Abstract: Recent theoretical study in the field of musical analysis asserts that music performance may be understood as a transgressive encounter based on the writings of George Bataille (Bataille, 2008 [1957]; Rebelo, 2006; Waterman, 2008). Through identifying an overlap between choreographic methodology and the examination of instrumental gesture, I propose ways in which these theoretical findings may be translated into practice-led research. Arising within the context of gesture-based research as a stimuli for choreographic activity, I discuss musical practice as a mode of simulation marked out by physical mimesis. I propose the manifestation of effort through physical gesture in music performance as an expressive component conducive to live art interpretation where the performer's body plays a key role. Richard Leppert's discussion of music and femininity as historically synonymous furthers this research by contextualising the abject within the framework of the transgressive (Leppert, 1995 [1993]; Kristeva, 1982 [1980]).

The gestural repertoires developed through instrumental practice with particular reflection on piano performance are well documented by Henry Shaffer, François Delalande, Jane Davidson, Eric Clarke and Mark Thompson (Shaffer, 1976, 1981, 1984; Delalande, 1988, 1995; Davidson, 2007; Clarke, 2006; Thompson, 2007). The kinds of gestural scores generated in such analyses - such as Delalande's classification of gesture types based on the playing of Glenn Gould - would usefully lend themselves to a choreographic interpretation (Delalande, 1988). Indeed, annotations of musical scores with gestural motifs, such as Thompson's analysis of Gould's playing of the 'Goldberg Variations' by J.S. Bach are redolent of the gestural scores generated in workshops led by choreographer Jonathan Burrows. Burrows, in collaboration with composer Matteo Fargion, has explored a number of choreographic interventions informed by musical structure. In a Burrows/Fargion workshop as part of the Bodysurf project at Findhorn in 2009, participants were encouraged to develop score-based exercises adapting rhythmical frameworks arising within John Cage's 'Lecture on Nothing' (1959). Within this framework, individuals were encouraged to explore different combinations of sitting gestures, vocal sounds and text while at the same time adhering to patterns in keeping with Kevin Volans's notion of variability. However, it has yet to be explored how gestural analyses within music performance research might be usefully translated into choreographed material that could be used to comment upon the physical aspects of music making, with special attention to ways in which material could be made available to non-instrumentalists.

Reproduction, Simulation

In his discussion of imitation in musical performance, John Sloboda comments: ‘[…] expressive techniques are passed from one musician to another by demonstration’ (Sloboda, 1985: 88). In this case, it is possible to consider gestural mimesis in music performance as an act of simulation in which the physical acquisition of repertoire may be partially reproduced. The rehearsal process means that a gestural repertoire based on the physical demands of any given piece may be first established and then reproduced in a quasi self-mimetic process. This gestural repertoire serves as an embodied muscular memory to musical reproduction and may be described as a codified technique in keeping with choreographic theory. The interpretation of different repertoires for live musical performance is a creative act in which compositional motifs are continually re-articulated and individualised. This kind of creative activity may be described as the genus of musical identity, where the dissemination of individualised accounts constitute a kind of
evolutionary trademark. This process is marked out in cyclic periods of learning and acquisition, followed by periods of creative output and realisation. As such, we may recognise musical activity as a process of reproduction by acknowledging the cyclical nature of creative performance intervention. Paul Fitts and Michael Posner describe skill acquisition by dividing learning into three distinct phases. In the first, the 'cognitive' stage, the player works out specific problems in relation to a piece through 'conscious attention'. In the second, difficulties are broken down and overcome so that playing can be 'refined'. In the third and final stage, actions become 'autonomous' and playing therefore '[...]
requires no conscious attention' (Fitts and Posner, 1967: 11-15). This, Reid claims, is a process of transferring information from short to long term memory (Reid, 2002: 104-5).
The long term physical embodiment of musical material comes to represent the 'reiterative' and 'constitutive' acts of gestural expression where the automated nature of delivery means that performance must take place in a state of semi-absence.2 This relinquishing of conscious control marks a transition from the effort produced through skill acquisition to the assimilative technique that results in the embodied state. How might one realise the effort implicit in the internal physical and perceptual shifts of acquisition and assimilation in music performance through practice-led research? In the following paragraphs I outline approaches to expressive delivery in music performance and how the study and classification of gesture has identified a subversion of physical displays of effort. I do this as a way into describing my own practical investigations within the live art installation 'Blood Piano'.

