodologically at odds with studying performance in the first place. Perhaps this is why studies of performers' creativity rarely address the role of notation in the practices under consideration. Formulated in reaction to the text-centeredness of traditional music scholarship, the performative turn is often phrased in the oppositional terms of text versus act, product versus process, or music as noun versus music as verb. Yet a 'work' is not the same as a 'score' and vice versa: could it be the case that this opposition to musical notation is inhibiting a complete view on the creative process? In its opposition to work-

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Creativity: How Collective Creations Emerge From Collaboration', *Psychology of Aesthetics Creativity and the Arts*, 3 (2009), 81–92.

[2] Lydia Goehr, *The Imaginary Museum of Musical Works: An Essay in the Philosophy of Music*, (2nd edn., New York, NY, 2007).

[3] Born, 'Mediation', 34.

[4] See also Mieko Kanno, 'Prescriptive Notation: Limits and Challenges', *Contemporary Music Review*, 26 (2007), 231–254.

[5] Nicholas Cook, 'Making Music Together, or Improvisation and its Others', *The Source: Challenging Jazz Criticism*, 1 (2004), 5–25 at 21.

centred thought, does this concomitant opposition to notation too readily accept the characterization of scores as 'determining' performance?

In this article we wish to soften binary oppositions such as text versus act by investigating how musicians engage with notation in two apparently contrasting musical practices. In particular, we investigate how annotations play a role in creative processes in rehearsal and performance. Score annotation is a widespread practice to the extent that it is rare to find a performer's part that does not contain them in some form. Performers spend varying degrees of time working with their scores, contributing additional markings, cues, and amendments, sometimes so much so that their working parts become 'elaborate hybrids'[6] that bear little resemblance to the original text. Annotations present a useful way of approaching the position of the score in the creative process, as they might be indicative of performers' working practices and formation of knowledge, as well as the negotiations of the hierarchies that traditionally pervade composer-performer relationships.

Musicians' additions to manuscripts have long been a focus of musicological interest, for example, the palaeographic study of Medieval fragments, palimpsests, and marginalia; investigations of compositional processes through the study of composers' sketches; and the use of performers' or conductors' performing materials as sources of evidence for performance practice.[7] Yet, there have been only two empirical investigations of the annotations of contemporary performers.[8] Meghan Winget's taxonomy of annotations

[6] Amanda Bayley and Neil Heyde, 'Communicating Through Notation: Michael Finnissy's Second String Quartet from Composition to Performance', *Music Performance Research* (Forthcoming).
[7] Indicative examples of these research areas include (among many others), Margaret Bent, *Counterpoint, Composition, and Musica Ficta* (London and New York, NY, 2002); Friedemann Sallis, *Music Sketches* (Cambridge, 2015); Robin Stowell, 'The Evidence', in Colin Lawson and Robin Stowell (eds.), *The Cambridge History of Musical Performance* (Cambridge, 2012), 63–104.
[8] Moreover, Nicolas Donin has combined approaches from sketch studies with empirical methods to investigate creative decision-making in composition. See Donin, 'Genetic Criticism and Cognitive Anthropology: A Reconstruction of Philippe Leroux's Compositional Process for *Voi(rex)*', in William Kinderman and Joseph E. Jones (eds.), *Genetic Criticism and the Creative Process: Essays from Music, Literature, and Theatre* (Rochester, NY, 2009), 192–215; Donin and François-Xavier Féron, 'Tracking the Composer's Cognition in the Course of a Creative Process: Stefano Gervasoni and the Beginning of *Gramigna*', *Musicæ Scientiæ*, 16 (2012), 262–285.

approached the practice as a form of information processing and aimed to create library tools for cataloguing purposes.[9] Coming somewhat closer to our present concerns, a short article by Linda Kaastra investigated annotation as a representational system within distributed cognition in ensemble coordination.[10] Although this work was only a small part of a larger study of performers' coordination, her focus on the 'dynamic interaction' between performer and score, where the latter is primarily conceptualized as a 'coordination device rather than a communicative artifact' suggests a performance-centred perspective that resonates with our own approach.[11] Neither of these studies was concerned with creativity as such or with the wider implication of annotations for the ontology of the score. We wish to argue for a *positive* function of notation within the creative process; not as the representation of an abstract structure but as a concrete material object, in order to move beyond a paradigm that opposes notated permanence to performed and/or improvised transience. Musical notation, in all its diversity, is ubiquitous and its presence extends well beyond the boundaries of Western classical music. Needless to say, writing and notation are indispensable tools for generating and disseminating knowledge. Is it possible to describe how scores can function as sources of creative knowledge for performers, while avoiding the discourse of 'reproduction' and its associated 'idea that performance means bringing out something that is already there in the score, composed into it and just waiting to be released by the performer'?[12] Moreover, can notation be understood not just as an object of cognition, but as an integral element of the forms of social and creative interactions that are now seen to characterize performance?

[9] Meghan Winget, 'Annotations on Musical Scores by Performing Musicians: Collaborative Models, Interactive Methods, and Music Digital Library Tool Development', *Journal of the American Society for Information Science and Technology*, 59 (2008), 1878–1897.
[10] Linda Kaastra, 'Annotation and the Coordination of Cognitive Processes in Western Art Music Performance', in Aaron Williamon, Darryl Edwards, and Lee Bartel (eds.), *Proceedings of the International Symposium on Performance Science* (Utrecht, 2011), 675–680.
[11] Ibid. 676.
[12] Cook, *Beyond*, 338.

In order to consider these questions, we present case study material from the two authors' respective research projects: Author 2's investigation of the creative processes of performance undertaken with contemporary clarinettists and their collaborators; and Author 1's work with the improvising collective, the Instant Composers Pool Orchestra. Epistemologically and methodologically, both studies are situated within what Cook terms the 'ethnographic turn' in musical performance studies,[13] which is characterised by the employment of observational methods drawn from anthropology, allowing for a richer analysis of the attributes of live music-making and the experiences of those who make it. Such work acknowledges the contingency of performance on a variety of factors and demonstrates the importance of situating research in 'real-world' contexts.[14] Both studies were concerned with understanding the creative processes of performance in a distributed sense, drawing on methods of observation, interviews, and analysis of fieldwork recordings, to compare how performers in these two different traditions engage with notation through a study of their markings on the scores they use. The former is an example of contemporary Western art music, where performers are often highly specialized in certain instruments and techniques, and regularly work together with composers in the preparation of a piece. The latter represents a different tradition, in which performers with a background in completely unprepared and improvised music have started to use composed elements for the sake of stylistic diversity and to create novel creative possibilities.

[13] Cook, *Beyond*, 255.

[14] See also Bayley's research with the Kreutzer String Quartet and composer Michael Finnissy (Bayley, 'Multiple Takes: Using Recordings to Document Creative Process', in Amanda Bayley (ed.), *Recorded Music: Performance, Culture and Technology* (Cambridge, 2010), 206–224; Bayley, 'Ethnographic Research into Contemporary String Quartet Rehearsal', *Ethnomusicology Forum*, 20 (2011), 385–411); Clarke and Doffman's investigations of creative practice in contemporary concert musics (Clarke, Doffman, and Lim, 'Distributed creativity'; Clarke, Doffman, and Timmers, 'Creativity'); and Frederick Seddon's research into ensemble interaction (Seddon, 'Empathetic Creativity: The Product of Empathetic Attunement', in Dorothy Miell and Karen Littleton (eds.), *Collaborative Creativity: Contemporary Perspectives* (London, 2004), 65–78); Seddon and Michele Biasutti, 'Modes of Communication Between Members of a String Quartet', *Small Group Research*, 40 (2009), 115–137).

In these two practices, the relation of notated material to the music in performance is very different, and so is the nature of rehearsal and preparation. In one, performers use notation as a basis for preparing a more or less 'definitive' version of that piece, while in the other a piece might be introduced into a variety of musical situations already taking place, and its performance might take very different forms in different circumstances. The annotations made by the musicians generally reflect these two different aims. These two examples, with their varying notions of a successful performance and of musical creativity, are by no means exhaustive of the different uses of notation that exist in the contemporary musical landscape. Still, such comparisons can help to highlight how performers relate to notated material, and what their engagement with it can tell us about the role of notation in their creative processes. The differences between the two practices should not be exaggerated however, since although our comparison of these ostensibly distinctive performance traditions is intended to open up the scope of our discussion of notation beyond the area of composed Western art music, the comparison of a 'score-based' performance practice with an 'improvisatory' one is simultaneously intended to complicate the assumptions that govern the use of these terms.

