

Colors Like Knives: Embodied Research and Phenomenotechnique in Rite of the Butcher

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1. For these recent debates in music, see John Croft, ‘Composition Is Not Research’, *Tempo*, 69.272 (April 2015), 6–11; and responses by Reeves (pp. 50–59), Pace (pp. 60–70), and Croft (pp. 71–77) in *Tempo*, 70.275 (January 2016). On the ‘work-concept’ in music, see Lydia Goehr, *The Imaginary Museum of Musical Works: An Essay in the Philosophy of Music* (Oxford: Oxford University Press, 1992). Compare these debates in music with those found in *Practice-as-Research in Performance and Screen*, ed. by Ludivine Allegue, Simon Jones, Baz Kershaw, and Angela Piccini (Basingstoke: Palgrave Macmillan, 2009).

2. See Note 18, below.

Colors Like Knives: Embodied Research and Phenomenotechnique in *Rite of the Butcher*

Ben Spatz 

Eleven Minutes

Conversations about the epistemology of embodied practice continue unabated across the arts and humanities. Recent disputes over the epistemological status of musical compositions – and whether these in themselves may or may not constitute research – revisit and reframe, in a different context, many of the same issues raised over the past decade in theatre, dance, and performance studies. Very often the objects of analysis in these discussions are varieties of the classically conceived artistic ‘work’: a repeatable score, either well-trained or notated, that remains distinct from any particular moment of performance. Individual performance events, in contrast, are still more often celebrated on the grounds that they are too fleeting and ephemeral to be captured by the documentary mechanisms of academic research. After more than a decade of Practice as Research, Performance as Research, Artistic Research, and related concepts and coinages, there is still little consensus as to the basic methods or terms according to which such research should be framed, disseminated, and assessed.¹

This article offers a mode of analysis in which embodied practice is taken seriously as a way of knowing. It applies a rigorous epistemological framework to an 11-minute video document from 2011.² By analyzing the research content of that video in technical terms, I attempt to move the above-cited conversations forward in several ways: first, by emphasizing the validity of *embodied research* in contrast to less coherent notions of

3. In a blog post that resonates with some of my discussion here, Rachel Hann proposes the concatenated form 'practice research' as a 'move away from the micro-politics of practice as/through/based/led'. The density of the term 'practice research' is suggestive, but it takes us no further in clarifying what counts as practice. Given how much work has gone into demonstrating that language, culture, science, and everyday life are all forms of practice, it is unclear how the term 'practice' in this context can still be productive. Rachel Hann, 'Practice Matters: Arguments for a "Second Wave" of Practice Research', *Future Practice Research*, 28 July 2015 <<https://futurepracticeresearch.org/2015/07/28/practice-matters-arguments-for-a-second-wave-of-practice-research/>> [accessed 10 March 2016].
4. 'Movement Research at Judson Church', *Movement Research* <<https://movementresearch.org/events/series/movement-research-at-judson-church>> [accessed 22 February 2016]. Along with Massimiliano Balduzzi, I was an Artist-in-Residence at Movement Research from 2010 to 2012.
5. Randy Martin, *Critical Moves: Dance Studies in Theory and Politics* (Durham, NC: Duke University Press, 1998), p. 52. See also Ramsay Burt, *Judson Dance Theater: Performative Traces* (New York: Routledge, 2006).
6. Martin, *Critical Moves*, pp. 37, 39.
7. In *What a Body Can Do: Technique as*

'practice' or 'performance' as research; second, by taking the relative stability of an audiovisual recording as an essential component in sharing and evaluating such research; and third, by using a conceptual vocabulary drawn from social and historical studies of laboratory science to clarify what exactly constitutes research in embodied practice.³ I do not claim that the approach offered here is the only way to establish greater precision in framing and articulating performing arts practices as research. Rather, I offer this micro-analysis as a modest contribution to a complex, multidisciplinary debate, in the hope that its particular approach will prove useful or suggestive to others.

The 11-minute performance in question was presented as part of Movement Research at Judson Church, a long-standing 'high visibility, low-tech forum' in New York City that 'supports experiments in performance rather than finished products'.⁴ This context is important, as Movement Research is one of the few organizations in the United States that provides direct and explicit support for embodied research. Carrying forward the legacy of the Judson Dance Theater, Movement Research at Judson Church provides what Randy Martin calls a space 'just outside the market for spectacle'.⁵ I want to suggest here not only that the framework of Movement Research is positioned outside the market for spectacle, but also that its invocation of 'research' pointedly emphasizes the epistemic dimension of embodied practice as distinct from its instrumental value in the creation of artworks. Like Martin, I am interested in reconsidering 'what would constitute a unit of meaning' in live performance, in part through a shift from 'representation' – the circulation of signs in an imagined public sphere – to 'participation': the circulation of practices across bodies.⁶ However, I want to postpone for now the question of how practices circulate between performers and audience in the complex whole of a live event in order to focus instead on the iterative elaboration of new technique through practice. In this article I take the term 'research' in the name Movement Research literally, testing it against social and historical studies of experimental research in the sciences. In doing so, I am pursuing a hunch that the methodologies of laboratory science may be more applicable to embodied research than those of the humanities or social sciences.

The risks and difficulties associated with writing critically about one's own practice are of urgent concern for many today who occupy hybrid identities like 'artist-scholar' and 'practitioner-researcher'. In previous publications, I have used social epistemology to analyze practices from which I can claim varying degrees of critical distance.⁷ Now for the first time I apply the same strategy to a practice of which I am the sole author and practitioner. My claim is that an 11-minute video can be analyzed as a research document, a trace or record of concrete discoveries made through embodied practice. To substantiate this claim, I need to show that a distinction can be meaningfully drawn between the established knowledge that structures the documented practice and the new, still-inchoate knowledge that the practice makes possible. In the terms developed by historian of science Hans-Jörg Rheinberger, I must trace the boundary that separates the *experimental system* of the documented practice from the *epistemic objects* that emerge from it. Let me clarify here that, in borrowing terms and

Knowledge, Practice as Research (New York: Routledge, 2015), I offer the historically significant work of Tirumalai Krishnamacharya, Konstantin Stanislavsky, and Jerzy Grotowski as examples of pioneering research in embodied technique. In 'Citing Musicality: Performance Knowledge in the Gardzienice Archive', *Studies in Musical Theatre*, 7.2 (2013), 221–35, I examine a set of published multimedia videos as traces of research while also drawing on my own period of apprenticeship with Gardzienice. In 'Massimiliano Balduzzi: Research in Physical Training for Performers', *Theatre, Dance and Performance Training*, 5.3 (2014), 270–90, I analyze a set of video documents produced by Balduzzi and myself as part of our sustained creative partnership. These three publications represent three points along a spectrum of distance between myself and the object of study: historical (Stanislavsky), participatory-ethnographic (Gardzienice), and collaborative (Balduzzi). The current essay takes that trajectory to its logical conclusion with an analysis of my own solo practice.

concepts from Rheinberger, I am in no way reducing embodied research to the scientific method. Rather, it is precisely the historicizing destabilization of science accomplished by critical epistemologists like Rheinberger that allows us to get beyond a binary division between science and art. In Rheinberger I find a surprisingly precise account of my own embodied research. This is not because my practice is scientific but because both scientific and embodied research are epistemic endeavors. What Rheinberger offers is much more than an account of science: it is a *general* account of how new knowledge arises out of existing knowledge, and it is this that I apply here to a specific example of embodied research.

My presentation at Movement Research on 21 February 2011 was merely a point along the way in the development of a project called *Rite of the Butcher*, neither the first nor the final incarnation of that work. Yet I consider that showing to be one of my most significant, precisely because it was a public demonstration of research rather than a private rehearsal or a public performance. The institutional frame of Movement Research implicitly suggests a set of questions related to this third type of space. What is the difference between watching performance and watching research? How should research presentations be analyzed and assessed? Is a research presentation primarily a place for sharing results or can it also involve live experimentation? My own answers to these questions provide the motivation for this essay. While later versions of *Rite of the Butcher* embedded its core research content within a theatrical frame, this version hews more closely to the notion of 'pure' (non-instrumental) research. To understand those later versions one would have to examine them as theatrical works, considering aspects of performance that are manifest in the perception of spectators more than that of the practitioner, such as visual imagery and narrative. This moment of public research demonstration invites something different. Below I will suggest that what is needed is a mode of analysis that combines or synthesizes aspects of the technical and the phenomenological. But first I begin from a methodological challenge: how can we focus analytically on the epistemic dimensions of a document of embodied practice? This is the task for which I enlist Rheinberger's help.