Embodying Effort

Recent scholarly study of musical gesture has debated the value of making visible the physical effort required in the execution of virtuosic repertoire, claiming that it would detract from the transmission of the work (Clarke, 2006; Gracyk, 1997; Mark, 1980). However, performers such as Daniel Barenboim continue to encourage physical effort as an expressive device in music performance, claiming that '[...] effort is integral to expression' (Barenboim, 2005). Specific gestures acquired through the learning and rehearsal of a piece of music therefore require the musician to choose how much physical effort to make manifest and when. Such manifestations are considered to be more of a choreographic supplement to compositional ideas than having an actual sonic effect on sound production, except in cases of particular technical demands that result in gestures of negotiation (Wanderley, 1999). In this case, we might consider gestural expression in music performance as partially dependent on the predilection of the player to attempt to physically embody musical ideas. Significantly, one of the criticisms of research with human-computer interactions is that there appears to be no visible physical effort on the part of the performer. Drawing on the example of the CHANT system for simulation developed in IRCAM in the 1980s, Clarke notes that this is often interpreted as the performer having 'no physical commitment'. Clarke identifies his criticism within the discourse that in traditional virtuosic performance, while the listener wishes for the performer's physical effort to remain invisible, they still desire an affirmation of the physical presence of the performer's body. Clarke describes the performer's presence as an involvement of '[...] mind and body in the “heroic struggle” to express and communicate' (Clarke, 2002: 191). Such criticism supports the importance of having a physical affirmation of musical delivery where visual representation may come to constitute a kind of 'mutual confirmation' between the body of the performer and the body of the spectator (Merleau-Ponty, 2005 [1945]: 215).

In what ways might the role of effort as an expressive device be made explicit through
practice-led research that consistently frames the body as crucial to musical delivery? In the following passage I outline ways in which femininity and the abject play a key part in ways in which the body may be read in music performance drawing on Leppert's discussion of music and gender. This outline has regard to a discussion of the musical 'other' as an abject expression of physical desire in keeping with notions of effort and simulation described above.

**Femininity and the Abject in Music Performance**

In his account of the role of gender in relation to musical discourse in Europe from the sixteenth century onwards, Richard Leppert attests that historically, 'woman' and 'music' were seen to be synonymous. Following on from Roland Barthes's contention that musical experience is akin to a repeatable orgasmic embrace, Leppert insists music was considered a 'feminine' entity on the grounds that it aroused bodily desire and instigated a condition of bliss in the listener (Barthes, 1977; Leppert, 1995 [1993]). This kind of musical jouissance - already well documented by scholars such as Pedro Rebelo and Ellen Waterman and informed by the writings of George Bataille - suggest music as an essentially erotic experience played out in a quasi-transgressive state (Rebelo, 2006; Waterman, 2008; Bataille, 2006 [1957]).

Leppert continues his discussion by relating notions of the 'musical gaze' with the formation of the piano as a physical object. He suggests that incorporating utilitarian features such as '[...] sewing machines or cupboards for bric-a-brac' into keyboard instruments led directly to what he terms the 'feminization of the piano' (Leppert, 1995 [1993]: 136). In this way the doubling of the piano's function to include domestic elements strengthened the connection between women and keyboard instruments by transforming the way in which it was used. Leppert furthers his explanation by describing that the piano was designed to reflect the attributes of the female body as a way of controlling woman as a symbol of desire. Indeed, the visual connection between the piano and the shape of the female body was so strong in Victorian society that it was deemed necessary to cover the ankles of the legs of the piano with small skirts (Grover, 1976). This was due to the overarching belief that the sight of a woman's ankle (and by proxy, the piano's ankle) was a sexual invitation and should therefore be hidden from view. Leppert writes:

> [...] the visual fascination with the piano connects to the scopophilic fascination with women's bodies in art. The compulsion to sort out and stabilize the sign 'woman', an obsession with Victorian men, is tied not only to the demands of identity, sexual difference, and power but also to the equally troublesome categories 'desire' and 'pleasure' (Leppert, 1995 [1993]: 155).