Our argument bears not only on how musical notation is conceptualized, but also on ideas of musical creativity, and in addition to musicological literature on notation and performance we draw on interdisciplinary work in creativity studies, particularly from cultural anthropology. In a paper entitled 'The Textility of Making', anthropologist Tim Ingold criticizes the *hylomorphism* inherent in much thinking about creativity: the idea that to produce means to apply an already existing form to shapeless matter.[15] The work-concept as traditionally employed in musicology is a prime example of hylomorphic thinking, as it detaches and hypostasizes musical form from the materials that make it up. In an attempt to reverse this logic, Ingold uses the image of a weaver: the weaver does not shape threads into a

[15] Tim Ingold, 'The Textility of Making', *Cambridge Journal of Economics*, 34 (2010), 91–102 (reprinted in *Idem*, *Being Alive: Essays on Movement, Knowledge and Description* (Abingdon, 2011), 210–219).

pre-established form, but lets this form emerge by binding together separate threads. That is to say, even with a pre-established design, the process of making is not so much a matter of 'moulding' the material into shape, but of negotiating the motion and the tension of the threads, the various elements of the loom, and the particular characteristics of the fabric. What Ingold calls the 'textility' of creative practice is meant to shift attention to the *materials* used in creative work, and the 'tactile and sensuous knowledge of line and surface' that comes with handling them.[16]

We propose an approach in which musical notation is not understood primarily as a formal model but as one of the materials with which musicians work. As a prime example of the change that the score can undergo in the creative process, we hope that a study of annotation will allow for a consideration of notation in its *textility* rather than its *textuality*. Such a focus includes elements of creative practice that might not be immediately striking in terms of novelty, but this does not mean that they should be taken for granted. As Ingold and Elizabeth Hallam have suggested, to understand creativity as necessarily breaking with an established tradition or convention is to 'read it backwards, in terms of its results, instead of forwards, in terms of the movements that gave rise to them'.[17]

A focus on the textility of creativity also bears on how improvisation is understood. Improvisation has been defined as 'the creation of a musical work, or the final form of a musical work, as it is being performed.'[18] Leaving aside the problematic use of the term 'work,' a central argument of the performative turn has been that all music is to some extent created as it is being performed.[19] Clearly, this definition relies on a tacit clause that might read as 'as opposed to being determined in the form of a composition or framework in

[16] Ingold, 'Textility', 92.
[17] Tim Ingold and Elizabeth Hallam, 'Creativity and Cultural Improvisation: An Introduction', in Elizabeth Hallam and Tim Ingold (eds.), *Creativity and Cultural Improvisation* (Oxford and New York, NY, 2007), 1–24 at 2–3.
[18] Bruno Nettl et al., 'Improvisation', in *Grove Music Online, Oxford Music Online*, http://www.oxfordmusiconline.com/subscriber/article/grove/music/13738 (accessed 1 June 2016).
[19] Cook, 'Making Music'.

advance'. This assumption is also visible in Nicholas Wolterstorff's remark that 'a necessary condition of improvisation is that it *not* be the performance of a work,' a point that he apparently feels needs no further argument.[20] The problem with such characterizations is that they are completely dependent on the 'work-concept' and its associated paradigm of performance-as-reproduction, to which improvisation can be seen to form a constitutive 'other'.[21] Improvisation is equated with innovation is equated with creativity.[22] To use Hallam and Ingold's terms, this understanding reads improvisation backwards rather than forwards.

Hallam and Ingold's arguments are representative of a broader anthropological interest in improvisation considered not so much as a categorically delineated activity, but rather as an element that inheres all forms of human behaviour—an interest partly inspired by Claude Levi-Strauss' distinction between 'engineering' and 'bricolage' as two approaches to practice.[23] As opposed to engineers' goal-oriented planning, bricoleurs make do with whatever is at hand and make novel combinations to achieve their present needs.[24] Annotation, as will be shown in our case studies below, suggests a way of working with music notation along the lines of bricolage rather than engineering, and thus indicates that there are forms of improvisation relevant to the creative process that are not incorporated in conventional understandings of the term—or are indeed antithetical to it.

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[20] Nicholas Wolterstorff, 'The Work of Making a Work of Music', in Philip Alperson (ed.), *What is Music? An Introduction to the Philosophy of Music* (University Park, PA, 1987), 101–129 at 119.
[21] Cook, 'Making Music'. Laudan Nooshin, 'Improvisation as "other": Creativity, Knowledge and Power: The Case of Iranian Classical Music', *Journal of the Royal Musical Association*, 128 (2003), 242–296.
[22] Indeed, models of creativity from a socio-psychological perspective have emphasized the innovative and revelatory qualities of creative process, rather than the more pragmatic activities involved in performing with a score. See (among many others), Margaret Boden, *The Creative Mind: Myths and Mechanisms* (2nd edn., London and New York, NY, 2010); Mihályi Csikszentmihályi, *Creativity: Flow and the Psychology of Discovery and Invention* (New York, NY, 1996); Keith Sawyer, *Explaining Creativity: The Science of Human Innovation* (Oxford, 2006).
[23] Claude Levi-Strauss, *The Savage Mind*, trans. George Weidenfeld and Nicolson Ltd (London, 1972).
[24] We acknowledge that Levi-Strauss' concept of bricolage, like the concept of improvisation, is itself part of a discourse of 'otherness'. Still, it is a term that avoids the oppositionality toward the use of texts inherent in the musicological conception of improvisation. The ethnocentrism of Levi-Strauss' distinction was already famously pointed out by Jacques Derrida in his 'Structure, Sign and Play in the Discourse of the Human Sciences' in *Writing and Difference*, trans. Alan Bass (London and New York, NY, 2002), 351–370.

By describing annotations as 'indicators' of the creative process we mean to highlight their function as what Charles Sanders Peirce would call 'indices', and indeed to emphasize the relation of our approach to these annotations to the basics of Peircean semiotics more generally.[25] The *index* is a sign that gains its signifying function through physical connection, contiguity, or a causal relation to its signified—other elements of his semiotics are the *icon* which depends on structural similarities, and the *symbol* which relates to its signified by convention.[26] The three terms do not so much represent different categories as different signifying functions that may be present to different degrees in any sign. Peircean semiotics in general, and the idea of the index in particular, has the advantage that it does not assume a categorical distinction between linguistic expressions and material objects, like Saussurean semiotics does.[27] Thus, these markings are less significant in terms of what they 'represent' but all the more in the way in which they are entangled in the practical processes of negotiation between musician, score, instrument, composer, fellow musicians, audience, and so on.[28]

An important thread running through our discussion is the tension, briefly alluded to above, between the descriptive and prescriptive functions of notation,[29] each associated with their own respective ontology of music in terms of either product or process. These two functions are inextricable, as staff notation is usually both a 'prescription for action'[30] and a

[25] In using Peirce's concepts to describe musical (an)notation our aims are somewhat distinct from other uses of Peirce's work to construct a semiotics of musical meaning, although we sympathize with the basic aim of locating this meaning in the practices of listening and performing. See for instance Philip Tagg, 'Towards a Sign Typology of Music' in Rossana Dalmonte and Mario Baroni (eds.), *Secondo Convegno Europeo di Analisi Musicali* (Trento, 1992), 369–378; Thomas Turino, *Music as Social Life: The Politics of Participation* (Chicago and London, 2008).
[26] Charles S. Peirce, 'On the Nature of Signs' in *Peirce on Signs: Writings on Semiotic by Charles Sanders* Peirce, ed. James Hoopes (London, 1991), 141–143.
[27] Carl Knappett, *Thinking Through Material Culture: An Interdisciplinary Perspective* (Philadelphia, 2005), 85–106; Webb Keane, 'Semiotics and the Social Analysis of Material Things', *Language and Communication*, 23 (2003), 409–425.
[28] On the application of semiotics to creativity studies, see also Eitan Wilf, 'Semiotic Dimensions of Creativity', *Annual Review of Anthropology*, 43 (2014), 397–412.
[29] Kanno, 'Prescriptive Notation'.
[30] Philip Thomas, 'A Prescription for Action' in James Saunders (ed.), *The Ashgate Research Companion to Experimental Music* (Farnham, 2009), 77–98 at 77.

description of the sounding result. If music analysis has traditionally assumed the descriptive function to be the most important, the perspective of performance studies would seem to be best aligned with the prescriptive aspects, as it emphasizes the moment-to-moment creation of musical form rather than accepting it as already given in the score. However, the annotations that performers make frequently intervene in the descriptive aspect of notation, and it is this physical and tactile engagement with the descriptive side of music that reveals what the textility of music notation signifies. Cook has referred to the two functions and their ontologies as 'two sides of the musical fabric'[31] and 'complementary strands of the twisted braid we call performance'.[32] Performers' annotations, then, may rightly be considered as weaving one into the other.