Embodying the Technical

Hans-Jörg Rheinberger offers a scientifically, historically, and philosophically informed analysis of how the sciences produce knowledge through what he calls their 'experimental systems':

Within these complex, tinkered, and hybrid settings of emergence, change, and obsolescence, scientific objects continually make their appearance and eventually recede into the technical, preparative subroutines of an ongoing experimental manipulation. As a result, there is again a continuous generation of new phenomena, which need not have anything to do either with the preceding assumptions or with the presupposed goals of the

8. Hans-Jörg Rheinberger, *Toward a History of Epistemic Things: Synthesizing Proteins in the Test Tube* (Stanford: Stanford University Press, 1997), p. 21. I first encountered Rheinberger via Karin Knorr Cetina's essay 'Objectual Practice' in *The Practice Turn in Contemporary Theory*, ed. by Theodore R. Schatzki, Karin Knorr Cetina, and Eike von Savigny (New York: Routledge, 2001), pp. 175–88. In Cetina's evocative description of unfolding epistemic things, I caught my first glimpse of how social epistemology can be used to describe aspects of embodied practice that are usually missed by prevailing modes of analysis in theatre and performance studies.
9. Hans-Jörg Rheinberger, *An Epistemology of the Concrete: Twentieth-Century Histories of Life* (Durham, NC: Duke University Press, 2010), p. 224. This collection of essays builds upon and extends the arguments of the earlier monograph. I call the technical and the epistemic quasi-philosophical categories because for Rheinberger they are first of all practical and concrete elements of a laboratory setup (e.g. microscope and protein or model organism and gene), but they can also be linked to philosophical debates over realism as I suggest below.
10. Rheinberger, *Toward a History*, p. 30.
11. 'Technique consists of discoveries about specific material possibilities that can be repeated with some degree of reliability, so that what works in one context may also work

experimenter. They usually begin their lives as recalcitrant 'noise', as boundary phenomena, before they move on stage as 'significant units'.⁸

Rheinberger's language is dense and requires some unpacking. At first glance there is a fairly simple relationship between the 'experimental system', which includes the physical laboratory and all of its technology and personnel, and the 'scientific object' or 'epistemic thing' that emerges from that system. Yet these are merely specific instances of two more general, quasi-philosophical categories: the technical and the epistemic. In some very clear-cut examples, such as a microscope examining a cell, the boundary between technical and epistemic can be as simple as that 'between an organic and an inorganic entity', an encounter in which 'the living entity is wet and soft and the technological one is dry and hard'. In other cases, however, organic entities such as cells or model organisms may function as 'organic tools' in biological experiments, so that the technical/epistemic boundary is found within the 'wet and soft' domain of organic matter.⁹ This boundary then is not a matter of different substances but of how various substances work in the context of a given experiment: '[t]he difference between experimental conditions and epistemic things [...] is functional rather than structural'.¹⁰

The question at hand is whether embodied technique – such as that of song, movement, and imaginative association – can be understood as setting sufficiently coherent boundary conditions to produce meaningful epistemic objects. Clearly we should not expect from such technical conditions the kind of quantitative repeatability upon which experimental physics or biology relies. Instead we should look for what I call a 'relative reliability' sufficient to allow for the development and transmission of embodied technique.¹¹ Specifying relative reliability in this sense would allow us to locate the border between technical and epistemic within embodied practice itself, independent of technological supports, by distinguishing within a given practice between technique that structures it (the technical) and technique that is generated by it (the epistemic). We might then look to see whether, as Rheinberger predicts, the new technique produced by a practice, which at first is fuzzy and unclear, can later be routinized and incorporated into the technical, thereby advancing the whole experimental system along a particular epistemic pathway. In Rheinberger's terms: '[t]he epistemic things that ground the experimental sciences emerge from the deposit of the technical and its potential for tinkering. Whence it follows that time and again they lend themselves to becoming reincorporated in that deposit'.¹²

Rheinberger himself has been asked to reflect upon the application of his epistemological framework to the arts and in particular to the idea of artistic research. He has responded with genuine interest, recognizing the importance of repetition in painting and music and suggesting that 'an artist like Cézanne, who painted hundreds of apples in his countless later still lifes, must have been caught in a kind of experimental system'.¹³ Moreover, Rheinberger emphasizes the deep engagement with materiality that unites scientists and artists: 'the interaction of the experimenter with his or her material lies at the centre. If one is not immersed in, even overwhelmed by, the material, there is no creative experimentation'.¹⁴ With this in mind, we can turn to the documented practice mentioned above and try to distinguish

in another.' Spatz, *What a Body Can Do*, p. 42. Although their technologies allow for quantitative repetition and hence for the scientific method, the artisan intuition of scientists is far more similar to that of artists and embodied practitioners than has usually been acknowledged. This has been one of the major arguments of social epistemology, sociology of scientific knowledge, and science studies.

12. Rheinberger, *Toward a History*, p. 141.
13. Hans-Jörg Rheinberger, 'Forming and Being Informed: Hans-Jörg Rheinberger in conversation with Michael Schwab', in *Experimental Systems: Future Knowledge in Artistic Research*, ed. by Michael Schwab (Leuven: Leuven University Press, 2013), pp. 199–220 (p. 216). This volume is an important precedent for my argument, full of valuable insights, although it does not take the decisive step of identifying artistic technique with Rheinberger's concept of the technical. This is likely because of the dominance of the 'work' concept (see Goehr, *Imaginary Museum*) in music and visual arts, which effectively hides technical knowledge behind its artifacts. Hence Schwab's interpretation of technique and the technical is much narrower than mine (see p. 10 and p. 207). Witzgall and others in this volume also engage with Rheinberger's concepts but are rarely able to apply them convincingly to contemporary art and music because of their

an iterative experimental system that might allow for the production of specifically new epistemic things. This system would be composed of layers of embodied technique, equivalent to the bodily skill of experimental scientists but without the support of technological instruments.¹⁵ In addition, we can attempt to locate this experimental system within a broader context of related embodied experimentation. For as Rheinberger notes, '[e]xperimental systems don't come in isolation. As a rule, they are part of broader landscapes or cultures of experimentation. They form ensembles with a patchwork structure.'¹⁶ If the documented practice is indeed a research practice, then the landscape of experimentation of which it is part will not be identical to the landscape of cultural performance in which it appears. From an epistemological perspective, the important context is not in the minds of witnesses – for example, other performances to which they might compare it – but in the flows of technique that structure it and the communities of knowledge that are invested in these flows.

The documented practice explores an epistemic territory I call song-action. The epistemic objects it seeks to realize are song-actions. In order to produce these elements, the practice iteratively enacts an experimental system comprising a number of technical flows. As with any experimental system, it is impossible to characterize all the layers of the technical that undergird its epistemic engagement. The best one can do is to enumerate those technical structures that are most active and influential at the point where something new emerges. Whether I was aware of these structures at the time is irrelevant to my present analysis, which aims to articulate the technical structure of the experimental system at work in the documented practice using a combination of embodied memory and reference to video and photo documents. A first step in this analysis would be to enumerate the main areas of embodied technique that structure the practice as follows: physical action, spoken text, song-action, and movement improvisation (see [Images 1–5](#)). In distinguishing these areas, I am not attempting to create a divisive typology of technique but rather to articulate the technical patterns that structure the practice. In another context, words like 'action' and 'song' might refer to significantly different areas of technique. The meaning of these terms as I use them here emerges not only from the discursive context of this article but also in reference to the cited video. In the documented practice, these areas of technique are explored separately, for differing lengths of time and with differing levels of expertise.¹⁷ Taken together they gesture toward an epistemic territory (song-action) that I have been exploring for more than a decade.

The present analysis leaves aside the use of spoken text and pure movement improvisation in *Rite of the Butcher* in order to focus on the embodied technique of action and song-action, for it is in these areas that I consider the main research outcomes and epistemic objects of this practice to be found. When we attempt to define an area of embodied technique such as 'action', ambiguity often arises between historical and technical frames of reference. Historically, the kind of action I am talking about can be traced through a lineage of practice from Konstantin Stanislavsky to Jerzy Grotowski to Massimiliano Balduzzi to me.¹⁸ This does not mean that I claim any particular legacy or authenticity deriving from those names. Clearly there are many lines of practice that could be

focus on unique 'art-works' rather than artistic technique.

14. Rheinberger, 'Forming and Being Informed', p. 199.
15. Andrew Pickering, more than Rheinberger, emphasizes the embodied technique possessed by scientists: 'the open-ended dance of agency that is scientific practice becomes effectively frozen at moments of interactive stabilization into relatively fixed cultural *choreography*, encompassing, on the one side, captures and framings of material agency, and, on the other, regularized, routinized, standardized, disciplined human practices'. Andrew Pickering, *The Mangle of Practice: Time, Agency, and Science* (Chicago: University of Chicago Press, 1995), p. 102; emphasis in original.
16. Rheinberger, 'Forming and Being Informed', p. 205.
17. See Ben Spatz, *Rite of the Butcher*, 21 February 2011, Movement Research, New York <<http://urbanresearchtheater.com/2011/02/21/rite-of-the-butcher-desert-version/>>. This is a complete video of the presentation, recorded by Movement Research staff, with what I consider the 'minimal density' of annotation for a research document: title of the work, names of creators and practitioners, and burnt-in time code for stable referencing. The following areas of embodied technique are presented in the video: silent physical action (0:00–3:10 and 10:10–10:40); spoken text with physical action (3:10–5:02); song-

charted, using these reference points or others, which might employ the term 'action' differently or not at all. By invoking these names, I am seeking not to authenticate but to specify my practice. While 'action' can refer to many different kinds of technique, in this context the operative meaning is that specified by the sequence of names Stanislavsky–Grotowski–Balduzzi. If one wanted to apply even greater historical specificity, one could refer to particular periods of practice, or – even better – to documents arising from those periods. But I am more interested here in technical than historical specification. Elsewhere I have defined physical action in Stanislavsky's sense as corporeally precise movement that is 'determined by reference not to a future audience but to the organic reactions of the actor'.¹⁹ In other words, the physical details of a particular movement are set because they are 'expected to provoke a fuller organic engagement on the part of the actor'.¹⁹ Grotowski extended this notion into a search for organicity within a wide range of physical and vocal expression. In the work of Massimiliano Balduzzi, these precedents have led to the development of 'exercise-actions' that combine a high degree of movement precision with a dynamic flexibility designed to support personal associations and intentionalities. What we have here are a series of historically and technically linked epistemic objects, all exploring in different ways the relationship between externally perceptible movement specification (for example, position of the spine and extremities, tempo-rhythms, opposing forces within the body) and the landscape of imagery and association that these evoke in the practitioner.²⁰ The extent to which the movement specification and the landscape of association are inseparable is what defines the presence of Stanislavsky–Grotowski–Balduzzi actions in the sense I have described.