The attempt to control woman both symbolically and literally during this time was reflected in a pervading fear of the unknown and little understood territory of the female reproductive system. This preoccupation with controlling 'woman' was evident in the catechism hysteria, which connected the menstrual cycle with otherwise 'unexplainable' neurological symptoms. The idea that woman's sexual desire was in some way beyond control was encapsulated in the belief that such symptoms were produced by a 'wandering womb', which detached itself from its proper place and moved up to the neck resulting in feelings of suffocation. Indeed, it was believed that the condition could be cured through 'hysterical paroxysm' or 'pelvic massage', now understood as female orgasm. That sexual reproduction and female sexuality was at the centre of this now widely disproved theory is
of great significance in seeking to understand ways in which 'woman' has been categorised, controlled and in some cases, forcibly misunderstood.

In *Powers of Horror: An Essay on Abjection* Julia Kristeva describes abjection as a confirmation between self and other which, she claims, is a 'precondition of narcissism' affirmed through subjective bodily experience. Kristeva insists that abjection is the foundation through which '[...] meaning, language and desire is founded' and as such is intimately connected to *jouissance* (Kristeva, 1982 [1980]: 5). Kristeva centres her discussion around the affirmation of the human as it is experienced through contact with and recognition of bodily fluids such as semen, sweat and blood. In addition, she considers the abject as a state of disgust or revilement in reaction to the affirmation of the human. Connecting the feminisation of the piano with the over-arching attempt to control 'woman' as a symbol of desire, I have considered the implications of the abject in musical performance with primary concern for the feminine other. I have attempted to realise these conceptions through practice-led research that might then be used to reflect upon the notion of musical delivery as an act of reproduction.

'Blood Piano': Live Art Installation

I used the two-part live art installation 'Blood Piano' to explore notions of femininity and the abject within the framework of music performance as a transgressive act. Drawing on the myth of Sisyphus, an upright piano was dragged though Belfast city centre recalling Charles Rosen's statement that the piano is '[...] a lumbering and embarrassingly inconvenient prehistoric beast on the point of extinction' (Rosen, 2002: 56). The piano was then installed in PS2 Gallery on Donegall Street where I used a series of choreographic interventions with the piano to explore themes of effort, desire and repetition. In this second section a mechanism was fitted into the interior of the piano to give the appearance of bleeding from the keys as it was played. Finally, the piano was left to 'bleed out' its remaining contents, which formed a thick pool of blood across the gallery floor.

**Methodology and Process**

The first part of 'Blood Piano' required the collection and transportation of the upright piano from Oxfam on the Dublin Road to PS2 Gallery though Belfast city centre. The transportation presented a significant risk and so after some intense deliberation, it was decided wheels would be affixed to the back of the piano thereby transporting it on its side. This - while solving the risk of possible toppling - presented the alternative difficulty of negotiating the now much wider base through narrowed streets. In addition, the difficult nature of transporting the piano on and off pavements and across busy roads only enhanced the already present risks. Between myself, the video-artist and photographer, as well as the kind escort provided by PS2, it was decided that no help would be given to the performer(s) in case of difficulty. Indeed, at times where the piano was caught on the side of a pavement, the Sisyphean performer deflected offers of help with a low guttural growl. I felt it was very important in this case to let the Sisyphean performer struggle with the various difficulties in order to allow him to embody the effort imposed by this large and cumbersome beast, the piano. The fact that the mobile installation was recorded by passing pedestrians on phone-camera as well as on the CCTV video footage of local shops was an added bonus.
Part 1 of 'Blood Piano', Bedford Street, Belfast, 6 June 2011. Live art installation featuring performers Mads Floor Andersen and Sheena Kelly, directed by Imogene Newland and photographed by Chris Parker.