Case study 1: *To My Father* for clarinet and piano

Annotations can serve as physical traces of the collaborative processes of composers and performers. In a lecture at the Royal Academy of Music, the violinist Peter Sheppard Skærved, Viotti Lecturer in Performance Studies at the Academy and a long-term collaborator with a number of composers,[33] shared with the audience a selection of his heavily annotated performance materials and working manuscripts, which served as the basis for discussion of his working relationships with composers. Some of the annotations were brightly coloured; some were so extensive that the original notation had become illegible to the extent that a replacement part was required. Above all, it was clear that annotations play a crucial role in Sheppard Skærved's creative practice, and serve a variety of purposes, as he articulated in the following comment: 'Some of the things we put on the part are entirely technical and far away

[31] Nicholas Cook, *Music, Imagination and Culture* (Oxford, 1990), 122.
[32] Nicholas Cook, 'Between Process and Product: Music and/as Performance', *Music Theory Online*, 7 (2001), http://www.mtosmt.org/issues/mto.01.7.2/mto.01.7.2.cook.html (accessed 1 Nov. 2014).
[33] Indeed, a collaborative project between Sheppard Skærved and the composer Jeremy Thurlow was the subject of investigation in Clarke, Doffman, and Timmers, 'Creativity'.

from the compositional process; some are learning tools in order to try and assimilate the whole thing, so we have a grip on it.'[34] The metaphor of a performer 'having a grip on a piece' is suggestive of a sense of ownership on two levels: practically, in terms of the facility and skill required to have a technical understanding or 'hold' on the notation; and more subjectively, in terms of the performer's familiarity with and authority over the piece. Sheppard Skærved's distinction between the 'technical' and the 'compositional process' implies that the technical decisions a performer makes (such as choices relating to bowings or fingering configurations, for example) are separate from the decisions made by the composer, distinguishing the roles of performer and composer. Yet, as the following discussion suggests, technical and conceptual additions to the score can be understood as a way in which performers develop an intimacy with their material and take ownership of the music. In this way, they create the musical meaning in performance rather than bringing out a meaning already contained in the score.

The dual meaning of 'having a grip on a piece' serves as the point of departure for this case study, whose object of focus is a collaboration between the clarinettist Lucy Downer and composer Nick Planas on a suite of five pieces called *To My Father* for basset clarinet and piano (2014).[35] Their interactions were documented from a first workshop meeting in October 2013, where Planas' compositional material was trialled for the first time, to the three rehearsals and premiere of the piece in March 2014. In addition, several interviews were undertaken with the participants throughout the process. A second perspective is provided from the clarinettist Margaret Archibald, who performed movements from the piece at around the same time as Downer. The case study provides an opportunity to examine the role of annotation during two stages of the collaboration: first, during the compositional workshop, in which various extended techniques were trialled; and second,

[34] Peter Sheppard Skærved, 'Collaborate!' Seminar, Royal Academy of Music, London, 9 October 2012.
[35] The titles of each movement are: 'Pastorale', 'Romance', 'Czardas', 'Clouds', and 'Calypso Finale'.

during the rehearsal process when the performers were developing their familiarity with the material. The discussion considers how score annotation might be understood in terms of creative ownership within the hierarchies that traditionally structure composer-performer relationships, and at the micro-level interactions between performer and instrument, where the performer was literally getting to grips with the notation and her instrument.

Echoing the distinction that Sheppard Skærved makes between the technical and the compositional, Downer described her role in the collaboration as being largely practically directed, in terms of 'technically *how* to create what Nick wanted on the clarinet, rather than actually *what* to create in the first place.'[36] Planas' view seemed to correspond with Downer's, in that he came to their workshop with preconceived ideas for the composition, seeking to find out 'What was doable and what wasn't'[37] rather than inviting Downer to contribute her own compositional material. Planas is a flautist and clarinettist himself and has composed for the clarinet on a number of occasions in the past, but nevertheless, he expressed his reliance on Downer's knowledge of extended instrumental techniques for the movement 'Clouds' in particular, stating 'I know what I want to get but I don't know how to get it. So it'll be more a case of Lucy sitting in here going "Well I could do this, or I could do that" and me saying "Yes I like that. No I don't like that".'[38] As a consequence, their workshop was composer-led, and focussed largely on considerations of technical detail. Planas sent Downer a 'trial sheet' for the movement, which presented working ideas for the basset clarinet part of 'Clouds'. Downer's interactions with this material open up questions of creative ownership within the collaboration. Before meeting with Planas, she had worked through the sheet and recorded her choices of microtonal fingerings for each note. An extract from her copy is shown in Example 1.

[36] Interview with Nick Planas, 20 March 2014.
[37] Interview with Nick Planas, 26 March 2014.
[38] Interview with Nick Planas, 25 July 2013.

Ex. 1. Trial sheet for ‘Clouds’ (bb. 11–14)

The trial sheet served two functions: first as a tool, both to ascertain whether Planas’ sonic aim could be produced effectively and to act as a ‘key’ to learning the passages (Downer remarked that notating the fingerings helped her to remember them); it could also be understood as fulfilling the role of ‘workbench’, with the notation becoming an object of interaction between performer and composer in the collaborative process, and a means through which material was worked and reworked into a more complete state. Planas had provided some prescriptive indications for fingerings, such as the direction to raise the left-hand middle finger to execute the d½♯[3] in bar 13, but further discussion led him to remove it from the score, favouring the timbral outcome of Downer’s choice of fingerings. Their exchange is transcribed in Figure 1.

Fig. 1. Transcription of workshop (hh:mm), 00:16-00:17, 29 October 2013

Downer’s annotations in Example 1 map her technical relationship to the material at the initial stages of preparing the piece for performance. Interestingly, later on in the workshop she advised Planas to leave out microtonal fingering suggestions, saying ‘Usually you’d expect to find them yourself. [...] The chances are someone else is going to look at that fingering and say “Oh that doesn’t work for me” and ignore it anyway.’[39] As well as emphasising the contingency of such techniques on the particular properties of the instrument and the individual practice of the performer, her suggestion that the fingering indications should be left out entirely so that other performers may find their own ways of realising the

[39] Workshop, 29 October 2013.

music assumes the performer's creative agency from the very beginning of working with a score, which Downer seemed to regard as a totally obvious and unproblematic aspect of the performance process. In the example above, the notation was left open in the final version of the score so that each performer could interact with the score on his or her own terms.

Having examined the role of annotations in the creative engagement between Downer and Planas in the shaping of compositional material, the focus of the remainder of this section narrows to explore how annotations can be a means of problem-solving—or 'learning tools', as Sheppard Skærved describes them—for trying to understand the score's conceptual ambiguities and its practical implications for the performer's physical relationship to his or her instrument. After providing a brief description of the basset clarinet's distinctive mechanism, several examples of Downer's annotations in response to her less familiar instrumental setup are examined.

