TEACHING MUSIC PERFORMANCE IN HIGHER EDUCATION

1

EXPLORING THE POTENTIAL OF ARTISTIC RESEARCH

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EDITED BY HELEN JULIA MINORS, STEFAN ÖSTERSJÖ, GILVANO DALAGNA, AND JORGE SALGADO CORREIA



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5. Artistic Practice as Embodied Learning: Reconnecting Pedagogy, Improvisation, and Composition

Robert Sholl

Introduction

'When you know what you're doing, you can do what you want'.1

More than forty years ago, Joseph Kerman proposed the notion of 'getting out of' musical analysis—a strategy, through criticism, to contextualise formalist analytical thought.² Kerman's argument was flawed in many respects as Kofi Agawu pointed out; analysis was necessary, in the latter's view, to teach 'undergraduate music theory' and 'basic musical literacy', something Kerman, doubtless, would not have denied.³

Yet these somewhat circuitous debates missed something more fundamental, especially as ideological and academic territories seemed to require protection.⁴ Over at least the last forty years the rise of university theory courses, particularly in America, has

¹ A saying often used by the somatic educationalist Moshe Feldenkrais, including in a training session delivered on 9 June 1980 at Amherst. My thanks to Simon Rigby (University of West London) and Nicholas Walker (The Royal Academy of Music) for their thoughtful comments on this chapter. My thanks, too, to Daniel K. L. Chua who inspired this idea for this chapter. I taught 'Techniques of Composition' with Daniel at King's College London in the mid-1990s, and Daniel used the theme of the *Goldberg Variations* for teaching species counterpoint.

² See Joseph Kerman, 'How We Got into Analysis, and How to Get out', *Critical Inquiry*, 7.2 (Winter 1980), 311–31.

³ Kofi Agawu, 'How We Got out of Analysis, and How to Get Back in Again', *Music Analysis*, 23:2/3 (July–October 2004), pp. 267–86 (p. 269).

⁴ See Julian Horton, 'On the Musicological Necessity of Musical Analysis', *Musical Quarterly*, 103, 1–2 (2022), 62-104; and 'Valuing the Surplus: Perspectives on Julian Horton's Article "On the Musicological Necessity of Music Analysis", with contributions by Kofi Agawu, Gurminder K. Bhogal, Esther Cavett, Jonathan Dunsby, Julian Horton, Alexandra Monchick, Ian Pace, Henry Stobart and Simon Zagorski-Thomas; compiled and edited by Esther Cavett, in *Music Analysis*, 32:3, 412–71, https://doi.org/10.1111/musa.12221

led to a schism between theory as a discipline and theory as a necessary precursor and as complementary to practice—for learning repertoire, improvisation, and for composition.

Analysts interested in performance, and attempting to inform performance, are not a new phenomenon.⁵ Some recent attempts to bridge disciplinary boundaries are surveyed by Mine Doğantan-Dack, who has proposed a form of practice-based approach to music theory through artistic research.6 Her work attempts to assimilate phenomenological insights and the 'highly situated embodied, affective, multimodal factors that shape a performer's (listening) experience' of music to create new interpretative knowledge through practice. She critiques the way scholars such as Gabriela Imreh (with psychologists, Roger Chaffin and Mary Crawford), Jeffrey Swinkin, Daphne Leong, and Janet Schmalfeldt have attempted to employ theory to inform and shape performance.⁷ Yet Doğantan-Dack does not discuss what can be learned from formalist analysis, or analysis in general, and why or how analysis can inform performance by providing alternative paradigms for musical awareness. It can, for example, provide a means of understanding and thence also of articulating the relationships between small and large-scale musical aspects (between motives and structure), or between voice-leading and register, which can create interpretative insight co-extensive with the investigation of melos and malleability, narrative and rhetoric, and the play with expectations that are forms of artistic research. The vital dialogue between analysis and performance aids the emergent process of listening and doing that is active, interrogatory, and, therefore, critical, and that is also a form of embodied knowledge.

Implicit in much work on the relationship between analysis and performance is what the psychoanalytic philosopher Jacques Lacan described as the position of the analyst or the 'subject [and what he or she is] supposed to know'.⁸ For Lacan, desire and lack are structured by the Other, and this can be perceived through the academic turn to performance in which the libidinal allure of performance is considered as a desired form

⁵ See a digest of this in Ian Pace, 'In Defence of Analytically-Informed Performance'. Keynote Paper presented at the International Encounters on Music Theory and Analysis Conference, 6 November 2019, São Paolo, Brazil, https://openaccess.city.ac.uk/id/eprint/30386/

⁶ Mine Doğantan-Dack, 'Expanding the Scope of Music Theory: Artistic Research in Music Performance', Zeitschrift der Gesellschaft für Musiktheorie, 19/2 (2022), https://www.gmth. de/zeitschrift/artikel/1169.aspx?fbclid=IwAR26sZcGvqUEtw3s9NG5rzGdm56D3N 41Z_s5HFfKZQZOGh0CbuVA_GyO3z8

⁷ Roger Chaffin, Gabriela Imreh, and Mary Crawford, Practicing Perfection: Memory and Piano Performance (New York: Psychology Press, 2002), https://doi.org/10.4324/9781410612373; Jeffrey Swinkin, Performative Analysis: Reimagining Music Theory for Performance (Rochester, NY: Rochester University Press, 2016), https://doi.org/10.2307/j.ctvc16ncq; Daphne Leong, Performing Knowledge: Twentieth-Century Music in Analysis and Performance (New York: Oxford University Press, 2019), https://doi.org/10.1093/oso/9780190653545.001.0001; and Janet Schmalfeldt, 'Who's Keeping the Score?', in Investigating Musical Performance: Theoretical Models and Intersections, ed. by Gianmario Borio, Giovanni Giuriati, Alessandro Cecchi, and Marco Lutzu (New York: Routledge, 2020), pp. 91–101, https://doi.org/10.4324/9780429026461-10

⁸ See Slavoj Žižek's discussion of this idea in his *Surplus-Enjoyment: A Guide for the Non-Perplexed* (London: Bloomsbury Academic, 2022), pp. 111–17.

and idealised benchmark of musical reality.⁹ The desire to objectify, advise, and even control performers testifies perhaps to the immanence (and also perhaps impotence) of a certain kind of musical theory. It also suggests a perceived value in the prestige (through competitions, marketing, forms of commodification, and capitalisation, for example) that can be realised through performance not necessarily through music theory. Concomitantly, there can also be a resistance to analysis from performers in conservatoires, to what (alas) can be perceived as didactic, and even as irrelevant to the skills needed for performance.