Audience reactions to this first half of the performance included the mobile installation being followed by a group of bewildered tourists asking for explanation as well as several genuine offers of help from passers by. There also seemed to be a concern for the well being of the dancer, who had a rather bumpy and noisy ride on the piano and was at risk of injury from the unpredictable nature of the piano as it moved along the uneven pavements.

In the second stage of the performance, the female dancer presented a choreographic intervention with the piano in repeated fifteen minute cycles. These interventions explored the tactile and erotic relation between the female body and the piano where physical transgression was a primary stimulus. As the piece progressed, more and more blood emanated from the keys of the piano as it was played, dripping directly onto the body and nightdress of the dancer. At a strategic point during each cycle, the Sisyphean performer - who otherwise remained stationed as a static voyeur in the corner of the room - opened the upper lid of the piano and 'refilled' its organ-like vessels with more blood from containers carried with him. The dancer appeared to churn blood from her own body, first reacting in disgust, then madness and finally, totally ecstatic and violent abandon at her contact with the blood. As the cycles progressed, she became more and more covered in the blood, and the piano, through being beaten by her, became less and less audible.

Despite there being a sign on entrance to the gallery warning audience members that blood spattering was an imminent risk, certain avid spectators chose to stand in close proximity to the piano, including two young children. Observers reported experiencing a sensation of nausea at the sight of the blood regardless of the fact that it was not real, while two members felt induced to leave the gallery space altogether in order to recover.
from feeling faint outside. Initial reactions to the performance included requests for a more philosophical explanation as well as quiet reflection and in some cases, stunned silence. In discussions following the event audience members related feeling trapped inside the small space and as a consequence intimidated by the close proximity of events. The general consensus was one of a feeling of disgust at the sight of blood and a recognition of the connection this aspect had with menstruation and life cycles.

Working with the dancer on Part 2 of 'Blood Piano' presented the challenge of devising a coherent and convincing musical narrative. During the initial creative process, the dancer observed my gestures in playing piano repertoire, constructing a list of possible physical motifs on which to base improvisation. I then observed her imitation of my gestures at the piano, paying particular attention to the ways in which tone quality might be improved through altering bodily approaches to the attack and release of specific chords. It quickly become apparent that singular note articulations would be less convincing to the outside eye than techniques such as cluster chords. I noticed an implicit difference in the tone quality of the gesture produced depending on whether the direction given was with attention to the tone produced or with attention to the shapes made with the body. Approaching each musical gesture from a primarily physical standpoint was absolutely crucial in this developmental stage. It soon became clear that trying to direct improvisation from the standpoint of musical tone was to have far less developmental significance than to describe gestures based solely on physical movements. While it may be argued that this was due to the fact that the performer was a dancer and not a musician, I wonder whether such an approach may be usefully adopted within music pedagogy.

For example, in asking the dancer to articulate a cluster chord, I directed her attention to not only the precision of depressing all notes at exactly the same time, but also to articulating the release of the chord with a downwards movement of the torso. This gesture made the release of the chord more visible, and therefore more articulate, to the outside eye. Not only this, but the diverted concentration of the dancer from the nature of the sound itself to the gesture as a bodily process transformed the sound in a positive manner. Specifically, the attention to bodily movement focussed the dancer on relaxing the body so that when the gesture was executed the sound had a more lasting ringing quality than the harsh sound produced by simply depressing the keys. In addition, I encouraged the dancer to visualise the sound travelling physically within the space of the piano as a kind of imaginary counter-point to supplement sound production and improve overall tone.

