

## **Sounded Gestures and Enacted Sounds**

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INTRODUCTION. William Brooks (composer/researcher)

We begin with a short performance: the first movement, called simply 'Prelude', from a projected suite entitled *Disjointed*. After that there will be short papers by Catherine and myself; then an informal conversation among the three of us; then a second performance of the 'Prelude'; and finally conversation with and questions from ... you.

PART 1: THE PROJECT. Catherine Laws (pianist/researcher)

A pianist moves her arm (vertically). A percussionist moves his arm (laterally). Both produce sound (perhaps). A viewer (auditor) finds one gesture 'musical' or 'expressive', another gesture 'theatrical'. From whence do these judgments come? Are they irrelevant to the experience of 'music' or an intrinsic part of it? Under what circumstances might the 'music' be ancillary to the gesture, rather than the reverse (as is conventional)?

This is the starting phase of a project investigating the relationship between physical and sonic gesture in the context of a piano-percussion duo, by means of a collaborative, experimental process of exploration, composition, performance and critical reflection.

The underlying starting point is an interest in the ways in which musical meaning is mediated by the body: the intricate combination of sound and movement that forms musical expression.

In terms of the research context, it has been necessary to problematise the notion that the instrumentalist's body is a *vehicle* for the realisation of cognitised musical intentions. As Deniz Peters points out, despite the growing discourse on the phenomenology of music, it is still the case that sensual qualities are often associated with 'the body' and intellectual qualities with 'the mind', with bodily experiences examined empirically, measured as physical phenomena and, as such, considered separately from semantics, musical 'understanding' and imagination.

One of the early phases of this project has involved an overview of the research to date on the musical instrumentalist's body. In recent years there has been a proliferation of work in this field, facilitated by

developments in video and motion capture technology. There are now quite a number of studies of performers' gestures, many focusing on pianists. Studies such as that of Dalla-Bella and Palmer on anticipatory motor action, Shaffer on timing, and especially Jane Davidson on the physical manifestation of expression, are extremely interesting, revealing aspects of performer's gestural repertoires and also confirming the extent to which the visual influences our perception of everything from musical form to judgments about a performer's abilities.

However, one of the starting points for my involvement in this project was that I find much of this work very frustrating. As Rolf Inge Godøy and Marc Leman discuss in *Musical Gestures: Sound, Movement and Meaning*, when we consider gesture as a carrier of musical meaning and expression it has to have two components: extension (the movement of the body in space) and intention (what we imagine). In many studies of the performing body, intention is reconstructed, considered outside of the act in both space and time. Moreover, a complex *embodied* process is split into bodily and mental components. The body is the object of study, examined empirically: we can measure extension, movement in space, by looking at it, using video and motion capture technology. Intention, of course, is not measurable. It has to be constructed, inferred, construed, interpreted. In these studies it is usually derived from two things: an idea of the expressive content of the piece, based on the score – i.e. an account of what the expressive content of the performance 'should' be – and the comments of the performer, verbalized and, of course, communicated before or after the act itself: what did I hope to do, what do I think I communicated?

This is, to my mind, problematic. From the perspective of the performer, intention is complex. It is constantly constructed and reconstructed, before the performance, through practice, but also during the performance, in relation to what really happens. And it is then reconstructed afterwards, when we try to work out for ourselves what did happen and evaluate the experience. Moreover, this dynamic intentionality operates at different levels and in different modes; we think of it, represent it to ourselves and others, in different ways at different times, but it also often takes place without apparent explicit conceptualization, through apparently instantaneous embodied actions and reactions. Additionally, the instrument is not purely a means of expression, but as Kathryn Woodard writes, a technology that shapes the self; the body is disciplined, not an unfettered tool of expression. Finally, beyond this, intention is perceived differently by performer and audience, imaginatively produced through what Alva Noë calls 'embodied enaction'.

So just when music theorists seem to have lain to rest the old linear, communicative model of the composer sending a message through a performer to a receiving, decoding audience, a similar intentional fallacy has effectively been reconstructed in many studies of musical gesture. Anthony Gritten is one of the few to acknowledge this, noting that gestures are usually conceived anthropomorphically in organicist terms, and that this is yet one more reflection of our desire to 'possess music', as he puts it, to get a grip on what it's doing.

In some of our discussions at the Orpheus Research Centre in Music (at the Orpheus Institute in Ghent), the word 'embodiment' has rightly been contested, but it is what I've just said that, to me, lies at the heart of the determination to focus on embodiment, not physicality, corporeality or just the body; to avoid the persistent Cartesian tendencies. As Arnold Berleant says, 'In embodiment meanings are experienced rather than cognitized' (quoted by Peters). And to again quote Deniz Peters, 'music becomes meaningful experience *via* bodily involvement (not *affecting* the latter as a consequence of cognitive acts, but being *created* by it, hence turning *into* cognitive acts).'