Like the brief genealogy of 'action' just traced, the approach to singing in the documented practice has its own technical and historical context, centering around Grotowski's increased engagement with folk and other traditional songs in his later work as well as the post-Grotowskian practices of the Workcenter of Jerzy Grotowski and Thomas Richards (Italy) and the Centre for Theatre Practices Gardzienice (Poland).²¹ In particular, the documented practice explores what Thomas Richards has referred to as a 'spiral' phenomenon in his practice of singing traditional songs from the folk and ritual traditions of Haiti and other Afro-diasporic cultures.²² A spiral is an open circle with linear directionality perpendicular to its curve. The circular form in this case is a short repeating refrain, melodically simple by the standards of European musicology. The complexity of the singing process is then found not in extended melodic development (as in European opera) but rather in a linear process that cuts across multiple iterations of the refrain. According to Richards, traditional songs in his practice function 'through repetition, and the way in which the vibratory qualities of the song are affecting the doer through this repetition. The melody stays the same, but the resonance is changing, the vibratory qualities develop along with the repetition.'²³ As Richards suggests, repetition of this kind structures embodied practice on multiple scales, from small to large.²⁴ I would argue further that such repetition should be understood as a literal instantiation of

action (50:02–9:24 and 9:55–10:10); movement improvisation (9:24–9:55). Although an audiovisual document cannot provide a comprehensive record of this technique, it affords access to some aspects – such as alignment of the body and quality of the voice – with a level of detail and stability that cannot be achieved either through live encounter or through the written word. Without suggesting that the cited video is in any way identical to the practice that took place on that date, I treat it as an archival record of particular repeatable pathways in embodied technique. As in other fields, it is not the local instance of an epistemic object that carries significance as a research output but its documented trace. Hence, the relevant question is not what the video document misses but what it captures. Additional multimedia documentation of *Rite of the Butcher* can be found at <www.urbanresearchtheater.com>.

18. This lineage has gaps. Grotowski worked not with Stanislavsky but with his students and Balduzzi worked not with Grotowski but with people who had worked with him. I have also worked with many other practitioners who use the term ‘action’ in technical ways, some of whom were influenced directly or indirectly by Grotowski. The three points ‘Stanislavsky–Grotowski–Balduzzi’ represent moments in the development of the technique of action that hold particular resonance for me insofar as I associate specific questions,

research in Rheinberger’s sense. Thus we should take Richards literally when he asserts that ‘traditions are research’ and describes the advancement of such research in terms that closely echo those of Rheinberger.²⁵

The practice analyzed here is based on precisely this kind of iterative process, or repetition-with-a-difference, across a number of scales or levels. On a macro scale, one can analyze the development of song-action across a variety of practices and contexts. On a middle or ‘meso’ scale, one can examine the different ways in which song-action is used in different projects created by the same ensemble or individual. Finally, on a micro scale, one can examine a particular moment or document of practice to see how an iterative or cyclical approach produces particular epistemic objects or locations in epistemic space.²⁶ The macro scale has evident links with social and cultural history and allows for a broad consideration of how embodied technique relates to larger-scale movements. The meso scale is roughly that of the artistic work or project when viewed from an embodied perspective, not as a written score or script but as an epistemic object that is differentially realized by multiple performances. While both of these perspectives are important, I have chosen to focus here on the micro scale of analysis in order to expose the development of new technique in detail.

Epistemologica

I will now describe and analyze three examples of what Rheinberger variously calls epistemic objects, epistemic things, epistemata, or epistemologica.²⁷ In each case I will attempt to trace the boundary between the repeatable technique that gives the practice its identity and the zone of unpredictable, emergent differentiation out of which new technique arises. As further discussed below, I am attempting to combine technical and phenomenological perspectives in a way that would allow another person with sufficiently similar skills to travel along analogous epistemic pathways and encounter some of the same epistemic territories and objects.

Seated Martial Dance

The practitioner is seated in a chair with their weight and balance grounded primarily through that point of contact (see Image 1).²⁸ Some weight may be distributed through the feet, but the legs are held free to move lightly and quickly. The arms are raised to the sides, outstretched and poised (Image 1). The action involves a series of sharp gestures, initiated in the core of the body and grounded through the seat, in which the hands come together in front of the body.²⁹ The shape into which the arms and hands arrive is improvised, but the hands never touch. The fingers may be open or closed and the gestures may invoke associations such as cutting, pressing, squeezing, slicing, squashing, slamming, or joining. Successive impulses pull the hands away from each other and then forcefully back together. The legs alternately open and close as part of the same whole-body impulse. The effort quality of each movement is

choices, and developments with each.

19. See Ben Spatz, 'Stanislavsky's Threshold: Tracking a Historical Paradigm Shift in Acting', *Journal of Dramatic Theory and Criticism*, 29.1 (2014), 81–95 (p. 91) – a revised version of a section in *What a Body Can Do*, pp. 122–32.
20. On Stanislavsky, see Spatz, 'Stanislavsky's Threshold': on Balduzzi, see 'Massimiliano Balduzzi'.
21. On Gardzienice, see Paul Allain, *Gardzienice: Polish Theatre in Transition* (London: Harwood Academic Publishers, 1997); Włodzimierz Staniewski and Alison Hodge, *Hidden Territories: The Theatre of Gardzienice* (New York: Routledge, 2004); and Ben Spatz, 'Citing Musicality'. On the Workcenter, see *The Grotowski Sourcebook*, ed. by Richard Schechner and Lisa Wolford (New York: Routledge, 1997); 'Re-Reading Grotowski', a special issue of *The Drama Review*, 52.2 (2008); and Kris Salata, *The Unwritten Grotowski: Theory and Practice of the Encounter* (New York: Routledge, 2012). To grasp the influence of this turn to traditional song cultures in contemporary theatre practice it is important also to consider the New World Performance Laboratory, Song of the Goat Theatre, Theatre Zar, Farm in the Cave, and other companies influenced by Grotowski, his Workcenter, and Gardzienice. These practices in turn should be understood

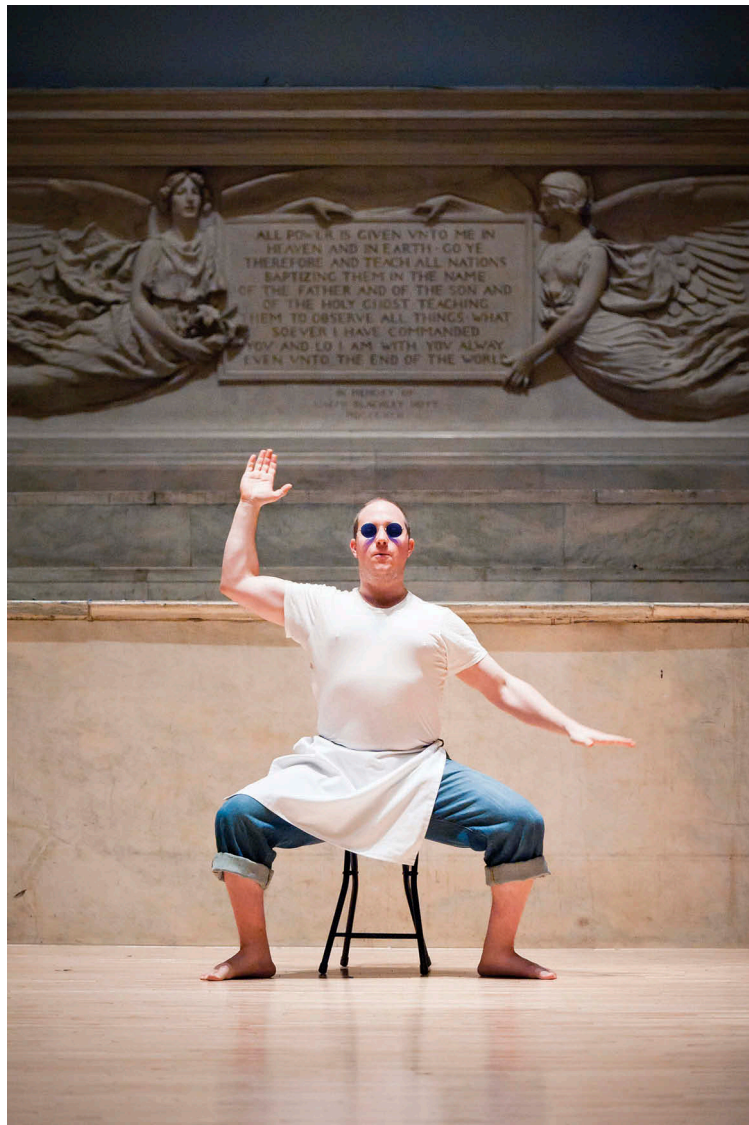


Image 1 Ben Spatz, *Rite of the Butcher*. Movement Research at Judson Church, 21 February 2011. Seated martial dance. Photo by Ian Douglas.