The performance score for Part 2 of 'Blood Piano' was made to provide a visual representation of the temporal progression of the piece with particular detail for specific physical gestures to be executed at the piano. Within this, a second score – Score A – was developed in order to prescribe a structure for improvisation based on cluster chords primarily specified through physical movement directions. Score A contained a total of seven gestures that were marked with instructions such as in which position the torso should be held in relation to the piano (hunched or straight back, for example) as well as dynamic guidelines and suggestions for attack and release of specific compositional motifs. Redolent of Christian Wolff's 'Duo for Pianists II' (1958), Score A presented strict performance directions for structured improvisation where a gradual progression of energy and temporal proximity of gestures was necessary. The use of this score was designed to evolve naturally, marking the transition from 2-3.30 minutes/seconds of the main score.
Main score from Part 2 of 'Blood Piano' developed by Imogene Newland

The particular development of this score not only served as a visual reminder to my working process with the dancer but offers the possibility for future dissemination to other performance practitioners wishing to explore these ideas. Importantly, the score is designed in such a way as to be easily translatable by non-instrumentalists who might otherwise struggle when confronted with a more traditional, staff-notated musical score. This method of forming a choreo-musical score also provides an interesting graphic representation of ways in which musical and movement material may be cross-fertilized to produce new and challenging interdisciplinary work. Finally, the score serves as an alternative form of documentation to the performance, leaving evidence for further thought and discussion.

Certain aspects of the second part of 'Blood Piano' project carried high risks and presented the possibility for an unpredictable outcome. One such aspect was the way in which the piano would be affected by the bleeding mechanism in terms of sound and resonance. In order to produce the bleeding effect of the piano, a thin strip of upholstery sponge was placed in the narrow gap between the front of the key bed and the keys themselves. This sponge was then soaked with blood via plastic tubing from four water carriers, placed above the main mechanism. The tubing was funnelled down through the mechanism at strategic points so as not to disrupt hammer action. Not being able to test the blood mechanism before the opening performance due to the fact that the keys would become stained in advance and possibly swell as a result of liquid absorption, produced a certain level of anxiety. A preliminary test with water confirmed that gaps throughout the piano frame – under the keyboard, as well as at the bottom of the piano – would also leak.

In the planning stages of 'Blood Piano' I had estimated that 20 litres of blood should be
adequate, given that each of the four water carriers could hold a maximum of five litres with a projected drainage rate of four litres per fifteen minute performance. However, on the day of performance, due to the unpredictable nature of circumstances where a prior test was not possible, a total of 10 litres was used. Approximately half of this blood drained during the process of the performance. On return to the gallery space the following morning, I discovered the blood had slowly drained out of the piano, forming a thick pool four feet across the gallery floor and appearing to move at a rate of one and half to two inches per hour. This process slowed throughout the following day and seemed to stabilise by the evening. The reflective consistency of the pool allowed for a mirror image of the installation, which included the bloodied nightdress thrust casually over the piano stool.

**Interpretative Reflection**

In the first part of ‘Blood Piano’ I aimed to actualise notions of intense physical effort in relation to musical practice. By substituting a gruelling physical task in place of actual piano playing, I intended for the Sisyphean performer to embody conceptions of struggle in order to question the nature of ambition with regard for musical competence. I hoped that the idea of the piano as a cultural burden - imminently infallible and incontestable – would give rise to the idea of a kind of musical stasis in which the habitual '[...] recycling of canonical repertoire' forms a literal ensnarement of progressive creative output (Meyer, 1967). In this way I hoped the spectator might connect the futility of the Sisyphean performer's task with the sense of insurmountability that the piano may be considered to represent. The performer's effort - and therefore his desire – for musical competence becomes a burden on the performer; an arduous and repetitive act with no final 'perfect' outcome. The idea that the performer therefore in some way feels 'bound' to the piano, as a vice or fetish object, may support the notion that the kind of expectations the piano as an object presents may indeed not be creative, but rather, trapping.