Both these extremes are unhelpful and, fortunately, are being rigorously dismantled in modern conservatoires. Artistic research can perhaps provide some form of mediation between these positions. Yet, it also must be careful not merely to reinscribe the ideological dominance of master narratives (such as analysis), or rely too heavily on abstruse intellectualisation to justify itself. There is also a debate in the artistic research community concerning its relation to other disciplines (this can be understood sometimes as form of 'special pleading' writ large through the perceived immanence of artistic research), and there is a sense also of taking refuge in gilded institutional cages under the rubric of 'research' (the issues of methodology, quality, and significance are moot especially in neo-liberal educational contexts), something that has contributed to the political understanding of artistic research.¹⁰

These issues are all perhaps symptoms of larger and laudable desires to take artistic research seriously in and out of conservatoires and to recognise it as a discipline across the arts. Lacan understood that desire is already within us, and it is an object cause of subjectivity.¹¹ Identity as a musician is bound to a desire to configure how one is understood in the world (the relationship between the 'Symbolic' and 'Imaginary'

⁹ Jacques Lacan, Seminar XI, The Four Fundamental Concepts of Psychoanalysis, ed. by Jacques-Alain Miller, trans. by Alan Sheridan (London: Karnac, 2004), pp. 84, 115, 180, 188, 235. The Other can be understood as superego demands or injunctions but also as the invisible and unspoken expectations placed upon thought and behaviour by society.

Some of these different perspectives inform the work in volume 10 of Music & Practice, https://www. 10 musicandpractice.org/volume-10/. For instance, Erlend Hovland confidently asserts: 'still, its [artistic research's] main strength lies in its opposition to conventional academic research' ('Artistic Research and Music & Practice, unpaginated, https://doi.org/10.32063/1000). Yet, Anders Førisdal and Christina Sofie Kobb state: 'we do think that artistic research will benefit from adapting a practice deeply imbedded in the humanities, in which the internal criticism and 'tough' reflection regarding the use of method, theory, terminology and models is an integral part of any (scientific) standing of the research' ('Artistic Research! Where are we today?', unpaginated, https://doi.org/10.32063/1001). Barbara Lüneberg, in 'Knowledge Production in Artistic Research-Opportunities and Challenges', states: 'As an additional aside, disseminating findings in text form, as is typical of the Western academic research tradition, helps to make research accessible to a wider academic audience, builds in-depth knowledge of artistic research in a broader research community, and establishes an easily accessible track record as an artistic researcher' (unpaginated, https://doi.org/10.32063/1009). On the politics of artistic research, see Silvia Henke, Dieter Mersch, Thomas Strässle, Jörg Wiesel, Nicolaj van der Meulen, Manifesto of Artistic Research: A Defense Against Its Advocates (Zurich: Diaphanes, 2020). The authors recommend the emancipation of artistic research from university research (p. 5). They rehearse many of the contradictions and issues that plague this emerging field, and promote such debates as axiomatic.

¹¹ Lacan, Seminar XI, p. 243.

registers for Lacan) and is connected to legitimacy—certainly a vibrant issue for artistic research. Another ramification of Lacan's thought is that human actions, whether *considered* embodied or not, are framed by this embodied desire. The creation of music theory and indeed notation (as shown below) are already forms of embodied actions.¹² The artificial separation of *Epistêmê* and *Technê*, or between the Cartesian mind and body are prima facie grounded in an embodiment and in the integration of these perceived binaries through action. The somatic educational thinker Mosche Feldenkrais (1904–1984) clearly understood the error of believing that thinking and doing are separate rather than components of a singular activity that enfolds within itself multiple modalities of thought, including agency and intention, listening and perception, and subjectivity and objectivity.¹³

Artistic research I would argue is made stronger by exposing itself and engaging with the interdisciplinarity of musicology. The continual expansion of the curriculum, the increased theoretical specificity and complexity of musical and cultural analysis (not necessarily separate), the proliferation of different forms of analysis, and the widening of repertoire, including jazz, popular, and world music offer forms of knowing that can enrich artistic research. Understanding different discourses, including analysis, speaks to the idea of differentiation that precedes integration, something that was advocated as a fundamental learning process by the Russian researcher and physician Nikolai Bernstein and by Feldenkrais.¹⁴

Learning, as Feldenkrais pointed out, is one of the greatest endowments that we have as human beings. Feldenkrais believed that integrating learning as embodied knowledge in action was related to our sense of pleasure.¹⁵ He also believed that learning was best when it was embodied, and this is where I would argue that disciplines such as analysis, aural training, orchestration and arranging, and composition could be taught through the keyboard as a means of concretising kinaesthetic learning. This form of learning embraces the embodied experience advocated by Doğantan-Dack, but this chapter takes a few steps back from her purview to examine the technique and mechanism that inform a context for learning. This return to skills is an essential part of learning (at any stage) that enables a person to 'know what you are doing' so that 'you can do what you want' as Feldenkrais put it. The process or acquisition of skills,

¹² For a recent study of embodiment and performance, see Jocelyn Ho, 'Corporeal Musical Structure: A Gestural-Kinesthetic Approach to Tōru Takemitsu's *Rain Tree Sketch II', Music Theory Online*, 27:4 (December 2021), https://mtosmt.org/issues/mto.21.27.4/mto.21.27.4.ho.html

¹³ Mosche Feldenkrais, Thinking and Doing (Longmont, CO: Genesis II, 2013). See also Roger Russell, 'Radical Practice: Practising Performance and Practising Oneself is the Same Activity', The Feldenkrais Method in Creative Practice: Dance, Music, and Theatre, ed. Robert Sholl (London: Methuen, 2021), p. 84, https://doi.org/10.5040/9781350158412

¹⁴ Nikolai Bernstein, Dexterity and its Development, ed. by Mark Latash and Michael Turvey (New York: Psychology Press, 1986); Dick McCaw, 'Learning through Feeling: How the Ideas of Nikolai Bernstein and Moshe Feldenkrais Apply to Performer Training', in *The Feldenkrais Method in Creative Practice*, ed. by Sholl, pp. 55–72.

¹⁵ *Feldenkrais, Embodied Wisdom: The Collected Papers of Mosche Feldenkrais,* ed. by Elizabeth Beringer (Berkeley, CA: Somatic Resources and North Atlantic Books, 2010), pp. 182–83.

through an analytical and critical process—a methodology formed of differentiations is an essential developmental pathway to the learning of craft, which facilitates artistry.