Planas' choice of instrument had immediate practical ramifications: Downer had not played the basset clarinet before and neither she nor Planas had access to an instrument until the second rehearsal, which took place two days before the premiere. The basset clarinet is an extended version of the standard soprano clarinet, and while their designs are largely similar,[40] Downer was compelled to adapt her skilled practice to the less familiar aspects of its interface, the most striking of which are the additional keys on the lower joint to increase the lower range by four semitones, from e to c.[41] While this supplementary keywork does not appear to be a radical departure from that of its predecessor, it alters the way that the performer interacts with the instrument in subtle yet significant ways. The keywork for the notes e, f, f♯, and g♯ is usually consistent across all models of soprano clarinet: four keys for the right-hand little

[40] For detailed accounts of the development of the modern basset clarinet, see Alan Hacker, 'Mozart and the Basset Clarinet', *The Musical Times*, 110 (1969), 359–362; Eric Hoeprich, *The Clarinet* (New Haven, CT, 2008), 121–122; and Colin Lawson, 'The Basset Clarinet Revived', *Early Music*, 15 (1987), 487–501.
[41] It should be acknowledged that a longer period of rehearsal time with the instrument certainly would have diminished some of the problems that Downer encountered, but the time constraints heightened the urgency for her to re-orientate her approach.

finger, with three[42] corresponding keys for the left-hand little finger. The ability to manoeuvre fluently around these keys, using configurations of the right- and left-hand fingers in an alternating pattern, is an elementary yet integral aspect of clarinet technique. Different models of basset clarinet, however, do not have this uniformity,[43] meaning that the configuration of duplicate keys for the left and right little fingers at the bottom end of the instrument can vary significantly from instrument to instrument. As a consequence, certain sequences of notes that might be easily accomplished on some instruments can only be achieved on others by the performer 'sliding' or 'jumping' the little finger from one key to another on the same side of the instrument, which, at faster tempos can disrupt the flow of the passage and compromise the efficiency of the action.[44] On encountering such sequences the performer must therefore reconfigure what would usually be a very routine and automated action.

The primary performative challenges that Downer encountered in preparing *To My Father* related to the basset clarinet's mechanism. The c♯ and e♭ keys are located on the right-hand side of this particular instrument, with the c♯ key activated by the right-hand thumb, on the underside of the instrument. This meant that some passages could not be accomplished by using the conventional alternating fingering patterns discussed above. Downer articulated the technical difficulties that the keywork presented:

> I suppose the obvious [technical challenge] would be all the extra notes, the e♭, d, c♯, and c, because I didn't know where they were going to be on the instrument. They weren't quite the same as on my bass and I didn't have the alternatives that I'm used to on my bass either. I didn't have an alternative a♭, and c♯ was on the same side as e♭, whereas on my bass it was on the back with the c. So having to learn where they were, so when I went for c♯ I was accidentally getting c[♮] because I was used to that being where it was.[45]

[42] Certain models, for instance those in the Buffet Prestige range, include a fourth duplicate g♯/a♭ key on the left-hand side.
[43] The reason for this variation is that modern basset clarinets were originally developed by extending existing nineteenth-century instruments both from German and French makers.
[44] Problematic little finger combinations on the clarinet are discussed further in Philip Rehfeldt, *New Directions for Clarinet* (2nd edn., Berkeley, CA, 1994), 7–9.
[45] Interview with Lucy Downer, 20 March 2014.

For Downer, it was not so much a case of having to learn new notes, but that her physical perception of where the notes—or perhaps more importantly, *combinations* of notes—lay on the instrument had been obscured. What David Sudnow has described as the expert performer's sense of 'perfect familiarity'[46] with his or her instrument was disrupted, and Downer had to adapt her embodied patterns of fingerings, acquired and internalized over years of practice, to this new and less ergonomic performance situation. As a consequence, she had to direct more conscious attention to the actions of her fingers in order to develop new movements with which she was less familiar. This attention is rendered visible by Downer's annotations in response to three instances of problematic little finger combinations occurring in 'Clouds'. For example, during section I[47] there is a demisemiquaver figure comprising e♭, f♭, d♮, f♮, and d♭ (Example 2).

Ex. 2. Downer's annotations in response to problematic fingering combinations, section I, 'Clouds' (basset clarinet part)

Downer annotated her copy of the score with reminders that the e♭ and the f♭ are both on the right-hand side, the d♮ is on the left-hand side, and the d♭ is on the right-hand side. Two bars later a similar figure is indicated, moving from d♮ to e♭ to c♯ to f♭ to c♮. Again, Downer's fingers had to jump from right-hand e♭ to right-hand c♯. This is followed two bars later by a passage that includes a jump from right-hand e♭ to right-hand a♭ (Example 3), as well as an *accelerando*, indicated by the feathered beaming over the notes.

Ex. 3. Downer's annotations in response to problematic fingering combinations, section I, 'Clouds' (basset clarinet part)

[46] David Sudnow, *Talk's Body: A Meditation Between Two Keyboards* (New York, NY, 1979), 17.
[47] 'Clouds' does not employ bar numbers.

Here, the solution Downer developed prioritized the execution of the notes at the expense of the phrasing and tempo, rearticulating the notes that occurred on the same hand, which although breaking the slur that Planas has indicated, allowed her to execute the note more 'cleanly'. The annotated arrows in the above example correspond to her decision to play these figures at a slower tempo in order to execute them more effectively: the reversed arrow reminds her to delay the *accelerando* until she reaches the particularly awkward a♭.

In considering the relationship between a performer and a less familiar instrument interface, Archibald's perspective on preparing the pieces for performance provides further insights. Her pencilled-in turn figurations on her part of 'Czardas' (Example 4) are gestural reinterpretations of the musical material.

Ex. 4. 'Czardas' (bb. 10–18) with Archibald's annotations (basset clarinet part)

Here Planas' notated turns have been transcribed graphically, with the 'R' in the first two bars acting as a reminder to Archibald to place her little finger on the right-hand c♯'' key from the beginning of the bar (indicated by the horizontal line), in order to achieve a smooth transition to the upper register. For Archibald, illustrating the turn in this way communicated the required gesture more effectively than reading the original notation, and allowed her to direct her focus to the physicality of shaping the turns without needing to read the individual pitches. In this way, the visual dimension of the score influenced her temporal shaping of the figures. Indeed, she commented to Planas that 'If it were written as a turn, you'd play it faster. ... It's because you think "Oh my god I've got to get all of those notes in", so visually it looks as if it ought to be slower.'[48]

[48] Interview with Margaret Archibald, 14 April 2014.

Like Downer, Archibald indicated the required coordination of the right- and left-hand little fingers in passages such as bar 61 of the 'Czardas' movement as the melody swoops down to the lower register of the instrument, but she also included arrows as reminders of the direction her fingers needed to move in, prompts that she described as 'sat nav stuff' to assist with navigating the 'geography' of the instrument's keywork (Example 5).[49]

Ex. 5. 'Czardas' (b. 61) (basset clarinet part, with Archibald's annotations)

Archibald described the arrows as reminding her

> That my right finger has to go up there and my left finger has to go down there! [Laughter] In a word, it's a map! And this [the curved arrow] means, 'Tuck your little finger round to the far right- and left-hand bottom corner you twit!' [Laughs] You see, I'm missing it, because this [the f♯ key] is much further away down the corner than I think ever, so I always miss it. Unless I've recently practised it I always hit one of these, and I need *that* one![50]

The arrows are an instance of gestural reinterpretation of the visual relation to musical notation. These kinds of indications will be familiar to most musicians, but while they might be a widespread and everyday aspect of a performer's practice, they point towards the highly refined physical relationship between performers and their instruments, which are usually taken for granted. Although it is likely that Downer and Archibald's annotations became redundant by the point of public performance, they illustrate the ways in which they both grappled with the less familiar properties of their instruments, negotiating their musical knowledge and their embodied relationships to their instrument. Comparison of the experiences of Downer and Archibald shows that performance involves not merely engaging with the material properties of one's tools in a habitual manner, but continually adapting

[49] Ibid.
[50] Ibid.

embodied knowledge according to the challenges that arise in the moment of performance. In sum then, the annotations employed by Downer and Archibald in *To My Father* can be understood as making explicit the implicit, or 'tacit', forms of knowledge that constitute music-making: both the negotiations of territory between composers and performers, and the bodily negotiations of instrumental interaction.

Case study 2: The Instant Composers Pool Orchestra

The kinds of annotations discussed in the first case study will be familiar to plenty of musicologists. The use of notations in the context of improvised music however, especially their particular use by the Instant Composers Pool (ICP) Orchestra, may require some explanation. As the group's name suggests, with its definition of improvisation in terms of 'instant composition', a central aspect of their musical aesthetic outlook is the questioning of the distinction between composition and improvisation. Part of this questioning is the use of a repertoire of stylistically varied compositions that use different notational strategies and compositional indeterminacies to explore different kinds of opportunities for improvisation and interaction in performance. Moreover, the musicians do not only improvise within certain specified parameters, but also with these compositions themselves, as they may start a new piece at any point, juxtapose and combine different pieces, and freely improvise transitions between them.