strong and direct, but there may be more or less resistance at the beginning and end of each gesture. The overall rhythm is irregular: whenever a regular rhythm appears, it is quickly broken so that the arrival of each successive impulse remains unpredictable. Each impulse has a bouncing quality, with the tempo-rhythm of the bounce depending on how far the hands move and the duration of the moments of suspension (when the hands are extended out) and compression (when the hands are almost touching). All of this movement in the limbs is initiated from the core of the body and flows out through the fingertips and back. If the movement is copied without finding a deep source of initiation through the core, the

in the context of developments in ethnomusicology and the natural voice movement. See Caroline Bithell, *A Different Voice, a Different Song* (Oxford: Oxford University Press, 2014), pp. 55–63.

22. Richards referred to the temporal development of a song as a 'spiral' in his plenary dialogue with Daphne Brooks at Performance Studies International #19 (Stanford University, 2013). I have not been able to locate a reference to this phenomenon in his publications in English, but I consider it a valuably concrete evocation of Richards's experience of songs as epistemic objects. Referring to a very different musical idiom, Thomas F. DeFrantz describes a similar spiral phenomenon: '[h]ouse music also tends to work with sparingly articulated referents, evocative lyrical hooks that are open-ended enough to repeat over several minutes without significant elaboration. In this expressive space that values repetition over change, details of harmonic and rhythmic structural shifts matter greatly. More than anything, house music relies upon the movement of the bass to generate sonic drama.' Thomas F. DeFrantz, 'Hip-Hop Habitus v.2.0', in *Black Performance Theory*, ed. by Thomas F. DeFrantz and Anita Gonzalez (Durham, NC: Duke University Press, 2014), pp. 227–42 (p. 233).
23. Thomas Richards, *Heart of Practice: Within the Workcenter of Jerzy Grotowski and Thomas Richards* (New

arms and shoulders may become sore (this happened when I attempted to teach this action to a group of professional dancers and performers).

The 'seated martial dance' appears from a synthesis of the *cheironomia* or gesture technique developed by Gardzienice – inspired by the iconographies of ancient Greece – and the approach to irregular rhythms in physical action developed by Massimiliano Balduzzi.³⁰ Both of these areas of technique were once epistemic objects, both in the strong sense as genuinely new discoveries (when they were created by Gardzienice and Balduzzi respectively) and in the weaker sense of being new to a specific individual (when I trained in them). But by the time of the documented practice, they had both sedimented in my body to the point of being technical in Rheinberger's sense: I no longer experienced them as objects to discover but instead as tools to work with. However, while I was consciously aware of how I was wielding Balduzzi's irregular rhythm in that moment, I was not aware of the influence of Gardzienice's *cheironomia*. The 'martial dance' action had emerged the previous summer during an improvisational session and at the time I had no sense of any strong historical precedent. It was not until almost a year later, while re-watching videos of Gardzienice's training practice, that I realized with a shock how my 'martial dance' adapted the overall quality of the *cheironomia* while jettisoning its specific gestural vocabulary. Hence what I had taken to be a relatively pure instance of elaborating new physical technique out of improvisational practice instead turned out to be an example of how two different technical flows can come together to produce a new epistemic object. In this case, technical pathways that had been ingrained in my body during my 2003–04 apprenticeship with Gardzienice were synthesized with what I was doing in 2011 under the influence of Balduzzi. Through differential reproduction of the known, something unknown appeared.³¹

Erotic Descent through 'oh pa say'

This epistemic object arose from a very different process, more complex and personal.³² Unlike many of the song-based practices of the Workcenter, Gardzienice, and many other post-Grotowskian practitioners, my embodied research from 2005 to 2013 was based on the invention of original songs or 'song fragments' in which simple melodic and rhythmic elements are combined with nonlexical (nonsense) vocables. The song fragment 'oh pa say' was created during the *First Song Cycle* project (2007–09), in which all song fragments were developed through unmediated accumulation. In that approach, neither melodies nor vocables are written down until long after they have been established and memorized, a process that tended toward the development of musically simple song fragments that were richly layered with associative meaning and bodily memory. The 'oh pa say' song fragment is especially simple, making use of just five notes in its root melody.³³ In contrast, most of the song fragments used in later versions of *Rite of the Butcher* were created during a recorded improvisation session and then modified and memorized as songs. That process allowed for longer and more complex melodic

York: Routledge, 2008), p. 45.

24. Ibid., p. 134.
25. '[T]raditions are research. From generation to generation they must advance, develop, otherwise they will die. Knowledge is never complete. It needs to advance substantially otherwise it will descend into mechanical repetition.' Richards, *Heart of Practice*, p. 52. Compare with Rheinberger: '[T]he temporal coherence of an experimental system is granted by recurrence, by repetition, not by anticipation and forestalling. Its future development, on the other hand, if it is not to end in idling, depends upon groping and grasping for differences. Together, this adds up to what can be called differential reproduction. [...] Reproducing an experimental system means keeping alive the conditions – objects of inquiry, instrumentation, crafts and skills – through which it remains “productive”. All innovation, in the end and in a very basic sense, is the result of such reproduction.' Rheinberger, *Toward a History*, p. 75.
26. Here I add a third category to Mark Fleishman's definition of Performance as Research as 'a series of embodied repetitions in time, on both micro (bodies, movements, sounds, improvisations, moments) and macro (events, productions, projects, installations) levels, in search of a series of differences'. Fleishman, 'The Difference of Performance as Research', *Theatre*

and vocable lines, while sacrificing the pure embodiment of the practice through its reliance on digital recording as part of the creative process. In the documented practice, the simple song fragment 'oh pa say' is combined with an extended line of actions to produce a spiral development in which repeated cycles of the refrain iteratively produce a complex song-action.

During *First Song Cycle*, 'oh pa say' had been linked to a line of actions that developed over six or seven minutes, through several stages, including: an initial invocation, touching and being touched by an imaginary partner, a free-flowing dance initiated in the spine, and a final 'descent' in which a deepening and thickening of vocal resonance went along with a gradual dropping in pitch and a viscerally sexual association. In the documented practice, this song-action is compressed into less than two-and-a-half minutes and cut short at the moment of greatest associative intensity. This version begins with the practitioner seated (see [Image 2](#)). Linking song and movement through breath, they initiate a searching gesture of the right arm and hand, which begins gently but soon becomes more forceful and staccato. The action of the arm draws the performer to standing and leads them forward into the space. There is a pause in the song as the searching action of the hand becomes a caress of the practitioner's own left shoulder. When the song begins again, it is more rhythmically regular as well as being pitched higher and finding a more delicate quality of resonance. This light, searching quality in both song and gesture leads the performer diagonally across the space, shifting from left arm to right and culminating in the touching of the right hand to the empty space above the head. The song now begins to descend in both pitch and resonance, followed by

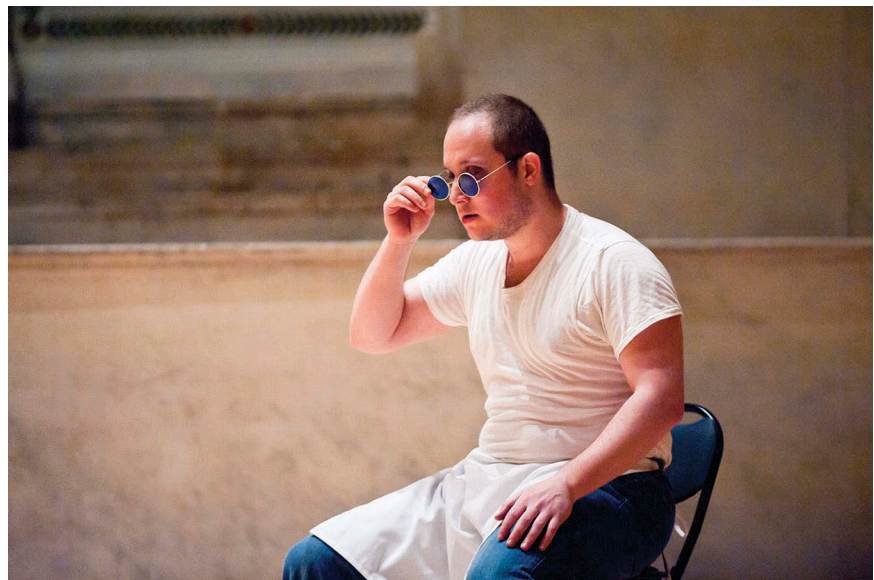


Image 2 Ben Spatz, *Rite of the Butcher*. Movement Research at Judson Church, 21 February 2011. Before the start of song-action 'oh pa say'. Photo by Ian Douglas.