This chapter, therefore, relies to an extent on the thinking inherent in the Feldenkrais Method, a system of somatic education. Feldenkrais believed that the goal of his Method was 'to make the impossible possible, the possible easy, and the easy aesthetically pleasurable', and this is what musicians strive to do every day through practice.¹⁶ Feldenkrais developed group lessons that he called 'Awareness through Movement' lessons (ATMs).¹⁷ These take a particular movement function and approach it in different ways.

This approach is implicitly adopted in this chapter, which presents a systematic focus on specific skills designed to facilitate mastery. This sense of mastery is transferrable and is something too often left to chance because curricula are often over-filled and calibrated to students who process and adapt ideas quickly with little space for experimentation or further approximations. If learning happens through feeling and sensation, as Bernstein and Feldenkrais both pointed out, then the time it to takes to listen, to feel, to sense oneself in action while making critically nuanced differentiations through judgment, is invaluable and should be understood as a vital part of conservatoire and musical education.¹⁸

Artistic acculturation is built on development though such time and deep listening skills, and shaped by aesthetic and sensorial feeling and judgement that creates craft; this is a form of holistic *Technê*. Artistic research is an arena in which higher levels of syntheses come into play. It is premised on knowing something, on having some 'petrol in the tank' (prior knowledge and skill), and especially on the ability to make aesthetic choices. In research terms, these choices can be construed as an interrogation of how something is done and what is done—its origins, style, and poetics.

This study, therefore, proposes a way in which this form of coming to know something—the process of what Feldenkrais calls 'integration'—can take place. It presents a form of synthesis between theory and analysis and between improvisation and composition. This is an ideal that has increasingly become the purview of jazz tutorial books which place much emphasis on blending such skills including aural training through playing.¹⁹ There are also some excellent guides to improvisation that fold theory into discussions of harmony, shape, figuration, and form.²⁰ Such pedagogical books demonstrate that the often-separated elements of music and of traditions are, in fact, complementary.

¹⁶ Mosche Feldenkrais, 'Learning, Free Choice, Individuality', recorded lecture given at Quest Workshop, New York, [n. d.] (San Diego: Feldenkrais Resources, 1981). My transcription from programme.

¹⁷ Individual lessons are called 'Functional Integration'.

¹⁸ See McCaw, 'Learning through Feeling'.

¹⁹ For a good example of this, see Edward Sarath, Music Theory through Improvisation: A New Approach to Musicianship Training [book and CD] (New York: Taylor and Francis, 2010). This book works across traditions and is useful for students of jazz or western art music.

²⁰ See Franz Josef Stoiber, Fascination Organ Improvisation: A Study and Practice Book (Kassel: Bärenreiter, 2018) and John J. Mortensen, The Pianist's Guide to Historical Improvisation (New York: Oxford University Press, 2020).

In this chapter, I treat these musical formants holistically to promote a form of literacy and fluency that is based on immersive study. Common to the study of style and technique is a process of becoming (self-)aware of our actions and calibrating these with compositional models.²¹ The exercises and ideas below allow stakeholders (teachers and students) to move freely between these areas and to examine them in relation to J.S. Bach's *Goldberg Variations* (1741). Most importantly, the resulting aspects of 'integration' allow the student to develop their own sense of autonomy and pride in their achievements. This study develops a critical and reflexive method for this task. It begins by presenting a creative rethinking of species counterpoint, a foundation for thinking in Schenkerian analysis,²² through Bach's *Goldberg Variations*.²³ This process develops a resource for pedagogy and practice. In Fig. 5.2 below, I present a layered cake of musical lines (moving from semibreves to quavers) against the figured bass of the theme as an exercise that includes various aspects of variation 1 of the *Goldberg Variations*, and then I explore the codes and ramifications of this that encourage historical sensitivity, creative development, and an embodied feeling and learning that is already a form of artistic research.

This contextualised exercise provides a stepping-stone to a discussion of Variation 4 and Variation 1 (already included in Fig. 5.2) and the development of complete variations beginning with a given 'invention' and then moving to the composition of new ideas.²⁴ This strategy attempts to promote an 'adaptive flexibility' in which

²¹ See David Gorton and Stefan Östersjö, 'Austerity Measures I: Performing the Discursive Voice', in *Voices, Bodies, Practices: Performing Musical Subjectivities*, ed. by Catherine Laws, William Brooks, David Gorton, Thanh Thủy Nguyễn, Stefan Östersjö, and Jeremy J. Wells (Leuven: Leuven University Press, 2019), pp. 29-79 (p. 45).

²² Kent Wheeler Kennan uses a creative adaptation of species as the basis for teaching counterpoint. His approach is a comparable to mine in that it uses 1, then 2, 3, and 4 notes against a bass, and he provides good examples from the common-practice repertoire to help students. See his Counterpoint Based on Eighteenth Century Practice, 3rd edn (Englewood Cliffs, NJ: Prentice-Hall, 1987). Sarath also includes a discussion of species counterpoint in Appendix 1 of his book Music theory through Improvisation. Kennan's goal (like Teresa Davidian's) is fugue; in her book, she moves straight from species counterpoint to fugue. See Davidian, Tonal Counterpoint for the 21st Century Musician: An Introduction (Lanham, MD: Rowman & Littlefield, 2015). Peter Schubert's Modal Counterpoint, Renaissance Style (New York: Oxford University Press, 2003) is a well-written reference source with good and clear examples that provides a very gradual way into species counterpoint. The focus in this book is more on Renaissance style, and it takes a long time to get to composition. Beth Denisch's book moves beyond species counterpoint to a wider purview of counterpoint with some application to modern contemporary styles. It includes a good online resource which helps put 'petrol' or 'gas in the tank', for the creative application of counterpoint. See Denisch, Contemporary Counterpoint: Theory and Application (Boston: Berklee Press, 2017). On the relationship between species counterpoint and Schenkerian analysis, see Allen Forte and Steven E. Gilbert, Introduction to Schenkerian Analysis: Form and Content in Tonal Music (New York: W.W. Norton, 1982), pp. 41-49, and their Instructor's Manual for Introduction to Schenkerian Analysis (New York: W.W. Norton, 1982), p. 18.

²³ The Goldbergs Variations are used by Lionel Rogg in his Improvisation Course for Organists (Fleurier: Schola Cantorum, 1988), p. 28. For a fascinating analytical study of the variations, see Alan Street, 'The Rhetorico-Musical Structure of the 'Goldberg' Variations: Bach's 'Clavier-Übung' IV and the 'Institutio Oratoria' of Quintilian', Music Analysis, Vol. 6, No. 1/2 (March-July 1987), pp. 89-131.