As such, the ICP's practice subverts the assumption that the notation is a controlling force that constrains the performers' creativity. ICP Orchestra's saxophonist Tobias Delius argues instead that a free improvisation may get stuck in a particular idiom and that the notated pieces allow for more diversity:

> Many people say that improvisation can be too chaotic and then there is the 'guiding hand' of the composer or a piece to bring some sense of structure, but I think it's the

> other way around. The purpose of the written material is to disrupt a 'nice flow' of improvisation. It can create more anarchy than improvisation sometimes. ... The compositions play their own part.[51]

Delius points out the importance of constraints in the creative process, of being challenged when a 'flow'[52] encounters some form of resistance, and he suggests that the pieces in the repertoire play an important role in this group dynamic, as they allow the group to effectively disrupt the direction of a musical situation.

The ICP Orchestra is based in Amsterdam and was founded in 1967 by pianist and composer Misha Mengelberg, drummer Han Bennink, and reed player and composer Willem Breuker. The group still exists and performs regularly, making them one of the longest consistently performing groups in improvised music, and one of the central groups in the genre. Like many other European improvising groups, they have a background in free jazz, by which they were inspired but from which they wanted simultaneously to keep a certain distance because they recognized its entanglement with African-American identity politics.[53] They also have a historical connection to contemporary European art music; Mengelberg is a composer educated in serialist composition at the conservatoire of The Hague, and Breuker, who left the ICP in 1973, became a prolific composer for his own collective as well as various performers, ensembles, and orchestras for contemporary art music. Many others of the ICP's current and former members have a history in either or both genres.

The material presented here is part of a larger study of the current performance practice of the ICP, which also includes a historical account of the group's prehistory and development. Ethnographic fieldwork included the attendance and recording of numerous

[51] Interview with Tobias Delius, 31 January 2013.
[52] For discussions of flow and group flow, see Csikszentmihályi, *Creativity: Flow and the Psychology of Discovery and Invention* (New York, NY, 1996) and Sawyer, *Group Creativity: Music, Theater, Collaboration* (Mahwah, NJ, 2003), respectively.
[53] Mike Heffley, *Northern Sun, Southern Moon: Europe's Reinvention of Jazz* (New Haven, CT, 2005); Ekkehard Jost, *Europas Jazz 1960-1980* (Frankfurt, 1987); George E. Lewis, '*Gittin' to Know Y'all*: Improvised Music, Interculturalism and the Racial Imagination', *Critical Studies in Improvisation / Études critiques en improvisation*, 1 (2004), http://www.criticalimprov.com/article/view/6 (accessed 1 Nov. 2014).

performances and rehearsals of the group as well as various interviews with its musicians, using both semi-structured interview techniques and stimulated recall methods using previously recorded video and audio material. The main aim of this project was to describe the role of the ICP repertoire, which was mainly composed by Mengelberg, as a source of creativity in the improvised performances of the group, a practice in which the idea of performance as 'reproduction' is clearly inapplicable and which thus requires a different understanding of the function of notation.

The term 'instant composition' expresses Mengelberg's conviction that improvisation and composition involve the same forms of musical thinking and that only the production process differs. This definition of improvisation in terms of 'instant composition' also meant that written compositions were not treated as antithetical to the group's improvisatory ethos, but were an integral part of their performance practice.[54] Although Mengelberg had been writing material for the ICP since its foundation, the use of compositions as found in the ICP Orchestra today can be traced back to the duo performances of Mengelberg and Bennink in the 1970s, after Breuker had left the group. This duo improvised not in what Derek Bailey would call a 'non-idiomatic' manner, but precisely by alternating various idioms in the course of an improvisation.[55] Indeed, they became particularly well-known for their musical interaction, which was not so much geared towards collaboration but could equally be antagonistic, as the negotiation of such idioms often included the subversion or sabotage by one musician of what the other was playing.

In the late 1970s the ICP developed from a loose collective of musicians into the ICP Orchestra, although line-ups would continue to change.[56] For this group Mengelberg started

[54] This embrace of compositional elements has a particular significance because of the ICP's cultural position between free jazz and contemporary art music, and also because of their involvement in the countercultural politics in Dutch music around 1970. See Robert Adlington, *Composing Dissent: Avant-garde Music in 1960s Amsterdam* (New York, NY, 2013), 97–136.
[55] Derek Bailey, *Improvisation: Its Nature and Practice in Music* (New York, NY, 1993), xii.
[56] During Author 1's fieldwork, the group consisted of Misha Mengelberg, Han Bennink, Ernst Glerum (bass), Tristan Honsinger (cello), Mary Oliver (violin and viola), Wolter Wierbos (trombone), Ab Baars (tenor

to create a large-scale repertoire that enabled a performance practice that was similar to the iconoclastic practice of the ICP-duo, but which would be suitable for a larger group of musicians—indeed, Mengelberg and Bennink have claimed that many of the ICP pieces originated in their improvisations. This repertoire includes arrangements of standards by Thelonious Monk, Herbie Nichols, and Duke Ellington, jazz pieces by Mengelberg himself, graphic scores, mobile form compositions, atonal chamber music, stylized dances like can-cans, rumbas, and waltzes, and songs and incidental music for theatre productions in the 1970s and 1980s drawing on the work of Weill and Eisler. More recently, other musicians in the group have started to compose for the group as well. Today, the ICP musicians each have a folder containing a number of these pieces from the repertoire, which they bring to concerts and rehearsals. No one folder is alike; not only may different musicians have different versions of the same piece, over the years every musician has lost their copy of a piece at some point.[57] This means the copies in the musicians' folders by now have usually been copied quite often, resulting in low resolution (as is evident in the examples below), or even titles and notes falling off the page.

Shortly before each set, a set list is made by one or two musicians containing a varied selection of this large repertoire. Apart from the composed repertoire, every set list will contain several free group improvisations by two to five musicians, and occasionally a conducted improvisation. The ideal for a set is to play it in its entirety, improvising transitions between items on the set list, thus creating an improvised collage of a selection of the ICP

saxophone and clarinet), Tobias Delius (tenor saxophone and clarinet), Michael Moore (alto saxophone and clarinet) and Thomas Heberer (trumpet). Mengelberg, who is increasingly suffering from dementia, decided to stop performing briefly after Author 1 had concluded his fieldwork. The group played without him for some time, sometimes asking local improvising pianists to play with them, such as Guus Janssen in the Netherlands, Steve Beresford in the United Kingdom, or Aki Takase in Japan. Janssen recently replaced Mengelberg as the ICP's standard pianist.

[57] It may be important to note that Mengelberg almost never made parts for the musicians, but always gave them full scores, and of the other musicians composing for the group, only Heberer and Moore make parts, but not always. Furthermore, apart from Heberer, Moore, and Glerum, all the members of the ICP still write their music by hand.

repertoire. This way of working requires a conception of the pieces in their repertoire as fluid rather than static objects—in terms of bricolage rather than engineering. Trumpeter Thomas Heberer describes them as follows:

> I assume the first guy that did this stuff really aggressively was maybe Charles Mingus, who of course comes from Duke Ellington, so there obviously is a connection… I've seen that with quite a few of Misha's pieces. They are often very interesting in this regard because on the surface they look very… not demanding and simplistic but then there's like all sorts of options internally which make them fantastic vehicles for improvisation because they are almost like a modular machine, you can see them from so many angles.[58]

Heberer's reference to modular machines, a programming term for software that uses interchangeable parts rather than a single, inflexible monolithic system, implies that these pieces can fulfil multiple purposes and are adaptable to a particular environment. Delius, who was quoted above as saying that the ICP pieces participate rather than dominate in their performances, emphasizes the importance of these pieces for the stylistic diversity and unpredictability of their music:

> I have heard groups that improvise, you know, sure, but there is a clear consensus on what they are about. To put it crudely, this is a loud energy kind of band, or here it's very subtle and about small sounds, and that can be very interesting, but I find it much more interesting if you do not really know. ... So with respect to musical form, some groups have clear models they work with, but I'm more interested in how are we going to get this ship back to shore, or on the rocks or whatever. It can be great being in a situation where you feel very comfortable, but it is very important not to be comfortable sometimes.[59]