Research

International, 37.1 (2012), 28–37 (p. 29).

27. For the latter two terms, see Rheinberger, *Toward a History*, p. 141 and *Epistemology of the Concrete*, p. 233.
28. Spatz, *Rite of the Butcher*, 1:24–1:59 (primary version in silence) and 3:38–4:26 (variation with spoken text).
29. An anonymous reviewer of this article queried my reference to the ‘core’ of the body as well as the notion of ‘sufficiently similar’ skills in the previous paragraph. To what extent can such references be made precise? I cannot do more than reiterate my two main points: first, that embodied technique can only ever be relatively reliable and that something like ‘the core of the body’ functions either as established technique or as epistemic object in any given experimental system; and second, that this writing is offered alongside the above-cited video document, which provides an entirely different way of accessing the practice and can be used to clarify or critique what is written here.
30. On the connection to Gardzienice, see Spatz, ‘Citing Musicality’, pp. 233–34. On irregular rhythms in Balduzzi’s work, see Spatz, ‘Massimiliano Balduzzi’, pp. 279–82.
31. Gardzienice’s *cheironomia* technique has been further developed, in varying ways, by Teatr Chorea <www.chorea.com.pl>; by Anna-Helena McLean <www.moonfool.com>; and in my ongoing Judaica project. This diversity of

the arm. The performer sinks to their knees as the song continues to descend through several repetitions. Here the song-action is cut short, interrupted by a short pause and followed quickly by the next song-action, a sustained and forceful chant with nonlexical vocables: ‘enzoma isode’.

In the context of my present discussion, the significance of this song-action is not only the combination of song and action but also the depth and quality of the imaginative associations that color it. Revealing some aspects of this association, including the sexual content of one moment, raises an important question about the limits of transferable technique and therefore of the technical in Rheinberger’s sense. To what extent can associations themselves, whether imagined or remembered, be taught or transmitted as technique? The actual associations I was working with in this moment, such as imagined visual images or physical sensations, are not transmissible to any other practitioner and therefore cannot be included in the technique or technical structure of the practice. On the other hand, more general sexual associations – such as searching, caressing, touching or being touched, penetrating or being penetrated – are transmissible to a degree. Substantial work has been done on the ethical risks arising from the use of sexual associations in hierarchical (director–actor and teacher–student) relationships and on the spectacular display of anti-normative sexuality in performance art. But neither the acting studio nor the theatrical stage of performance art aims to conduct open-ended embodied research of the kind described here. When analyzing an embodied research based in solo practice, the question is less how personal associations create meaning between working partners or between performer and audience than what kind of psychophysical or affective impact they provoke in the practitioner. There remains much work to do in applying queer and feminist perspectives to embodied practice and research.³⁴

Wrestling the Angel (Song Fragment ‘Bosay’)

This epistemic object was first spontaneously elaborated during the same early improvisational session mentioned above.³⁵ Although lines of influence could probably be traced, I do not recognize it as the clear result of any particular synthesis of previously sedimented technique. Like ‘oh pa say’, the song fragment ‘bosay’ is rhythmically and melodically simple, comprising just a few notes and a ‘click’ sound (vocal percussion). In *Rite of the Butcher* it has always been combined with a physical action of embracing or grappling with an invisible partner (see [Image 3](#)). The quality of this imagined contact ranges from intimately sensual to aggressively combative, increasing in force as the song repeats. The arms and spine are fully engaged and the action can grow to include rolls across the floor ([Image 4](#)) as well as standing movement. The physical precision of this song-action is found in the continuous translation of irregular impulses across the spine and arms, as if in response to the movements of the imaginary partner, while the

development suggests that the research in Gardzienice uncovered a highly generative area worthy of further exploration.

32. Spatz, *Rite of the Butcher*, 5:02–7:25.
33. In conventional musical terms, the melody is *ti sol mi sol ti sol* followed by a half-step rise to *do la mi la do la*. One could also transcribe this as ‘B-G-E-G-B-G / C-A-E-A-C-A’. The former notation (tonic sol-fa) is preferable because it emphasizes the relative intervals between notes rather than the kind of absolute pitch specification favored by European musical notation. Thanks to Scott McLaughlin for help with this note.
34. Rosemary Malague contrasts the abusively heterosexist pedagogy of Sanford Meisner with the explicitly feminist performance art of Karen Finley in *An Actress Prepares: Women and the Method* (New York: Routledge, 2012), pp. 113–14. Erotic associations also played an important role in Grotowski’s shift from theatrical production to ‘art as vehicle’. After Ryszard Cieslak’s death, Grotowski revealed that the actor’s famous work in *The Constant Prince* was based on ‘a time of love from his early youth’ in which ‘sensuality’ became a ‘carnal prayer’ – see Jerzy Grotowski, ‘From the Theatre Company to Art as Vehicle’, in Thomas Richards, *At Work with Grotowski on Physical Actions* (New York: Routledge, 1995), pp. 115–135 (p. 123). I wrote about consensual power exchange as a phenomenon common to

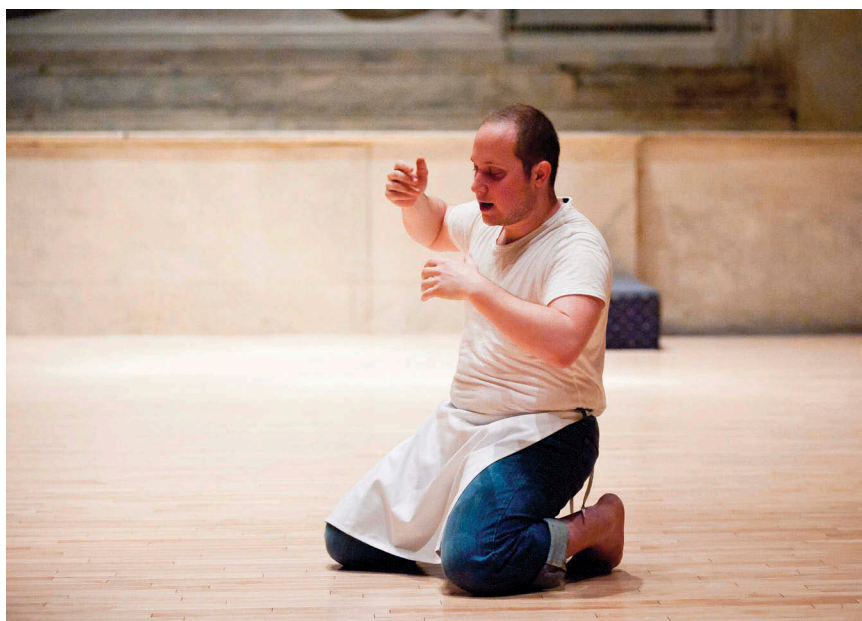


Image 3 Ben Spatz, *Rite of the Butcher*. Movement Research at Judson Church, 21 February 2011. Wrestling the angel. Photo by Ian Douglas.

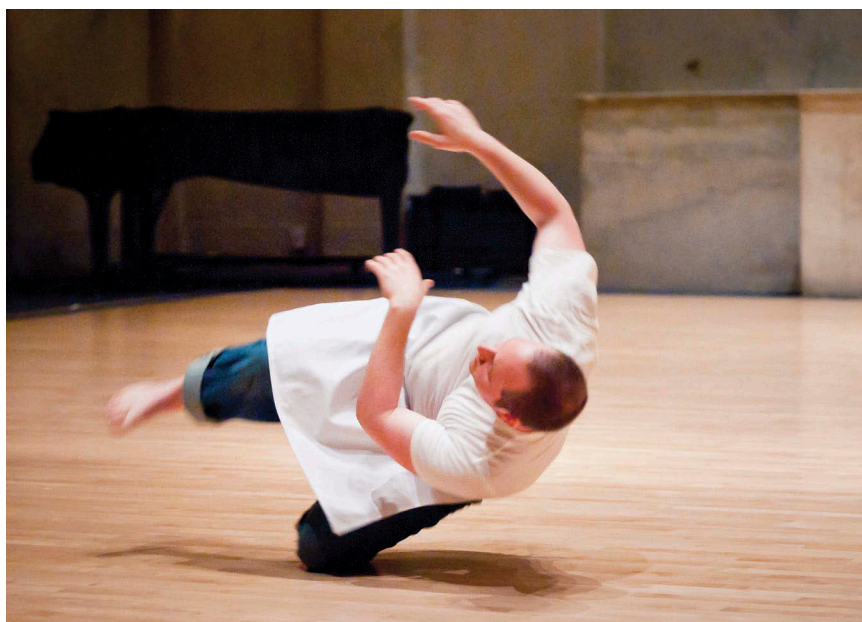


Image 4 Ben Spatz, *Rite of the Butcher*. Movement Research at Judson Church, 21 February 2011. Movement improvisation. Photo by Ian Douglas.