²⁴ On the idea of 'invention', see Laurence Dreyfus, *Bach and the Patterns of Invention* (Cambridge, MA: Harvard University Press, 1997), pp. 1–32.

students can actively and organically learn musical and technical fluency while also developing their creativity and autonomy.²⁵

Bach's music, therefore, provides a structure, a model, but also a medium for both confrontation and reconciliation with the past—a template for re-imagining the levels of learning and experiment behind the score understood from a conjunction of practical, historical, and analytical perspectives. In this chapter, Bach's music is imagined as a form of questioning to the analyst-improviser-composer that asks them to reflect on their hearing, their prejudices, and their desires (for outcomes), as well as to pose contingent answers in the spirit of experimentation discussed in the introduction to this volume.

The material is written out here so that it can be re-used. Improvisation is therefore not treated as an object for study (as in much work in critical improvisation studies) but as a practice.²⁶ The thinking below is a method that might serve as an introduction to teaching composition or stylistic composition, and would be useful for undergraduates in their first or possibly second year of study, but it could be adapted for use in secondary school education. The material could be used in different ways, but my strong recommendation is that writing should not be separated from playing; the two activities need to co-exist to facilitate different sensations, experiences, and forms of integrated learning.

Analysis, improvisation, and composition all imply traditions, but here my concern is with creating an environment for learning in which these things intermingle as an embodied form of artistic practice. This itself has a good historical pedigree, for instance, through the *partimenti* tradition.²⁷ However, through the material presented in this chapter, I make a leap to another more contemporary paradigm. Artistic practice is a situated embodied practice, meaning that practice is undertaken by a body with a nervous system that is 'in a physical and social environment'.²⁸

Artistic practice is a kinaesthetic practice, a practice of knowing through touching, through listening as a form of touching, that is not merely results driven but is intrinsically connected to the ways in which we use ourselves and become aware of using ourselves.²⁹ Those who use this material can move through it systematically or holistically and, indeed, they are encouraged to make their own variants of it. The

²⁵ Esther Thelen, 'The Central Role of Action in Typical and Atypical Development', in Movement and Action in Learning and Development: Clinical Implications of Pervasive Developmental Disorders, ed. by Ida J. Stockman (San Diego, CA: Academic Press, 2004), p. 71.

²⁶ See, for example, *The Improvisation Studies Reader: Spontaneous Acts*, ed. by Rebecca Caines and Ajay Heble (New York: Routledge, 2015), https://doi.org/10.4324/9780203083741, and *The Oxford Handbook of Critical Improvisation Studies*, 2 vols., ed. by George E. Lewis and Benjamin Piekut (New York: Oxford University Press, 2016), https://doi.org/10.1093/oxfordhb/9780195370935.001.0001

²⁷ See Thomas Christensen, Robert Gjerdingen, Dirk Moelants, and Giorgio Sanguinetti, Partimento and Continuo Playing in Theory and in Practice (Leuven: Leuven University Press, 2010); Robert Gjerdingen, Child Composers in the Old Conservatories: How Orphans Became Elite Musicians (New York: Oxford University Press, 2020); and https://partimenti.org/. See also Mortensen, pp. 161–95.

²⁸ Esther Thelen and Linda B. Smith, 'Dynamic Systems Theories', *Handbook of Child Psychology*, ed. by William Damon, 5th edn (New York: J. Wiley, 2006), pp. 287–88.

²⁹ See Robert Sholl, 'Feldenkrais's Touch, Ephram's Laughter, Gould's Sensorium: Listening and Musical Practice between Thinking and Doing', *Journal of the Royal Musical Association*, 144. 2 (2019), 397–428, https://doi.org/10.1080/02690403.2019.1651500

material here encourages variance, experimentation, and it is this search for new solutions that can create a critical (reflective and reflexive) practice essential to learning.

Pathways to Embodied Practice as Artistic Research

For musicians, what cannot be heard cannot be controlled or shaped and, therefore, cannot be used. These are fundamental precepts that inform this study. Artistic research is nourished through a holistic approach to education. Essential to the growth of awareness and fluency is the development of an ability to perform tasks in different ways. This facilitates a feeling of control, knowledge, mastery, and craft. When a person can add (subtract, multiply, divide...) two numbers to equal six in several different ways, he or she has control of the problem through functions (theory) and working (practice). This model of learning demonstrates that mastery requires co-ordinated action through different and differentiated approaches to a problem. Flexible hands (as performers) should be accompanied by flexible brains and vice versa.³⁰ This study deals with a particular topic that enables this process.

The educational approach here can be simultaneously described as spiralling into an activity and widening the circumference of the spiral of material. Discerning differences and making refinements to practice are fundamental to the growth of awareness and intelligence, and what is presented here allows students the chance to develop these attributes through listening, analysis, and the putting of this awareness into artistic practice.

In this chapter, I begin with a focus on species counterpoint, often encountered in first-year courses as an introductory analytical regimen. This technique/tradition is useful for some students because it applies certain rules to music, providing seemingly sure parameters and criteria for correctness. Yet, species counterpoint is, in my view, a public-relations disaster at a conservatoire. It is fairly unexciting and disconnected from real music, even the music it is supposedly based upon, Palestrina.³¹

Some of the arguments for species counterpoint are that great composers learned from it (Mozart and Beethoven, for instance), that it is a historical method of learning the basics of craftsmanship, and that it provides a good basis for understanding Schenkerian analysis, or voice-leading in composition.³² Another argument for it is that its abstraction from musical literature is beneficial: rules without knowledge of

³⁰ Thelen and Smith state that, 'According to [the Russian physiologist Nikolai] Bernstein one of the hallmarks of skilled activity is the ability to flexibly adapt movements to current and future conditions. What constitutes skilled performance is not just a repeatable and stable pattern, but the ability to accomplish some high-level goal with rapid and graceful, but flexible solutions that can be recruited online or in anticipation of future circumstances' (p. 298).

³¹ Arguably, it would be better to study real sixteenth-century music (and other composers such as Orlando di Lasso, Tomás Luis de Victoria, William Byrd, Orlando Gibbons, and Clemens non Papa), especially as there are so many fine recordings of this music.