In both Heberer and Delius' comments, a position is formulated vis-à-vis jazz history; connections are claimed to Mingus and Ellington, while the ICP is distinguished from other groups in improvised music. Of course, the ICP has itself cultivated a particular style, of

[58] Interview with Thomas Heberer, 1 February 2013.
[59] Interview with Tobias Delius, 21 February 2012.

which the rapid stylistic changes form an important marker, and the connection to Mingus and Ellington is partly a matter of rhetoric, especially considering that the ICP occupies what many would consider a fringe position in the jazz tradition. Still, both musicians describe the pieces in the group's repertoire not as 'models' that structure and homogenize a performance, but as more flexible materials that contribute to the heterogeneity of creative possibilities, and Heberer's connection to Ellington and Minugs suggests that such a perspective may help to understand the nature of composing for improvisers more generally.[60]

Heberer and Delius describe a practice in which notated music is embedded in a musical practice based on improvisation, caught up in an improvisatory flow. As Heberer mentions, most of the compositions are quite easy to play from a technical point of view. This tendency, coupled with the fact that the musicians are not working towards a definitive version for performance, means that there are comparatively few marginalia in their scores. Some of the more common ones include circling one's part, making formal indications (arrows to the next section, deleting sections, etcetera), or transposing chord changes. Still, the ICP's repertoire is central to their way of working and to the forms of creativity inherent in their performance practice, albeit in a very different way than seen in the previous case study. Just like in the case of contemporary clarinet performance, the annotations found in the ICP's scores are indicative of their particular way of working. A closer look at some of them will make this clear.

Example 6 shows the score of *Kneushoorn* ('Krhinoceros' [sic]). Although at first glance the piece may look rather closed, in the sense that it has been fully notated and thus might seem to indicate a rather rigid and inflexible form, each part stands more or less on its own, and the musicians can start and stop playing as it progresses, creating different instrumentations and textures. The musicians also often play with the rhythm of the piece;

[60] See for instance Katherine Williams, 'Improvisation as Composition: Fixity of Form and Collaborative Composition in Duke Ellington's *Diminuendo and Crescendo in Blue*', *Jazz Perspectives*, 6 (2012), 223–246.

Mary Oliver and Tristan Honsinger, who play the cello part together on viola and cello respectively, will cue each other to play irregular entries of their part. In this way the seemingly closed form becomes a tool for the musicians to play with and challenge each other.

Kneushoorn thus gives a good first impression of the improvisatory approach to scores found in the ICP, showing a conception of improvisation not opposed to the use of scores, but thought rather in terms of bricolage, disassembling and assembling the 'modules' of the score in the course of performance. This applies not just to the context of performance itself, but also to the longer term as pieces change through time: most obviously, the line-up of the group has changed since the piece was composed; not only is there an extra viola in the group, but the trumpet part on the second stave (the main melody of the piece) was given to Wolter Wierbos to play on trombone at some point and Heberer plays along with the accompaniment in staves three and four—this may be because the ICP never really had a regular trumpet player before Heberer joined the group, and since they play this piece quite often it may have been easier just to have Wierbos always play the melody.

Because of these changes, and because of the way in which the piece is performed, Wierbos wrote 'begin F' on his copy, making it possible for him to play the rest of this simple melody by ear without having to transpose the trumpet part (trombones are not transposed, despite being tuned in the key of B flat). This is particularly useful in such a context where it is important to be able quickly to play a new phrase yet where the concentration of musicians cannot be focused on the score too much. Hence, although this particular marking may seem insignificant, it indicates how the scores function in the practice of the ICP, and how Wierbos's engagement with the score can be characterized as a process of 'weaving' the piece into practice.

Ex. 6. *Kneushoorn*, Wierbos's copy with 'Begin F' in the margins

A second example is from a more complex score. Example 7 is taken from *Boenwas*, a composition by tenor saxophonist Ab Baars. It shows position markings added to the score by Wierbos. When Author 1 was discussing the piece with Baars and took out the copy he had made of Wierbos' part earlier on, Baars said 'Is this Wolter's part? Oh… funny, I see all these things here that I hadn't expected from him…!' When asked what he meant, he half-jokingly replied 'that's none of your business!'[61] Clearly, such scribbling has a degree of intimacy about it—that is not to say that Wierbos' annotations are very dear him, but simply that they are a way of personally negotiating this material. Example 8 shows his part for an arrangement by Michael Moore of Brooks Bowman's *East of the Sun (West of the Moon)*, with positions indicated over every single note (indeed, although this excerpt shows just one stave, they are indicated over all the notes in the piece). When asked about this, Wierbos explained:

> I don't like sharps.
>
> FS: Yes, it's in B major.
>
> Well, that doesn't mean much to me. I just have difficulty reading lots of sharps and there are four… no five here. An A sharp for instance, I really have to think about that and you know it's just a B flat! So if I just notate the slide positions it saves me the trouble. Also, I seem to remember Michael wrote this arrangement because somebody requested it, and we only had one brief play-through, not even a rehearsal so I had to make sure I was able to play it quickly. I was quite thorough with it though![62]

Wierbos, together with Bennink, is one of two current ICP musicians who never had any formal training in music, and the knowledge of his horn positions is more obvious to him than the more abstract concept of 'being in B major'. The positions, read in combination with the

[61] Interview with Ab Baars, 4 January 2013.
[62] Personal communication from Wolter Wierbos, 28 May 2016.

written notes, allow him to sight-read the piece without having to worry about the alterations—which are particularly tricky on a trombone because of the aforementioned discrepancy between the instrument's fundamental and its notation. As such, the markings are suggestive of Wierbos' thinking about the connection between his embodied knowledge of his instrument and the more abstract representation of these notes on the page. Interestingly, he has marked every note in the score like this, even if a note had already appeared a number of times before. At some point, it seems, these position markings were no longer solutions to a problem, but an exercise undertaken for its own sake to gain a familiarity with his part as well as his instrument—or rather, of negotiating the relation between them.

Ex. 7. *Boenwas* with trombone positions added by Wierbos

Ex. 8. *East of the Sun (West of the Moon)* with trombone positions added by Wierbos

The above examples show how Wierbos' annotations serve to gain more familiarity with this written repertoire. However, the notion of the score as a material rather than a representation of a static abstract object to which such performers' markings attest also plays a role during ICP performances, not just in rehearsal. This is where the distinction between improvised and rehearsed performance becomes particularly blurred, but also between the practice of annotation and the engagement with notation more generally. Even though many pieces have an open form, making it easier for musicians to improvise transitions, the musicians still frequently directly intervene in the notated score during the performance. Example 9 shows the score of *Kehang* ('Kallpaper' [sic]) as used by the ICP today. This particular version is again written for an older line-up of the group, with only one tenor saxophone and no trumpet player. This score was copied from the folder of violinist and

violist Oliver, but its provenance is unclear. Violist Maurice Horsthuis left the ICP in the late 1980s, and Heberer became a full-time member only in 1993. The handwriting suggests that alto saxophone player Moore transcribed the viola part for Heberer to make it more easily legible, both underneath the viola part and again at the bottom of the page. The transcription of this part contains a mistake, as the b♭ in the second bar becomes a b♮—Mengelberg presumably left out the flat sign because he thought it was obvious—but in the trumpet part it becomes a notated c♯', creating a raised fifth in what otherwise was a regular major seventh chord.

Additional markings like these do not just reflect changing instrumentations, but are frequently used as a source of musical ideas in performance. The motif in x-shaped note heads in the box at the bottom of the score of *Kehang* is usually used to enter the piece. Although the notation seems to imply that the strings improvise while the brass players repeat this motif, this is no longer common practice, and the large arrow to the box suggests that all musicians play just the motif rather than what was originally written in this bar. The motif—which because of its musical shape is easily recognizable—is repeated and spreads out over the group. After a cue the head is played. However, this is only the basic idea, and the musicians usually think of more elaborate ways of making such transitions. At one concert, in Antwerp on 18 February 2012, Mengelberg, Honsinger, and Bennink were improvising together using motivic and harmonic ideas taken from the previous piece on the set list which had segued into a free improvisation.