Grotowski's work, medieval Christianity, and BDSM in 'This Extraordinary Power: Authority, Submission, and Freedom in the Actor-Director Relationship', *Ecumenica*, 3.2 (2010), 43–61.

35. Spatz, *Rite of the Butcher*, 7:44–9:24.

song retains its regular rhythm, producing a dynamic juxtaposition of embodied regular and irregular rhythms. The association of 'wrestling' and the struggle to move or to stand cut through the repetition of the action, giving it linearity, while changes in pitch and resonance cut through the refrain of the song: another spiral. The practitioner is engaged in a process of energetic development, gradually drawing more and more of the body into the physical action while fighting not to break the structure of the song. The result is a complex engagement – movement, song, action – or body, voice, affect – which in its totality constitutes what I call song-action.

By the time of the documented presentation at Movement Research, both song fragments – 'oh pa say' and 'bosay' – had crossed what Rheinberger calls the epistemic boundary and been incorporated into the technical. In other words, as the practitioner I was no longer concerned with the question of how to reproduce the song fragments themselves. Similarly, the physical actions could each be trained on their own in a fairly straightforward way. Thus, what had become interesting at this point was how the song fragments could be integrated with the physical actions to provoke a more complex and multifaceted engagement on the part of the practitioner. The three examples just described can be understood as distinct epistemic objects, which I aimed to share with the Movement Research audience. But what is the significance of these 'epistemologica'? Even if they are indeed epistemic objects, previously unknown pathways or possibilities at the edge of known technique, of what use are they? What can be done with them? I do not wish to make any strong claim here for the significance of these particular examples. On the contrary, I prefer to assert the bare minimum: they are contributions to knowledge. Yet even if I do not wish to claim any particular value for these epistemic objects beyond a minimal epistemic expansion, it seems worthwhile to consider how this type of object – a small, new technical element – might be taken up in a larger context, becoming instrumentally useful to other projects.

As noted above, the kind of embodied research discussed here hews close to the extreme of 'pure research': experiments in embodied

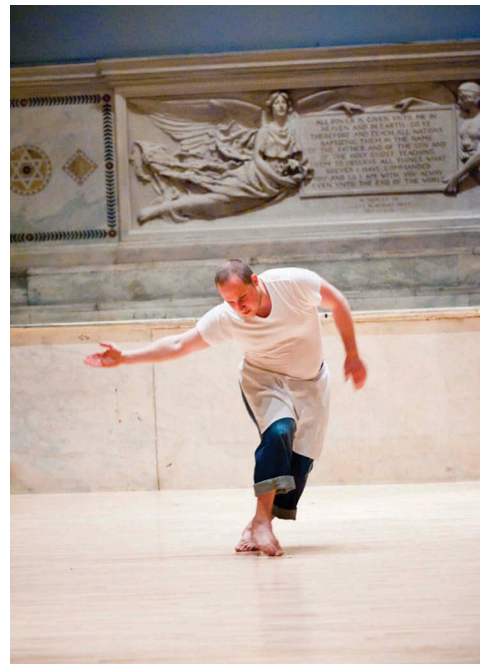


Image 5 Ben Spatz, *Rite of the Butcher*. Movement Research at Judson Church, 21 February 2011. Movement improvisation. Photo by Ian Douglas.

technique that have no direct instrumental purpose but which may later be applied according to a variety of orientations. It therefore cannot be assessed by any single instrumental criterion. Rather, the main criteria of assessment are those of research: *Is it transmissible? Is it new? What can it do?* Let us consider each of these in turn.

Is It Transmissible?

Above all, new technique must be transmissible to other bodies and contexts. Otherwise it would hardly deserve to be called technique, for the technical is exactly that which can be reproduced. The song-actions described above are transmissible both as distinct epistemic objects and as signposts indicating a field or territory of technique. I often use technical elements from my previous research, such as *Rite of the Butcher*, in classroom teaching and workshops. Most often these elements are smaller and more atomized than the three epistemic objects described above. Thus I am more likely to teach the *kind of vocal resonance* used in ‘oh pa say’ or the *spine-limbs connection* found in ‘wrestling the angel’ than the whole integrated song-action. On the other hand, when I teach someone a physical action, song fragment, or song-action, what I am really intending to transmit is less that specific technical element or object than the general area of technique in which it is located. The two aspects go together: training in a specific song fragment is training in a general approach to singing; working on a song-action like ‘wrestling the angel’ is a way of engaging with the technique of song-action. As I continue to develop the technique of song-action, I expand the territory of technical knowledge into which I can make pedagogical invitations. In any case, it should be clear from this discussion that what is documented in the video is not something unique to myself as a practitioner – however ephemeral that single moment of practice – but something that can be taught, shared, and transformed by others.

Is It New?

A second set of questions asks about the relationship between the documented practice and other practices that may be more or less distant in time and space. Following this line of inquiry one might appeal to any number of analytical frameworks in order to make diachronic and synchronic comparisons between the documented practice and, for example: other presentations made at Movement Research that year, especially those in which dancers vocalized; other practical approaches to ‘action’, as in Action Theater or the technique of ‘actioning’; or other attempts to integrate song, movement, and narrative, as in contemporary opera and musical theatre. Drawing more finely grained distinctions, one could compare this particular integration of song and action with those developed by other post-Grotowskian practitioners such as those mentioned above. This kind of comparative analysis, which can be used to determine whether the

documented technique is substantively new, fall within the conventional range of theatre, dance, and performance studies. In contrast, answers to the third question lie outside this domain, in the related but undertheorized domain of embodied research.

What Can It Do?

Rather than comparing existing practices, this question opens onto the discovery of new pathways for practice. Could the song-action technique documented here be used to resolve any problems currently faced by opera or musical theatre performers? Could it suggest new compositional strategies for post-dramatic theatre? Might this technique be useful to creative arts therapists looking to combine existing therapeutic approaches based in dance and drama? Could it be used to structure a weekly practice session aimed at physical exercise, mindfulness, community building, or any combination of these? These are questions of application, of how basic research can be applied. In addition to such interdisciplinary questions, there is also a set of highly specialized questions that extend the documented technique in a focused way and which have been the basis for my own embodied research since 2011. These relate to the use of song-action with traditional Jewish songs; the extension of song-action solo practice to duo and trio dynamics; and yet more subtle rhythmic and muscular integrations between song, action, and other layers or zones of embodiment. Both sets of questions – the expansive interdisciplinary kind and those that increase specialization – are significant here because they cannot be answered through analysis, only through further embodied research. Their answers are not analytical but empirical. While my own research in song-action has mostly taken place in enclosed, laboratory settings with just a handful of practitioners, there is no reason why the resulting technique could not be adapted for larger groups and more public contexts. While for me song-action has been simultaneously a physical, interpersonal, spiritual, and scholarly practice, there is nothing to stop others from developing it for narrower applications or adapting it to contexts I could not have foreseen.

What I am describing is not radically new insofar as this is how embodied technique has been developed, shared, adapted, transformed, innovated, circulated, discarded, and revisited throughout human history. Yet rarely has the core impulse to discover new technique been foregrounded over its instrumental use. Rarely have embodied practitioners acknowledged the dialectical and mutually sustaining relationship between tradition and innovation, training and research, technical and epistemic. Rarely has embodied technique in its nascent, open-ended, ‘blue skies’ mode been distinguished from the specific aims of the performing, martial, healing, ritual, and other embodied arts. Nor has a strong theoretical connection been developed between the epistemic objects we encounter through embodied practice and those produced by technoscience. Yet the parallel is clear, for the discoveries that so fascinate Rheinberger lead to

exactly the same sets of questions. *Is it transmissible? Is it new? What can it do?* In science too, the empirical has often been debased in favor of theory. We now know that technology produces science as much as the reverse. By the same token, it is time to recognize the extent to which embodied research underpins all our theories and philosophies of embodiment.

Writing in the Phenomenotechnical Mode

I attempted in the previous section to write in a voice or mode that would capture the precision and substance of embodied technique as an instrument not unlike those that ground the technological sciences. I now want to focus explicitly on this mode and consider how it differs from other, more established modes of written analysis. Clearly we are not dealing here with what Francisco Varela and Jonathan Shear call ‘third-person’ methodologies, in which a strict separation between subject and object produces critical distance.³⁶ That kind of analysis is third-person in that it accords primacy to the perception of spectators and to the meaning of a practice as it appears in the public sphere. For this reason, such an analysis is usually more effective when undertaken by someone other than the practitioner. Because of my closeness to and implication in the practice documented practice, it would be difficult and counterintuitive for me to imagine what the performance could have meant to a spectator. It is not that I could not think about *Rite of the Butcher* in terms of the circulation of signs and symbols, but in doing so I would continually have to fight against the intensive meanings that the practice generated for me as its practitioner. Like many artists, I prefer not to speak in such terms about my own practice. The account given above has more in common with what Varela and Shear dub ‘first-person’ methodologies, but it cannot be identified with any of the approaches they describe. In particular, the approach developed here is importantly distinct from that offered by phenomenology.