³² Felix Salzer and Carl Schachter, *Counterpoint in Composition: The Study of Voice-Leading* (New York: Columbia University Press, 1989), pp. 3–116 and 329–94.

repertoire can be followed, and reasonable results can be obtained. There is also, here, a not-so-tacit apologetics for the complexity of real music, and a certain kind of faux-patriarchal 'wisdom' and *jouissance* involved in wearing the hairshirt of such strictures.³³

The mesmeric rules of species counterpoint seem to perplex many students. These strictures are not intended to disable the musical ear—the ear that hears line, melody, and harmony as narrative even in such exercises—but they often have this effect, hobbling these endowments along with the muse of intimate musical memory and musical history. Rather than throwing this methodology to the wind, however, I suggest here that it can be reimagined in ways that address students' musical intuition and creativity. Bach's music provides an almost inexhaustible resource and is a familiar *lingua franca* for the student of western art music. The ideas below could be used well in conjunction with other books, such as that of Thomas Benjamin on Bachian counterpoint, which is distinguished by the helpful anthology of musical examples.³⁴ Benjamin also emphasises the importance of rhythmic, melodic, and textural variety in composition as well as stressing the need to sing through examples and to consider expressive effects of gesture and technical devices. This is invaluable thinking that moves well beyond learning rules.

Most important is that the exercises presented in this chapter are nourished by listening to music. An internal reservoir of resources is a key aspect of successful learning, again something that takes time. Being able to turn an idealised recording on in one's mind is a vital aspect of internal hearing and musical development, and it is an essential pathway for the flexibility of choice essential to the development of craft. Craft requires guidance, and I have therefore sought to provide some general parameters rather than rules in what follows. These parameters aid stylistic rather than formalist analysis.³⁵ As a function of mastery, the principle that rules inscribe can eventually be altered: they become subsumed in the horizon of what is artistically possible and, in a post-Enlightenment sense, they become subject to reason and critique, but they also, crucially, become part our embodied and creaturely feeling, which is a form of knowing. The approach presented below allows different types of students to go at different speeds, and it allows them to use and explore their innate creativity in a number of different ways.

The *Goldberg Variations* are useful for my purposes because of the number of excellent recordings that exist, the possibilities to create new variations that this work may inspire, and the ways in which this work exemplifies a common but universal *lingua franca* of western music. Here is the theme as printed in the first edition:

³³ On jouissance, see Dylan Evans, An Introductory Dictionary of Lacanian Psychoanalysis (London: Routledge, 1996), pp. 93–94 and Jacques Lacan, Seminar VII, The Ethics of Psychoanalysis, 1959–60, ed. by Jacques-Alain Miller, trans. by Dennis Porter (London and New York: Routledge, 1992), pp. 235–68.

³⁴ Thomas Benjamin, *The Craft of Tonal Counterpoint with examples from the works of J.S. Bach* (New York and London: Routledge, 2003), https://doi.org/10.4324/9780203494110

³⁵ For a guide to stylistic analysis, see Jan LaRue, *Guidelines for Style Analysis: Models for Style Analysis, a Companion Text*, 2nd edition, ed. by Marian Green LaRue (Detroit, MI: Harmonie Park, 2011).



Fig. 5.1: J. S. Bach, Goldberg Variations (theme in facsimile).³⁶

³⁶ J. S. Bach, *Clavier Übung 4e partie (Variations Goldberg)* 1741, presentation par Philippe Lescat, dir. Jean Saint-Arroman after BnF Ms 17669 (Paris: J. M. Fuzeau, 1990), unpaginated. This is available

The facsimile reproduced in Fig. 5.1 shows what this music looked like to an eighteenth-century musician, and students should be encouraged to perform from facsimile scores to broaden their understanding of such works. Doing this disrupts and refocuses habitual ways of looking (more on this below). How music is written—its cartographic disposition and organisation—changes how one reads, hears, and plays it.

It is also important to undertake a different form of embodied thinking that Bach himself learned much from but that has since fallen by the wayside.³⁷ Writing music out by hand is a process that develops intuition and awareness. This activity captures a way of touch, which, from an evolutionary perspective, is linked to wants, needs, desires, and survival. The experience of putting one's own mental handprints into another person's experience (from the score or from memory) is profound. This activity engages directly with a composer's uniqueness, and it enables students to feel something of the quality of the composer's thought in action. There was a moment when the Goldberg Variations did not exist. As a composer writes music, blank space is filled. It is worth stopping and considering the conscious and subconscious decision-making processes to appreciate that music is a human creation, an artifice that is given and constructed. The uniqueness of a composer (as a human being, like anybody else) is inscribed into the way he or she writes. Writing out music enables us to catch the breath of the age but also to sense that composition is an embodied activity created by a highly-developed nervous system and at a certain epistemic point in history.

It is important as part of this engagement with the *Goldberg Variations* to listen to a variety of recordings in and out of class. I suggest listening to

- Wanda Landowska (who made the first recording of the *Variations* in 1933 on the harpsichord)
- Trevor Pinnock on the harpsichord (1985)
- Glenn Gould (two studio recordings, piano, 1955 and 1981)
- Maria Tipo (piano, 1986)
- Murray Perahia (piano, 2000)
- Daniel-Ben Pienaar, whose (piano, 2011) recording employs techniques from early-twentieth century recordings

at https://s9.imslp.org/files/imglnks/usimg/2/2d/IMSLP74598-PMLP02982-Goldberg_Variations_ (facsimile).pdf. All facsimiles in this chapter are from this source.

³⁷ See, for instance, Bach's handwritten score of Nicholas de Grigny's *Livre d'Orgue: Premier livre d'orgue,* édition originale, 1699, copie manuscrite de J.S. Bach, copie manuscrite de J. G. Walther (Paris: J. M. Fuzeau, 2001).

• Chiyan Wong's recording (piano, 2021) of the composer Ferruccio Busoni's re-interpretation of the *Variations* (1915).³⁸

These performances reflect considerably different visions of the work and different aesthetics of recording.

Next, it is essential to examine the structure of the theme and what makes a baroque theme useful for variations. On the keyboard, it is vital to play the chords from the figured bass or, at least, to play a two-voice reduction like that provided in Level 1 of Fig. 5.2 below. This facilitates a discussion of the function of the figured bass as enlightenment technology (defeating error and guesswork) and the way in which Bach's counterpoint is constructed to be melodic and purposeful—there is no redundancy in good art. It is then worth examining the types of figures used, including the ornamentation, types of accented and unaccented passing notes, turning patterns, neighbour-notes; how melodies are constructed and shaped (highpoints) to inflect meaning and shape structure (at cadences for example); and what makes this piece more than the sum of its parts.

Here, it is also worth drawing in some musicology, discussing the idea of rhetoric (saying something through musical figures [*Figurenlehren*]) and explaining the useful idea of 'invention' as expounded by Laurence Dreyfus.³⁹ It is also worth comparing this theme to other baroque themes such as Archangelo Corelli's 'La Folia' movement from his violin sonata Op. 5, No. 12, and even Pachelbel's *Canon*, all themes employed for the purposes of variation.