Ex. 9. *Kehang*

On a cue given by Moore, the brass musicians play the '*Kehang* motif' once, a clear signal to the other musicians that they want to start a transition to this piece. Oliver repeats this motif,

while Bennink, who had up to that point been providing some background colour for the interaction between Honsinger and Mengelberg, starts setting up a change in texture and indicating a pulse by playing clear accents and drum fills. Baars points to the wobbly lines in the tenor and trombone parts in bar 10, which are interpreted as a graphic score by the other brass musicians who play trills. Now Mengelberg starts playing along with the accents provided by Bennink. Baars points to the downward arrow between bar 10 and the rhythmic motif, which is again interpreted as a graphic instruction, played as a downward *glissando*. Oliver, who is on the other side of the stage and so cannot see where they point, plays the motif again, and Honsinger plays a variation on it. Baars then points to the first three notes of the trumpet part that has been added to the score, and slowly waves his flat hand up and down, a gesture indicating to the other horn players to play these notes—including the mistake—softly and slowly (at sounding pitch c–b♭'–b♮'; Wierbos harmonizes e'–d'–c♯ below), creating a sense of expectation after the clear accents before. Oliver joins them in playing long notes, while Bennink plays a drum roll and Mengelberg a trill. Then the horn section starts repeating the main motif and on a cue by Moore they start playing the head of *Kehang*. Such interaction and collaborative creation of musical shape and expectation requires very close concentration, trust, and an almost telepathic sense of each other's intentions. Some of the musicians in the horn section—Wierbos, Baars, Moore—have been playing together in this band for over thirty years, and are very attuned to what they expect from each other.

The *Kehang* example shows how a combination of annotations, markings, non-diastematic symbols, and regular notation is used by the musicians to explore new creative possibilities in performance, giving further weight to the idea that improvisation is not necessarily opposed to the use of notation by any means. It may be thought that such examples—and indeed the further role of annotation on ICP scores—are very particular to the

practice that the ICP has developed as a group. Partly, this underscores our metaphor that making annotations is a matter of 'weaving' the score into practice, as different practices will create different considerations in making and using annotations. For further comparison however, we turn to a discussion of our case studies.

Discussion: itinerary (an)notation

Distributed creativity

In several of the above examples, the changes that musicians make in the score, and the process of making these changes, are an important part of the creative process. Certain notational ambiguities in *To My Father* such those in the trial sheet (Example 1) became a source of interaction between performer and composer during the workshop. The performer's personal relationship to and sense of ownership over the material is clearly visible in Downer's assertion that Planas' fingering indications might not be suitable for other performers, who will need to spend time working with the material in order to develop their own relationships with it. In the case of *Kehang*, the changes in the score are indicative of long- and short-term developments in the ICP's creative practice. The changing line-up of the group, particularly when the group settled on Heberer halfway through the '90s after working with several other trumpeters, made it necessary to create a trumpet part for him. Within a shorter timeframe, the musicians' attempts to find different ways into the piece, creating different motifs and musical cues by interpreting various parts of the score as graphic scores, shows how such interventions in the score can be used as a creative tool in the course of performance itself.

As the musicians we have described develop their creative knowledge of playing techniques and sound ideals, or decide that certain elements of the score are too vague, can be simplified, or altogether deleted, the markings they make function as an indices of this

development of creative knowledge (besides any iconic or symbolic function they may have in representing the contents of the ideas thus developed). Alfred Gell used Peirce's concept to develop a general anthropological theory of artistic production. Tracing the relations between different artistic products, he proposed that the oeuvre of a single artist can be considered a 'distributed object', in which creative knowledge, skills, and social relations are distributed across time and space—this is the primary inspiration for Born's use of the concept of 'distributed creativity'.[63] One of Gell's main examples is the preparatory sketches of painters, or more precisely the work of Marcel Duchamp, in which there is no clear distinction between preparatory sketch and resulting work. This perspective has affinities with our discussion of score markings, and we propose the index as a useful tool to theorize their relationship to the performer's creative development.

However, Ingold criticizes Gell insofar as he 'can conceive of action only as an *effect* set in train by an agent',[64] which Ingold considers a remnant of the hylomorphic model of creativity. Rather than a process of *iteration*, the repeated application of the same idea in a number of instances, the textility of making is a process of *itineration*.[65] That is to say, it is not defined by the individual points but by the movement between them. The markings do not just 'reflect' the cognitive process but may in turn stimulate new ideas. Attending to the indexicality of these markings is thus not to see them as an outcome of practical creative considerations, but to see the externalization of these considerations itself as a part of the creative process. In other words, it is through the process of distribution that creativity is developed. Born comments on Gell's notion of distribution that '[t]he art object has a kind of career; it changes not only via its changing interpretation in performance and reception, but it can change even in its very physical form.'[66]

[63] Alfred Gell, *Art and Agency: An Anthropological Theory* (Oxford, 1998); Born, 'Mediation'.
[64] Ingold, 'Textility', 95.
[65] Ibid. 97.
[66] Born, 'Mediation', 16.

For Gell, this distributed object also serves to mediate a distributed agency, and both *Kehang* and *To My Father* illustrate that musicians make these annotations as a way to assert their agency as performers or to develop possibilities for action. In *Kehang*, for example, the reinterpretation of certain signs mediates the interaction between the horns, and simultaneously gives them a way to take control of the musical situation by guiding the transition into a new piece. In the case of 'Clouds', Downer's annotations interrogate the material and assert her creative authority, but they also trace her embodied relationship with her instrument, suggesting that part of a performer's sense of ownership over the music is achieved through finding one's own gestural relationship to the notation. Downer's presence in the work is thus subtly tangible in the final score of 'Clouds' through her reworkings of Planas' instructions to make them more effective. While in interview she downplayed her role as merely practical, her input into shaping the score ultimately had greater significance than she acknowledged. Moreover, Downer's perspective on notational practices raised questions concerning performers' negotiation of creative ownership in working with notation.

Problem-solving and problem-finding

Our point about the itineracy of scores, and the importance of externalizing creative ideas for developing those ideas, leads to our second point of discussion, which elaborates on the process of working out how to approach a problem. Wierbos's trombone position indications in Examples 7 and 8 are only partly evidence of solving problems in an explicit sense. However, the amount of markings he has made is well beyond that necessary to solve the problem of reading the five sharps and many of his markings are thus redundant, suggesting that making them was also in order to develop through them an intimacy with his material.

Problem-solving has been a dominant focus within creativity research.[67] In his work on group creativity, Keith Sawyer[68] identifies problem-finding as a collective and emergent process in group improvisation, in contrast to the problem-solving that is required when working with the 'well-specified' problem of a score, that is, 'to perform the piece accurately and with an appropriate interpretation'.[69] By contrast, Richard Sennett, speaking of craftsmanship, has suggested that an integral element of a practitioner's engagement with material is the ability to problem-find as well as to problem-solve through a 'dialogue between concrete practices and thinking'.[70] For Sennett, solving and finding are inextricable. Sometimes on encountering a problem, practitioners might explore their material, getting to know all its details ('identifying with it') in order to solve it; but sometimes practitioners seek problems *in order* to develop a closer relationship to their material.[71] Creative processes of performance share aspects of both of these activities, and they are demonstrated in several of the examples above.

For Sennett, this opening up of/to material also translates to human interaction, which is clear in Downer's annotated fingering chart (Example 1), where the score functions as a means through which composer and performer interact. *Kehang* has a similar kind of 'workbench' function, only during performance and among performers, as the musicians deconstruct and reinterpret aspects of the score as part of their improvisatory practice. Such reinterpretation can also be seen as a form of problem-finding, and it builds a familiarity with the score, particularly among the performers. In an interview, Delius described the practice of interpreting particular aspects of the sheet music as graphic scores as 'a little banal', adding

[67] K. Anders Ericsson, 'Creative Expertise as Superior Reproducible Performance: Innovative and Flexible Aspects of Expert Performance', *Psychological Inquiry*, 10 (1999), 329–333; Aaron Kozbelt, Ronald A. Beghetto, and Mark A. Runco, 'Theories of Creativity', in James C. Kaufman and Robert J. Sternberg (ed.) *Handbook of Creativity*, (Cambridge, 2010), 20–47 at 33; Sawyer, *Group Creativity*, 104–106.
[68] Sawyer, *Group Creativity*. Sawyer cites Jacob W. Getzels and Mihályi Csikszentmihályi, *The Creative Vision* (New York, NY, 1976).
[69] Sawyer, *Group Creativity*, 176.
[70] Richard Sennett, *The Craftsman* (London, 2008), 9.
[71] Sennett, *Craftsman*, 214–231.

however that 'when you try it in another group you notice it's not as obvious as you think!'[72] Both examples show how notation can work to give performers a co-creative role, engaging with the material on their own terms, according to the circumstances of performance.