So the problem, then, is how, as a pianist and a percussionist, and particularly ones involved in contemporary music and music theatre, we can have a better understanding of our physical relationship with the instruments and the complexities of expression. Clearly the growing body of work on gesture is relevant and in many respects revealing. And likewise, we can use video and motion capture, and I certainly have, looking back at myself after the fact and trying to relate this to what was going in, attempting to recapture, reimagine my embodied experience in relation to what I see on the two-dimensional screen.

But this project takes a different tack, partly due to the frustrations I've just expressed.

In a practice-led approach the complexities of the body come to the fore – there is no divorcing of subject and object. The veneer of objectivity has to be discarded. Of course the subjective is no less problematic, but the questions do feed from and through the experience of practice. The attempt, then, is to find both greater awareness and to enrich the field of creative possibilities by exploring the body as a site of imaginative production. The project is to examine, exchange and reconstruct vocabularies of gesture, to make strange and disjoint what ordinarily feels (even if it is not) natural, to disrupt the habitual, as if to try to catch the performing body-subject in the act of looking at itself.

We took as our starting point the taxonomy proposed by Rolf Inge Godøy and Marc Leman (in turn derived from previous such

taxonomies, by Delalande and others); see slide 2. However, our discussions and experiments tended to focus on the overlappings and ambiguities that result from the attempt to define and categorise the gestures of performers. It is, of course, relatively rare that a gesture truly fits neatly into a single category. More often, the gesture serves more than one function (or has a combination of qualities, some serving one purpose and some another). For example, when a pianist drops her hand onto the keys we see a sound producing gesture, but the qualities of tension and motion – how she holds and moves her arm – will most likely combine sound producing, sound modifying and communicative elements. She may also include a sound-accompanying element within the gestural complex, but it may sometimes be hard to distinguish this from the truly sound-producing elements and the specifically communicative aspects. In this way, a performer's gestural intentions often manifest as a complex combination of consciously thought out and unconscious decisions. And even beyond this the relationship between intention and perception is equally ambiguous: an audience member may well 'read' the meaningful content of the gesture differently to the performer, and differently again to another audience member.

Such complexity and ambiguity is of course acknowledged by those studying musical gesture in terms of embodied cognition. However, for us these uncertainties have formed a creative research opportunity: our aim is to experiment with and exploit exactly these ambiguities. We employ them as a means to extend, but also to explore the limits of, our understanding of our bodies at our instruments and in the context of a duo.

The initial objective, then, was to construct a series of experiments that took gesture as the starting point for composition, but with an understanding of the specific correlations and divergences between gestural and sounding content. This involved examining composition as choreography, but a choreography in which the intimate relation between the physical and the sonic is embedded.

To summarise, we explored the nature of our gestures at our instruments, both individually and comparatively, examining the relationships and differences between our sound producing and other gestural characteristics. We extended this through the use of devised exercises, working from and producing various mappings and sketches of gestural possibilities (see slides 3 and 4). Some of these were devised at the instruments, others away from them; we were concerned to move beyond the constraints imposed by the ways in which our bodies are trained at our instruments, questioning the sense that certain gestures feel 'natural', others not.

A stage of the research process involved sonifying our gestures. We worked at the Aesthetic Lab of the Institute of Electronic Music and Acoustics at the Kunst Universität in Graz, attaching sensors to our arms and wrists to map our movements using an infrared motion tracking system. By linking relatively simple sonifications to the movements in space, with sliding pitch or timbral changes, we perceived our gestures differently, both in themselves and comparatively. The process allows movement in space to be felt as a change in sound, giving real-time (if relatively crude) feedback on the similarities of or differences between movements; qualities one cannot perceive of one's own body in the moment of enaction (nor, often, by means of retrospective viewing of video footage on a 2-D screen). The Aesthetic Lab set-up also allowed for immediate visualization of the movements on a large screen, abstracted as points in space across a grid.

Overall, then, these processes have been designed to explore, and often to disrupt, our embodied understandings – our sense of what we do at an instrument, and why – in order to gain a better knowledge of those understandings and their limits. One of the starting points of this project is the impossibility of full presence-to-oneself – in this context, the impossibility of ever truly knowing what one's body is 'doing' in relation to the production of musical meaning, while always knowing that its work is significant. By disjointing what we usually take for granted, our experiments have provided different 'ways in' to the (always provisional, ultimately impossible) attempt to catch oneself in the embodied enaction of musical experience.