Bach's variations are premised on a given harmony, which can be used as a template for species-like development. So, for the purpose of this exercise, the theme has been converted from 3/4 into 4/4 time. In Fig. 5.2 and 5.7, I have left the exercise open for completion.

³⁸ Busoni's version of the *Goldberg Variations* is available at: http://conquest.imslp.info/files/imglnks/ usimg/6/66/IMSLP08668-Bach_-_Goldberg_Variations_(breitkopf).pdf

³⁹ Dreyfus, pp. 1–32.











This example presents a four-layer contrapuntal cake in which all Levels (1–4) pertain to the bass (with figures). Level 1, above the figured bass, is like 1st species (note against note), and the other lines approximate but move beyond the other species categories. Level 2 has elements of 2nd and 4th species (2 notes against 1 with suspensions). Level 3 has elements of 3rd and 5th species (4 notes against 1 and with dissonances). Level 4 develops the material further. Rather than impose the tedious rules of species counterpoint, I would give six general principles:

- 1. Try and write music first and check your work with points 2-4 (below) later;
- 2. Try and write lines that move in contrary motion as much as possible;
- 3. In general, do not jump off or onto a dissonance (harder to do than it is to say);
- 4. Check for consecutive and hidden fifths and octaves;
- 5. Try and have thirds, (fifths), sixths, or octaves on the strong beats; and
- 6. Concentrate on smooth voice-leading using scales and arpeggios.

Levels 1–4 move from longer to shorter notes, thus illustrating the principle of melodic diminution by showing the way more intricate figures can be derived from simpler ones. This enables discussions of some of the following features:

- 1. Melodic movement, embellishment, and diminution (this can be seen within the lines themselves);
- 2. Dissonance treatment (preparation and non-preparation, leaping);
- 3. Voice-leading (use of arpeggios and embellishment figures);
- 4. Cadential articulation (the shaping of highpoints, of tension and release); and
- 5. What happens when the number of notes fitted into the space increases (the register has to expand).

Levels 1 to 4 gradually develop and flesh out (as diminutions) the previous material: the notes of Level 2 are clearly based on Level 1, Level 3 on Levels 1 and 2, and Level 4 on Levels 1, 2, and 3. This is another aspect of this method: whatever is written at Level 1 should have a cumulative impact and relation to the other Levels. This exercise facilitates other questions such as:

- 1. What is being varied and how?
- 2. How does Bach, in his music (in Figs. 5.3 and 5.5, for examples, below), maintain a steady flow of interest for the listener? What happens in b. 5 of Fig. 5.5, for instance, and how is the invention or idea subtly changed?

and, most crucially,

3. How does the music across the Levels of Fig. 5.2 gradually come to sound like Bach? Is it, for example, the dissonance treatment, the types of melodic movement, and/or the way in which the lines rise and fall? What sustains our interest here?

To work through even one Level would take some time, and what I have offered in Fig. 5.2 is merely the beginning of one solution. Students (and instructors) should be encouraged to find their own different, yet equally valid, solutions (by beginning on a different note, for example). The exercise is structured, then, so that the rest of the variation can be created one Level at a time, and students can compare their workings.

This preliminary project employs one 'invention' with a particular 'Affekt' of musical characteristic at each level, and this is typical of Bach's practice. This observation can be sharpened by borrowing another 'Affekt', this time from Variation 4:



Fig. 5.3: Bach, Goldberg Variations, beginning of Variation 4 (facsimile).

Fig. 5.4a presents an adaptation of Levels 2 and 3 above (from Fig. 5.2), using the same 'invention' as Variation 4. Note that the first right-hand pitch in each bar is the same as in Levels 2 and 3 of Fig. 5.2 above:



Fig. 5.4a: Based on *Goldberg* Variation 4.

This 'invention' can be presented in the left hand. The Feldenkraisian idea of flexibility (finding different ways to approach the same 'function) is therefore instantiated in Fig. 5.4b. The right hand, here, keeps the first notes (on the strongest beat) of Level 1 from Fig. 5.2 above. Note that notes 1–4 and notes 5–8 of the right-hand part effectively form elongated ornaments (turns).



Fig. 5.4b: Based on Goldberg Variation 4.

The following examples (Figs. 5.4c and 5.4d), have essentially the same bass line as Fig. 5.4b. In Fig. 5.4c, a more fluid line based on level 2 and 3 (from Fig. 5.2) is added to enrich the counterpoint:



Fig. 5.4c: Based on Goldberg Variation 4.

In Fig. 5.4d, a still more elaborate version is created that relates to Level 4 of Fig. 5.2. In creating this counterpoint, it is important to move in a controlled manner from relative simplicity towards complexity. It is also imperative that complexity never obscures the purposefulness and transparency of the music, and that the fundamental harmony underpinning the counterpoint is always clear.



Fig. 5.4d: Based on Goldberg Variation 4.

These preliminary differentiations through elaborations of Variation 4 have facilitated the freeing up the bass (from Fig. 5.2), allowing it to become an integral part of the counterpoint. Variation 1 of the *Goldberg Variations* (Fig. 5.5) is useful for understanding and developing the relationships between the lines further and for making other connections and differentiations that are realised in Fig. 5.7.



Fig. 5.5: Goldberg Variation 1 (facsimile).

It can now be seen that what is present in Level 4 in Fig. 5.2 flows from aspects of the melodic line of Fig. 5.5. However, this observation leads to other questions about Fig. 5.5:

- 1. What is the rhythmic balance and contrast of melodic invention between the lines?
- 2. Why does the bass sound different here?
- 3. How do figures from one line appear in the other line?
- 4. How does Bach use dissonance, embellishment figures, and register, and how does this make it sound like Bach?
- 5. What happens when Bach swaps the figures around in b. 5, and why do these musical features do this?
- 6. Why does Bach use the arpeggio figure in the right hand of b. 9 and how does this relate to the opening idea?
- 7. How might the 'inventions' presented in the first half of the Variation recur (as further variations) in the second half?