Prescription and description

The final point we would like to discuss is the dual function of music notation of a *description* of sound and a *prescription* for its production by musicians. At the beginning of our discussion of Case Study 1, we mentioned the remark made by Sheppard Skærved that performers' markings are more 'technical' than 'compositional', and we suggested that such markings can be inextricably intertwined with aesthetic consideration, and can often be considered as parts of the creative process. The continuity of the descriptive and prescriptive aspects of notation is particularly apparent in two examples discussed above. Archibald's markings in 'Czardas' (Example 4) interpret the various turns present in the musical material as gestures. This serves to simplify them, and thus make them more immediately legible. There are two points to draw from this: first, the turns are primarily a gesture, with their pitches and intervals functioning as secondary considerations; what is more, the movement that defines these turns is not just apparent in the experience of these sounds, but also relates directly to Archibald's physical experience of playing them. This is even more apparent in Example 5, where similar markings serve to navigate her finger movements on her clarinet keys. Archibald's description of these markings as a 'map' illustrates their dual function as visualizations and prescriptions for physical behaviour. In the ICP case study, the interpretation of various aspects of the notation as 'graphic scores' similarly exemplify the blurred boundary between description and prescription: Baars uses a hand gesture to indicate

[72] Interview with Tobias Delius, 21 February 2012.

tempo and dynamics to his fellow performers, and there is no categorical difference between such a gesture and the interpretation of the downward line as a downward glissando.

Cook's metaphor of the 'two sides of the musical fabric' is a reference to Maurice Merleau-Ponty's suggestion that 'Like the weaver, the writer works on the wrong side of his material. He has to do only with language, and it is thus that he suddenly finds himself surrounded by meaning.'[73] This is a fitting description of the itinerary character of performers' markings, one that complements our metaphor of annotation as a form of weaving and highlights the close connection between compositional and 'merely' technical concerns. Merleau-Ponty's advocacy to 'rid our minds of the idea that our language is the translation or cipher of an original text' is comparable to Cook's criticism of 'the idea that performance means bringing out something that is already there in the score, composed into it and just waiting to be released by the performer.'[74] Both oppose the idea that description is a matter of the representation of a prior, abstract idea that remains invulnerable to the practical considerations that characterize the creative process. Instead of such a representational understanding of the descriptive aspects of notation, we might propose a *performative* understanding in the sense that Judith Butler has theorized: a representation that creates what it represents.[75]

Conclusions

Although the examples presented in this paper are drawn from two distinctive performance traditions with notations of varying 'specificity', annotations function in both as traces of the complex relationships that performers develop with their materials. Most obviously, both

[73] Maurice Merleau-Ponty, *Signs*, trans. Richard C. McCleary (Evanston, IL, 1964), 45.
[74] Ibid. 43; Cook, 'Making Music', 338.
[75] Judith Butler, *Gender Trouble: Feminism and the Subversion of Identity* (10th anniversary edn., New York, NY, and London, 1999). This point may be compared to Brian Rotman's work on the semiotics of mathematics, see for instance *Signifying Nothing: The Semiotics of Zero* (Stanford, CA, 1987).

show annotation playing a role in performers developing musical relationships in a number of ways: negotiating their musical knowledge, their embodied relationship to their instrument, and their own creative agency and ownership of the music. Much more than expressions of a performer's structural understanding of a piece, or even of a performer's understanding of how to play such structures, annotations are ways of imaginatively negotiating the wide variety of practical considerations that make up the creative process.

As discussed in the introduction of this article, a corollary of musicology's performative turn is an increased attention to musical improvisation. This rapidly growing body of scholarship has formed one of the main counter-arguments against the hylomorphic work-centred tradition, as it facilitates the study of musical performance exclusively in terms of the 'spur-of-the-moment' interaction between performing musicians without the ideological demand of 'truth' to a composer or a work. Indeed, composed material has sometimes been described as being detrimental to the 'true spirit' of improvised music. In his classic work on improvisation in music, Bailey writes:

> Whether reading music is a disadvantage to an improvisor [sic] is a question which gets quite a lot of discussion amongst improvising musicians. ... There is an unmistakable suspicion that the acquisition of reading skill in some way has a blunting effect in improvising skills, an acceptance that these are very often two things which do not go together. So, of course, in musics where there isn't an 'accurate' notation system, that possible problem, or distraction, disappears. But more important than the removal of a possible inhibition or contrary discipline from the performer is the fact that the absence of a music writing/reading tradition gets rid of the composer.[76]

Expressing a similar antipathy to notation, Sawyer, in discussing group creativity, writes that collective improvisation is the 'purest form of group creativity, a Weberian ideal type.'[77] The implication of this statement seems to be, as it is in Bailey's, that notation makes the music of

[76] Bailey, *Improvisation*, 10–11. Coincidentally, Bailey played frequently with the ICP, especially during the 1970s.
[77] Sawyer, *Group Creativity*, 14.

groups 'impure', impeding social interaction, on the agency of the performers, and hence on the possibility of creativity itself.

In the introduction we suggested that such an understanding of improvisation, as evidenced in the statements from Bailey and Sawyer, was itself dependent on the work-concept. In this conception, improvisation is associated with creativity and performing with a score is limited to reproduction, the result of which is that improvisation (equated with orality and novelty) is seen as more creatively 'authentic' than performing with a score. In the case of the ICP, it is evident that the use of scores is in no way antithetical to an improvisatory practice, and in the case of *To My Father* improvisation was inherent in the creative process even when working towards a 'definitive' performance of a piece. Moreover, rather than impeding their agency, scores provide musicians with a source of creative action.

These observations lead to the question of how working with the score does not just build a familiarity with it, but is also a process of personal development and acquiring a sense of ownership. There is a sense of the performers asserting their authority over the music: reclaiming the musical material and demonstrating their expertise. In this way, the score becomes a territory on which the performer's markings are evidence of a tightening up of ownership over the piece. This way of working is suggestive of the limitations of notation, that an extra 'layer' of labour on the part of the performer is needed in order to clarify or to realize the music. This last point is suggestive of broader ethical imperative, so that, as Cook has argued, 'the score scripts a process of personal development, a form of Bildung'.[78]

Nevertheless, it is important not to over-emphasise the ubiquity of annotation. Some musicians choose not to annotate their manuscripts, which we do not suggest demonstrates a lack of creative engagement on their part. Indeed, annotations are just one manifestation of itineracy that musicians exercise. The itinerative character of musical performance is

[78] Cook, *Beyond*, 285.

embodied in the performer's attentive engagement with his or her materials and fellow musicians, for example, in the fine tuning of the relationship between body and instrument to achieve the necessary fluency to execute a complex musical phrase, or in the learning of new musical and professional roles in playing in various formations over the course of a musical career. The musical result of such engagements can never be guaranteed, and will vary—either minutely, or in more significant ways—each time, and as a consequence, no work is ever finished: itineracy lies in the *processes* of performance rather than the outcome.

This final point brings us back to the work concept, since the continuing opposition of improvisation and score-based performance relies on an iterative conception of music that focuses on outcomes rather than creative processes. We have suggested that the growing interest in the social life of objects may constitute an opportunity to give notation a place within such processes,[79] not as a platonic ideal that determines or supervises performance, *pace* Born, but as part of a messier and more fluid set of relations. Performers can have extraordinarily intimate, fruitful, and perhaps most importantly, *reciprocal* relationships with their materials. A move away from the persistent, product-orientated concept of creativity creates space for a more forward-looking model that better appreciates the interwoven threads of musical performance.

[79] Arjun Appadurai (ed.), *The Social Life of Things: Commodities in Cultural Perspective* (New York, NY, 1988); and see also Eliot Bates, 'The Social Life of Musical Instruments', *Ethnomusicology*, 56 (2012), 363–395.