## PART 2: COMPOSITION. William Brooks (composer/researcher)

All that Catherine has said would seem to be preliminary to my part in this project: as a composer, I was to provide raw material — a 'score' — that would precipitate an alienation of gesture, a deconstruction of habit, a reconception of expression. In fact, my work has overlapped with Catherine's from the beginning: I too have been caught up in the dilemmas of 'intention' and its construction; I too have found Godøy's work immensely useful, though I too apply the notion of a taxonomy in ways quite different from his; and I too learned much — though not what I expected — from the visit to Graz.

I will take these in reverse order. At Graz it became clear that the equipment recorded and interpreted gestures with little regard for my perceptions. Gestures which seemed to me to be very different were, in fact, similar; others which I thought nearly identical turned out to be quite distinct. Some of this followed from the situation in the laboratory, but most followed from my readings. It became evident that similarity followed, for me, when gestures had equivalent symbolic functions. All

cutoffs seemed alike, because they were all cutoffs; but the technology read them as extremely different. On the other hand I read as different actions that were associated with different results. A hand dropping in frustration or fatigue seemed very different from a hand dropping to produce sound on a keyboard. Not, however, to the technology, which read and sonified both in nearly the same way.

So Graz made perfectly evident the need to describe gestures in a multi-dimensional way, if I were to compose with them. Godøy seemed to have done that by postulating a fundamental distinction between the gesture as extension in space and the gesture as manifested (or at least 'read') intention. Corollaries follow. An intention can be read as practical: this was done so that a particular sound results; or it can be read as communicative: this was done to indicate something specific to someone else (such as a cue to another player or a signal to an audience). Gestures that produce sound may bring a sound into being or they may modify, transform or extend a sound already present. And so forth.

I was going to be writing for musicians, and I wanted to write symbolically and conventionally, producing a score that would require neither specialized knowledge nor specialized training. So I wasn't going to use Labanotation, nor was I going to rely on workshops or improvisations to convey my ideas. I needed a gestural vocabulary that would be comfortable and familiar, and I needed a notation that would bear some resemblance to conventional music notation. I also wanted the piece itself to be conventional; the test, the experiment, was to be with the interaction of body, of gesture, with intention and sound—not with aesthetic or perceptual hypotheses.

I settled on a suite, almost a Baroque suite, and the piece you just saw is the Prelude. It will be followed — if these two marvellous performers can stand it — by such conventional movements as a Canon, a Chaconne, a Rondeau, and so forth. I took as my fundamental gestural material (my 'theme,' if you will) the pattern usually used to indicate triple meter. And I settled on a keyboard-like layout of instruments, and a score based on staff notation (see slide 5). The 'keyboard' is divided into fourteen sounds or fourteen instruments; in addition, six instruments are placed above the keyboard, to be sounded with an upward rather than downward stroke. Two more instruments are placed at the extreme ends. In the 'Prelude' not all these instruments are used; hence what you see here is an incomplete version of the full setup. In the 'Prelude,' also, each player uses only one hand.

Location in space is indicated by the location of symbols relative to the staves. Motion through space is indicated by arrows (slide 6). It's all

quite naïve—deliberately so. With this in place you can easily understand the opening bars (slide 7). Would you like to perform them?

That takes care of 'extension.' Though I, like Catherine, am troubled by the word 'intention,' it seemed acceptable—even necessary—as a compositional parameter, even if it is problematic as part of an interpretive framework. Hence various kinds of intention are indicated by different kinds of noteheads (slide 8). Round noteheads are practical: the actions are events in themselves or are preparations for other events (as, for instance, an upbeat might lead to a downbeat). Diamond noteheads are cues: the players look at each other and respond, as any musical duo might. Square noteheads are signs and signals, either musical (a rising gesture might signal 'get louder') or extra-musical (a rising gesture might become 'thumbs up').

The final distinction is between gestures which produce sounds and those which do not. An X through any notehead indicates that sound results: a downward gesture, for instance, carries through to contact an instrument. When the X is absent, no sound occurs; the gesture stops short of the instrument.

To all of these are applied articulations of various kinds, which affect the continuation of the sound: staccato and tenuto, for instance, and various ornaments, conventionally Baroque, such as the mordent and trill.

The result is a notational system that characterises each gesture in several independent domains: location, character, intention, sound, and continuity. This seems rich enough to be of compositional and performative interest, and I don't anticipate expanding it significantly in the next two movements. The second is being drafted at present and will be first performed in Ghent in October; after that, we will see.

I propose that we finish by hearing—seeing—the piece one more time. You should now have received a handout which contains the first two pages of the score. You'll probably find it easy to follow—though of course in looking at the score you will miss the action. But such is life.

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