These are complex and fascinating questions, and they go to the heart of Bach's creative engagement with his material. These questions are by no means meant as prescriptive, exhaustive, or necessarily to be taken in this order, and they can easily be transferred to other repertoire and variations. They open up other questions for discussion such as:

- 1. What is the function of a bass, and of the basso continuo, in baroque music?
- 2. On which instruments does this music sound better and why? What is 'better'?
- 3. Who are the main performers, and what types of traditions of performance exist for this repertoire? How can these be critically examined and compared?
- 4. How have the *Goldberg Variations* been extended, for example, by Robin Holloway in his *Gilded Goldbergs* Op. 86 (1992–97) for two pianos, or by the Jacques Loussier (jazz) trio?
- 5. What are the demonstrable differences between these variations, and, for example, Mozart's variations on *Ah*, *vous dirai-je maman* KV 265 (1778) or Brahms's *Variations on a Theme of Haydn* Op. 56a (1873) known as the *St Anthony Variations*?

To continue the learning trajectory from the previous examples, here are some starter 'inventions' for writing, improvising, or composing other variations that have different characters:



Fig. 5.6: Starter 'inventions' for *Goldberg* variations.

Fig. 5.6 becomes a stepping-stone to exploring the techniques and elaborations of 'inventions' in the other *Goldberg Variations*. The starter examples in Fig. 5.6 imply different speeds and are written in different meters. Already they provide material for development and variation and for continuity and narrative.

From the 'starters' given in Fig. 5.6, it is worthwhile inventing one's own 'inventions' and variations. Here, I would recommend exploring how other Bach works can be adapted. An 'invention' can be borrowed from one of the 'Passions', a Brandenburg concerto, a cantata, a violin or cello suite, or one of the organ or keyboard works (no. 11 in Fig. 5.6, for example, is borrowed from the beginning of Bach's organ Prelude and Fugue in C, BWV 547). This procedure speaks to a spiralling out from the exercises presented above to absorb other resources. It is worth creating a 'listening list' of pieces that can be used to create 'inventions' and to work through this in class. As Dreyfus shows, Bach seemed to consider some inventions to have more potential than others—*The Art of Fugue* is the *locus classicus* of this.

In this spirit of re-invention, here is a 'Goldberg' Variation created from a variant of the 'invention' at the beginning of the sprightly G major two-part invention BWV 781 (no. 6 in Fig. 5.6). Students can finish the example and then compare their findings. I have included various techniques from Variation 1 of the *Goldberg Variations* in Fig. 5.7. Note, in particular, with reference to Fig. 5.7, the way in which the right hand 'invention' in b. 1 becomes the left hand at b. 5, and the way a related figure is introduced at b. 8–9 as a form of sequential development of the 'invention'. Note also the use of contrary motion here and at b. 13, and the way the music builds to the cadence, which has a semiotically-definable form of closure. How Bach writes an ending is a feature of his music that is worthy of study in itself.

















Fig. 5.7: *Goldberg* variation based on the opening of BWV 781.

Fig. 5.7 reveals some of the basic mechanisms for 'invention' and its elaboration. Figs. 5.1, 5.2, and 5.7 are all templates for improvisation. Fig. 5.2 and 5.7 can be extended, and the student can become aware of the way in which the internal listening facilitated by these examples creates different musical possibilities and solutions. Following Feldenkrais's thought, it is the finding of different solutions that facilitates choice and mastery.

Exercises for improvisation can be created through certain parameters. For instance, one deliberate 'limitation' might be that the right hand is only going to use scales and/ or arpeggios belonging to the chord. For non-keyboard players, it is perfectly possible to record a bass line and then improvise on it, or, more authentically, to play these examples with a keyboard player. It is worthwhile seeing what happens when one begins a variation on different notes of the first chord (G - B - or D), with a rest, or in a different octave or register.

These are already small examples of changing focus that entail the creative decisionmaking fundamental to artistic research. Keyboard music is written so that the righthand is on the top stave. This creates a certain reliable visual pattern. It is important to notice the way in which this axiomatic orthography (higher pitch = higher stave) influences the way in which we look at our hands on the keyboard, what we think of as the relationship of melody to harmony (as something derived from the bass), and how this has formed thought patterns from childhood for many musicians.⁴⁰ It is also worth considering how these precepts and our engagement with them relates to other deeper ethical, linguistic, and cultural patterns, such as the idea of right-hand dominance, the idea that heaven is up (beyond the sky) and hell is beneath the ground, or the pre-Copernican idea that the sun sets in the west.⁴¹

Such relationships are not set in stone. They are deep physiological and cultural patterns that can be disrupted, and that can be played with, not least in the case of Fig. 5.2 above, by crossing the hands, using different forms of articulation, or finding different fingerings. For example, one might try baroque fingering, in which the use of the thumb in passagework is minimised. I would also strongly recommend transposing the exercises, and improvising different versions of them, in at least the neighbouring keys of F and A major. It is worth examining how changing only the key causes our thought patterns and the notes we play to change. These kinds of differentiation help to build the connections between hearing, seeing, and thinking essential for 'adaptive flexibility' understood as a form of virtuosity.⁴² One of Feldenkrais's discoveries was that when we change, disrupt, or build new patterns to do an activity (such as a finding non-habitual ways to interlace our fingers, for instance) the function of the habitual action is improved when we return to it—try this for yourself.

Here are some suggestions, therefore, of how to create different forms of embodied stability and instability using the material above. It is worth becoming aware of the way in which our eyes organise the movements of our hands on any instrument, not just at the keyboard. Feldenkrais became very interested in the relationship between the eyes and the hands and the ways in which altering the tonus of one creates a

⁴⁰ See Feldenkrais, *Body & Mature Behavior: A Study of Anxiety, Sex, Gravitation & Learning* (New York: International Universities Press Inc., 1966).

⁴¹ See Chris McManus, *Right Hand, Left Hand: The Origins of Asymmetry in Brains, Bodies, Atoms, and Cultures* (London: Phoenix, 2002).

⁴² Thelen, 'The Central Role of Action in Typical and Atypical Development', p. 71.

change in the other.⁴³ Another way of thinking about this is: do we move our eyes in certain patterns at certain times in a piece (through necessity or anxiety), and how does this become habituated to and with the sounds and physical/kinaesthetic patterning imprinted through practice? Such patterns remain unnoticed until they are brought into our awareness. I would contend that such forms of play are a powerful means of developing 'adaptive flexibility' and that this in itself constitutes a form of physiological and embodied artistic research.

With this in mind, it is worth examining a number of other things in Fig. 5.2. As one moves through the different densities of information in the Levels, observe what happens to your breathing, to the tension in your face (between the eyes), or in the shoulders. Fig. 5.2 provides for an increased information density in the right hand only, a 'limitation' that allows concentration on other aspects of ourselves while playing.