I used the theme of life cycles affirmed through the abject (blood) in the second stage of the performance to draw parallels with music as a feminine entity. Here, I hoped menstruation would be seen as an active participator to the generation of sound and the creation of music in concurrence with feminine desire. I intended the female performer to appear to generate the bleeding scenario through her tactile relation with the instrument, bringing to mind notions of loss of virginity. Further to this, I feel that the female body and the piano may be seen to be connected through the sense that the more the female performer became exhausted, the more the piano bled. In this way we might consider that the piano is bleeding for the female performer in order to actualise her effort and through this the female body and the piano may be seen to be interchangeable. For me, the Sisyphean body in this second part of the performance symbolised desire through actively generating the renewal of blood to the piano, facilitating the cycle through a method of giving part of (his) own body. The Sisyphean body, I think, acted as the sustaining life force to the female performer, whose increasing contact with blood acted as a unifying and life-confirming fluid in keeping with Kristeva's notion of the abject (Kristeva, 1982 [1980]). Further to this, the idea of an overt display of physical expression within the context of music performance may be considered abject where a subversion of corporeal realisation has, historically, been encouraged.

The performance can be recognised as having a strong influence from Viennese Actionism where blood and violent confrontation is used as a facilitator to transgressive states. The transgressive state in 'Blood Piano', I believe, occurred for the performers through strenuous and sustained physical struggle and through contact with bodily fluid (blood). The blood was used to affirm the performers' effort and to symbolise their desire
for the experience of otherness achieved through contact and interaction with objects. The state of being derived from this experience is one in which the performers actualise the notion of transgression through bodily participation with the piano. The parallel with menstruation as confirmation of the feminine abject with the notion of music as a feminine entity in need of social control furthered the idea that sound production at an instrument constitutes the 'reproductive' at the most intimate level. The parallel between the 'muting' of the piano and the 'muting' of the female body may be seen as a 'working through' of the 'reiterative' and 'constitutive' acts of gender performativity and gestural mimesis. In this sense the attempt of the subject to 'reproduce' a desired ideal through observation, imitation and assimilation may be considered alongside notions of effort and repetition in music performance. The conceptualisation of music as a creative by-product of real and human bodily process allows for a kind of 'giving birth' of sound - and therefore desire – to take place. This conceptualisation allows for the feminine abject as the musical other to emerge, described through an acute physical and emotional struggle actualised through live art processes with the piano.

Sheena Kelly performing Part 2 of 'Blood Piano' at PS2 Gallery, Belfast, 8 June 2011. Directed by Imogene Newland and photographed by Chris Parker.
What is predictable must be both predictable and unpredictable: and what is unpredictable, must be both unpredictable and predictable' (Volans/Burrows, 2010: 107).

2 The term 'reiterative' and 'constitutive' acts with regard to mimesis was first established by theorist Judith Butler in her book Gender Trouble: Feminism and the Subversion of Identity (2008 [1990]). Her discussion pertains to the idea that gender is performative and this performativity manifests itself through 'reiterative' and 'constitutive' acts that serve to reinforce culturalised gender assumptions.

3 Originating in French psychoanalytic theory, the term jouissance was originally coined by Lacan in his seminar 'The Ethics of Psychoanalysis' (1959-1960) and is used to refer to pleasure, usually of a sexual nature.

4 I recall here Thomas Mark's statement that '[...] the virtuosity of a performer like Horowitz involves a certain self-effacement; a virtuoso does not call to attention the effort demanded by a difficult piece' (Gracyk, 1997: 145 paraphrased from Mark, 1981: 32)

5 Developed throughout the 1960s and earlier 1970s, the Viennese Actionists were a group of artists including Hermann Nitsch and Günter Brus that tackled issues of transgression and taboo through performance by using various bodily fluids including blood (Vergine: 2007 [2000]).

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Imogene has an MA with distinction in choreography from Dartington College of Arts and a Licentiate of the Royal Schools of Music in piano performance. She has presented her original performance works at, amongst others, the Arnolfini, Bristol, the Klankkleur Festival, Amsterdam and Ars Electronica, Linz. She has recently completed her practice-led PhD “The Piano and the Female Body: the Erotic, the Seductive and the Transgressive” at the Sonic Arts Research Centre, Queen's University Belfast.