Phillip Zarrilli has championed the use of a phenomenological approach in analyzing performance practice. In a boxed text that appears in two of his recent publications, Zarrilli provides a detailed phenomenological account of a few seconds at the beginning of a 2006 performance of Beckett’s *Ohio Impromptu*. Like my account of *Rite of the Butcher* above, Zarrilli speaks about a moment of his own public embodied performance practice, but there are important differences between these two accounts. Zarrilli chooses to narrate those brief moments in which he enters onstage, prepares to perform, and utters the first line of text. Furthermore he describes a performance that – like other works by Beckett and Ota Shogo staged by Zarrilli – is performed in radical stillness and/or slowness. As a result, Zarrilli’s description emphasizes interior bodily perception:

My attention shifts to my breath. I follow my in-breath as it slowly drops in and down to my lower abdomen. Keeping my primary attention on my in-

36. Francisco Varela and Jonathan Shear, ‘First-Person Accounts: What, Why, How?’, in *The View from Within: First-Person Approaches to the Study of Consciousness*, ed. by Francisco Varela and Jonathan Shear (Thorverton: Imprint Academic, 1999), pp. 1–15; also available as *Journal of Consciousness Studies*, 6.2–3 (1999), 1–14. My thanks to Tomoyo Kawano for providing me with this reference.

37. Phillip B. Zarrilli, 'Performing Reader in Beckett's *Ohio Impromptu*', in *Psychophysical Acting: An Intercultural Approach After Stanislavski* (New York: Routledge, 2009), pp. 43–44, reprinted in *Acting: Psychophysical Phenomenon and Process*, ed. by Phillip B. Zarrilli, Jerri Daboo, and Rebecca Loukes (Basingstoke: Palgrave Macmillan, 2013), pp. 20–21.

38. Deborah Middleton and Franc Chamberlain, 'Entering the Heart of Experience: First Person Accounts in Performance and Spirituality', *Performance and Spirituality*, 1.3 (2012), 95–112 (p. 105).

39. This is in part what Sarah Ahmed does in her queer rereading of Merleau-Ponty in *Queer Phenomenology: Orientations, Objects, Others* (Durham, NC: Duke University Press, 2006). But even this important work does not go so far as to offer a technical analysis of the embodied technique that underpins classical phenomenology. The problem is that deeply sedimented embodied technique cannot be accessed through phenomenological approaches. Its exclusion or 'bracketing' is a fundamental part of the phenomenological reduction.

40. Middleton and Chamberlain, 'Entering the Heart of Experience', p. 108.

breath and out-breath, I open my auditory awareness to [another performer] about three feet to my left.³⁷

In keeping with the phenomenological tradition of Maurice Merleau-Ponty, Zarrilli's emphasis is on his own perception and experience. His aim is to help the reader understand 'what it is like' for him in that moment. To accomplish this, he necessarily leaves out an analysis of the layers of embodied technique that make the narrated moment possible. Thus one does not learn from Zarrilli's account what makes his in-breath at the start of *Ohio Impromptu* different from an ordinary, everyday in-breath. The practitioner's background in Indian martial arts, as well as *taiji*, yoga, and other areas of technique, which is the focus of the rest of the books, is necessarily excluded from the phenomenological account. Precisely because they have been mastered and sedimented to the point of unconscious embodiment, these layers of technique cannot be articulated in the phenomenological mode.

Zarrilli's use of phenomenology is developed with great insight by Deborah Middleton and Franc Chamberlain in an essay that argues for the value of Varela and Shear's first-person methodologies in the context of performance and performer training (as well as spiritual practice). Citing the same passage, Middleton and Chamberlain point to the technical expertise at work in Zarrilli's practice by comparing it with an account given by Don Hanlon Johnson of an experience in which he awakes to bodily presence. 'Johnson seems to be describing an early moment in his awareness training,' they note, 'Zarrilli a much later one.'³⁸ Indeed, one can attempt to read phenomenological accounts technically by asking what layers of embodied knowledge and habit had to have been incorporated in order to make that particular experience possible.³⁹ But the approach taken here is distinct from those articulated by Varela and Shear, Zarrilli, and Middleton and Chamberlain insofar as I am not particularly concerned with consciousness, experience, or 'what it is like' to engage in a particular moment of specialized practice. As Middleton and Chamberlain suggest, focusing on lived experience demands 'a shift away from externally-oriented object-consciousness' and 'from research which makes truth-claims for consensual reality'.⁴⁰ In contrast, my goal here is to offer an account that is firmly grounded in the experience of the practitioner while nevertheless making qualified claims on consensual reality. I have taken Rheinberger's social epistemology as my model because it describes an experimental context in which the privileging of the researcher's perspective goes hand in hand with such claims.

My account of 'epistemologica' moves between first- and third-person pronouns. To name this particular mode of analysis and articulation I borrow a term from Rheinberger, who takes it from Gaston Bachelard: *phenomenotechnique*. A phenomenotechnical account is one that thoroughly analyzes the technical in order to trace the contours of its border with the epistemic. Phenomenotechnique describes both the technical and the epistemic in terms of the line or boundary where they come together. It is more than an account of the technical, the merely known,

41. Rheinberger, *Epistemology of the Concrete*, p. 30.
42. Bachelard in Rheinberger, *Epistemology of the Concrete*, p. 31; emphasis in original.
43. I have borrowed the term phenomenotechnique from Rheinberger because it seems to point to exactly this type of analysis, but other concepts might be employed to similar ends. Thomas Csordas has attempted to combine Pierre Bourdieu's understanding of *habitus* with Merleau-Ponty's phenomenology through the concept of 'somatic modes of attention' – see 'Somatic Modes of Attention', *Cultural Anthropology*, 8.2 (1993), 135–56 (p. 138); and for an application to embodied technique, see Jen Tarr, 'Habit and Conscious Control: Ethnography and Embodiment in the Alexander Technique', *Ethnography*, 9.4 (2008), 477–97. More recently, the term *somatechnics* has been coined to 'highlight the inextricability of soma and techné, of "the body" (as a culturally intelligible construct) and the techniques (dispositifs and "hard technologies") in and through which corporealities are formed and transformed' – see *Somatechnics: Queering the Technologisation of Bodies*, ed. by Nikki Sullivan and Samantha Murray (Surrey: Ashgate, 2009), p. 3. I find somatechnics a compelling term, although I consider it a problem that the volume draws no distinction between technique and technology in its approach to 'technics'.
44. It is useful to note that Gaston Bachelard encountered the same

the sedimented premise or tool, but also more than a mere evocation of the unknown. According to Rheinberger (and Bachelard), this is the kind of account that best allows us to understand scientific research, which most often unfolds at the point where technological instruments and epistemic objects make contact. 'Instruments stand at the heart of th[e] epistemic ensemble in modern science', writes Rheinberger. 'On the one hand the instrument embodies an already acquired knowledge; on the other, it helps produce the object as technophenomenon.'⁴¹ In embodied research, the instrument is technical but not technological: it is the known technique that structures embodied practice. What is produced by this technique is also embodied, but it is not yet technical: an epistemic object, new technique in-the-making. A phenomenotechnical account describes both sides of this equation, articulating a precise research edge. Hence '[p]henomenotechnique *extends* phenomenology'.⁴² Without a thorough explication of the technique that structures practice – even if such explication can never be comprehensive – first-person descriptions of experience and perception remain incomplete, ungrounded, unspecified. To describe an epistemic object, it is necessary to begin from the experimental system that produces it.⁴³

A phenomenotechnical account uses the language of technique to point toward what is yet unknown. It begins from technical language. I therefore call for a return to the language of technique, which is so often elided outside the studio or rehearsal room. When performers (or athletes) are asked to describe what they do on record, often they speak in general terms and avoid the kind of technical analysis that they would use in a context of practical work. Perhaps in deference to the gap between practical expertise and general interest, highly skilled practitioners tend to assume that most people will not care about the technical details that structure their practice.⁴⁴ But a serious encounter between critical discourse and embodied knowledge cannot take place until the language of technique makes a substantial return. This encounter, which finds a strong analogy in the engagement of social epistemologists with scientific discourse, must assume with Rheinberger that the technical language of the practitioner gets at the 'aboutness' of the work in a way that critical and spectatorial analysis cannot.⁴⁵ Yet most technical accounts do not go as far as the phenomenotechnical mode. Especially where the focus is pedagogy, technical accounts tend to emphasize the known over the unknown, stopping short of describing epistemic objects in their unknown emergence. Such accounts may even mislead the reader by suggesting an illusory completeness that conceals the provisional and processual nature of knowledge.⁴⁶

What we need is a mode of analysis that uses thick technical description to point to unfolding epistemic objects: a mode that defines a field of inquiry by tracing its research edge and which thereby returns cultural analysis to an engagement with philosophical realism at the level of embodiment. For the phenomenotechnical mode assumes philosophical realism. Because human embodiment is relatively reliable, embodied practice is not merely a frame for the circulation of signs but also an empirical investigation into repeatable

problem with scientists, begging them ‘to make available their daily laboratory experience, the daily dramas of their daily work, to the philosophers of science, so that they could reflect properly about the practice of contemporary science’. Hans-Jörg Rheinberger, ‘Gaston Bachelard and the Notion of “Phenomenotechnique”’, *Perspectives on Science*, 13.3 (2005), 313–28 (pp. 317–18); see also Rheinberger, *Epistemology of the Concrete*, p. 28. ‘Tell us what you think,’ he implored, ‘not when you quit the laboratory, but during the hours when you leave ordinary life behind you and enter scientific life’. Cited in Rheinberger, ‘Gaston Bachelard’, p. 218. This is exactly what I often find myself saying to skilled performers undertaking ‘Practice as Research’ projects in academia: before you attempt to explain your practice by reference to Michel Foucault or Merleau-Ponty, tell me what you do in the studio. Explicate the technical skills that you teach and describe the problems and questions you face in practice. *Talk shop* – for that is where your primary expertise lies.