Improvisation opens a space where this sense of the different levels of engagement we can make with music (technical, physical, and even spiritual) can be observed and played with. What happens if the density is increased simply by adding another note in the left hand, such as adding a minim an octave below on beat 3 of almost each bar in Fig. 5.2? Notice as you move from one Level to another what happens in the ribs, in the pelvis, or even in the right-foot. Notice the whole right-hand side of the body and how individual parts of the body on this side can be felt to participate more in the activity than those on the left. This participation, Feldenkrais has shown, leads to improved functioning.⁴⁴ The perception of these differences can be accentuated by leaning more to one side, by looking at something completely different (not your hands or the music), and, crucially, by noticing what you do and how you do it. In Fig. 5.2, attention needs to be paid to the moments leading up to and then to the change from one line of the music to the next. Is there a jump in the eyes, and can this be made smoother? Is there any noticeable change or sense of transition as one moves from written music to improvisation? How can this transition become easier, lighter, and a focus for play?

Anybody who engages in these practices will quickly discover that 'play' is fundamental to the serious business of learning – it is intense and mentally taxing. One of the things that Feldenkrais built into his 'Awareness-through-movement' lessons were breaks between differentiations. These breaks allow time for the brain to digest the experience. He discovered that integration happened in the moments when the brain was released from *doing*.⁴⁵ Stopping, I have suggested, is a powerful creative strategy in artistic practice.

Integration arrives at a point when these different forms of embodied knowledge become part of the person and can be spontaneously retrieved when circumstances

⁴³ See, for instance, 'The bell hand: soft opening and closing movements of the hands' in Feldenkrais's Quest seminar.

⁴⁴ See Alan Fraser, Play the Piano with your Whole Self: Refine the Physical to Free Your Inner Musician: Biotensegrity, the Inner Conductor, & Expressively Directed Micro-Timing at the Piano (Novi Sad: The Piano Somatics Press: 2022).

⁴⁵ See Sholl, 'Feldenkrais's Touch'.

demand it. The exercises above can be used to investigate some basic mechanisms of music, moving from skills to craft. They can also aid in moving towards Feldenkrais's ideal of making flexible brains and becoming more fully aware of how to know something.

Conclusion

Feldenkrais advised some of his students: 'Be sure your intention is clearly present in your movement. The movement organises itself when your intention is clear.'⁴⁶ The question for musicians often, though, is 'how do I know that my intention is clear?' or, to return Feldenkrais's maxim at the start, 'how do I come to know what I am doing?' A straightforward answer to these questions is that experimentation—the finding of different 'solutions' to the problems posed above that are emotionally, historically, intellectually, and creatively both satisfying and contingent (awaiting other 'solutions')—is a profound way of enabling the process of knowledge acquisition that leads to craft and to artistry. This is partly why I have framed the above discussion of Bach as a mode of enquiry, more than as a schematic process. The former promotes an emergent awareness of style, knowledge, and intention though action.

The discussion above of the *Goldberg Variations* creates parameters for the development of 'self-organisation', meaning that the '*pattern and order emerge from the interactions of the components of a complex system without explicit instructions*, either in the organism itself or from the environment'.⁴⁷ This is one way of describing semiautonomous learning that also acts as a template for creativity. Embodied cognition is too often in conservatoires understood as something implicit (merely taken for granted), or as something added to the curriculum. However, in fact, it is a primary aspect of learning that needs to be placed at the centre of everything that happens at a conservatoire. This is because it is at the centre of a musician's activities and crucial for the sustainability of a career, especially given the often-excessive demands of the music profession.

The exercises above have used the *Goldberg Variations* for the promotion of embodied learning closely aligned with awareness of technical observations. This is artistic practice in action—a burgeoning awareness of attention and intention and the critical working-through of nuance and differentiation, and of variance. These exercises meld theory and practice and help create 'knowing', an integration which Thelen and Smith describe as 'the process of dynamic assembly across multileveled systems in the service of a task'. ⁴⁸

⁴⁶ *Dr Mosche Feldenkrais at Alexander Yanai*, ed. by Ellen Soloway, trans. by Anat Baniel (Paris: International Feldenkrais Federation, 1994), see lesson 22: 'Sitting on the Floor with the help of your hands' (p. 132).

⁴⁷ Thelen and Smith, p. 259, italics in the original.

⁴⁸ See Bernstein, The Development of Dexterity; Thelen and Smith, pp. 298, 303.

Thelen and Smith argue that '…in action and cognition, and in development, many configurations that act like programmes, stages, or structures are stable attractors whose stability limits may indeed be shifted under appropriate circumstances'.⁴⁹ This is what these researchers describe as 'soft-assembled' systems rather than 'the vocabulary of programmes, structures, modules, and schemas' that are then supplanted by 'constructs with concepts of complexity, stability, and change'.⁵⁰ From a Feldenkraisian position, such 'shifts' are desirable and, in fact, necessary to the 'behavioural development' that Thelen and Smith describe as '…a series of evolving and dissolving attractors of different stability'.⁵¹

Another way of thinking about this would be to say that the model presented in Fig. 5.2 above builds various levels of dependence and, therefore, stability that can be destabilised. Through improvisation, this can be thought of as an *'epigenetic developmental process* through which increasingly more complex cognitive structures emerge in the system as a result of interactions with the physical and social environment'.⁵² Improvisation acts as an emergent system of finding new possibilities: new stabilities are revealed through new instabilities or, as Thelen and Smith elegantly call them, 'points of transition'.⁵³

Such 'transitions' could also be applied to the move from skills to craft, which is the hallmark of artistry and artistic research. This is not merely adapting skills to future circumstances, or of 'knowing', but the ability to produce serendipitous solutions to problems through sustained engagement, and to make aesthetic choices between them.⁵⁴ This process would enable a person to 'do what you want', as Feldenkrais stated. These choices are embodied. In the words of Thelen et al., 'perception, action, decision, execution, and memory are cast in compatible task dynamics, the processes can be continuously meshed together [...] Body and world remain ceaselessly melded together'.⁵⁵

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⁴⁹ Thelen and Smith, p. 274.

⁵⁰ Ibid.

⁵¹ Ibid., p. 276.

⁵² Ibid., p. 288. Italics in original.

⁵³ Ibid., p. 291.

⁵⁴ See Bernstein, *The Development of Dexterity*; Thelen and Smith, pp. 298, 303.

⁵⁵ Esther Thelen, Gregor Schöner, Christian Scheier, and Linda B. Smith, 'The Dynamics of Embodiment: A Field Theory of Infant Perseverative Reaching', *Behavioral and Brain Sciences*, 24 (2001), pp. 1–34 (p. 2), https://doi.org/10.1017/s0140525x01003910

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