45. ‘The bench work language of the scientific practitioner translates with much more appropriateness what his work is actually about than what a particular philosophy of science declares him to be doing.’ Rheinberger, *Toward a History*, p. 109.
46. Again, this is a problem for textbooks and public disseminations in every field, not just embodied

pathways of technique.⁴⁷ This brings us to a further distinction of the phenomenotechnical mode: the way in which it both does and does not privilege the voice of the practitioner. In contrast to third-person approaches, the phenomenotechnical mode does accord a certain kind of privilege to the practitioner. Far from being suspect because of their intimacy with the practice, the practitioner is understood as having special access to the technical and epistemic objects in play by virtue of this closeness. However, this privilege is eminently contestable. Unlike the phenomenological mode, the phenomenotechnical mode does not prioritize experience, perception, or ‘what it is like’ to be or do something – phenomena which, though they may be shared to some degree through language, are not open to contestation or validation.

Because they cannot be contested, phenomenological accounts alone are insufficient to delineate a shared field of research. Varela and Shear acknowledge this problem in their discussion of first-person methodologies. To resolve it, they suggest the need for a ‘second-person’ position located between first-person accounts of experience and more distanced third-person accounts. For Varela and Shear, this role is filled primarily by a teacher or mentor, as when ‘a researcher seeks the mediation of a more experienced tutor to improve and progress his [*sic*] skill as a scientist’.⁴⁸ This works when we are dealing with research in the weaker sense, where an individual researcher makes discoveries relative to their own prior understanding. But if we want to consider examples of research in the strong sense, where a network of researchers works together over time to produce genuinely new knowledge, then we need to understand the second-person position not as an individual teacher or mentor but as a community. We might then say that the embodied researcher has the privilege of speaking first about what has happened, but this must be subjected to analysis by others with related expertise. Hence the phenomenotechnical mode is one that accords *contestable privilege* to the practitioner. The practitioner has (or ought to have) the first opportunity to offer an account of the practice, against which future accounts will be contrasted. But the development of consensus about the structure of a given practice will arise out of a process of contestation that involves a community or network of practitioner-researchers working in related areas. This is precisely the position from which a laboratory scientist speaks: because of the scientist’s closeness to the experiment, they are able to offer a first interpretation of its results. While questions of bias and vested interest may be raised, there is no general assumption that scientists are untrustworthy when analyzing their own research, as one sometimes finds in discussions of embodied research. On the other hand, a scientist’s announcement of research results is never the final word on ‘what happened’. Rather, it is the start of a communal process that unfolds through shared documents and discourse, as well as further experimentation, in which the question of what happened is explicitly contested. It is time for us to understand embodied research in these terms, not in order to claim

technique. '[A]s soon as scientists go public, they have a strong tendency to leave all that [technological mediation] behind and to convey a picture of what they are doing as if the instruments were absent – or transparent.' Rheinberger, 'Forming and Being Informed', p. 204.

47. The question for realist approaches is how to distribute ontology: given that there is something real out there, who gets to name and analyze it? Whose voice is to be privileged when it comes to articulating the real? As Tom Sparrow suggests, 'for much of the twentieth century, it was phenomenology that promised to satisfy the desire for realism among continental thinkers, but now it is clear that phenomenology cannot deliver realism as commonly understood' – *The End of Phenomenology: Metaphysics and the New Realism* (Edinburgh: Edinburgh University Press, 2014), p. xii. However, there are important differences between the nuanced, critically-oriented realism of social and historical epistemologists like Rheinberger and Andrew Pickering and the 'speculative realism' championed by Sparrow. For a biting critique of speculative realism and its cousin 'object-oriented ontology', see Nathan Brown, 'The Nadir of OOO: From Graham Harman's *Tool-Being* to Timothy Morton's *Realist Magic: Objects, Ontology, Causality*', *Parrhesia*, 17 (2013), 62–71.

48. Varela and Shear, 'First-Person Methodologies', p. 9. Middleton and Chamberlain also identify the second-person position as an

that embodied research is science (it is not), but in order to demonstrate that it is in fact *research*.

When we speak of research in embodied practice and the embodied arts, let us not fall into the illusion of a unified public sphere populated by atomized individuals. For between those scales intervene all the institutions of *disciplinarity*, by which I mean not the ossified gatekeepers of established power-knowledge but the communities, networks, hubs, and nascent movements that organize themselves around shared commitments to particular fields and pathways of knowledge.⁴⁹ This is the shifting 'patchwork' to which Rheinberger refers. If we are going to speak only of individuals and society at large, then we may as well not use the term research, for research has no meaning without the differential incommensurability of its varied fields. In the above account of song-action, I speak as an embodied researcher, according myself a limited and contestable privilege in relation to the technique that structures the documented practice. I am the only one who was there during the whole research process. My account, along with the cited video document, is now offered up to a larger community for contestation or validation. But the community to which I offer my account is not the 'we' of an imaginary public or even the 'we' of those who happened to be in attendance at Judson Church that night. It is a *disciplinary* we, grounded in shared knowledge and expertise and with its own technical vocabulary, research paradigms, and critical debates. It is precisely those practitioner-researchers who have already been working for some time with physical actions, folk songs, extended voice technique, imaginative associations, and body-voice integration who will produce the most critical and incisive evaluations of my account. They alone can work toward consensus regarding the epistemic objects I have proposed and their potential uses.

Coda

The phrase 'colors like knives' comes from the original poem-text spoken in *Rite of the Butcher*. In that poem, the phrase suggests the image of a god who produces the world through a process of iterative differentiation, through the redaction of colors out of an originary darkness (or light): instead of a word or *logos*, the world begins from colour. In the present analysis this phrase takes on a second meaning, linked to Karen Barad's peculiarly violent metaphor of the 'agential cut' as that which produces the subject/object distinction in scientific laboratory research.⁵⁰ If performance technique can indeed produce new and specific epistemic objects, as my interpretation of Rheinberger suggests, then my claim is that the colour of the voice (for example) – its timbre or resonant quality – operates in the epistemic space of embodied practice as a knife operates in an anatomical dissection. The voice in this sense cuts not only into the time and space of performance and into audience perception but also into an epistemic field constituted by the relative reliability of human embodiment. This voice is a technical object, an experimental apparatus that

experienced teacher in their reading of Don Hanlon Johnson's account of a workshop with Charlotte Selver, see *Entering the Heart of Experience*, p. 98–99.

49. On the dual connotations of disciplinarity, see Spatz, *What a Body Can Do*, pp. 50–56.
50. Karen Barad's *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning* (Durham, NC: Duke University Press, 2007) offers a reading of particle physics that closely resembles Rheinberger's model of the technical and the epistemic. One important difference is in how they figure what I have called the technical/epistemic boundary or 'research edge', a post-structuralist reworking of the subject/object relationship, which Barad calls a 'cut' (e.g. p. 55). When I conceptualize something like 'wrestling the angel' as an element of song-action, I could be said to make a 'cut' in reality, bestowing a name upon a particular zone of my own embodied technique, naming a small fraction of my habitus. Every element of embodied technique would then derive from a cut of this kind: a roundhouse kick, a mime walk, a pirouette, a focused breath, etc. But I am uneasy with the narrowness of the metaphor of cutting, which in Barad derives from practices of quantitative measurement and which may be less applicable to other kinds of research. Some research cuts; other research traces, interprets, gropes, dances, charts, invites, invokes. . .

makes an agential cut as sharp as that of the biologist's microscope or the surgeon's knife.

*To create from nothing
New proportion, new dimension
Little houses, little people
Made of color*

*To give voice to a voiceless creation
I myself, individual, king,
Pulling, churning, dredging up
My insides to uncover
Those necessities that make possible
Such beginning*

*Colors like knives
I sing into being
Each new soul born naked and tiny
Swaddled in sand
Coming up in the containment of my song
And I am the godhead*

*Spewing fire out of orifices
All-singing, all-dancing heat of the world
Beastlike, terrible,
Thirty-fingered vengeful god,
Capricious, jealous,
This my territory
These my peoples
I brook no desecration
Watch over my people
Father, mother, ancestor in one
It was not always so*